

Dissociative Disorders

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INTRODUCTION

In current diagnostic nosology, the category of dissociative disorders includes a wide variety of syndromes whose common core is an alteration in consciousness affecting memory and identity (American Psychiatric Association [APA], 1987). In *psychogenic amnesia*, the patient suffers a loss of autobiographical memory for certain past experiences. In *psychogenic fugue*, the amnesia is much more extensive, covering the whole of the individual's past life; it is coupled with a loss of personal identity and, often, physical movement to another location. In *multiple personality*, a single individual appears to manifest two or more distinct identities, with each personality alternating in control over conscious experience, thought, and action and separated by some degree of amnesia from the other(s). In *depersonalization*, the person believes that he or she has changed in some way or is somehow unreal, whereas in *derealization* the same beliefs are held about one's surroundings. Finally, the dissociative category covers a number of miscellaneous disorders,

including *Ganser's syndrome* (Cocores, Santa, & Patel, 1984; Enoch, Trethowan, & Barker, 1967), pathological (though not nonpathological) *trance states*, and dissociative states occurring in association with *brainwashing*, *thought reform*, or *cult indoctrination*.

Although impairments of memory and consciousness are often observed in the organic brain syndromes, the dissociative disorders are functional in nature: they are attributable to instigating events or processes that do not result in insult, injury, or disease to the brain, and they produce more impairment than would normally occur in the absence of this instigating event or process (Kihlstrom & Evans, 1979; Schacter & Kihlstrom, 1989). The dissociative disorders appear to be rather rare, but for more than 100 years these and related phenomena have been objects of fascination for clinicians and experimentalists alike (for other recent reviews, see Aalpoel & Lewis, 1984; Abse, 1974; Cattell & Cattell, 1974; Kluff, 1988a; Nemiah, 1979, 1989; Sutker & King, 1984).

THE EVOLUTION OF A CONCEPT

It should be noted that the term *dissociative disorder* is almost unique in the psychiatric nosology, because the label also implies a specific mechanism (dissociation) to account for the disturbances observed. Other category labels such as schizophrenia, anxiety disorders, and personality disorders carry no such surplus

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etiological baggage. Schizophrenia could be caused by neurotransmitter malfunction or by a double-bind family environment, but dissociation is caused by—well, dissociation. (The other salient example of this identity of category with etiology is conversion disorder, about which more will follow). Thus, any consideration of the dissociative disorders as a group of mental illnesses properly begins with a consideration of the dissociation concept itself.

The origins of the idea of dissociation lie in a body of medical and scientific literature that emerged from 1775 to 1900 and represents what Ellenberger (1970) called the “first dynamic psychiatry.”* As Ellenberger shows, this movement had its roots in Christian religious practices associated with the cure of souls; mesmerism, animal magnetism, and hypnosis, as practiced in the eighteenth and nineteenth centuries; and especially in Charcot’s neurological clinic at the Salpêtrière, with its concern for the differentiation between organic and functional mental illness. Beginning about 1775, with the appearance of Franz Anton Mesmer, speculation about nonconscious determinants of experience, thought, and action coalesced with rationalized, materialistic versions of primitive psychotherapies to form the new movement, which gathered steam under Jean-Martin Charcot and then reached its peak in nineteenth- and twentieth-century France and America in the hands of Pierre Janet, Morton Prince, and Boris Sidis (for reviews, see Hilgard, 1973a, 1977b).

The first dynamic psychiatrists were interested in a wide spectrum of phenomena, including hypnosis and other forms of suggestion; spiritism (automatic writing, crystal gazing); the “magnetic diseases” of catalepsy, lethargy, and somnambulism (so named because of their resemblance to certain phenomena of animal magnetism, a precursor of hypnosis); ambulatory automatism (fugue); multiple personality; and hysterical anesthetics and paralyses. Charcot himself held that these symptoms and syndromes were the manifestations of subtle organic brain syndrome. However, according to Janet and his followers, each of these phenomena reflected the power of ideas to engender

action, as well as a change in consciousness in which experience, thought, and action occurred outside of phenomenal awareness and voluntary control. Thus, these phenomena represented “dynamic illnesses,” caused by a suggestion or idea whose origins lay in some psychological trauma whose nature was unknown to the victim. As a result of this trauma, certain experiences, thoughts, and actions become separated from the monitoring and controlling function of a central executive ego.

Ellenberger (1970) shows that the emphasis of the first dynamic psychiatry on unconscious mental processes was based on two theories of the mind that were prominent in nineteenth-century epistemology. *Dipsychism* analyzed the mind in terms of two unconnected layers, each consisting of independent chains of associations: The “upper consciousness” was active in the normal waking state, while the “lower consciousness” was active during dreams, hysterical reactions, and hypnosis. *Polypsychism* argued that each segment of the anatomy was served by its own mental structures (or “egos”), each capable of perception, memory, and thought. These mental structures were, in turn, subject to the control of a higher-order structure identified with normal consciousness. When the link between subordinate and superordinate structures was severed, certain aspects of mental life proceeded subconsciously, outside of phenomenal awareness and voluntary control.

The dominant figure in the first dynamic psychiatry was Pierre Janet (1889, 1907; see also Haule, 1986; Havens, 1973; Mayo, 1952; Perry & Laurence, 1984). Janet attempted to organize the neuroses as Kraepelin had organized the psychoses, but his scheme was based on psychological rather than medical and biological principles. Inspired by the principle of analysis followed by synthesis (which was popular in Jacksonian neurophysiology) and adopting a term introduced earlier by Despine (Ellenberger, 1970), Janet identified the elementary structures of the mental system as “psychological automatisms.” Each automatism represented a complex act, finely tuned to external (environmental) and internal (intrapsychic) circumstances, preceded by an idea, and accompanied by an emotion. Thus, it reflected the entire trilogy of mind—cognition, emotion, and motivation—described by psychologists and philosophers of mind at least since the time of Kant (Hilgard, 1980b). Therefore, each reflected a rudimentary consciousness.

According to Janet, the normal person’s entire repertoire of elementary psychological automatisms were bound together into a single, united stream of con-

*The “second” dynamic psychiatry, as Ellenberger defines it, was centered on Sigmund Freud and classical psychoanalysis. Arguably, third and later dynamic psychiatries can be discerned that comprise neo-Freudian and post-Freudian psychoanalysis, ego psychology, and object-relations theory, with their diminished emphasis on phylogenetically ancient sexual and aggressive instincts. See Ellenberger (1970), Eagle (1984), and Greenberg and Mitchell (1983).

sciousness, accessible to introspective phenomenal awareness and voluntary control. However, under certain circumstances one or more automatisms could be split off from the rest, thus functioning either outside of awareness or independent of voluntary control, or both. Charcot's term for this situation was *condition seconde*; Janet's preferred term was *désagrégation*, translated into English as *dissociation*. This translation is quite unfortunate, since it allies Janet with the doctrine of the association of ideas (Perry & Laurence, 1984). *Disaggregation*, referring to a breaking up of integrated mental life into component parts and to a lack of integration between various parts of the personality, would have served Janet and his theory—and perhaps the syndromes themselves—somewhat better.

The dissociation view of the unconscious, as distinct from the repression view elaborated by Freud and his followers (see Kihlstrom & Hoyt, 1990), was endorsed by William James (1890; Taylor, 1982; see also Hilgard, 1969; Kihlstrom & McConkey, 1990) and taken up by Morton Prince (1906, 1914, 1939) and Boris Sidis (1902; Sidis & Goodhart, 1904). James (1890), in chapter 6 of the *Principles of Psychology*, attempted to refute the “mind-stuff theory” (which held that the elements of conscious mental life were themselves unconscious) and asserted that the idea of “unconscious thought” is a contradiction in terms. As James viewed it, *unconscious* can describe brain processes, but not mental processes; unattended perceptual inputs, but not attended ones; and latent memories, but not active ones. Similarly, unconsciousness occurs in concussion and coma, but not in mental life. At the same time, however, he acknowledged on the basis of clinical and experimental observations that consciousness could be divided into several streams of thought, only one of which was accessible to phenomenal awareness at any particular point in time. To avoid the oxymoron threatened by the negation of consciousness, James referred to this situation as one of “secondary” consciousness. Similarly, Prince and Sidis referred to “co-conscious” or “subconscious” mental states.

This conceptualization of consciousness was briefly popular (Hilgard, 1973a) but soon fell into disuse. The claims of the dissociation theorists were often overly broad, and their clinical and experimental studies often methodologically flawed. In the clinic, the second dynamic psychiatry, with its emphasis on sex and aggression, dreams and repression, soon triumphed over the first. In the laboratory, the behaviorist revolution banished all reference to mental states, conscious or not,

from the vocabulary of scientific discourse. After World War II, however, interest in consciousness—attention, primary memory, and imagery—experienced a revival in the course of the cognitive revolution (Hilgard, 1977a, 1980a, 1987). As a result, cognitive psychology and cognitive science have made an ever-widening place for the psychological unconscious: cognitive, emotional, and motivational states that are inaccessible to phenomenal awareness but nonetheless exert palpable effects on experience, thought, and action (Bowers & Meichenbaum, 1984; Hilgard, 1977b; Kihlstrom, 1984, 1987, 1989, 1990).

More recently, Hilgard (1973b, 1977b) has offered a “neodissociation” theory of divided consciousness, which acknowledges its links to the earlier theories but seeks to free itself from their excesses and errors. Neodissociation theory assumes that the mind is organized as a system of mental structures that monitor and control experience, thought, and action in different domains. These structures, which resemble Janet's psychological automatisms in some respects, and in others the modules or cognitive units familiar in parallel distributed processing approaches to cognition (McClelland, Rumelhart, & PDP Research Group, 1986; Rumelhart, McClelland, & PDP Research Group, 1986), may be organized at several different levels. For example, different structures might represent different faculties, such as perception, memory, or emotion; different modalities, such as vision or audition; or different categories of objects and events. In principle, each of the structures can process inputs and outputs independently of the others, although under ordinary circumstances each structure is in communication with the others, and several different structures might compete for a single input or output channel. At the center of the system, yet another structure exercises executive functions of monitoring and control, as well as providing the mental basis for the experience of phenomenal awareness and voluntary control.

According to Hilgard, the operations of the central executive can be constrained, and the integration and organization of the individual control structures disrupted, thereby producing a state of divided consciousness. For example, the lines of communication between two subordinate structures might be cut: The operations of each would be represented in phenomenal awareness and perceived as under voluntary control, but they would not be integrated with each other. Alternatively, the links between a subordinate structure and the executive might be cut: Under these circumstances, the operations of the subordinate would be isolated

from phenomenal awareness and the experience of intentionality—a classic instance of dissociation.

An alternative mechanism for dissociation has been offered by Kihlstrom (1987, 1990). Kihlstrom notes, following James (1890), that every conscious experience, thought, and action is accompanied by self-reference, that is, the person himself or herself is represented as the agent or the experiencer of the event. Thoughts, feelings, and motives are conscious when they are linked in working memory to an activated mental representation of the self. From the standpoint of associative network theories of memory structure, the self may be thought of as a node joined by associative links to other nodes representing the individual's specific autobiographical memories, as well as generic knowledge concerning his or her physical and psychosocial attributes (Kihlstrom & Cantor, 1984; Kihlstrom, Cantor, Albright, Chew, Klein, & Niedenthal, 1988). The mental representation of self, including the person's internal cognitive, emotional, and motivational states, resides in working memory (Anderson, 1983) along with coexisting representations of the current external environment.

As a knowledge structure activated in working memory, the self routinely becomes associatively linked to other activated mental representations of experience, thought, and action. However, such links are not necessary for many forms of even complex information processing. When the link to self is not made, or not maintained in memory, the mental state in question may still influence ongoing experience, thought, and action. However, this influence will be outside the person's phenomenal awareness, expressed automatically, preconsciously, or subconsciously—precisely what is observed in the dissociative disorders. The loss of a preexisting connection between autobiographical memories and the mental representation of the self, then, would serve as the psychological basis for the memory disorders seen in psychogenic amnesia and fugue. In addition, some forms of fugue (as well as multiple personality disorder) seem to involve the creation of one or more new mental representations of self that coexist alongside the old one. Activation of one self or another would then control access to different funds of autobiographical knowledge, as well as different repertoires of cognitive, emotional, motivational, and behavioral dispositions.

