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Dissociation and Dissociative Disorders: Challenging Conventional Wisdom

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Abstract

Conventional wisdom holds that dissociation is a coping mechanism triggered by exposure to intense stressors. Drawing on recent research from multiple laboratories, we challenge this prevailing posttraumatic model of dissociation and dissociative disorders. Proponents of this model hold that dissociation and dissociative disorders are associated with (a) intense objective stressors (e.g., childhood trauma), (b) serious cognitive deficits that impede processing of emotionally laden information, and (c) an avoidant information-processing style characterized by a tendency to forget painful memories. We review findings that contradict these widely accepted assumptions and argue that a sociocognitive model better accounts for the extant data. We further propose a perspective on dissociation based on a recently established link between a labile sleep–wake cycle and memory errors, cognitive failures, problems in attentional control, and difficulties in distinguishing fantasy from reality. We conclude that this perspective may help to reconcile the posttraumatic and sociocognitive models of dissociation and dissociative disorders.

Keywords

dissociation, dissociative disorder, dissociative identity disorder, trauma

The current (fourth) edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) defines *dissociation* as “a disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment” (American Psychiatric Association, 2000, p. 519). Many psychologists and psychiatrists view dissociation as a coping mechanism designed to deal with overpowering stress (Dell & O’Neil, 2009). One well-known form of dissociation is depersonalization, in which individuals feel disconnected from themselves; they may feel like an automaton or feel as if they are watching themselves from a distance. Another is derealization, in which individuals feel disconnected from reality; they may feel as though they are in a dream or that things seem to be moving in slow motion. Steven Spielberg’s 1998 film, *Saving Private Ryan*, vividly depicts an episode of derealization (spoiler alert): After being shot, Captain John Miller (portrayed by Tom Hanks) witnesses the events around him unfolding as if in a silent, slow-motion movie.

Certain forms of dissociation are widespread in the general population; for example, most estimates suggest that nearly 50% of individuals have experienced depersonalization at some point in their lives (Aderibigbe, Bloch, & Walker, 2001). When mild and intermittent, such symptoms are rarely of clinical concern. Nevertheless, in some cases, dissociation may take the form of grossly impairing *dissociative disorders*.

These puzzling conditions include dissociative identity disorder (DID), formerly known as multiple personality disorder, dissociative fugue, and depersonalization disorder. In the best known dissociative disorder, DID, individuals supposedly develop multiple coexisting personalities, known as “alters.” In dissociative fugue, individuals purportedly suddenly forget their past, travel from home or work (*fugue* has the same root as *fugitive*), and adopt a new identity; in depersonalization disorder, individuals experience frequent bouts of depersonalization, derealization, or both. Dissociation also features prominently in other psychological conditions not formally classified as dissociative disorders, such as panic disorder, borderline and schizotypal personality disorders, and posttraumatic stress disorder.

The origins of dissociation are poorly understood. Nevertheless, the clinical literature on dissociation has been marked by three widely accepted assumptions associated with what is often referred to as the posttraumatic model. Specifically, it has long been assumed that chronic dissociation is (a) a coping mechanism to deal with intense stressors, especially childhood

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sexual and physical trauma; (b) accompanied by cognitive deficits that interfere with the processing of emotionally laden information; and (c) marked by an avoidant information-processing style characterized by a tendency to forget painful memories. The coping mechanism outlined in (a) is typically assumed to play a key causal role in dissociative disorders. For example, many authors have argued that DID reflects individuals' attempts to "compartmentalize" and obtain psychological distance from traumatic experiences such as child abuse (Dell & O'Neil, 2009). In this article, we review recent research that calls these widespread assumptions into question and proposes novel and scientifically supported approaches for conceptualizing dissociation and dissociative disorders.

The Posttraumatic Model

The posttraumatic model (Bremner, 2010; Gleaves, 1996) is ostensibly supported by very high rates—sometimes exceeding 90%—of reported histories of childhood trauma, most commonly child sexual abuse, among patients with DID and perhaps other dissociative disorders (Gleaves, 1996; Simeon, Guralnik, Schmeidler, Sirof, & Knutelska, 2001). Nevertheless, a number of authors (e.g., Giesbrecht, Lynn, Lilienfeld, & Merckelbach, 2008, 2010; Kihlstrom, 2005; Merckelbach & Muris, 2001; Piper & Merskey, 2004; Spanos, 1994, 1996) have questioned the oft-cited link between child abuse/maltreatment and dissociation for several reasons.

