# 14

# CLARIFYING THE ETIOLOGY OF THE DISSOCIATIVE DISORDERS

## It's Not All About Trauma

*Paul F. Dell*

American police used to claim that marijuana is the "gateway drug" to drug addiction. They used that 'fact' to justify harsh marijuana laws. The origin of the gateway drug belief was the fact that so many drug addicts began their 'careers' by smoking marijuana. This idea – that marijuana causes drug addiction – is false; it is based on a highly-biased sample (i.e., drug addicts). Proper testing of this hypothesis requires that drug addicts be compared to marijuana smokers; that comparison shows that most marijuana smokers do *not* become addicted to cocaine, heroin, or methamphetamine.

This chapter argues that the dissociative disorders field has two 'gateway drug fallacies' that are based on a highly-biased sample (i.e., dissociative disorder patients): (1) trauma causes dissociation, and (2) structural dissociation is caused by an inability to integrate traumatic events. I think both of these hypotheses are wrong. Proper testing of these hypotheses requires that dissociative disorder patients be compared to: (1) individuals who have been exposed to major stressors, and (2) individuals who are unable to integrate stressful events. I predict that those comparisons would show that (1) few trauma survivors develop a dissociative disorder; and (2) few people with an impaired ability to integrate stressful events develop structural dissociation.

### Trauma and the Dissociative Disorders

In 1986, Putnam, Guroff, Silberman, Barban, and Post reported that 97% of 100 cases of multiple personality disorder reported an extensive history of childhood trauma. Since then, every study of trauma in dissociative identity disorder (DID) or major dissociative disorder patients has replicated that finding (e.g., Boon & Draijer, 1993; Coons, Bowman, & Milstein, 1988; Foote, Smolin, Kaplan, Legatt, & Lipschitz, 2006; Middleton & Butler, 1998; Ross et al., 1990; Ross, Norton, & Wozney, 1989).

For the last 40 years, the informal consensus of the dissociative disorders field has been that trauma causes DID. Van der Hart and colleagues have emphasized that this is what Janet (1889; 1920/1965) meant when he described dissociation as the consequence of a person's inability to psychologically integrate traumatic events (Nijenhuis, 2015; Nijenhuis & Van der Hart, 2011; Van der Hart & Dorahy, Chapter 1, this volume; Van der Hart, Nijenhuis & Steele, 2006; Van der Hart & Rydberg, 2019).

Today's neo-Janetian theory (Moskowitz & Van der Hart, 2020) – i.e., the theory of structural dissociation of the personality – is one of the principal models in the dissociative disorders field (Nijenhuis, 2015; Nijenhuis & Van der Hart, 2011; Nijenhuis, Van der Hart & Steele, 2002; Van der Hart et al., 2006). There is, a problem with the theory of structural dissociation (and with all trauma models of dissociation): *the correlation between trauma and dissociation is only 0.32* (Dalenberg et al., 2012; see also Carlson et al., 2012; Briere, 2006). This surprisingly-low correlation (that is barely medium in its effect size) does not change the fact that severely dissociative patients routinely report an extensive history of trauma and abuse, but it does indicate that *trauma cannot be the sole determinant – or even the primary determinant? – of dissociation* (Dell, 2019, 2021). What is going on here?

DOI: 10.4324/9781003057314-17

## High Hypnotizability: The Road Not Taken

Individuals with high hypnotizability can produce a second personality (Braid, 1855/1970; Cox & Barnier, 2013; Dell, 2021; Harriman, 1943; Janet, 1886; Kampman, 1976; Leavitt, 1947; Richet, 1883). Janet was well-aware of this fact, but he gave no credence to its potential implications because he believed that hypnotic suggestibility is a pathological trait that can be cured by therapy! Why did Janet believe this? Probably because his patients with severe hysteria – especially those with multiple personalities – were extremely hypnotizable. Their high suggestibility seemed to Janet to be an essential aspect of their hysterical pathology:

> Hysteria is before everything else a mental disease consisting chiefly in an exaggeration of suggestibility [i.e., high hypnotizability].
>
> *Janet, 1920/1965, p. xiii*

> [I]t is only among hysterical patients that this hypnotism is to be found in a marked degree.
>
> *Janet, 1920/1965, p. 5*

> *Suggestion [i.e., high hypnotizability]* … depends on a lack of synthesis, on a weakening of consciousness. … It requires as its essential condition a malady of the personality. … A tendency to suggestion and subconscious acts is the sign of mental disease, but *it is, above all, the sign of hysteria*.
>
> *Janet, 1920/1965, pp. 288–289, italics added*

Van der Hart and colleagues have said little about Janet's many statements that *hysterics* (i.e., dissociative patients) are highly hypnotizable. They do, however, accept Janet's report that hypnosis of *normal individuals* can produce a dissociation of the personality (i.e., a second, dissociated personality). Van der Hart and colleagues' response to these two assertions by Janet has significantly shaped their structural theory of dissociation. In particular, like Janet, Van der Hart and colleagues appear to have given little thought to the implications of dissociative patients' hypnotizability (Moskowitz & Van der Hart, 2020; Nijenhuis, 2015; Nijenhuis & Van der Hart, 2011; Van der Hart et al., 2006; Van der Hart & Rydberg, 2019).