In passing, it should be noted that the term *dissociation* has emerged as a technical concept in other areas of psychology, somewhat independent of its origins in the vocabulary of the first dynamic psychiatry. For example, patients suffering bilateral damage to the

medial temporal lobe (including the hippocampus) and diencephalon (including the mammillary bodies) display a gross anterograde amnesia; they cannot remember events that occurred postmorbidly. Thus, after studying a list of words, they show gross impairments in recall or recognition compared to controls. However, when asked to complete a word stem or fragment, these same patients show enhanced performance when the correct response is a word from the previously studied list. This advantage of old over new items, known as a *priming effect*, gives evidence for implicit memory (Schacter, 1987)—a change in task performance attributable to a previous episode of experience. Implicit memory, so defined, is dissociable from explicit memory, or conscious recollection in at least three senses: (a) Subjects and patients can display implicit memory in the absence of explicit memory; (b) even when conscious recollection is preserved, implicit memory is stochastically independent of explicit memory; and (c) different variables affect performance on explicit and implicit memory tasks.

On the basis of neuropsychological evidence of dissociations between explicit and implicit memory, Schacter (1990) has proposed that conscious mental life reflects the operation of a "conscious awareness system" (CAS) that normally interacts with other systems that regulate perception, memory, language, and other processes. He has suggested that certain forms of brain damage produce damage to the CAS, or perhaps a breakdown in communication between the CAS and one or more modules governing the various mental faculties, without impairing the faculties themselves. Such a situation would produce the kinds of dissociations observed in the amnesic syndrome, prosopagnosia, and other organic brain syndromes (for a review of some of these phenomena, see Schacter, 1987, 1990). However, as noted at the outset, the hallmark of the dissociative disorders is the absence of demonstrable insult, injury, or disease affecting brain tissue. Thus, while not denying that every mental event has a corresponding brain event, we believe that the functional dissociations observed in psychogenic amnesia, fugue, and multiple personality require explanation at a psychological, rather than a biological, level of analysis.

THE EVOLUTION OF A DIAGNOSIS

The dissociative disorders have a somewhat checkered history in the *Diagnostic and Statistical Manual (DSM)* published and periodically revised by the American Psychiatric Association. The DSM arose out

of an attempt to develop and establish a uniform nomenclature for mental illnesses. Early versions of the manual, known as the *Standard Classified Nomenclature of Diseases* and primarily intended to be used for statistical purposes, were issued in 1917, 1933, and 1942. However, the introduction (during World War II by the Army and Navy, and afterwards by the Veterans Administration) of alternative classificatory schemes led to considerable confusion and renewed attempts to achieve uniformity.

In the first edition of DSM (DSM-I; APA, 1952) the dissociative syndromes were classified as “psycho-neurotic disorders,” in which anxiety is either “directly felt and expressed or . . . unconsciously and automatically controlled” by various defense mechanisms (p. 32). Under this label, the dissociative syndrome included depersonalization, dissociated (multiple) personality, stupor, fugue, amnesia, dream states, and somnambulism. Although the earlier classificatory schemes had grouped the dissociative and conversion disorders under the single rubric of “conversion hysteria,” the two classes were now distinguished: dissociation by personality disorganization, conversion by isolated symptoms of anesthesia, paralysis, and dyskinesia. (DSM-I also carried a special listing of “somnambulism,” but this apparently referred specifically to sleepwalking.) Although DSM-I abandoned earlier references to conversion hysteria, the conceptualization of the disorder was heavily influenced by psychoanalytic theory, as evidenced by its reference to the discharge or deflection of repressed impulses.

In some respects, DSM-II (APA, 1968) reverted to earlier practices. Here, “hysterical neurosis, dissociative type,” defined as an alteration in consciousness and identity, is joined by “hysterical neurosis, conversion type,” defined as a disorder of the special senses or the voluntary nervous system. “Hysterical neurosis” itself is characterized in psychoanalytic terms of the unconscious and automatic control of anxiety. However, explicit references to repression and the psychoanalytic theory of neurosis are absent from the description.

DSM-III (APA, 1980) and its revision, DSM-III-R (APA, 1987), of course, abandoned both *neurosis* and *hysteria* as technical terms (Kluft, Steinberg, & Spitzer, 1988; Spitzer, Hyler, & Williams, 1980). The class of dissociative disorders includes psychogenic amnesia, psychogenic fugue, multiple personality, depersonalization disorder—and “what has now become a typical category” (DiClemente, 1981, p. 102), atypical dissociative disorder. Conversion disorder, by contrast, is grouped with body dysmorphic disorder, hypochon-

driasis, somatization disorder, and somatoform pain disorder under the heading of somatoform disorders.

DSM-III-R states that the essential feature of the dissociative disorders is “a disturbance in the normally integrative functions of identity, memory, or consciousness” in the absence of brain insult, injury, or disease. In the case of psychogenic amnesia, the essential feature is, of course, loss of memory. Psychogenic fugue adds to this the assumption of a new identity, as well as physical relocation away from customary home or workplace. Somewhat surprisingly, however, the DSM-III-R criterion for multiple personality disorder (MPD) specifies only the alternating control of behavior by at least two distinct personalities; permits the diagnosis to be made on the basis of personality fragments rather than complex, integrated structures; and makes no reference to interpersonality amnesia. Thus, the DSM-III-R criterion is rather liberal, as it diagnoses patients who formerly might qualify only for atypical dissociative disorder as instances of full-blown MPD.

It seems likely that this situation will be corrected in the forthcoming DSM-IV (D. Spiegel, personal communication, December 12, 1989). The most recent draft of the DSM-IV dissociation work group, now under consideration by the larger DSM-IV task force, returns an explicit criterion of amnesia to the diagnostic criteria for multiple personality disorder. Thus, it is not enough simply to find evidence of two or more “ego states” in the same person—a likely factor in the recent proliferation of the diagnosis. Certainly, if this proposal is adopted by the task force, the addition of amnesia as a criterion will make the diagnosis of MPD more precise and restrictive. Cases resembling MPD, but without amnesia, are removed to the category of “dissociative disorder not otherwise specified,” where they are certain to prove less attractive to the editors of supermarket weeklies.

In other, probably less controversial changes, the draft DSM-IV strengthens the emphasis in diagnosing psychogenic fugue on changes in personal identity, whether the loss of an old one or the assumption of a new one. Whereas DSM-III-R retained a provision for fuguelike states lacking the assumption of a new identity, this subcategory has now been deleted. In its place is a new subcategory for culture-specific disorders that have a dissociative flavor (e.g., amok, berserk, koro). However, there is no implication that dissociative states occurring in the context of cultural or religious rituals are pathological.

Another proposed addition to DSM-IV is the category of “brief reactive dissociative disorder,” analo-

gous to acute stress reactions but with dissociation (e.g., stupor, derealization, depersonalization, and amnesia) as opposed to anxiety as the primary feature.

PSYCHOGENIC AMNESIA

Psychogenic amnesia, also known as limited functional amnesia (Schacter & Kihlstrom, 1989; see also Sears, 1936), simply entails a loss of personal memory that cannot be accounted for by ordinary forgetting or by brain insult, injury, or disease (Brna & Wilson, 1990; Kanzer, 1939; Kennedy & Neville, 1957; Kiersch, 1962; Kopelman, 1987; Pratt, 1977; Stengel, 1966). In some cases, perhaps the modal case, the amnesia affects memory for only a single traumatic event; in other cases, it may cover an extended period of time. In any case, the amnesia is typically retrograde in that it covers a period of time before the precipitating event. Nemiah (1979) has distinguished three forms of psychogenic amnesia, depending on its extent: *localized*, covering hours or weeks; *systematized*, covering only specific events and related material; and *generalized*, involving a transitory loss of memory for one's entire life (a condition that shades into psychogenic fugue).

Psychogenic amnesia is sometimes encountered in victims of violent crime (e.g., rape), as well as those who have been involved in catastrophic accidents such as explosions, cave-ins, and asphyxiation. Thus, psychogenic amnesia may be a symptom of post-traumatic stress disorder. It is also frequently claimed by perpetrators (or suspected perpetrators) of violent crimes.

Sirhan Sirhan. On June 4, 1968, Sirhan Sirhan shot and killed Senator Robert F. Kennedy in the kitchen of the Ambassador Hotel in Los Angeles, shortly after Kennedy had claimed victory in the California presidential primary. However, Sirhan was unable to remember this event following his arrest. When hypnotized, Sirhan was able to recall and even reenact the episode, but these memories were not accessible to him after hypnosis was terminated (Diamond, 1969, 1980).

Although psychogenic amnesia, by definition, is not caused by brain insult, injury, or disease, the relation between the syndrome and brain injury is better characterized as one of independence. That is, brain injury can occur without amnesia appearing as one of its sequelae; and functional amnesia can occur in association with head injury.

Patient S., then aged 39, suffered amnesia following surgery in 1976 to repair a double aneurism of the carotid artery. The patient awoke from surgery believing that the year was 1960, and that she was 23 years of age. Although she was aware of her identity, she had no personal recollections of the 16 years that had passed since

she, her husband, and two children moved into a new house—including the fact that she had borne two more children in the interim. She perceived friends, family, and public figures as older than she remembered them, and had no awareness of products or advances in technology introduced since 1960. Patient S. did not suffer an anterograde amnesia, however, and she was able to reacquire this information quickly. Because of the sharp temporal boundaries on the amnesia, beginning with an emotionally significant personal event, and the absence of significant anterograde amnesia, the possibility must be raised that this patient's amnesia is actually functional, not organic, in nature (Treadway, Cohen, & McCloskey, 1988).

Whatever may be true in the case of Patient S., one important question for future research concerns the symptoms that differentiate organic and functional amnesias. For example, clinical lore has it that psychogenic amnesia is more extensive and persists longer than traumatic retrograde amnesia secondary to a concussive blow to the head; and it seems likely that psychogenic amnesias, but not organic amnesias, can be reversed by hypnosis or barbiturates. Such information, in turn, would permit conclusions about the extent to which functional, psychogenic amnesias are diagnosed as organic amnesias simply because they occur in temporal association with head injury.

Although psychogenic amnesia has been the frequent subject of popular treatments, there has been very little research on the nature of the memory loss, its eliciting conditions, and the circumstances that lead to recovery of the lost memories (Schacter & Kihlstrom, 1989). Even Janet (1907) barely made mention of psychogenic amnesia outside of the context of somnambulism, fugue and multiple personality—although he did describe an unusual case of *anterograde* psychogenic amnesia (which he called “continuous amnesia”), in which memory before the trauma remains intact, but the patient shows an inability, reminiscent of that observed in the organic amnesic syndrome, to remember events that transpired *since* a traumatic event (Janet, 1893). Given that psychogenic amnesia is likely to be encountered frequently in PTSD, it would seem that ample case material would be available for study, and that research-minded clinicians and clinically oriented researchers should take steps to prepare for the systematic study of instances that may come to their attention.

PSYCHOGENIC FUGUE

Considerably more is known about psychogenic fugue, also called functional retrograde amnesia (for reviews, see Abeles & Schilder, 1935; Berrington, Lid-

dell, & Foulds, 1956; Fisher, 1945, 1947; Fisher & Joseph, 1949; Geleerd, Hacker, & Rapaport, 1956; Kihlstrom & Schacter, 1991; Luparello, 1970; Pratt, 1977; Schacter & Kihlstrom, 1989; Stengel, 1939, 1941, 1943, 1966). Fugue adds to the loss of personal memory observed in psychogenic amnesia a loss of identity as well, and sometimes physical relocation (hence the name; Akhtar & Brenner, 1979; Keller & Shaywitz, 1975). Again the precipitating incident is usually some trauma (physical or mental), an episode of depression, problems with the legal system, or some other personal difficulty.

Case M. R. A 27-year-old man was found lying intoxicated in a street and brought by the police to the hospital. At the time of admission, he denied knowing his name or where he was from, and he was unable to answer any questions relating to his identity or personal history. Otherwise, he was oriented to time, place, and person. A CT scan, EEG, and lumbar puncture revealed no evidence of organic brain syndrome. Subsequent hypnotic interviews revealed that he had been raped, as well as detailed information about his identity and past. None of these memories were accessible to him outside of hypnosis until he was prompted with his name and hometown, at which time he reported experiencing a flood of personal memories concerning the rape and his life before the incident (Kaszniak, Nussbaum, Berren, & Santiago, 1988).

Sharon. A 34-year-old woman was found lying naked and near starvation in a park, with her clothes folded neatly beside her. Her skin was covered with sores and rat bites. She had no idea who she was, how she had gotten to the park, or any other details of her life. After medical treatment, media publicity led to her identification by her family some 7 months later. However, she still did not recognize her family, and had no awareness of her identity or past. Subsequent hypnotherapy revealed that she had eloped from an abusive family situation 13 years earlier and subsequently was held prisoner by her lover (Eisen, 1989).