First, in most studies (e.g., Ross & Ness, 2010), objective corroboration of abuse is lacking. Second, the overwhelming majority of studies of self-reported trauma and dissociation are based on cross-sectional designs that do not permit causal inferences; in these designs, individuals are typically assessed for DID or other dissociative disorders and asked to recollect whether they had been abused or neglected in childhood. Prospective studies that circumvent the pitfalls of such retrospective reporting often fail to substantiate a link between childhood abuse and dissociation in adulthood (Giesbrecht et al., 2008; but see Bremner, 2010). Third, researchers have rarely controlled for overlapping conditions or symptoms, such as those of anxiety, eating, and personality disorders, raising the possibility that the correlates of abuse are not specific to dissociative disorders. Fourth, the reported high levels of child abuse among DID patients may be attributable to selection and referral biases (Pope & Hudson, 1995); for example, individuals with dissociative disorders may be especially likely to enter treatment if they are struggling with problems stemming from early abuse. Fifth, correlations between abuse and psychopathology decrease substantially or disappear when participants' perception of family pathology is controlled statistically (Nash, Hulse, Sexton, Harralson, & Lambert, 1993), which could mean that this association is due to global familial maladjustment rather than abuse itself. These five points of contention suggest ample reasons to be skeptical of the claim that child abuse plays a central or direct causal role in DID—although, as we will suggest later, it may

be one element of the complex etiological network that contributes to this condition.

The Sociocognitive Model

In contrast to the posttraumatic model, the sociocognitive model (Spanos, 1994; see also Aldridge-Morris, 1989; Lilienfeld et al., 1999; McHugh, 1993; Sarbin, 1995) proposes that DID is a consequence of social learning and expectancies. This model holds that DID results from inadvertent therapist cueing (e.g., suggestive questioning regarding the existence of possible alters, hypnosis for memory recovery, sodium amytal), media influences (e.g., television and film portrayals of DID), and sociocultural expectations regarding the presumed clinical features of DID. In aggregate, the sociocognitive model posits that these influences can lead predisposed individuals to become convinced that indwelling entities—alters—account for their dramatic mood swings, identity changes, impulsive actions, and other puzzling behaviors (see below). Over time, especially when abetted by suggestive therapeutic procedures, efforts to recover memories, and a propensity to fantasize, they may come to attribute distinctive memories and personality traits to one or more imaginary alters.

A number of findings (e.g., Lilienfeld & Lynn, 2003; Lilienfeld et al., 1999; Piper, 1997; Spanos, 1994) are consistent with the sociocognitive model and present serious challenges to the posttraumatic model. For example, the number of patients with DID, along with the number of alters per DID patient, increased dramatically from the 1970s to the 1990s (Elzinga, van Dyck, & Spinhoven, 1998), although the number of alters at the time of initial diagnosis appears to have remained constant (North, Ryall, Ricci, & Wetzel, 1993). In addition, the massive increase in reported cases of DID followed closely upon the release in the mid-1970s of the best-selling book (turned into a widely viewed television film in 1976), *Sybil* (Schreiber, 1973), which told the story of a young woman with 16 personalities who reported a history of severe child abuse at the hands of her mother (see Nathan, 2011; Rieber, 2006, for evidence that many details of the *Sybil* story are inaccurate). Manifestations of DID symptoms also vary across cultures. For example, in India, the transition period as the individual shifts between alter personalities is typically preceded by sleep, a presentation that reflects common media portrayals of DID in that country (North et al., 1993).

Moreover, mainstream treatment techniques for DID often reinforce patients' displays of multiplicity (e.g., asking questions like, "Is there another part of you with whom I have not spoken?"), reify alters as distinct personalities (e.g., calling different alters by different names), and encourage patients to establish contact and dialogue with presumed alters. Interestingly, many or most DID patients show few or no clear-cut signs of this condition (e.g., alters) prior to psychotherapy (Kluft, 1984), raising the specter that alters are generated by treatment. Indeed, the number of alters per DID individual

tends to increase substantially over the course of DID-oriented psychotherapy (Piper, 1997). Curiously, psychotherapists who use hypnosis tend to have more DID patients in their caseloads than do psychotherapists who do not use hypnosis (Powell & Gee, 1999), and most DID diagnoses derive from a small number of therapy specialists in DID (Mai, 1995), again suggesting that alters may be created rather than discovered in therapy.

These sources of evidence do not imply that DID can typically be created in vacuo by iatrogenic (therapist-induced) or sociocultural influences. Sociocognitive theorists acknowledge that iatrogenic and sociocultural influences typically operate against a backdrop of preexisting psychopathology. Indeed, the sociocognitive model is consistent with findings that many or most patients with DID, and to a lesser extent other dissociative disorders, meet criteria for borderline personality disorder, a condition marked by extremely unstable behaviors, such as unpredictable shifts in mood, impulsive actions, and self-mutilation (Lilienfeld et al., 1999). Individuals with this disorder are understandably seeking an explanation for their bewildering behaviors. The presence of hidden alters may be one such explanation, and it may assume particular plausibility when suggested by psychotherapists or sensational media portrayals.