Thus, in an article, partially titled "Dissociation in Trauma," they declared that:

> Our definition of dissociation pertains [solely] to *a division of the personality in the context of trauma*. We are aware that *this division may also occur in hypnosis and mediumship*."
>
> *Nijenhuis & Van der Hart, 2011, p. 441, italics and bracketed content added*

Their unambiguous exclusion of hypnosis from their field of interest led Cardeña (2011), an authority on hypnosis, to criticize the structural model of dissociation on the grounds that it tied clinical dissociation solely to trauma. Perhaps in response to this, Nijenhuis amended the name of their theory, calling it, "the theory of (trauma-related) structural dissociation of the personality" (Nijenhuis, 2015, p. 5).

Still, Cardeña's criticism is valid; the theory of (trauma-related) structural dissociation focuses only on (1) trauma, (2) inability to synthesize that trauma, and (3) subsequent dissociation of the personality. *The theory of structural dissociation says nothing about the high hypnotizability of dissociative patients.* This amounts to a declaration that hypnotizability is irrelevant to trauma-related dissociation. I disagree – as does Cardeña (personal communication 1-11-21). This, I believe, is the fatal shortcoming in both Janet's model of dissociation and Van der Hart and colleagues' neo-Janetian model of structural dissociation.

Janet had a reason – albeit erroneous – to exclude hypnotizability from his study of hypnosis and dissociation; he considered suggestibility to be a major component of hysterical pathology. Today's neo-Janetians (Nijenhuis, 2015; Nijenhuis & Van der Hart, 2011; Nijenhuis et al., 2002; Van der Hart et al., 2006), however, do *not* have a valid reason for their disinterest in the high hypnotizability of dissociative patients – just the historical precedent of Janet's (erroneous) beliefs about hypnotizability.

In fairness, neo-Janetians do have some justification for considering hypnotizability to be largely irrelevant. Twentieth-century research on the relationship between hypnotizability and dissociation was suspended in the 1990s by both the dissociative disorders field and the hypnosis field. Two reviews of the relationship between hypnotizability and dissociative experiences – one from the hypnosis field (Whalen & Nash, 1996) and one from the dissociative disorders field (Putnam & Carlson, 1998) – concluded that the relationship between hypnotizability and dissociation is vanishingly small ($r = 0.12$). Thus, since the 1990s, hypnotizability has been 'the road not taken' in the dissociative disorders field.

But not entirely. First, there is an inconvenient fact: DID patients are significantly more hypnotizable than those with any other mental disorder (Bliss, 1983, 1986; Butler, Duran, Jasiukaitas, Koopman, & Spiegel, 1996; Dell, 2017a; Frischholz, Lipman, Braun & Sachs, 1992). This is not a trivial finding. Second, several publications have marshalled evidence and reasoned lucidly that high hypnotizability is essential to the dissociative disorders (Butler et al., 1996; Dell, 2009, 2017a, 2017b, 2019, 2021). Third, and most importantly, Dell (2019) showed that the 0.12 correlation between hypnotizability and dissociative experiences in unselected community and clinical samples is misleading because data from unselected samples (85% of whom are *not* highly hypnotizable) can shed no light on the etiological relationship between high hypnotizability and dissociative-disordered patients (see Dell, 2017a, 2019, 2021).

In summary, Janet wrongly attributed hysterics' high hypnotizability to their pathology. For the last quarter-century, the dissociation field (and the hypnosis field) have wrongly believed that there was no meaningful, empirical relationship between hypnotizability and dissociation. The bottom line about hypnotizability and dissociation is that (1) Janet's hysterics were extremely hypnotizable, and (2) today's DID cases are significantly more hypnotizable than cases with any other mental disorder. It is an error for the trauma model of dissociation to dismiss that fact; it is an error to exclude that fact from the theory of structural dissociation.

## The Road Taken: An Inability to Synthesize Trauma

According to Janet (1889, 1920/1965), dissociation of the personality is a two-step sequence: (1) the person lacks the ability to integrate the biopsychosocial sequellae of stressful events, and (2) the person subsequently (spontaneously?) synthesizes those unintegrated traumatic sequellae and ideas into a second personality. In my opinion, the causal link between these two steps is the most underdeveloped aspect of Janet's writings on hysteria (i.e., the dissociative disorders). In fact, Janet never proposed a causal theory of dissociation (see below). I also think that Janet's two-step account of dissociation is the weakest and most undeveloped aspect of the modern theory of structural dissociation of the personality (Nijenhuis, 2015; Nijenhuis & Van der Hart, 2011; Nijenhuis et al., 2002; Van der Hart et al., 2006).