Fisher (1945; Fisher & Joseph, 1949) has distinguished three types of fugues. In the classic instance, there is amnesia for personal history, accompanied by a change in identity and relocation to another domicile. Fugue may also entail amnesia accompanied by the simple loss (but no change) in personal identity. Finally, there may occur a reversion to an earlier period in one's own life, with an amnesia for the interval between that earlier period and the present but no change in identity. Clearly, the distinction between psychogenic fugue and psychogenic amnesia is difficult to make. Although one might say that fugues are simply very generalized amnesias, the loss of identity that is pathognomic of fugue may be a qualitative difference.

The process of recovery from fugue is not well understood. Patients typically come to clinical attention when they become spontaneously aware of the situation, or when they fail to respond appropriately to specific questions about their background when ques-

tioned by the police, potential employers, or others. Some patients experience a sudden awakening to their original identity; others experience a sudden awareness that they do not know who they are. Nevertheless, when the situation is resolved, the patient is typically left with an island of amnesia covering the period of the fugue state itself.

Although there exist many clinical reports of psychogenic fugue (e.g., Venn, 1974), apparently only a single case has been subjected to controlled, experimental analysis. Schacter, Wang, Tulving, and Friedman (1982) performed such an analysis on a case, P. N., whose condition was apparently precipitated by the death of his grandfather. The boundaries of the amnesia were explored by means of the Crovitz-Robinson technique (Crovitz & Schiffman, 1974; Robinson, 1976), in which common words are presented as cues for the retrieval of conceptually related autobiographical memories. When tested during the fugue state, 86% of the patient's memories were drawn from the period covered by the fugue—a stronger recency bias than is normally observed in such situations. Two weeks later, after the amnesia had remitted, fully 92% of the memories predated the amnesia (the lack of recency bias thus reflecting an amnesia for the fugue itself). By contrast, when asked to identify pictures of famous people, the patient performed equally well during and after the amnesia.

Such findings have been interpreted (Schacter *et al.*, 1982) as reflecting a selective disruption (technically, a dissociation; Schacter & Tulving, 1982) in memory during fugue: *Episodic* memory for episodes of personal experience and other highly personal material is impaired, but *semantic* memory for the individual's fund of context-free, impersonal world knowledge is spared. However, it would seem that more detailed analysis of this dissociation would be profitable. For example, in addition to autobiographical knowledge of the events of one's past (graduating from college, getting married, the birth of a child, etc.), one can also possess knowledge of oneself that is best thought of as semantic in nature (e.g., one's birthdate; the names of family members; one's own physical, demographic, and personality characteristics). And though one can have semantic knowledge of certain famous people (that John Kennedy was president of the United States, that the space shuttle *Challenger* blew up, etc.) one can also have episodic memories of the circumstances under which this information was acquired (sometimes represented as "flashbulb" memories; see Brown & Kulik, 1977). In future experimental studies, it may

be instructive to draw these distinctions even more clearly.

MULTIPLE PERSONALITY

Multiple personality disorder takes the disruption of memory and identity observed in fugue one step further, because there is an alternation of both memory and identity (for recent reviews, see Bliss, 1986; Confer & Abeles, 1983; Putnam, 1989; Ross, 1989).^{*} That is, when one ego state is in control of thought and action and is monitoring environmental events, memory is continuous within that ego state. However, when monitoring and control shift to another ego state, the new personality may have no access to memories for the activities and experiences of the other(s). However, some degree of cooperation is possible among ego states, when one has information or resources that the other one needs.

Miss Beauchamp. A young college student, conscientious, hard-working, and proud, complained of easy fatigability and lack of physical and mental vigor. Hypnotic treatment of neurasthenia appeared to intensify these characteristics, and further use of the technique led to a dramatic personality change. In her new state, the patient now was very childlike—full of fun, with no sense of responsibilities; she claimed that she hated activities related to the intellectual life and religious obligations. Later on, another personality appeared who also disliked cultural, intellectual, and religious affairs but was irritable and quick-tempered. The four personalities were named B-I through B-IV, respectively: the childlike B-III was also called Sally; B-IV, the Idiot. B-I and B-IV were amnesic for B-II and B-III, and for each other. B-III knew about B-I and B-IV, while B-II knew only about B-I. These asymmetrical patterns of amnesia produced complex patterns of control over experience, thought, and action. During vacations, Prince (1906), who pronounced the patient's pseudonym "Beecham," corresponded with each of the alter egos individually. Miss Beauchamp was subsequently identified by Rosenzweig (1987, 1988).

I. C. A 24-year-old woman was brought to the emergency room of a hospital after she was observed walking in the middle of a highway and, later, banging her head against a brick wall. Upon examination, she was confused and denied awareness of the

incident. Her husband reported that she displayed episodes in which her tone of voice, temperament, and entire manner would appear to change; following such an episode, she would deny any awareness of these shifts. Subsequent anamnesis and hypnotherapeutic intervention identified a number of apparently distinct alter egos, including "Heather," an adolescent who is bent on destroying I. C.; "Joan," a sexually active lesbian; "Gloria," a drug abuser; and "Alpha" (a name bestowed by the therapist), a bodiless personality who appears to possess executive control over the others. The primary personality is unaware of the existence of these other personalities, although they are aware of each other and of the primary. Emergence of the alter egos can be controlled in hypnosis. I. C. is married, with a child, and some college education. When she is functioning normally, she is a world-class performer who has been able to maintain her skills even during extended periods of hospitalization (Schacter, Kihlstrom, Canter Kihlstrom, & Berren, 1989).

On the basis of their review of 76 named (mostly classic) cases, Taylor and Martin (1944) listed a number of features distinguishing the various ego states:

1. The "general quality" of the personality as a whole
2. Propriety of behavior
3. Gender identity or erotosexual orientation
4. Age, handedness, or language differences
5. Anesthesia in one or more sensory modalities, or paralysis in one or more limbs

About two-thirds of the cases studied by Taylor and Martin were dual personalities, and about half of these showed a pattern of mutual or symmetrical amnesia. Of the remainder, most displayed only three personalities and a more complex pattern of asymmetrical amnesia. Ellenberger (1970) classified MPD into three major categories: (a) successive multiple personalities, the usual case, with either symmetrical or asymmetrical amnesias (Ellenberger thought that "mutually cognizant" alter egos were infrequent); (b) simultaneous multiple personalities, cases of which were very rare; and (c) personality clusters.

However, it is by no means a straightforward matter to discern which ego state, if any, is "primary." Following the example of Eve (Thigpen & Cleckley, 1954) and perhaps influenced by the psychoanalytic concept of the repression of conflict-laden ideas, drives, affects, and impulses, there appears to be some tendency to identify the primary personality with the ego state displaying the most conventional, socially desirable qualities. However, Taylor and Martin (1944) argued that there was no clear pattern of "normality" or "pathology" distinguishing the primary personality from the alter egos; sometimes, a normally subconscious personality is better adjusted than a normally conscious one. In most cases, it may be convenient to

^{*}In addition to the reviews cited here, the interested reader is referred to a number of special issues of professional journals that have been devoted in whole or in large part to the topic of multiple personality: *American Journal of Clinical Hypnosis*, 1983, 26(2), and 1986, 29(2); *American Journal of Psychiatry*, 1987, 144(3); *International Journal of Clinical and Experimental Hypnosis*, 1984, 32(2); *Journal of Nervous and Mental Disease*, 1985, 173(9), and 1988, 176(9); *Psychiatric Annals*, 1984, 14(1); and *Psychiatric Clinics of North America*, 1984, 7(1). We note also the formation of the International Society for the Study of Multiple Personality and Dissociation, with conferences held annually since 1984 and publication of a special-interest journal, *Dissociation*, beginning in 1988.

assign the label *primary* to the ego state that is most frequently encountered, or has the longest-running identity. In the case of I. C. (Schacter *et al.*, 1989), the pattern of memory deficit observed strongly suggested that the “primary” personality, defined in terms of frequency of encounter and degree of familiarity to other people, was actually an alter ego who first appeared when the patient was about 10 years old.

The History of MPD

The formal history of MPD reaches back more than 200 years, to the very beginnings of the modern medical literature (Carlson, 1981). Carlson (1989) has described two cases, one in France and one in America, dating from 1791. Better known is the case of Mary Reynolds, reported by Mitchell (1816; see Carlson, 1984).^{*} Another important early case was Estelle, reported by Despina in 1840 (cited in Ellenberger, 1970; see also Fine, 1988).

What might be called a classic period for the study of MPD extended from about 1880 to 1920, as reflected in the well-known reports of Azam, Janet, Prince, Sidis, and others. Of the 76 named cases covered by Taylor and Martin (1944) in their exhaustive review of the published literature, 51 (67%) were first reported during this period, and the vast majority shortly before or after it. In their detailed review of selected “crucial cases,” Sutcliffe and Jones (1962) added only a single acceptable case, the “three faces of Eve” (Thigpen & Cleckley, 1954, 1957; for accounts of this case in Eve’s own words, see Lancaster & Polling, 1958–1974; Sizemore, 1986; Sizemore & Huber, 1988; Sizemore & Pittillo, 1977).

^{*}Ellenberger (1970) cited the case of Mary Reynolds on the basis of secondary reports by S. W. Mitchell and others. However, he was unable to locate the primary reference, attributed to the *Medical Repository* of 1815. A diligent search of the library shelves by Dr. Malcolm Macmillan of Monash University turned up the primary reference in the 1816 volume (Mitchell, 1816) as correspondence dated that year. The 1816 and 1817 volumes were bound together, which may explain why Taylor and Martin (1944) provided the correct volume and page number, but dated the article 1817. Ellenberger also misspells Samuel Latham Mitchell’s last name and incorrectly identifies him with John Kearsley Mitchell, father of Silas Weir Mitchell (1888; see D. M. Reid, 1952; Schneck, 1989), who knew the Reynolds family and brought the case to the attention of William James (1890, pp. 359–363). We thank Dr. Macmillan for his kindness in sharing his detective work, and refer the reader to his work on the relationship between Freud and Janet (Macmillan, 1986, 1990, 1991). For a further history of the Mary Reynolds case, see also Carlson (1981, 1984, 1989) and Goodwin (1987).

Case reports of MPD fell off rapidly in the half century following 1920, a trend that may be attributable in part to the triumph of Freud over Janet, and in part to increased diagnosis of schizophrenia (Chodoff, 1987; Rosenbaum, 1980). They then took a sharp upward turn, beginning around 1970, that may be attributable in large part to the publication in the popular press of *Sybil* (Schreiber, 1973), an account by a novelist of a dramatic case who apparently displayed 16 different personalities (for a description of the impact of this case on an MPD patient, see Atwood, 1978). There followed a literal avalanche of case reports, appearing in both the popular and professional press. Greaves (1980) counted 8 published case reports on MPD between 1944 and 1970 (including Eve and *Sybil*), and at least another 36 instances reported between 1970 to 1979 (not counting informal references to 42 other cases)—almost half as many as had been documented in the entire period from 1791 to 1962. At the same time, Bliss (1980) reported on 14 cases seen over a period of years; a little later, Boor (1982) added 11 more cases published in the 1970s, plus 4 more appearing the early 1980s, and referred to a “the multiple personality epidemic” (p. 302). Kluff (1984b) then reported treatment results on 33 cases, while Coons and his colleagues (Coons, Bowman, & Millstein, 1988) described 50 consecutive patients. Around this same time, Putnam and his colleagues at the National Institute of Mental Health, surveying selected clinicians by mail questionnaire, developed a case registry of 100 cases “currently or recently in treatment” as of 1982 (Putnam, Guroff, Silberman, Barban, & Post, 1986, p. 286); it is not known to what extent these cases overlap with those cited by Greaves, Bliss, Boor, Kluff, and Coons.

It is probably time to stop counting individual cases. But it is worth noting that in the 1970s alone, at least by a liberal count, more cases of MPD were reported than in all the previous time since Mary Reynolds. In fact, a reading of the contemporary literature strongly suggests that some individual clinicians by themselves can account for that many cases. As if that were not enough, there has been a dramatic increase in the number of alter egos manifested in the individual case. The vast majority of cases listed by Taylor and Martin (1944)—48, or 63%—presented dual personalities, and only one case presented as many as 12 alter egos. But the majority of cases listed by Greaves (1980) had 3 or more personalities, as did those added by Boor. Bliss’s (1980) patients presented an average of 7.7 personalities each, Kluff’s (1984b) 13.9 each, and

those of Putnam presented 13.3. Thigpen and Cleckley's (1954) Eve, originally reported as possessing 3 personalities, eventually claimed 22; and Sibyl had 16 alter egos. Indeed, it sometimes seems as if there were some sort of contest in progress to see who could have (or be) the patient with the most (Kenny, 1986).