Cognitive Mechanisms of Dissociation

Much of the literature on cognitive mechanisms of dissociation is more consistent with the sociocognitive model than with the posttraumatic model. For example, researchers have found little evidence for inter-identity amnesia among patients with DID using objective measures of memory (e.g., event-related potentials or behavioral tasks; Allen & Movius, 2000; Huntjens et al., 2006). In such studies, investigators present certain forms of information to one alter and see whether it is accessible to another alter. In most cases, it is, demonstrating that alters are not psychologically distinct entities.

Contradicting the claim that individuals with heightened dissociation are defending against the impact of threat-related information and therefore exhibit slower or impaired processing of such information, patients with DID and other “high dissociators” display *better* memory for to-be-forgotten sexual words in directed-forgetting tasks (Elzinga, de Beurs, Sergeant, van Dyck, & Phaf, 2000). This finding is strikingly discrepant with the presumed coping function of dissociation. Studies of cognitive inhibition in highly dissociative clinical and non-clinical samples typically find a breakdown in such inhibition, challenging the widespread idea that amnesia (i.e., extreme inhibition) is a core feature of dissociation (Giesbrecht et al., 2008, 2010).

The extant evidence therefore questions the widespread assumption that dissociation is related to avoidant information processing and suggests that apparent gaps in memory in interidentity amnesia, or dissociative amnesia more generally, could reflect intentional failures to report information.

Moreover, the literature indicates that dissociation is marked by a propensity toward false memories, possibly mediated by heightened levels of suggestibility, fantasy proneness, and cognitive failures (e.g., lapses in attention). Indeed, at least 10 studies from diverse laboratories have confirmed a link between dissociation and fantasy proneness. In addition, heightened levels of fantasy proneness are associated with the tendency to overreport autobiographical memories and the false recall of aversive memory material (Giesbrecht et al., 2010). Accordingly, the relation between dissociation and fantasy proneness may explain why individuals with high levels of dissociation are especially prone to develop false memories of emotional childhood events. This explanation dovetails with data revealing links between dissociative symptoms and hypnotizability (Frischholz, Lipman, Braun, & Sachs, 1992) and high scores on the Gudjonsson Suggestibility Scale (Merckelbach, Muris, Rassin, & Horselenberg, 2000). Similarly, dissociation increases the number of commission memory errors (e.g., confabulations/false positives, problems discriminating perception from imagery) but not omission memory errors, which are presumably associated with dissociative amnesia (Holmes et al., 2005). These findings, together with research demonstrating a link between dissociation and cognitive failures, point to an association between a heightened risk of confabulation and pseudomemories. They also raise questions regarding the accuracy of retrospective reports of traumatic experiences.

Still, these findings do not exclude some role for trauma in dissociation. Suggestibility, cognitive failures, and fantasy proneness could contribute to an overestimation of a genuine, although perhaps modest, link between dissociation and trauma. Alternatively, early trauma might predispose individuals to develop high levels of fantasy proneness, absorption (the tendency to become immersed in sensory or imaginative experiences; Tellegen & Atkinson, 1974), or related traits. In turn, such traits may render individuals susceptible to the iatrogenic and cultural influences posited by the sociocognitive model, thereby increasing the likelihood of DID.

Sleep, Memory, and Dissociation

A recent theory connecting sleep, memory problems, and dissociation may provide a conceptual bridge between the posttraumatic model and the sociocognitive model. In a review of 23 studies, van der Kloet, Merckelbach, Giesbrecht, and Lynn (2011) concluded that data from clinical and nonclinical samples provide strong support for a link between dissociative experiences and a labile sleep-wake cycle. This link, they contend, is evident across a range of sleep-related phenomena, including waking dreams, nightmares, and hypnagogic (occurring while falling asleep) and hypnopompic (occurring while awakening) hallucinations. Supporting this hypothesis, studies of the association between dissociative experiences and sleep disturbances have generally yielded modest correlations (in the range of .30 to .55), implying that unusual sleep

experiences and dissociation are moderately related constructs (see also Watson, 2001).