Janet's description of dissociation is *a passive, bottom-up, deficit model* (Dell, 2009; Liotti & Liotti, 2019; Perry & Laurence, 1984): that is, Janet says that dissociation is preceded by the person's *mental or psychological inability to integrate* certain ideas and events. In contrast, Freud (1914) proposed that unacceptable events and ideas are *'pushed' out of conscious memory by the active, motivated, top-down defense of repression* (Dell, 2009; Liotti & Liotti, 2019; Perry & Laurence, 1984). Freud mocked Janet's deficit model:

> Janet's hysterical patient reminds one of a feeble woman who has gone out shopping and is now returning home laden with a multitude of parcels and boxes. She cannot contain the whole heap of them with her two arms and ten fingers. So first … one object slips from her grasp; and when she stoops to pick it up, another one escapes her … and so on.
>
> *Freud, 1910, pp. 21–22*

I do not quote Freud because I think that Freud was right and Janet was wrong. I reference Freud because I want to heighten the reader's awareness of the distinction between *a passive weakness or deficit* (i.e., Janet's descriptive account of dissociation) and *an active, motivated process of will* (i.e., Freud's theory of repression). According to Freud, repression actively 'pushes away' and 'splits-off" unacceptable contents of the mind, and forcibly confines them in the unconscious (Freud, 1914). I take from Freud not the psychoanalytic concept of repression, but instead his emphasis on an active, motivated, top-down, defense.

Evolution has built into every living organism a passive, bottom-up, *physiologically-motivated*, set of avoidance and defensive responses. Like other living organisms, humans exhibit bottom-up, motivated actions of avoidance and defense. Crucially, however, humans also employ *top-down, motivated, willful actions of avoidance and defense* when they are endangered, hurt, or even upset/uncomfortable.

Mitchell (1921), an expert on dissociation, was similarly dissatisfied with Janet's passive, deficit-driven view of dissociation. Mitchell said that:

> [Janet] seems to emphasize unduly the purely cognitive aspect of consciousness and to neglect the part played by the emotions and the will. *Dissociation is for Janet a curtailment of capacity, passively submitted to by an enfeebled consciousness – a catastrophe in which the emotions and the will take no active part.*
>
> *Mitchell, 1921, pp. 40–41, italics added*

Although Janet and modern Janetians accept the existence of psychological or mental defenses, they flatly reject the idea that structural dissociation is a defense (Nijenhuis, 2015; Van der Hart et al., 2006; Van der Hart & Rydberg, 2019). Structural dissociation, they insist, stems from a deficit – the individual's mental or psychological inability to synthesize/integrate traumatic events.

## The Autohypnotic Model of the Dissociative Disorders

I have proposed that a dissociative disorder arises when individuals with high hypnotic ability repeatedly use that ability to mentally distance themselves from emotional and physical pain (Dell, 2009, 2019, 2021). On the other hand, individuals with low hypnotic ability – no matter how hurt or traumatized they may be – cannot develop a dissociative disorder (Dell, 2009, 2019). Thus, in this instance, I am claiming that both Freud and Janet are wrong. Both gave serious, but fleeting consideration to the hypnotizability of hysterics; ultimately, both rejected its etiological relevance (Breuer & Freud, 1895; Janet, 1889, 1920/1965).

In one isolated paragraph of his doctoral thesis, Janet proposed that:

> It is not hysteria which constitutes terrain favorable to hypnotism, but it is hypnotic sensibility that constitutes favorable terrain for hysteria and other illnesses.
>
> *Janet, 1889, pp. 451–452*

This would have been a major insight, but Janet promptly abandoned it. He spent most of the remainder of his life insisting that high hypnotizability is a pathological symptom of hysteria – a 'symptom' that is cured when the person receives successful treatment for his or her hysteria:

> Suggestion [i.e., high hypnotizability] is a … relatively rare phenomenon; it presents itself experimentally or accidentally *only* with hystericals.
>
> *Janet, 1920/1965, p. 292, italics added*

When Janet discussed the etiological role of suggestibility [i.e., high hypnotizability] in hysteria, he could not accept (or even see) what his own words proposed – i.e., an 'autohypnotic' genesis of hysteria and the dissociative disorders:

> [T]his psychological fact [i.e., *the suggestibility of hysterics*] *plays a great role in the formation of their disease* …
>
> *Janet, 1920/1965, p. 292, italics added*

Freud's endorsement of the hypnotic etiology of hysteria was similarly short-lived. In 1893, Freud joined with Breuer in declaring that:

> [T]he basis and *sine qua non* of hysteria is the existence of hypnoid states. These hypnoid states share with one another and with hypnosis … one common feature: the ideas which emerge in them are very intense but are cut off from associative communication with the rest of the content of consciousness.
>
> *Breuer & Freud, 1893, p. 12, italics in original*

> In these views we concur with Binet and the two Janets …
>
> *Breuer & Freud, 1893, p. 12*