The degree to which some of these cases are iatrogenic or simply misdiagnosed remains to be seen (Fahy, 1988). Certainly, MPD can be easy to confuse with schizophrenia (Rosenbaum, 1980), psychosis (Steingard & Frankel, 1985), and borderline personality (Gruenewald, 1977, 1978, 1984; Horevitz & Braun, 1984; Horowitz, 1977). Coons (1980, 1984) provides a good overview of many of the diagnostic issues. The availability of structured diagnostic interviews, discussed below, should ease this situation considerably. It is worth remembering that even in the heyday of MPD, with clinicians very alert to the possibility of new cases, very few were actually diagnosed: Even Janet and Prince described only four cases each (Taylor & Martin, 1944). And despite hundreds of referrals, Thigpen and Cleckley (1984) only saw one other case after Eve. Yet, at the same time, there have been enough well-documented cases since the "classic period" that MPD remains a viable, if perhaps rarely instantiated, diagnostic category.

Experimental Studies

Especially in view of the virtual avalanche of cases reported in both the professional and popular press since 1973, it is frankly shocking that so few cases have been subject to experimental analysis under controlled conditions. The precedent for this research is to be found in the work of Prince and Sidis themselves. Prince (1939) reported studies of perception, reasoning, free associations, and psychophysiological responses in the alter egos of a number of different cases of multiple personality, including "B. C. A." Similarly, Sidis (1902; Sidis & Goodhart, 1904) compared the performance of the alter egos of "Mr. Hanna" on a variety of psychological and psychophysiological tasks. Along with the studies of Jung on word associations and Kraepelin on continuous performance, this work constitutes the forerunner of current interest in experimental studies of psychological deficit by psychopathologists and neuropsychologists (Kihlstrom & McGlynn, 1991).

Most of this research consists of single-case studies, in which various research paradigms have been used to tap various aspects of personality and cognitive func-

tioning that might differentiate between the alter egos. In the first study of this kind, Osgood & Luria (1954; for a reanalysis, see Kroonenberg, 1985) performed a blind analysis of semantic differential protocols contributed by the initial three alter egos in the case of Eve (Thigpen & Cleckley, 1954). Not only were the impressions of the different personalities based on the semantic differential fairly accurate (compared against the clinical impressions), but Osgood and Luria were able to detect, in the ostensibly fused personality Jane, signs of further difficulties after treatment had been terminated. More than two decades later, the technique of blind analysis was repeated on a new case, Gina (whose alter egos were Mary and Evelyn, hence the title of the paper) by Osgood, Luria, Jeans, and Smith (1976). Again the blind analysis of the several personalities yielded a satisfactorily accurate reflection of the clinical picture.

Similar psychometric studies of single cases of MPD have been reported using the Rorschach technique (Battle, 1985; Danesino, Daniels, & McLaughlin, 1979; Lovitt & Lefkof, 1985; Wagner, 1978; Wagner, Allison, & Wagner, 1983; Wagner & Heise, 1974) or the MMPI (Bliss, 1984, 1986; Brandsma & Ludwig, 1974; Coons & Sterne, 1986; Larmore, Ludwig, & Cain, 1977; Solomon, 1983). One particularly interesting study (Lowenstein, Hamilton, Alagna, Reid, & deVries, 1987) employed experiential time sampling to document state changes in a woman vulnerable to extremely rapid alterations of personality.

Single-case studies using both experimental and psychometric methods have been somewhat rarer. The most salient example of this work is the case of Jonah, a man with four (perhaps five) alter egos, studied by Ludwig and his associates (Brandsma & Ludwig, 1974; Ludwig, Brandsma, Wilbur, Bendfeldt, & Jameson, 1972). Each of the four principal alter egos was administered a battery of personality and intelligence tests (including the MMPI, the Gough Adjective Check List, and the WAIS), a number of learning and memory tasks (including paired-associate learning and prose memory), conditioning, and psychophysiological recordings (including electrodermal responses, EEG, and event-related potentials). Similar studies have been performed by others, with a particular interest in the question of differential pattern of performance among alter egos on tests of learning and memory tests (Dick-Barnes, Nelson, & Aine, 1977; Nissen, Ross, Willingham, Mackenzie, & Schacter, 1988). Schacter *et al.* (1989) used the Crovitz-Robinson technique to study I. C., who had very extensive childhood amnesia;

although they were not able to study autobiographical memory in any of the alter egos, they did compare I. C. to the performance of a carefully matched control group. More detail on the findings of these studies with respect to memory will be found below.

A very recent development, reflecting the increased interest in biological processes in psychopathology generally, has been the use of psychophysiological and neurophysiological techniques with MPD patients (Braun, 1983b; Putnam, 1984). The use of these procedures in the case of Jonah (Ludwig *et al.*, 1972) has already been noted; other investigators have followed suit (Bahnson & Smith, 1975; Brende, 1984; Dick-Barnes *et al.*, 1987; Larmore *et al.*, 1977). Of special interest have been studies using various techniques of brain imaging, such as EEG frequency analysis (Cocores, Bender, & McBride, 1984; Coons, Milstein, & Marley, 1982), event-related potentials (Braun, 1983a; Coons *et al.*, 1982), and regional cerebral blood flow (Mathew, Jack, & West, 1985). Putnam (1984) has presented a preliminary report of a study of 11 MPD patients and 10 simulating controls that successfully distinguished the two groups on the basis of quantified evoked potentials: Genuine alter egos showed greater differences in amplitude and latency than simulated ones. And Braun (1983a) has reported two cases where there were significant differences between the evoked potentials during and after treatment.

A major contribution of the aforementioned studies is to confirm the clinical diagnosis of multiple personality, putting the impressions of the interviewer and therapist on a firmer, more objective basis. Occasionally, though, these single-case studies lead to testable hypotheses about the multiple personality syndrome in general. For example, Osgood *et al.* (1976) suggested that every case possesses a "real personality that is aware of all its roles" (p. 286). Similarly, Schacter *et al.* (1989) hypothesized that extensive childhood amnesia might be characteristic of MPD cases, and that in these cases the ostensibly "primary" personality might actually be an alter ego that emerged in childhood or later in life. Other research, specifically directed toward understanding the nature of the amnesia that is pathognomic of MPD, is discussed separately below.

However carefully performed single-case studies may be, the extent to which we can generalize from them to MPD in general is extremely limited. Accordingly, it seems important to begin to develop nomothetic studies of the psychological and physiological characteristics of representative samples of MPD pa-

tients in order to determine what they might have in common that distinguishes them from normals and other diagnostic groups. The attempt to develop Rorschach profiles characteristic of MPD patients is one contribution along these lines (Lovitt & Lefkof, 1985; Wagner, 1978; Wagner *et al.*, 1983; Wagner & Heise, 1974), although the decision rules currently offered are based on too few patients to be considered anything more than hypotheses. On the MMPI, MPD patients show high elevations on the *F* and *Sc* scales, and a high rate of endorsement of certain critical items (e.g., #156, "I have had periods in which I carried on activities without knowing later what I had been doing"; and #251, "I have had blank spells in which my activities were interrupted and I did not know what was going on around me"; Bliss, 1984, 1986; Coons & Sterne, 1986; Solomon, 1983). However, the MMPI does not contain enough items tapping dissociative experiences to yield a satisfactory dissociation scale analogous to *D* and *Sc* (Tellegen & Atkinson, 1974). A better questionnaire measure, the Dissociative Experiences Scale (DES) of Bernstein and Putnam (1986) is described below; scores on this scale successfully distinguish between MPD patients and such other groups as students and patients with alcoholism, anxiety disorder, and schizophrenia.

Somewhat surprisingly, there has been only one nomothetic study of amnesia in MPD (Silberman, Putnam, Weingartner, Braun, & Post, 1985). However, there have been a number of single-case experimental studies of memory in MPD, and these are discussed in a later section of this chapter.

Sociocultural Influences

Although most studies of MPD have focused on personality differences between alter egos or on cognitive processes underlying the interpersonality amnesia, other investigators have focused on the effects of the sociocultural context. To a great extent, this work has been influenced by a social-psychological view of mental disorders in general, which argues that mental illness is a myth (e.g., Braginsky, Braginsky, & Ring, 1969; Sarbin, 1964, 1968; Sarbin & Coe, 1979; Sarbin & Mancuso, 1980; Szasz, 1961, 1970). According to this view, the symptoms and syndromes covered by official diagnostic labels simply refer to counternormative or counterexpectational conduct that is presented or interpreted as signs of mental disorder. Rather than being construed as deliberate, strategic actions under the control of personal and social reinforcement con-

tingencies, the behaviors associated with mental illness are attributed to biological or psychological forces that are outside of the person's control, such as an unfortunate genetic endowment or unconscious conflicts. Thus, in the view of Szasz (1961, 1970), the hysterical patient feigns the symptoms of medical illness in order to escape responsibility for certain problems in living, or the diagnosis is imposed on the patient as a form of social control. In the view of Sarbin (1964, 1968; Sarbin & Coe, 1979; Sarbin & Mancuso, 1980), symptoms reflect the transformation of metaphors (e.g., "It is as if I cannot remember") into myths ("I cannot remember"), through which process the person adopts the socially defined and sanctioned role of mental patient.

Some of the most difficult aspects of the current MPD "epidemic" are the loosening of diagnostic criteria, the influence of popular culture (in the late nineteenth century, Stevenson's *Dr. Jekyll and Mr. Hyde*; in the late twentieth century, the cases of Eve and Sybil) on patient and therapist alike, the investment that some clinicians seem to have in the syndrome, and the recent proliferation of cases with extremely large numbers of alter egos. Another troublesome aspect is the apparently common practice of eliciting alter egos through hypnosis, instead of seeing them emerge spontaneously. That phenomena superficially resembling multiple personality can be elicited in hypnosis has long been known (Harriman, 1942a, b, 1943; Kampman, 1976; Leavitt, 1947). More recently, however, the diagnosis of MPD has come to be made on the basis of evidence elicited primarily or exclusively in hypnosis. This is troubling because the hypnotic interaction itself is highly suggestive. Thus, hypnosis affords an especially good opportunity to create alter egos out of whole cloth, and for their nature to be shaped by the hypnotist's suggestions and other cues and demands contained in the hypnotic situation (Sarbin & Coe, 1972; Spanos, 1986a).

This role of experimental demands in such procedures is clearly illustrated in a pair of simulation studies conducted by Spanos and his associates (Spanos, Weekes, & Bertrand, 1985; Spanos, Weekes, Menary, & Bertrand, 1986). Subjects were asked to take the role of an accused murderer, and each then participated in a one of three types of simulated psychiatric interview. In one of these conditions, subjects were hypnotized and interviewed in a manner resembling the procedures used to detect multiple personalities clinically, involving explicit suggestions that hidden "parts" of the person exist, and that these parts have names and histories that are not shared by the

normal part. Another group received a somewhat more open-ended hypnotic interview, while a third was not hypnotized. Subjects receiving the explicitly suggestive treatment were more likely to manifest symptoms of MPD, in both the interview and in subsequent psychological testing, than those who received the other treatments. Although these subjects were explicitly instructed to simulate an accused criminal, the results do point up the fact that diagnostic interviews often contain cues that clearly indicate the sorts of behaviors that are of interest to the clinician, opportunities to elicit them, and social reinforcements for their display.

Drawing on a social-psychological analysis of hypnotic phenomena (Spanos, 1986b), Spanos (1986a) has offered an interpretation of multiple personality (and, by extension, the other dissociative disorders as well; see Spanos & Gottlieb, 1979) as strategic social enactments in which an individual disavows responsibility for certain actions by attributing them some "indwelling entity, 'part,' or 'personality' other than the self" (p. 36). Just as people learn the hypnotic role and then enact it under appropriate conditions, so people can learn to enact the role of having multiple personalities—to create a social impression that is congruent with the diagnosis, and that fulfills certain interpersonal goals. Just as the hypnotist abets this process by giving suggestions as to how the subject should behave, so clinicians explicitly and implicitly shape the behavior of their patients by encouraging them to adopt the role in the first place, providing them information about how to do so convincingly (e.g., by displaying interpersonal amnesia), and then validating the performance by conferring a psychiatric diagnosis and offering a particular form of therapy. Thus, the multiple personality is not so much a "discovery" as a creation on the part of both patient and therapist. Even so, the benefits for achieving the diagnosis (relief from interpersonal distress, mitigation of criminal responsibility, control of others, permission for untoward behavior) may be so powerful as to lead patients to "become convinced by their own enactments and come to believe that they possess multiple selves" (Spanos, 1986a, p. 47).