Nevertheless, these studies typically relied on cross-sectional designs. To address this limitation, Giesbrecht, Smeets, Lepink, Jelacic, and Merckelbach (2007) deprived 25 healthy volunteers of one night of sleep and found that sleep loss engenders a substantial increase in dissociative symptoms. They also found that this increase could not be accounted for by mood changes or response bias.

van der Kloet, Giesbrecht, Lynn, Merckelbach, and de Zutter (in press) later conducted a longitudinal investigation of sleep experiences and dissociative symptoms among 266 patients who were evaluated on arrival and at discharge 6 to 8 weeks later. Sleep hygiene was a core treatment component. Prior to treatment, 24% of participants met the clinical cut-off for dissociative disorders (i.e., Dissociative Experiences Scale > 30; Bernstein-Carlson & Putnam, 1993); at follow-up, this number dropped to 12%. Although sleep improvements were associated with a reduction in global psychopathology (e.g., anxiety, depression), this reduction did not account fully for the specific effect of treatment on dissociation. The fact that a sleep-hygiene intervention reduces dissociative symptoms independent of generalized psychopathology bears noteworthy clinical implications. It also suggests that researchers may wish to revisit the treatment of dissociative disorders. Surprisingly, this clinically important area has received minimal investigation: For example, Brand, Classen, McNary, and Zaveri (2009) reported that only eight nonpharmacological studies, none of which was a well-controlled randomized trial, have examined treatment outcomes for DID.

van der Kloet et al.'s (in press) findings suggest an intriguing interpretation of the link between dissociative symptoms and deviant sleep phenomena (see also Watson, 2001). According to their working model, individuals with a labile sleep-wake cycle experience intrusions of sleep phenomena (e.g., dreamlike experiences) into waking consciousness, in turn fostering dissociative symptoms. This labile sleep-wake cycle may stem in part from a genetic propensity (Lang, Paris, Zweig-Frank, & Livesley, 1998), distressing trauma-related memories, or other unknown causal influences. van der Kloet et al.'s model further proposes that disruptions of the sleep-wake cycle degrade memory and attentional control, thereby accounting for, or at least contributing to, the cognitive deficits of highly dissociative individuals.

Accordingly, the sleep-dissociation perspective may explain (a) how aversive events disrupt the sleep-wake cycle and increase vulnerability to dissociative symptoms, and (b) why dissociation, trauma, fantasy proneness, and cognitive failures overlap. Thus, this perspective is commensurate with the possibility that trauma engenders sleep disturbances that in turn play a pivotal role in the genesis of dissociation and suggests that competing theoretical perspectives may be amenable to integration. The SCM holds that patients become

convinced that they possess multiple selves as a by-product of suggestive media, sociocultural, and psychotherapeutic influences. Their sensitivity to suggestive influences may arise from increased salience of distressing memories (some of which may stem in part from trauma) and susceptibility to memory errors and a propensity to fantasize and experience difficulties in distinguishing fantasy from reality, brought about at least in part by sleep disruptions.

The data we have summarized have received only scant attention in the clinical literature. Nevertheless, they have the potential to reshape the conceptualization and operationalization of dissociative disorders in the upcoming edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V, publication scheduled in 2013). In particular, they suggest that sleep disturbances, as well as sociocultural and psychotherapeutic influences, merit greater attention in the conceptualization and perhaps classification of dissociative disorders (Lynn et al., in press). From this perspective, the hypothesis that dissociative disorders can be triggered by (a) a labile sleep cycle that impairs cognitive functioning, combined with (b) highly suggestive psychotherapeutic techniques, warrants empirical investigation. More broadly, the data reviewed point to fruitful directions for our thinking and research regarding dissociation and dissociative disorders in years to come.

Recommended Reading

- Giesbrecht, T., Lynn, S. J., Lilienfeld, S.O., & Merckelbach, H. (2008). (See References). Discusses the cognitive and neuropsychological mechanisms of dissociation and surveys literature challenging claims regarding an avoidant coping style and cognitive deficits that impede processing emotional material in dissociation.
- Kihlstrom, J. F. (2005). (See References). An excellent review of the literature, which argues that the evidence supporting the hypothesis that dissociative disorders are the consequence of trauma is weak and plagued by poor methodology and that there are no convincing cases of trauma-based amnesia not attributable to brain insult, injury, or disease.
- Lilienfeld, S. O., & Lynn, S. J. (2003). (See References). Summarizes controversies surrounding dissociative identity disorder and discusses the sociocognitive perspective on dissociation.
- Spanos, N. P. (1996). (See References). A provocative book arguing that multiple personality disorder is a cultural/historical construct tied to inaccurate altered-state theories of hypnosis, recovered memories and presumed childhood abuse, and suggestive techniques in psychotherapy.
- Watson, D. (2001). (See References). A seminal paper that reports validity data for a now widely used scale of sleep-related experiences (Iowa Sleep Experiences Survey) and evidence for a link between dissociation and sleep-related experiences.

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The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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