Within a year, Freud rejected Janet's theory of dissociation and Breuer's theory of hypnoid states. In their place, Freud proposed a new theory of hysteria – motivated, mental defenses:

> Janet … assigns too great an importance to the splitting of consciousness in his characterization of hysteria.
>
> *Freud, 1894, p. 51*

> I was repeatedly able to show that *the splitting of the content of consciousness is the result of an act of will on the part of the patient*; that is to say, it is initiated by an effort of will whose motive can be specified. By this I do not, of course, mean that the patient intends to bring about a splitting of consciousness. His intention is a different one; but, instead of attaining its aim, it produces a splitting of consciousness.
>
> *Freud, 1894, pp. 46–47, italics added*

This last quotation of Freud is quite similar to the 'autohypnotic' model of the dissociative disorders (Dell, 2019, 2021). But, Freud was not interested in dissociation, and he was certainly no longer interested in hypnosis (Kluft, 2018). In the two quotations above, Freud is rationalizing his abandonment of Breuer's hypnoid-state model of hysteria – a model that was based on Breuer's treatment of Anna O (a woman with multiple personalities; Breuer & Freud, 1895).

In his own chapters of their 1895 book, Freud openly abandoned Breuer's theory of hypnoid states:

> Strangely enough, *I have never in my own experience met with a genuine hypnoid hysteria*. Any that I took in hand has turned into a defence hysteria.
>
> *Breuer & Freud, 1895, p. 286, italics added*

In Freud's subsequent writings, he had nothing positive to say about hypnosis, hypnoid states, Janet's theory of dissociation, or even Janet himself (whom he deemed an intellectual thief).

Breuer was still convinced of the validity of his hypnoid-states model of hysteria. In his own chapters of their book, Breuer tried to make peace with Freud's new theory of defenses by suggesting that hypnoid states occur in *major* defense-hysteria (i.e., dissociative disorders such as multiple personalities), but not *minor* defense-hysteria (i.e., simple sensory-motor 'conversion' symptoms). Breuer said:

> I am still of the opinion that *hypnoid states are the cause and necessary condition of many, indeed of most, major and complex hysterias*. (Breuer & Freud, 1895, p. 216, italics added)
>
> Freud's observations and analyses show that the splitting of the mind can also be caused by "defence," by the deliberate deflection of consciousness from the distressing ideas … *I only venture to suggest that the assistance of the hypnoid state is necessary if defence is to result* not merely in single converted ideas being made into unconscious ones, but *in a genuine splitting of the mind*.
>
> *Breuer & Freud, 1895, pp. 235–236, italics added*

I agree with Breuer's final sentence, but I attribute defensive acts of dissociation to the abilities of highly-hypnotizable individuals – abilities that do *not* need the presence of 'trance' or a hypnoid state in order to operate (Dell, 2019, 2021).

Thus, Breuer is the historical progenitor of the autohypnotic model of the dissociative disorders. Unfortunately, Breuer did not further develop his ideas. A quarter of a century later, Mitchell (1921) picked up the thread of autohypnotic dissociation. Mitchell (1) brought together high hypnotizability and the dissociative symptoms of hysteria, and, importantly, (2) challenged Janet's erroneous belief that high hypnotizability is a pathological trait:

> We may suppose that *some special capacity for dissociation is the one qualification necessary for both the occurrence of hysterical symptoms and for the induction of hypnosis. A person who can be hypnotized is a person who may under appropriate circumstances, become an hysteric* [i.e., develop a dissociative disorder], but who need not already have suffered from any manifest hysterical ability [i.e., somatic dissociative symptoms].
>
> *Mitchell, 1921, p. 32, italics added*

The autohypnotic model lay fallow for the next half-century until Herbert Spiegel's (1974) important article, "The Grade 5 Syndrome," shone a bright light on individuals who are highly hypnotizable. Spiegel said that highly hypnotizable individuals were often "victims of their own profound trance capacity" (H. Spiegel & Spiegel, 1978, p. 322) because they are prone to "spontaneously dissociate and develop hysterical, conversion, or dissociative symptoms under stress" (Butler et al., 1996, p. 53).

The next important step for the autohypnotic model of the dissociative disorders came from David Spiegel's research team at Stanford in 1996. Butler et al. (1996) documented – symptom by symptom – the correspondence between dissociative symptoms and the hypnotic responses of highly hypnotizable individuals. Butler and colleagues explicitly proposed an autohypnotic model of dissociation:

> [P]athological dissociation may result from a diathesis-stress interaction of innate hypnotizability and traumatic experience. *Dissociation, therefore, may be understood as an autohypnotic phenomenon*.
>
> *Butler et al., 1996, p. 43*

Little attention was paid to this remarkable paper, probably because (1) both the hypnosis field (Whalen & Nash, 1996) and the dissociative disorders field (Putnam & Carlson, 1998) had concluded that there was no meaningful relationship

between hypnotizability and dissociation, and (2) the dissociative disorders field had reached a consensus that dissociative disorders were caused by trauma.