The influence of interpersonal, cultural, and historical factors on multiple personality hardly can be denied, but it is also something of a puzzle. The fact that the diagnosis experienced a golden age, waned after 1920, and showed a resurgence of in the 1970s makes one wonder about the social conditions in which dissociative behaviors are expressed and corresponding diagnoses made. This point has been made most forcefully by Kenny (1981, 1986), who has provided an

ethnographic analysis of multiple personality and related conditions. Analyzing the classic cases of Mary Reynolds, Ansel Bourne, Miss Beauchamp, B. C. A., Eve, and Sybil, Kenny (1986) argues that MPD is a response to changing conditions in American culture. For example, Mary Reynolds's alter ego seems not so much an alternate to her normal state as a contradiction of it, a rebellion against her old self. Similarly, Ansel Bourne's fugue state is interpreted as a symbolic representation of his self-perceived status as a "changed man" following his religious conversion. Miss Beauchamp rebelled against the limitations imposed on women in turn-of-the-century America and was used as a vehicle for Morton Prince's campaign against Freudian psychoanalysis. Kenny (1986) does not argue that most, or even many, cases of MPD are fraudulent; he closes his book with an image of an intense and preoccupied Ansel Bourne "trying—and failing—to remember something important" (p. 188). Rather, his purpose is to understand how the definition and experience of self is shaped by the surrounding culture. There is no contradiction between accepting certain cases of dissociative disorder as genuine and understanding the sociocultural context in which they occur.

DEPERSONALIZATION AND DEREALIZATION

In addition to the gross disruptions of autobiographical memory and self-integration seen in psychogenic amnesia, fugue, and multiple personality, the dissociative disorders include the experience of depersonalization and derealization, a syndrome originally described by Krishaber (1872) and named by Dugas and Moultier (1911; for reviews, see Ackner, 1954a, b; Cattell, 1966; Cattell & Cattell, 1974; Mayer-Gross, 1935; Muller, 1972; Reed, 1979, 1988; Sedman, 1970; Shorvon, 1946; Weckowicz, 1970). As originally defined, depersonalization and derealization were thought to co-occur: persons experience both themselves as totally different, and the world as strange and new. Later, the disorders were construed as separated entities. Nemiah (1989) has suggested that derealization is the more general case, and depersonalization a limited form in which only the experience of self is changed.

A 22-year-old married woman experienced her first attack of depersonalization when, shortly after her father fell as a result of vertigo, her husband was injured in an auto accident. Upon opening the door for the police, she stood frozen to the spot, and numb; she heard the officer's voice as if from a distance, without any emotional response. The episode persisted for one year,

during which she felt separated from herself and detached from the world. She felt she was able to perform her ordinary activities only by sheer effort of will; and she suffered frequent lapses of consciousness signaled by *déjà vu* and a sinking feeling in her stomach. The episode was resolved, but she had a relapse after her father died suddenly of a heart attack (Roth & Harper, 1962).

Both depersonalization and derealization are frequently seen as symptoms of other syndromes, such as anxiety (Trueman, 1984a; Tucker, Harrow, & Quinlan, 1973), depression (Sedman & Reed, 1963), and obsession (Sedman & Reed, 1963; Shorvon, 1946; Torch, 1977). Of special interest here is the phobic anxiety-depersonalization syndrome, described by Roth (1959; see also Harper & Roth, 1962; Roth & Argyle, 1988; Roth & Harper, 1962). However, a careful epidemiological study has shown that depersonalization and derealization are nonspecific symptoms independent of other diagnoses (Fleiss, Gurland & Goldberg, 1975; see also Brauer, Harrow, & Tucker, 1970), and they occur with some frequency in the normal population as well (Dixon, 1963; Harper, 1969; Myers & Grant, 1970; Roberts, 1960; Sedman, 1966; Trueman, 1984b). Finally, depersonalization and derealization are salient components in the near-death experiences reported by those who have been rescued at the last moment from drownings, falls, and other kinds of accidents (Bates & Stanley, 1985; Noyes, Hoenk, Kuperman, & Slymen, 1977; Noyes & Kletti, 1976a,b, 1977; Noyes & Slymen, 1978–1979).

However, depersonalization and derealization also constitute psychopathological syndromes in their own right, and the present discussion focuses on their status as primary diagnoses. As such, the central feature of this syndrome is a subjective awareness or feeling of change in oneself (depersonalization) or the world (derealization). This often occurs suddenly, after awakening from sleep or after a frightening incident. The feeling puzzles the experimenter: The changed condition is perceived as unreal, and as discontinuous with his or her previous ego state. The object of the experience (i.e., self or world) is commonly described as isolated, lifeless, strange, and unfamiliar; oneself and others are perceived as automatons, behaving mechanically without initiative or self-control.

Although the feeling of depersonalization and derealization may be pleasant when self-induced by means of psychedelic drugs, in clinical cases it is unpleasant, even aversive: The victim often feels as if he or she were going insane, or dying. Throughout, however, the person retains insight into what is happening. He or she remains aware of the contradictions between

subjective experience and objective reality, it is only "as if" things were not real. Occasionally, the person will develop a delusional explanation about the experience (Kihlstrom & Hoyt, 1988), in which case both the puzzlement and the as-if quality will disappear. Finally, depersonalization and derealization usually involve diminished emotional responsivity—a loss of interest in the outside world, of feelings for other people, and of anxiety or depression (except, of course, that the person worries about his or her inability to have emotional experiences!).

Mayer-Gross (1935) noted that depersonalization and derealization may occur with a host of other symptoms, including *déjà vu* (in which the sense of having been in a place before coexists with the knowledge that this is not the case) and *jamais vu* (in which a situation is experienced as unfamiliar, despite the person's knowledge that it has been experienced many times before). Also, distortions of sensation and perception, changes in the experience of personal time, heightened memory for the personal past, and changes in body image are commonly experienced. In its totality, then, the experience of depersonalization is one of strangeness in oneself, in others, and in one's relation to them. Viewed from the perspective of cognitive psychology, these syndromes represent failures of recognition, an inability to match current experience with past memories, something like what happens when one enters a familiar room whose furniture or paint scheme has been changed (Reed, 1979, 1988). Especially important here is the disruption of self-reference, which seems so crucial to the experience of recognition (Kihlstrom, 1985; Kihlstrom & Tobias, 1991).

DIAGNOSIS AND ASSESSMENT OF DISSOCIATION

The actual incidence and prevalence of the dissociative disorders are hard to estimate. Bliss and Jepps (1985), based on questionnaires and interviews with a consecutive sample, estimated that 10% of acute psychiatric inpatients qualified for a diagnosis of MPD; based on an analysis of randomly selected records, they came to the same estimate for psychiatric outpatients (for commentary on this study, see Bliss, 1985; Chodoff, 1987; O. French, 1987; Kluft, 1986b, 1987a; Ludolph, 1985). Unfortunately, MPD and the other dissociative disorders have been left out of the massive Epidemiological Catchment Area survey currently in

progress (e.g., Regier *et al.*, 1984), presumably because appropriate diagnostic criteria were not provided by the assessment instruments available at the time (e.g., the Schedule for Affective Disorders and Schizophrenia, Research Diagnostic Criteria, Renard Diagnostic Interview, Present State Examination, or Diagnostic Interview Schedule).

This situation has now been corrected. Several investigators have now developed questionnaire surveys of dissociative experiences that can be conveniently administered to large samples. These include the DES (Bernstein & Putnam, 1986; see also Ross, Norton, & Anderson, 1988), the Perceptual Alterations Scale (PAS; Sanders, 1986), and the Questionnaire of Experiences of Dissociation (QED; Riley, 1988). Scores on the DES and PAS correlate very highly with each other, at least in the college student population (Nadon, Hoyt, Register, & Kihlstrom, 1991), although the PAS has items relating to eating disorders that are not clearly related to the usual definition of dissociation. None of these instruments yields a psychiatric diagnosis, but they offer great promise as screening tools, locating high-scoring subjects who might qualify for a formal diagnosis of dissociative disorder or might be at risk for such a disorder in the future.

With respect to diagnosis itself, Ross (1990; Ross, Heber, Norton, & Anderson, 1989) and his associates have developed a Dissociative Disorders Interview Schedule (DDIS) intended to yield diagnoses of psychogenic amnesia, fugue, MPD, and depersonalization disorder according to both DSM-III and NIMH criteria. Along the same lines, Steinberg, Rounsaville, and Cicchetti (1990) have produced a version of the Structured Clinical Interview for DSM-III-R (SCID; Spitzer, Williams & Gibbon, 1987) that diagnoses these same syndromes (SCID-D). Both instruments show extremely high degrees of interrater reliability.

Coupled with the use of questionnaires for preliminary screening, these standardized diagnostic instruments will finally give us the necessary information about the prevalence of dissociative disorders among psychiatric patients and in the population at large. As an example of what can be done, Ryan (cited in Ross, 1990) administered the DES to a large group of college students, identifying groups of high and low scorers who subsequently received the DDIS. On the basis of this interview, Ross (1990) has estimated the prevalence of MPD in the college population at 2% to 5%. If amnesia is added to the diagnostic criteria, as proposed for DSM-IV, this value will certainly decrease considerably.

FORENSIC ASPECTS OF DISSOCIATIVE DISORDERS

In addition to being a puzzle for clinicians and experimentalists, the dissociative disorders have created substantial difficulties for the legal system. A victim who cannot remember the circumstances of a crime cannot offer valuable testimony that might lead to a conviction, while amnesic defendants cannot assist in their own defense. Moreover, the presence of amnesia for a criminal act may suggest that the crime was committed in an altered state of consciousness in which normal processes of monitoring and control were inoperative, thus potentially qualifying the defendant for the insanity defense (Bliss & Larson, 1985). Unfortunately, the diagnosis of dissociative disorder is difficult to substantiate (Cleary, 1985; Howe, 1984)—even the structured clinical interviews are susceptible to faking—and there is no way to tell for sure whether a particular suspect's claim of amnesia is genuine or simulated (Schacter, 1986a, b). Moreover, it has proved difficult to refresh the memories of amnesic victims and witnesses by means of hypnosis and other techniques (for reviews, see Council on Scientific Affairs, 1985; Kihlstrom & Barnhardt, 1991; Laurence & Perry, 1988; Orne, 1979b; Orne, Soskis, Dinges, & Orne, 1984; Orne, Whitehouse, Dinges, & Orne, 1988).

Schacter (1986a, b), reviewing the available literature on amnesia and crime, found that between 23% and 65% of persons charged with or convicted of homicide (but substantially smaller proportion of persons involved in other cases of violent crimes) claim to be unable to remember details of the crime. This amnesia is most commonly limited to the crime itself and rarely extends to a complete retrograde amnesia. Very often, alcohol or drugs are involved, in which case the amnesia can be accounted for by the effects of intoxication on brain function and cognitive processing (i.e., true blackout). However, in other cases, the crime is committed in a state of extreme emotional arousal, raising the question of psychogenic amnesia (Bower, 1981; Christianson, 1991; Christianson & Nilsson, 1984; Loftus & Burns, 1982). Obviously, the same kind of emotional arousal can affect memories in victims and witnesses as well as perpetrators.

The legal problems associated with MPD are especially severe (Abrams, 1983; A. P. French & Shechmeister, 1983). There have been a number of such cases reported since 1981 (Allison, 1981, 1982–1983, 1985), the most famous of these cases are those of Billy

Milligan (*State v. Milligan*, No. 77-CR-11–2908, Franklin County, Ohio, December 4, 1978) and Kenneth Bianchi (*State v. Bianchi*, No. 79–10116, Washington Superior Court, October 19, 1979).

In 1978, Milligan was tried on charges of kidnap, robbery, and rape in Columbus, Ohio. He was diagnosed as a multiple personality with 10 (later raised to 24) alter egos and found not guilty by reason of insanity (Keys, 1981). After inpatient treatment and apparent fusion of his personalities, Milligan was released, established a child-abuse prevention agency, worked as a farmer, and developed a career as an artist.

Kenneth Bianchi was charged along with his cousin in the 10 “Hillside Strangler” rape-murders in Los Angeles, and alone in two similar cases in Bellingham, Washington. His case has been unusually well documented, being the subject of a series of journal articles by the opposing expert witnesses in the case (Allison, 1984; Orne, Dinges, & Orne, 1984; Watkins, 1984) and a 2-hour documentary, “The Mind of a Murderer,” broadcast on public television in 1984. According to his defense, the crimes were perpetrated by an alter ego, “Steve Walker,” a claim that was supported by evidence of high hypnotizability. However, the claim was undercut by other evidence suggesting that Bianchi had simulated hypnosis, and especially by inconsistencies in the self-presentation of the alter egos, psychological test evidence, and the lack of independent corroboration of the alter egos by people who knew him before he was arrested. Bianchi also had a great deal of background psychological knowledge and had practiced psychotherapy under a false name and faked credentials (at one point in the proceedings, he claimed that this was the work of a third alter ego, named “Billy”). Bianchi was convicted of eight counts of murder in the Hillside Strangler cases. He subsequently offered to testify against his cousin, who was also convicted.*

*These cases continue to build up. In late 1990, Arthur Shawcross was tried in Rochester, New York, for the murder of 11 women (he had previously been convicted of two child murders, served time in prison, and been released). Shawcross confessed to the murders, but claimed multiple personality disorder as part of an insanity defense. While hypnotized on the witness stand, Shawcross produced a reincarnation of a thirteenth-century English cannibal (sic) who, he said, taught him to eat flesh; and the voice of his mother, who, he claimed, controlled him during the murders. The insanity plea was rejected, and he was convicted.

A new development is seen in the case of Mark Peterson, who was tried in Oshkosh, Wisconsin, on charges of sexual assault

ETIOLOGY OF THE DISSOCIATIVE DISORDERS

Stress, whether acute or chronic, is an extremely prominent feature in the dissociative disorders—so much so that they are sometimes considered forms of post-traumatic stress disorder (PTSD; e.g., Putnam, 1985; Spiegel, 1984). The occurrence of depersonalization in response to life-threatening danger, and of psychogenic amnesia and fugue in victims of crime and disaster, has already been noted. Further evidence in this regard comes from the frequency with which amnesia and fugue are seen in cases of “war neurosis” (Archibald & Tuddenham, 1965; Grinker & Spiegel, 1943; Henderson & Moore, 1944; Watkins, 1949). For example, Sargent and Slater (1941), in an analysis of psychiatric casualties in soldiers, noted that amnesia occurred in approximately 35% of those who had come under severe stress (e.g., prolonged marching, heavy fire), 13% of those who had experienced only episodic stress (e.g., periodic bombing), and 6% of those who were not directly exposed to combat.

Along these lines, many authorities have noted an apparently strong relationship between MPD and a history of childhood physical and sexual abuse (Bliss, 1986; Coons, 1986a; Kluff, 1985a; Putnam, 1989; Ross, 1990; Saltman & Solomon, 1982; Wilbur, 1984, 1985). Perhaps the best evidence in this regard comes from a comprehensive analysis of 100 cases conducted by Putnam *et al.* (1986). Of these cases, fully 86% presented a history of sexual abuse, 75% reported repeated physical abuse (68% reported both kinds of abuse), and 45% had witnessed a violent death during childhood, whereas only 3% had no history of significant childhood trauma. At the same time, it should be noted that this data is based on a retrospective survey of a sample of patients (and clinicians) whose representativeness of the population of MPD is unknown. The definition of childhood trauma was very broad, including extreme neglect and poverty as well as sexual and physical abuse, and there was no quantification of the number of traumatic episodes, their severity, or their duration; nor were these histories necessarily subject to

independent verification. More important, the extent to which these reports may be biased by the patients' or clinicians' own intuitive theories of MPD is unknown: Those who seek evidence of abuse and other trauma in childhood are quite likely to find it.

Even more crucially, no study of the etiology of MPD (or any other dissociative disorder, for that matter) has included a comparison group of non-MPD patients. For this reason, we do not know whether the occurrence of severe childhood trauma is any greater among adult MPD patients than, for example, schizophrenics or depressives. Finally, there is no prospective study of adult outcomes in children who are presumably at risk for MPD by virtue of identified childhood abuse. For this reason, we do not know whether abused children are more likely to manifest MPD or other dissociative disorders as adults, compared to other syndromes.

Although it is impossible to ignore the incidence of stress in the lives of patients with dissociative disorders and the possible role of trauma in the etiology of these syndromes, a detailed description of the relationship and its underlying mechanisms is not yet available. Even if all adult MPD patients have histories of severe childhood abuse, trauma, and deprivation, it is clear that not all abused, traumatized, and deprived children grow into adults with MPD. What leads some people, but not others, to dissociate in response to stress? Bliss (1984, 1986) has found that both confirmed and possible MPD patients show relatively high levels of hypnotizability, compared to both the normal population and other psychiatric patients; this finding has been confirmed by others (e.g., Spiegel, 1984). Interestingly, the same pattern of high hypnotizability is shown by Vietnam veterans with PTSD (Spiegel, Hunt, & Dondershine, 1987; Stutman & Bliss, 1985) and conversion disorder (Bliss, 1986). Thus, hypnotizability—or some correlate thereof, such as absorption (Roche & McConkey, 1990; Tellegen & Atkinson, 1974)—may be a predisposing factor in MPD and other dissociative disorders.

Braun and Sachs (1985) and Putnam (1989) have proposed models for the origins of MPD that fairly represent current theorizing. According to Braun and Sachs (1985), an innate dissociative capacity (see Ludwig, 1983), above average levels of intelligence and creativity, and a history of abuse constitute predisposing factors. At some point, a particularly traumatic episode of abuse leads the child to dissociate in an attempt to defend himself or herself. Although the process could stop there (presumably leading to psy-

on an MPD patient (who herself claimed 21 personalities). Apparently, when Peterson propositioned the victim, one alter ego gave consent, another watched the tryst, and another went to the police. As part of his defense, Peterson claimed that he did not know the woman's patient status, a claim the prosecution disputed. In the end, Peterson was convicted under a law that makes intercourse with a mental patient (regardless of diagnosis) a crime analogous to statutory rape.

chogenic amnesia or fugue), a series of related episodes of trauma may lead to the formation of an alternate personality. This new personality or alternate self may then be perpetuated, perhaps through the reinforcing value of successful defensive dissociation, or perhaps through observational learning. Interestingly, Braun (1985) has reported clinical evidence of a high rate of dissociative disorder in the family histories of MPD patients, while a clinical study by Kluft (1987b) indicates that the majority of mothers with MPD are impaired as parents or grossly abusive.

According to Putnam (1989), people possess innate tendencies toward multiple personality, despite which they succeed in consolidating an integrated sense of self over the normal course of development. Moreover, he assumes that children have a relatively strong propensities toward both fantasy and dissociation (see also Lynn, Rhue, & Green, 1988). Trauma, especially when severe and sustained, disrupts the normal development of the self and leads the child to dissociate defensively as an attempt to escape reality, isolate traumatic memories from conscious awareness, and alter the sense of self. Thereafter, the child may draw on his or her capacity for fantasy and imagery to endow the dissociated state (or self) with a physical and psychological identity—thus producing, in effect, an alternate personality. Over time, this new identity may become highly elaborated and alternate with the primary self as the integrator of experience, thought, and action. Interestingly, Putnam *et al.* (1986) have noted that the number of alter egos manifested by a patient is highly correlated with the number of different kinds of trauma suffered, as if different identities were elaborated in response to different circumstantial demands.

The ostensible role of early abuse, trauma, and deprivation leads to the question of whether MPD can occur in children as well as adults. Apparently this is the case: Despina's patient, Estelle, was only 11 years old. Fagan and McMahon (1984), Kluft (1984a), and Vincent and Pickering (1988) have reported several cases each of MPD in children and younger adolescents. Based on his experience with five cases, Kluft (1985b) has suggested a number of symptoms (e.g., intermittent depression, trancelike behaviors, and the disavowal of witnessed behavior, especially if polarized) that may be useful in detecting MPD in children. Interestingly, none of his cases had a currently active imaginary playmate; perhaps in MPD, this companion is created inside (rather than projected outside) the self. Coons (1986b) has suggested that MPD may be easier to treat in children than in adults.

The possibility of conducting a prospective study of MPD and other dissociative disorders is raised by Bernstein and Putnam (1986), who have developed the DES, a 28-item self-report instrument. These investigators found that MPD patients (and to a lesser extent, veterans with PTSD), score high on the DES; this finding has also been confirmed by others (Ross, Norton, & Anderson, 1988). Although the available evidence indicates that DES correlates only weakly with hypnotizability, there is a substantial correlation between DES and absorption as measured by the Tellegen Absorption Scale (Nadon *et al.*, 1991) and a significant correlation between absorption and hypnotizability (for a review, see Glisky, Tataryn, Tobias, Kihlstrom, & McConkey, 1991). Taken together, these results suggest that some dimension of personality tapped by the common thread running through hypnotizability, absorption, and everyday dissociative experiences may well serve as a diathesis factor that renders subjects vulnerable to pathological dissociation under stress. Of course, this hypothesis remains to be tested.

THE RETURN OF THE DISSOCIATED: IMPLICIT MEMORY IN THE DISSOCIATIVE DISORDERS

Although the dissociative syndromes are defined in DSM-III-R as disorders of identity and the integration of self, they are also fundamentally disorders of memory. In each case, what has been dissociated from conscious awareness is part or all of the patient's record of experience, or autobiographical memory. Nevertheless, there is evidence that these memories may continue to exert an influence, outside of awareness, on the patient's ongoing experience, thought, and action. Consider, for example, the case of Madame D., reported by Janet (1904). This 34-year-old married woman was brought to the Salpêtrière in late 1891 in a highly anxious state. On August 31 of that year, she began to display a retrograde amnesia extending from July 14 of that year (Bastille Day), as well as an anterograde amnesia for events occurring after August. It has been suggested that the onset of the illness was a practical joke in which a man informed her that her husband was dead. She had no conscious recollection of the event; however, during the period of the illness she dreamt about the episode at night (without recognizing its connection to her personal experience) and froze with terror every time she passed the front door of her home. These effects on both nocturnal and waking

behavior may be interpreted as expressions of "memory without awareness" (Eich, 1984; Jacoby & Dallas, 1981) or "implicit memory" (Schacter, 1987).

Contemporary theory and research in cognitive psychology tend to distinguish between two fundamental types of knowledge stored in memory: declarative and procedural (e.g., Anderson, 1983; Winograd, 1975). *Declarative* knowledge consists of the individual's fund of general knowledge beliefs concerning the nature of the world and specific memories of events that have occurred in his or her personal experience; *procedural* knowledge consists of the skills, strategies, and rules with which the person manipulates and transforms declarative knowledge in order to acquire and use this knowledge in judgment, decision-making, and problem-solving.

Within the domain of declarative knowledge, it is common to distinguish further between semantic and episodic memory (Tulving, 1983). *Semantic* memory comprises a mental lexicon of abstract, categorical information, somewhat along the lines of a dictionary or encyclopedia. *Episodic* memory consists of the individual's autobiographical memory of personal experiences, encoded with respect to the spatiotemporal context in which the events occurred, as well as the self as the agent or experiencer of the event (Kihlstrom, 1985, 1987, 1990).

Finally, episodic memory may be expressed in two forms, explicit and implicit (Richardson-Klavehn & Bjork, 1988; Schacter, 1987). *Explicit* memory refers to the person's conscious, intentional recollection of some previous episode, most commonly reflected in recall and recognition. However, there is more to memory than what the individual can bring to awareness. *Implicit* memory, or memory without awareness, may be demonstrated by any change in behavior that is attributable to some prior episode of experience but cannot be accounted for by explicit memory for that event. In general, explicit memory tasks make a clear reference to some prior episode and ask the subject to remember the experience deliberately; by contrast, implicit memory tasks do not refer to prior episodes and do not require the subject to remember any experiences at all.

Typically, implicit memory is revealed by tasks that do not make reference to the person's prior personal history or require conscious or intentional recollection of those experiences. In any event, a wide variety of clinical and experimental studies indicate that explicit and implicit memory are dissociable, in the technical sense that explicit memory may be seriously impaired while implicit memory is relatively spared. Thus,

Janet's Madame D. had no explicit memory of the practical joke, but her memory for the event implicitly affected her in a number of different ways. Such dissociations should be commonplace in the dissociative disorders. After all, the central symptoms uniting these syndromes are disruptions in autobiographical memory and identity. Accordingly, we should expect to observe a selective impairment in memory functions in these syndromes: Episodic memory, and especially explicit expressions of episodic memory, should be grossly impaired; procedural knowledge and semantic memory, and implicit expressions of episodic memory, should be relatively spared.

Although the evidence bearing on this hypothesis is sparse and mixed, the taxonomy of knowledge structures outline above seems to do a fairly good job of organizing what is known about memory impairments in the dissociative disorders (for more complete reviews, see Kihlstrom & Schacter, 1991; Schacter & Kihlstrom, 1989). Thus, for example, a loss of autobiographical memory is pathognomic of psychogenic amnesia. Yet, most patients suffering psychogenic amnesia retain their normal repertoire of procedural knowledge and fund of semantic memory. Madame D. acknowledged that she had a husband and children; she simply did not remember that she had recently visited her children's school, or that her husband had recently brought her to Paris. She still knew how to speak French, and how to practice her trade as a seamstress. Sirhan Sirhan denied—and continues to deny—killing Kennedy, but he knew who Kennedy was, and he deeply resented both Israeli treatment of Palestinians and Kennedy's apparent tolerance of Israeli policy. Patient S. lost 16 years of her life; nonetheless, she recognized family members, friends, and public figures.