In 2009 (in the first edition of the present volume), I proposed a version of the autohypnotic model of the dissociative disorders. That model challenged the etiological primacy of trauma:

> *High hypnotizability is both a* sine qua non *of MPD [multiple personality disorder] and the fundamental mechanism of clinical dissociation*. When sufficiently motivated by recurrent trauma and pain, children with high hypnotizability will eventually utilize their hypnotic capacities in order to escape from, and to encapsulate or compartmentalize, the traumatic material. On the other hand, *no amount of trauma can produce MPD unless the child is highly hypnotizable*.
>
> *Dell, 2009, p. 741, italics added*

This challenge to the trauma paradigm evoked little reaction from the dissociative disorder field.

Ten years later (Dell, 2019), I refined my thinking about trauma, and described three important differences between the trauma model and the 'autohypnotic' model. First, pain and distress are necessary to develop a dissociative disorder, but *'trauma' per se is not necessary*. Second, even when trauma has undeniably occurred, *trauma is not sufficient* to produce a dissociative disorder. Third, *a dissociative disorder cannot occur unless the individual is highly hypnotizable*.

The 'autohypnotic' model of the dissociative disorders also differs radically from the structural model of dissociation. *The 'autohypnotic' model is founded on a hypnotic ability* (that enables motivated, defensive, mental-distancing from physical and emotional pain), *whereas the structural model is founded on a cognitive/emotional weakness or inability* to integrate trauma.

> [T]he autohypnotic model leaves behind the generally accepted idea that dissociative disorders *require* a history of trauma. Recurring pain, distress, and suffering from *nontraumatic mistreatment* (especially, chronic emotional abuse) may be quite sufficient to motivate repeated acts of autohypnotic distancing. … [*T*]*he autohypnotic model is inconsistent with the idea that trauma has the ability to somehow "cause" dissociation* (e.g., "making" or "splitting off" an alter personality or a "part"). Trauma does not have that ability, but some individuals *do* (i.e., those who are highly hypnotizable). … [A]utohypnotic distancing from pain/suffering is always *a motivated, mental effort* to find some way, any way, to get away from the circumstances that are causing that pain.
>
> *Dell, 2019, p. 65, italics in original*

The bottom line here is that the 'autohypnotic' model is radically different from the trauma model: *the cause of the dissociative disorders lies solely in high hypnotizability*; *trauma is not causal – it is motivational*. Chronic usage of high hypnotizables' dissociative ability is motivated by pain/distress/trauma, but that pain/distress/trauma can never cause a dissociative disorder. Never.

## Janet Did Not Propose an Etiological Theory of Dissociation

Van der Hart and colleagues (2006) adopted Janet's psychology of action to describe the functioning of individuals with a dissociative disorder and to conceptualize their therapy. Additionally, they embraced Myers' (1940) Janetian understanding of the dissociative symptoms of war-trauma (i.e., "shell shock") – namely, that the 'shell-shocked' soldier's mind is divided into an apparently normal personality (ANP) and an emotional personality (EP). Van der Hart and colleagues have placed Myers' model at the center of their conceptualization of the daily functioning and the therapy of individuals with DID. Their elaboration of Myers' model (Van der Hart et al., 2006) is enormously rich; it gives clinicians a much-needed understanding of their DID patients.

More recently, Van der Hart and Rydberg (2019) have drawn upon Janet's writings about vehement emotions. Vehement emotions occur when a person's ability to cope is overwhelmed. Van der Hart and Rydberg use vehement emotions to better explicate the "integrative failure that involves a disaggregation or dissociation of the personality" (p. 191). In particular, Van der Hart and Rydberg (2019) draw upon Janet and Raymond's (1898) account of vehement emotions in their two-volume publication, *Névroses et idées fixes*:

> The main characteristic of vehement emotions is that they have a disintegrative power; they deteriorate the individual's integrative capacity.
>
> *La synthèse mentale; Raymond & Janet, 1898b, p. 254*

> [Vehement emotions] are gifted with a power of dissociation.
>
> *Janet & Raymond, 1898, p. 476*

Van der Hart and colleagues' theory of structural dissociation is compelling up to a point. Ultimately, however, their model of vehement emotions and the deterioration of the individual's ability to engage in mental synthesis (*la synthèse mentale*) has a fatal shortcoming: *neither Janet's original accounts of dissociation, nor his later psychology of action – nor Van der Hart and colleagues' model of structural dissociation – provides an explanation of how (or why) an inability to synthesize traumatic events would produce a second personality.* Remember, trauma does *not* always lead to structural dissociation; the correlation between major stressors and dissociation is only 0.32. Thus, the critical issue is why *some* individuals respond to stressors by developing a dissociative disorder, and why *most* individuals do not (Briere, 2006).