A similar pattern can be seen in psychogenic fugue. These patients forget who their are and the events in their lives, but their amnesia rarely covers other sorts of knowledge. James's (1890) case of Ansel Bourne, who migrated from Rhode Island to Pennsylvania and assumed the name of A. J. Brown, began life as a devout Baptist, became an atheist, and had a religious conversion experience during middle age and was a faithful churchgoer in his second identity (see also Kenny, 1986). More recently, in a case studied by Gudjonsson (1979; Gudjonsson & Howard, 1982), a woman who had been suicidal before her amnesia seemed preoccupied by death in her responses to the Rorschach technique. Schacter *et al.* (1982) studied a single patient, P. N., who realized that he had no knowledge of

his identity or past life when he presented at a hospital with complaints of severe back pain. In an experiment in which he was presented with common words and asked to recall a conceptually related personal experience, P. N.'s responses were almost exclusively confined to the 4 days since his hospitalization (after recovery from the fugue, a retest yielded a preponderance of memories from the period before his hospitalization). Nevertheless, during his fugue state, P. N. had no difficulty identifying pictures of people who were famous during his lifetime (and there was no improvement after his fugue remitted). Thus, both cases show a gross impairment of episodic memory, but essentially intact procedural and semantic memory.

In addition, there is some evidence for a dissociation between explicit and implicit expressions of episodic memory in these patients. Madame D.'s dreams and hysterical symptoms were clearly representations of an unremembered traumatic event. A. J. Brown, giving testimony in a Pennsylvania church, referred to the religious conversion experience that had occurred to him when he was Ansel Bourne; note, too, the similarity in form of the two names. More recently, Kaszniak *et al.* (1988) studied a patient who developed a fugue after an incident of homosexual rape. Although this patient had no conscious recollection of what had happened to him, he became severely distressed when showed a card from the Thematic Apperception Test that can be interpreted as one person attacking another from behind. Christianson and Nilsson (1984), studying a case of amnesia following heterosexual rape, found that the woman became extremely upset when she returned to the scene of the crime, even though she did not remember what had happened there. There is no reason to think that these individuals would have shown these reactions had their traumas not occurred. Therefore, the behaviors themselves may be interpreted as expressions of implicit memory for the events in question.

Fugue patients can show some implicit memory for their identities as well. Gudjonsson's (1979; Gudjonsson & Haward, 1985) case showed differential electrodermal responses to some (but not all) personally relevant stimuli, although she failed to recognize them consciously. P. N., studied by Schacter *et al.* (1982), answered to the nickname "Lumberjack," which had been bestowed on him long before the onset of the fugue, during a period covered by his amnesia. Another patient was asked to dial a telephone number at random: She unknowingly connected with her mother, who provided an identification (Lyon, 1985).

With respect to multiple personality, the pattern of effects on memory function is not precisely clear. As noted, the diagnosis of MPD is occasionally supported by observations of shifts in language, handedness, and other functions that have the character of procedural knowledge. And individuals sometimes lose their fund of semantic world knowledge as well. Finally, some multiple personalities show shifts in gender identity and role, and erotosexual orientation, that come closer to what is meant by semantic knowledge about the self than autobiographical memory. For example, following her first shift to her alter ego, Mary Reynolds' mind was described as a *tabula rasa*, so that she babbled like an infant and failed to recognize objects and people that previously had been known to her. At the same time, it was noted that she reacquired these skills and other knowledge very quickly, a sort of savings in relearning that is one of the expressions of implicit memory (Nelson, 1978). Moreover, the most striking feature of her case—and of all rigorously diagnosed cases of MPD that followed her—was the amnesic barrier separating the episodic memories of her two personalities.

Recent single-case experimental studies of interpersonality transfer of learning and memory in MPD suggest that the distinction between explicit and implicit memory may be highly relevant. The first indication of explicit-implicit dissociations in MPD emerged in the study of Jonah by Ludwig *et al.* (1972). Jonah was completely unaware of his three other alter egos (Sammy, Usoffa Abdulla, and King Young), whereas they were aware of him and had complete access to his memories, thoughts, and feelings; Sammy, Usoffa, and King Young were aware of each other's presence, but had little knowledge of their memories, thoughts, and feelings. Studies of verbal learning, classical conditioning, transfer of training, and "learning to learn" were performed to document the pattern of amnesia apparent on clinical examination and anamnesis, with interesting results. For example, Jonah could not recall paired associates learned by the other personalities; and while the others could recall items learned by Jonah, they could not recall items learned by each other. This result reflects the pattern of asymmetrical amnesia among the personalities. Similarly, on a test of electrodermal responses to emotionally laden words, each alter ego responded to words selected to be personally relevant to it, and also to Jonah's words; however, the alter egos generally did not respond to each other's words. This result reflects the pattern of awareness of the various personalities with respect to each other's thoughts and feelings.

However, rather different patterns of performance were obtained on other tasks. For example, when one alter ego was asked to learn (rather than remember) a list of paired associates initially mastered by another, each showed considerable savings. Thus, there was transfer of information between personalities on the paired-associate learning test, but not on the paired-associate recall test. Similar evidence of transfer of learning was obtained on tests involving the block-design subtest of the WAIS and the logical-memory subtest of the Wechsler Memory Scale. Although in these cases knowledge generally did not transfer to Jonah from the other personalities, somewhat different results were obtained on a classical fear-conditioning procedure. Here, conditioned responses established with a shock as unconditioned stimulus generalized widely among the personalities, especially Jonah, Sammy, and King Young.

Ludwig *et al.* (1972) suggested that affectively charged material was transferred from Jonah to the others but not the reverse, while nonemotional material was transferred among all the personalities. However, their classification of procedures as emotional or non-emotional has an ad hoc quality to it (Schacter & Kihlstrom, 1989); for example, the shock-conditioning procedure showed good generalization across personalities. On the other hand, these results do have some of the flavor of the distinction between explicit and implicit memory. The task showing the clearest pattern of interpersonality amnesia was cued recall of paired associates, where one alter ego was asked to remember items learned by another. The other tasks did not involve explicit memory: Each personality was given something to learn, or a set of test probes, without any reference to episodes experiences by some other personality. Nevertheless, performance on these tasks was often influenced by these experiences, which is what implicit memory is all about. Accordingly, on the basis of the study by Ludwig *et al.*, the conclusion might be that interpersonality amnesia affects explicit more than implicit memory; or, put another way, that implicit (but not explicit) memory transfers across personalities.

This hypothesized dissociation between explicit and implicit memory is supported by subsequent research. Dick-Barnes *et al.* (1987) tested three alter egos of a single patient on paired-associate and pursuit-rotor learning, neither of which were affectively charged, and both of which showed interpersonality transfer. The pursuit-rotor task clearly classifies as implicit. Unfortunately, the precise procedure employed in the paired-associate learning test is not specified: If one

personality was asked to respond to the associate learned by another, it would be an explicit task; but if each personality were simply asked to give the first word that came to mind, it would be an implicit task.

The distinction between explicit and implicit memory is also somewhat blurred in a study by Silberman *et al.* (1985) involving nine patients currently receiving psychotherapy for MPD. Each patient studied four matched word lists. Two of these were presented to different alter egos separated by a symmetrical amnesia (the dissociative condition), while the other two were presented to the same ego state (nondissociative condition). Another 10 normal control subjects were asked to simulate multiple personality. Each alter ego was tested for all lists by means of free recall and recognition; they were also asked to indicate from which list each item came. The hypothesis was that the interpersonality amnesia would reduce proactive and retroactive interference, and thus improve memory for the dissociative condition; moreover, presentation of lists to two different alter egos should have improved performance on the list-discrimination test. However, recall and recognition were actually worse in the dissociative than the nondissociative condition. An interesting observation was that each alter ego attributed all of the items that it recalled or recognized to itself, regardless of which personality had actually studied the items. Accordingly, list discrimination was rather poor: Items from one list were remembered as having been presented on another.

Though the inability to discriminate different personalities' lists from each other may be counted as a failure of explicit memory, the occurrence of interference effects and intrusion errors may be construed as expressions of implicit memory. Thus, while MPD patients did not show the superior memory and list discrimination that had been hypothesized, they did give some evidence of a dissociation between explicit and implicit memory. Interestingly, the normal control subjects in the Silberman *et al.* (1985) experiment were able to simulate the performance of the MPD patients fairly well. However, the failure to find differences between patients and simulators does not imply that the patients were responding to the demand characteristics of the experimental situation by simulating amnesia (Orne, 1979a). Rather, it may simply mean that the simulators successfully intuited how genuine MPD patients would perform on such tasks.

Although the previous experiments yielded results reminiscent of the explicit-implicit distinction, none were designed with it in mind. Most recently, Nissen *et*

al. (1988) performed a careful comparison between explicit and implicit memory in a single MPD patient with 22 different alter egos. On each test, items were presented to one alter ego, and memory for these items was tested in another; a total of eight personalities, each separated from the others by an amnesic boundary, were tested in the experiment. On two tests of explicit memory, cued recall and yes-no recognition, each ego state showed a dense amnesia for items presented to the others. For example, "Bonnie" failed to recognize any of the items that "Alice" had seen. However, five other tasks (involving four-alternative forced-choice recognition, repetition priming in perceptual identification and in word-fragment completion, sequence learning in serial reaction time, and proactive interference) showed some evidence of implicit memory. Thus, when asked to complete word fragments (e.g., A--A--IN) with a meaningful word, Bonnie was more successful with items previously studied by Alice than with entirely new items.

Unfortunately, four other tasks (involving story recall, repetition priming of stem completion, and interpretation of ambiguous texts and sentences) showed no evidence that implicit memory transferred between alter egos. Moreover, on some tasks there was less implicit memory between alter egos than within a single personality, indicating that even implicit memory sometimes failed to cross the amnesic barrier. Thus, although it would be tempting to conclude that implicit memory transfers across ego-state boundaries while explicit memory does not, the actual pattern of results is somewhat more complex than this. This is clearly an area that requires further research.

TREATMENT OF DISSOCIATIVE DISORDERS

Other than multiple personality, little has been written about the treatment of the dissociative disorders (APA, 1989; W. H. Reid, 1989). Apparently, most cases of psychogenic amnesia and fugue resolve themselves spontaneously. Sometimes, the patient recovers his or her memories and identity unaided (Parfitt & Gall, 1944). In other cases, this process is prompted by contact with family and friends, or by hints generated through free associations or dream reports. In many cases, recovery is stimulated by the induction of hypnosis (Garver, Fuselier, & Booth, 1981; MacHovec, 1981) or sedation by means of intravenous barbiturates such as thiopental (Ruedrich, Chu, & Wadle, 1985). In

the latter instances, there is a concern that the critical memories may be state dependent, meaning that they are only accessible in the state in which they were recovered. Accordingly, therapists often suggest to the patient that the memories recovered will remain accessible after hypnosis has been terminated or the drug has worn off.

The apparent preservation of implicit memory in the functional amnesias, discussed above, suggests that certain tasks may be very useful in suggesting leads to the amnesic patient's identity or history. For example, the patient might be asked to report the first man's or woman's name that comes to mind; to dial a telephone "at random," or to identify which of a list of states or cities "rings a bell." The patient's responses to such requests may well be influenced by implicit memory for information rendered inaccessible by the amnesic state. Practitioners are warned, however, that this suggestion and the others have only the status of clinical lore and common sense, insofar as no systematic empirical literature supports them.

Whatever specific techniques are used, the focus in the treatment of psychogenic amnesia and fugue is on the recovery of memory, which is often achieved with hypnosis (or perhaps amytal/barbiturate interview) with good success. A gentle, supportive therapeutic environment is generally recommended, with respect for the defensive purpose of the amnesia. Thus, whatever memories are recalled during the interview, it is suggested that the patient may then choose to remember only as much as he or she wishes to remember, and that the rest will return to memory only when he or she is ready to remember it. Exploration of psychodynamic conflicts and strengthening of other defenses are typically recommended to prevent relapse, but overdependence upon the therapeutic relationship is discouraged.

Depersonalization symptoms are typically intermittent, but because episodes are often associated with acute mood disorder, drug treatment for anxiety and/or depression is often recommended. Presumably, benzodiazepines and other psychoactive drugs act on the anxiety and depression in which depersonalization and derealization occur, rather than on the feelings of unreality directly. Directive psychotherapy has also proved useful in cases of depersonalization (Blue, 1979).