This lacuna in the etiological explanation of the dissociative disorders began with Janet. Now, a century later, the etiology of DID is still unexplained by the structural model of dissociation – or by any other trauma model.

## *Trauma Models of the Dissociative Disorders*

All trauma models of the dissociative disorders propose the same explanatory formula: *Traumatic stressor + being overwhelmed →pathological dissociation*. In no case do any of the trauma models provide a rigorous explanation of "→ pathological dissociation." Each just says "→ pathological dissociation." But, "→ pathological dissociation" must be explained. So far, only the autohypnotic model of the dissociative disorders has proposed a causal explanation of "→ a dissociative disorder." The autohypnotic model proposes that highly hypnotizable individuals have a superior ability to make major alterations in their experience (e.g., turning off pain, 'going up to the ceiling,' 'going into the wall,' retreating into a fantasy world, creating an internal friend, creating alters, etc.). Thus: *Recurrent/inescapable pain/distress strongly motivates avoidance + high hypnotizability →'hypnotic'/dissociative distancing maneuvers*. When repeated over time, these highly-motivated, mental-distancing maneuvers evolve into a procedural/conditioned, reflexively-functioning dissociative disorder (Dell, 2019, 2021).

## *Janet's Refusal to Theorize*

Curiously, there is a more basic reason why Janet's model of hysteria lacks an etiological explanation of the dissociation of the personality: *Janet refused to theorize*. He insisted that he only reported what he observed. Janet's anti-theory ethic was characteristic of nineteenth-century French science (Dell, 2009; Robinson, 1977). The following quotations illustrate Janet's refusal to theorize about the cause(s) of hysteria and dissociation:

> [M]y old studies … simply endeavored to *throw light upon, describe and classify*, certain phenomena of pathological psychology.
>
> *Janet, 1907/1910, pp. 53–54, italics added*

> *I intentionally avoid discussing theories* … I simply remind myself that I have something quite different to do.
>
> *Janet, 1907/1910, p. 62, italics added*

> [W]e have got other psychologic and clinical problems to resolve concerning the subconscious without *embarrassing ourselves with … [theoretical] speculations*.
>
> *Janet, 1907/1910, p. 65, italics and bracketed word added*

> *"[D]oubling" … of consciousness … is not a philosophical explanation; it is a simple clinical observation*.
>
> *Janet, 1907/1910, p. 67, italics added*

Janet *observed* that severe hysterics (1) had a low level of emotional and cognitive functioning, (2) did not consciously integrate or synthesize the biopsychosocial sequellae of traumatic events, (3) were highly suggestible, and (4) exhibited a second consciousness that knew and did things that the primary consciousness did not know or do (Janet, 1889, 1920/1965). Janet's observations do not constitute an etiological theory of dissociation – but Van der Hart and colleagues imply that they do:

> Structural dissociation occurs when an individual's mental efficiency and mental energy … are too low to fully integrate what happened.
>
> *Van der Hart et al., 2006, p. 26*

> Janet (1907, p. 332) noted that, *when the capacity to integrate the experience is insufficient, a dissociation of the survivor's personality in two or more "systems of ideas and functions" is bound to follow.*
>
> *Nijenhuis, 2015, p. 33, italics added*

> *[V]ehement emotions … entail an integrative failure that* involves a disaggregation or dissociation of the personality, especially as part of traumatic experiences. This *involves a division of the personality into different subsystems, each with its own sense of self and first-person perspective …*
>
> *Van der Hart & Rydberg, p. 191, italics added*

Van der Hart and colleagues' descriptions of "→ structural dissociation" are always a bit oblique. They never say explicitly that the inability to synthesize trauma *causes* structural dissociation. On the other hand, Van der Hart and colleagues (Nijenhuis, 2015; Nijenhuis & Van der Hart, 2011; Van der Hart et al., 2006) have never stated that their theory is *not* a causal theory of structural dissociation. This leads me to suspect that they are discomfited by the murkiness of the causal relationship between (1) an inability to synthesize overly-stressful events, and (2) the appearance of a second personality. I am tempted to construe Nijenhuis' (2015) book as an extended effort to articulate the as-yet-unexplained, causal gap between inability-to-synthesize and development-of-a-dissociative-structure.

Finally, several authors have recently drawn an important distinction between the *disintegrative effects* of traumatic experience and the *dissociative process* that subsequently organizes that which has been disrupted/disintegrated into dissociative structures (Farina, Liotti & Imperatori, 2019; Meares & Barral, 2019; Şar, 2017; See Farina & Meares, Chapter 3, this volume). This is a sorely-needed distinction because the *disintegrative effects of trauma* and the *organization of that unintegrated material into a dissociative structure* are not the same, and – more importantly – there is little evidence that these two processes are causally-related.

## So, What *Is* the Relationship Between Trauma and Dissociative Divisions of the Personality?

In 2011, Nijenhuis and Van der Hart proposed "a precise definition of dissociation in trauma" (p. 416). Their definition surprised me because it makes the concepts of (1) trauma, (2) inability to synthesize, and (3) dissociative division of the personality *interdependent, mutually explanatory, and dynamically inseparable from one another*:

> Dissociation in trauma entails a division of an individual's personality. … *This division of personality constitutes a core feature of trauma*. It evolves when the individual lacks the capacity to integrate adverse experiences …
>
> *Nijenhuis & Van der Hart, 2011, p. 418, italics added*

Nijenhuis (2015) and Moskowitz and Van der Hart (2020) have reasserted this claim:

> Dissociation in trauma involves a division of the personality … into two or more conscious and self-conscious subsystems or dissociative parts during or following traumatic/traumatizing events. *This division is a core feature of trauma*.
>
> *Nijenhuis, 205, p. 273, italics added*

> Trauma-related dissociation involves … a division of an individual's personality … *This division of the personality constitutes a core feature of trauma*.
>
> *Moskowitz & Van der Hart, 2020, p. 3, italics added*

This thrice-asserted claim – that 'the division of personality constitutes a core feature of trauma' – says that trauma has two components: (1) the individual's inability to integrate it, and (2) the individual's division of his/her personality into parts. Thus: "No division of the personality = no trauma;" and "No trauma = no division of the personality." In short, *Van der Hart and colleagues seem to equate trauma with a structural division of the individual's personality:*

> Following Nijenhuis (2015), we would define trauma as a "biopsychosocial injury … (whose) formal cause is *a lack of integration of particular experiences/events … (which) manifests itself as a particular dissociation of the personality*."
>
> *(Nijenhuis, 2015, p. 271); Moskowitz, Heinimaa & Van der Hart, 2019, p. 18, italics added*

> *[T]rauma-related dissociation initially occurs because the traumatized individual does not have sufficient integrative capacity …*
>
> *Moskowitz & Van der Hart, 2020, p. 8, italics added*

For a similar point of view about trauma and dissociation, see Howell (2005, 2011).

The title of Nijenhuis' (2015) exegesis of trauma, *The Trinity of Trauma: Ignorance, Fragility, and Control*, equates trauma with the division of the personality – that is, division into ANPs (who live in *ignorance* of the trauma) and EPs (who are either *fragile* or *controlling*).

Then, unexpectedly, Nijenhuis declares that trauma and dissociation-in-trauma are "not the same thing":

> *Dissociation in trauma and trauma are not the same thing* – they are not synonyms. *Dissociation in trauma involves a particular division of personality, whereas trauma pertains to the complete gamut of biopsychosocial phenomena that make up traumatic experiences …*
>
> *Nijenhuis, 2015, p. 273, italics added*

"Dissociation in trauma and trauma are not the same thing." This makes excellent sense to me, but as noted, the title of Nijenhuis' book contradicts this assertion – as does the text of the book. On page 273, Nijenhuis (2015) claims that, (1) "Dissociation in trauma and trauma are not the same thing," and (2) "This division [of personality] is a core feature of trauma." These two assertions negate one another; they cannot both be true.

Nijenhuis' contention – that 'division of the personality is the core of trauma' – is probably incorrect. Why? Because trauma most often consists of a "gamut of biopsychosocial phenomena" that do *not* include a division of the personality. We know this as clinicians (because most of our 'traumatized' patients do not have a dissociative disorder) and we know this as researchers (because the correlation between trauma and dissociation is only 0.32). Thus, dissociation of the personality cannot be the core feature of trauma.

Nijenhuis' (2015) book provides many clarifying insights about trauma, but my judgement is that the book does not explain the etiology of the dissociative disorders. To me, it seems impossible to explain the etiology of the dissociative disorders solely on the basis of (1) trauma, and (2) the inability to synthesize trauma. No matter how Nijenhuis defines them, these two variables do not explain why *some traumatized individuals* develop a dissociative disorder and *other traumatized individuals* do not. Another variable is needed.

## The Theory of Structural Dissociation Needs to Incorporate High Hypnotizability

The structural model of dissociation implies that dissociative disorders are caused by an inability to synthesize trauma. This implication must be incorrect (or, at least, incomplete) because far more people have an impaired ability to synthesize stressful events (i.e., they suffer various, *nondissociative*, and/or nonstructural traumatic sequellae) than have structural dissociation. An additional factor is needed to explain why only some traumatized people develop a dissociative disorder. As stated above, I propose that high hypnotizability is that factor.

Before proceeding, I want to acknowledge the clinical value and descriptive/conceptual usefulness of Myers (1940) and Van der Hart and colleagues' (2006) ANPs and EPs. The structural model is at its very best in (1) its conceptualization of the psychological dynamics of ANPs and EPs, and (2) its psychology-of-action blueprint for treating dissociative patients. The clinical utility of Van der Hart and colleagues' structural model has not been significantly undermined by excluding high hypnotizability from its field of interest. I do, however, doubt the clinical helpfulness of their insistence that posttraumatic stress disorder is always a form of structural dissociation (Dell, 2009, 2019).