The traditional approach to the treatment of multiple personality disorder, initially popularized by Thigpen and Cleckley (1957), involves psychodynamic uncovering, abreaction, and working through of the trauma and other conflictual issues presumed to underlie the disorder, followed by an attempt at integrating the

personalities into a single identity (for extended discussion, see the contributions collected in Braun, 1986). The cooperation of each personality is required, entailing considerable effort directed toward developing therapeutic alliances. Hypnosis is often used, both for communicating with the personalities and for the integration, which is sometimes performed almost as a ceremony. Of course, psychotherapy does not necessarily stop with fusion: There may be additional work to be done in order to work through the insights achieved earlier in therapy, to support the new fusion among the alter egos, and cope with the changes produced by integration.

Although the focus of insight-oriented, psychodynamic therapy is on the individual, family interventions may be necessary to disrupt a pattern of continuing abuse and to help spouses, parents, and children understand the disorder. In cases where childhood physical or sexual abuse is implicated, support groups may be very valuable. Group therapy—especially groups where all the patients have multiple personalities—can provide a setting where patients can share their experiences and learn coping strategies from others who are similarly afflicted. Adjunctive medication may be useful, although there are some indications that the various alter egos may respond differentially to any particular drug regime.

Even though the modal therapy for MPD is insight-oriented, there have been occasional attempts at cognitive-behavioral treatments. Price and Hess (1979) reported on a case of dual personality, one (“L.”) somewhat passive, the other (“Toni”) overtly aggressive. Toni disappeared when L. was taught to behave angrily by means of conventional role-playing and assertion-training techniques. Similarly, Caddy (1985) performed a functional analysis of the actions and emotions displayed by each alter ego, and then achieved integration without abreaction or ceremony by leading each to the realization that it was only a facet of a whole person. Finally, Kirsch and Barton (1988) employed a variant of the behavioral technique of successive approximation to facilitate fusion of two alter egos.

Cognitive-behavioral techniques are not discussed by most writers on treatment (Bliss, 1986; Braun, 1986; Putnam, 1989) and are essentially dismissed by Ross (1990) in favor of insight-oriented, psychodynamic approaches. Nevertheless, the point remains that in many cases the various alter egos seem to reflect the context-specific nature of personality and the self (Cantor & Kihlstrom, 1987; Kihlstrom & Cantor, 1984), and each alter ego seems to have skills that the

others need for truly effective personal and social functioning. And even after psychodynamic insight has been achieved, the person must acquire the social knowledge and skills that are needed to cope with the past and literally put his or her life together. Accordingly, once mutual awareness has been achieved among the various alter egos, it would seem that the cognitive-behavioral approach would have much to offer the treatment of MPD and should be more extensively employed.

Regardless of treatment approach, there appears to be general consensus that the syndrome presents a number of specific challenges to treatment (Reid, 1989). However, individual clinicians vary in the degree to which they recognize and address these problems in individual cases. They are as follows:

1. *Secondary Gain* (for the patient, and for the therapist). The therapist's interest in this rare and exotic disorder may be a source of gratification for the patient. If the therapist communicates interest in or an expectation of additional personalities, the patient may well produce them, so that the therapist inadvertently exacerbates the very condition he or she is trying to cure. Therapists should thwart any inclination of the patient to avoid or question responsibility for the behavior of some “other” personality, particularly in legal situations, and should not encourage talk of book or movie contracts. The therapist must also beware of undue ego investment in treating these disorders. Notoriety among professional colleagues or the public, “saving” patients misdiagnosed as schizophrenic or borderline by “misguided” colleagues, or voyeuristic excitement may divert the therapist from appropriate professional conduct or from competent diagnosis and treatment.
2. *Countertransference Reactions*. Therapist reactions of anger, exasperation, and aggression (as well as sexual attraction) are, much as those evoked in treating borderline personality disorder, not uncommon. The patient's unintegrated and often uncooperative personalities may be so demanding and frustrating as to provide a serious challenge to the therapist's equilibrium.
3. *Suggestibility*. Because MPD patients may be highly hypnotizable, as has long been recognized, they may be particularly susceptible to subtle suggestion on the part of an inexperienced hypnotist. Special care must be taken where the

evidence for MPD is elicited in hypnosis, in the absence of independent confirmation.

4. *Integration of Confabulation into Memory.* The hypnotic techniques used to uncover repressed or forgotten memories are capable of producing confabulations that the patient may then mistake for true memories. This may be a particular problem for highly hypnotizable MPD patients if the therapist assumes that severe, extended childhood trauma has produced the disorder.

As with the other dissociative disorders, there is little in the literature by way of systematic outcome studies (APA, 1989). One exception is a report by Coons (1986b) on 20 cases; approximately three years after intake, only 5 had achieved full integration, although partial fusion was present for an additional 4 cases. Clearly, the psychodynamic treatment of MPD is a long-term enterprise. And in the months and years following fusion, there is a substantial risk of relapse due to insufficient working through, premature (or unwelcome) fusion, the presence of undetected (and thus untreated) alter egos, or the occurrence of highly stressful life events. Kluft (1984b, 1985c, 1986a, 1988b) has reported periodically on a large series of cases, all of whom had passed at least 27 months since initial fusion (which took an average of 22 months from diagnosis) without relapse. In an initial report on 33 cases (Kluft, 1984b), only 6% of the patients suffered relapse during this later follow-up period, although 24% had suffered residual dissociative difficulties. In a later report on 52 patients (Kluft, 1986a), the figures were 6% and 21%, respectively. In this series, the average number of alter egos was more than 15 per patient: those with fewer required shorter treatment and were less likely to relapse. Obviously, successful fusion must be more difficult to achieve, and to maintain, where there are more alter egos to fuse. But Kluft's study, which is continuing to collect cases, indicates clearly that successful treatment of MPD is possible, if arduous.

Finally, it should be noted that one hallmark of an advanced, scientifically based health care system is prevention of illness in the first place rather than treatment after the fact. At the same time as therapeutic approaches to MPD and the other dissociative disorders are put on a sounder scientific footing, including more rigorous empirical documentation of their effects, we should be concerned about identifying those who are at risk for developing these syndromes (by virtue of either a predisposition toward episodes of

dissociation, or a history of abuse, trauma, deprivation, or neglect in childhood) and taking steps to preclude the development of these disorders.

THE DISSOCIATIVE SPECTRUM

In closing, it is important to recognize that the dissociative disorders listed in DSM-III-R (and the forthcoming DSM-IV as well) constitute only a portion of what was formerly described as "hysteria" (Abse, 1966; Veith, 1965). We do not refer to the hysteria of Breuer and Freud (1893–1895/1955), which was a catchall label for any functional mental illness; nor to the hysteria of Briquet's Syndrome, involving recurrent, multiple, somatic symptoms running a chronic course (Guze, 1975); nor to the hysteria of "hysterical personality," a sexist label applied mostly to women as both a term of opprobrium and a means of social control, and now located on Axis II of DSM-III-R as histrionic personality disorder (Millon, 1981). Rather, we speak of the hysteria of Janet's (1907) "grand hysteria," involving single, relatively short-lived pseudo-neurological symptoms of blindness, deafness, tactile anesthesia, aphonia, and paralysis—what has been known, under the influence of psychoanalytic theory, as "conversion disorder." Janet, in his pioneering classificatory work, was quite clear that the functional anesthetics, paralyzes, and amnesias (including the amnesias of fugue and multiple personality) all belonged together in a single class, distinct from phobias, obsessions and compulsions, and other subtypes of neurosis.

As noted at the outset of this chapter, early diagnostic usage essentially honored Janet's principles. In the *Standard Classified Nomenclature*, the dissociative and conversion disorders were classified as types of conversion hysteria. Although DSM-I did not reflect any particular relationship between the syndromes, DSM-II explicitly returned to first principles by categorizing the conversion and dissociative disorders under the label of "hysterical neurosis." When DSM-III and its revision, DSM-III-R, abandoned both hysteria and neurosis, the dissociative and conversion disorders were separated completely, and conversion disorders were removed to the category of "somatoform disorders" along with somatization disorder (Briquet's Syndrome), hypochondriasis, somatoform (psychogenic) pain disorder, body dysmorphic disorder (formerly known as dysmorphophobia), and the like (for reviews of the somatoform disorders, see Iezzi &

Adams in Chapter 9 of this volume; see also Barsky, 1989; Goodwin & Guze, 1989; Maxmen, 1986; Sutker & King, 1984; Turner, Jacob, & Morrison, 1984).

Put bluntly, this reclassification was, and remains, a mistake. It has long been known that conversion disorders, reflecting monosymptomatic disorders of the sensory-motor system, have nothing in common with Briquet's Syndrome, hysterical personality, and hypochondriasis (e.g., Chodoff & Lyons, 1958; Guze, Woodruff, & Clayton, 1971). They have much more in common with the dissociative disorders: In both cases, events (in the current or past environment) have been registered and influence the patient's experience, thought, and action, even though the patient is not consciously aware of them.

The proper classification of the conversion disorders as essentially dissociative is suggested by the pseudo-neurological nature of their presenting symptoms, and is further supported by closer psychological analysis of the paradoxes and contradictions in behavior observed in the classic cases described by Janet (1907). The functionally blind patient complains of being unable to see, but correctly guesses how many fingers the examiner holds up before his eyes. The functionally deaf patient claims to be unable to hear, but orients when her name is called from outside her field of vision. In both cases, the patient's problem is in gaining conscious access to something that has been processed and registered in the sensory-perceptual system. But in the absence of conscious access, the percepts in question nevertheless influence the patient's experience, thought, and action outside of phenomenal awareness. The parallel to functional amnesia—where the patient complains of being unable to recollect past episodes, but is nevertheless influenced by the unremembered events—is clear. Just as the functionally amnesic patient is not conscious of what he or she remembers, the functionally blind or deaf patient is not conscious of what he or she sees or hears. This disruption of conscious awareness is the essence of dissociation.

By analogy with implicit memory, the paradoxes and contradictions in the behavior of conversion disorder patients may be labeled as expressions of "implicit perception" (Kihlstrom, 1990; Kihlstrom, Barnhardt, & Tataryn, 1991): They show the influence of events in the current environment, in the absence of conscious perception of these events. Interestingly, similar paradoxes and contradictions have been observed in hypnotized subjects (Hilgard, 1977b; Kihlstrom, 1979, 1984). Hypnosis is a social interaction in which one person (the subject) responds to suggestions offered by an-

other person (the hypnotist) for imaginative experiences involving alterations in conscious perception and memory. As Janet, Freud, Prince, and others noted, the responses of highly hypnotizable subjects to these suggestions often show phenotypic similarities to the behavior of patients suffering "hysteria" (in Janet's sense of the term). Given suggestions for blindness or deafness, these subjects claim to be unable to see or hear, thus showing a failure of explicit perception; but their behavior is nonetheless influenced by visual and auditory events, giving evidence for implicit perception (for a review, see Kihlstrom *et al.*, 1991). Given suggestions for amnesia, they show an impairment of explicit memory, whereas implicit memory is largely spared (for reviews, see Kihlstrom, 1985; Kihlstrom & Hoyt, 1988, 1990; Kihlstrom *et al.*, 1991).

These parallels suggest that hypnosis and "hysteria" may have a common underlying dissociative process (Hilgard, 1977b, 1984; Kihlstrom, 1979, 1984): Perhaps the same dissociative ability that is associated with high hypnotizability in normals (or some correlate of this ability, such as absorption; Roche & McConkey, 1990; Tellegen & Atkinson, 1974) also leaves them at risk for dissociative psychopathology. If so (and even if not; see Sarbin & Coe, 1979; Spanos & Gottlieb, 1979), hypnosis may provide a useful laboratory model for the investigation of psychological processes involved in the dissociative disorders.

Fundamentally, then, both the dissociative and conversion disorders reflect a disruption of the normal functions of consciousness (Hilgard, 1973a, b, 1977b; Kihlstrom, 1984). These functions include (a) monitoring oneself and one's environment, permitting one to be aware of current events and to recollect the past, such that the work is accurately represented in phenomenal awareness; and (b) controlling oneself so that one has the experience of voluntarily initiating and terminating mental activities, at will, in order to achieve personal goals and meet environmental demands. Accordingly, their essential unity should be reflected in our diagnostic nosology (for a similar suggestion, see Nemiah, 1989). Therefore, we suggest that henceforth the term *conversion disorder* be dropped from the diagnostic nosology as an inappropriate holdover from the days when psychoanalysis dominated our conception of the neuroses. Furthermore, the erstwhile conversion disorders should be removed from the somatoform category and regrouped with the other dissociative disorders, forming three subcategories: (a) dissociative anesthesia, including psychogenic blindness, deafness, analgesia, and other functional disorders of sen-

sation and perception; (b) dissociative paralysis, including psychogenic aphonia and other functional disorders of motor function; and (c) dissociative amnesia, including psychogenic amnesia and fugue, multiple personality, depersonalization and dissociation, and other functional disorders of memory and awareness.

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