In order to fully assimilate the high hypnotizability of dissociative patients into their theory of structural dissociation, Van der Hart and colleagues would need to adjust their stance on four issues: (1) ability, (2) defense, (3) inability to integrate particular events and experiences, and (4) trauma. Their theory's formulation of these matters has, I think, gone astray via misapprehensions that Van der Hart and colleagues inherited from Janet.

Janet acknowledged two kinds of structural dissociation: (1) *hypnotically-induced divisions* of the personality, and (2) *trauma-induced divisions* of the personality. Van der Hart and colleagues agree with Janet about this. And – to their disadvantage, I think – Van der Hart and colleagues follow Janet in two crucial regards: (1) they pay no attention to high hypnotisability, and (2) they restrict their interest solely to trauma-induced dissociation (Nijenhuis, 2015; Nijenhuis & Van der Hart, 2011; Van der Hart et al., 2006).

Van der Hart and Dorahy (Chapter 1, this volume) insist that hypnotic divisions of the personality are *transient*: when the 'hypnotic state' is terminated, the division of the personality promptly ceases. They portray hypnosis as belonging to the domain of normal, healthy individuals – thereby implying that such hypnotic division of the personality is irrelevant to pathological, trauma-related, structural dissociation. DID, however, is almost certainly the living proof that high hypnotizability enables abused/betrayed children to self-induce a division of the personality (Dell, 2009, 2017b, 2019, 2021) – thereby producing a part that is *not transient*.

Van der Hart and Dorahy suggest that a medium best exemplifies normal, self-induced dissociation of the personality. However, they do not mention two important features of mediums (and other healthy individuals who self-induce a hypnotic division of the personality). First, *unlike* individuals with a dissociative disorder, mediums are not impaired in their ability to synthesize events. Second – and most importantly – *like* individuals with a dissociative disorder, healthy individuals who self-induce a division of their personality are highly hypnotizable. Thus, once again, this fundamental similarity (between structural dissociation and hypnotically-induced division of the personality) goes unmentioned.

### *Ability*

I keep saying that Van der Hart and colleagues should embrace high hypnotizability. But, why should they? Why should they discard Janet's inability-to-synthesize-trauma as the fundamental cause of structural dissociation? There are eight reasons why.

First, research has shown that Janet was wrong about hypnotizability. Hypnotizability is not pathological; it is a normal trait that has a bell-curve distribution in the general population (Hilgard, 1965). Second, individuals with DID are significantly more hypnotizable than those with any other mental disorder (Dell, 2017a). Janet knew this – but his insistence that high suggestibility is the defining *symptom* of hysteria (i.e., the dissociative disorders) led him to discount the possibility that high suggestibility is a nonpathological trait that *enables/causes* hysteria (i.e., dissociative disorders). Third, Janet was quite aware of two facts; (1) healthy individuals who are highly hypnotizable can easily produce a division of the personality, and (2) dissociative hysterics are highly hypnotizable. Janet should have concluded that high hypnotizability is the essential factor-in-common for division of the personality (in hysteria and in hypnosis). He did not. Janet's conviction that high hypnotizability is a pathological trait deprived him of that insight.

Fourth, high hypnotizability is associated with dissociative symptoms in seven mental disorders (i.e., phobias, bulimia, PTSD, acute stress disorder, 'conversion' disorder, somatization disorder, and DID; Dell, 2017a). This finding and other evidence led (some) modern researchers to conclude that high hypnotizability is a *sine qua non* for the development of a severe dissociative disorder (Butler et al., 1996; Dell, 2009, 2017a, 2019, 2021).

Fifth, Butler and colleagues (1996) have shown that the phenomena of high hypnotizability corresponds isomorphically – hypnotic phenomenon by hypnotic phenomenon – with the symptoms of a dissociative disorder.

Sixth, Janet never provided a causal theory of hysteria. Instead, he elaborated hysterics' inability to synthesize certain events into a comprehensive analysis of human functioning (i.e., his psychology of action). Notably, however, Janet's psychology of action considers hysterics to be *just one of many diagnostic groups* with poor mental efficiency, low mental energy, and a weakened ability to integrate stressful events.

Seventh, Nijenhuis has already acknowledged that ability is an important component of the dissociative disorders:

> In our view, *dissociative ability* involves an individual's *ability* to divide the personality in two or more insufficiently integrated, hence dissociated, parts, each with, at a minimum, his or her own first-person perspective.
>
> *Nijenhuis & Van der Hart, 2011, p, 436, italics added*

> Dissociation of the personality involves *the capacity* to organize and reorganize the personality into two or more dissociative parts of the personality.
>
> *Nijenhuis, 2015, p. 353, italics added*

> The maintenance of dissociation is related to *the ability* to keep two or more parts of the personality and the associated actions and mental contents relatively divided from each other.
>
> *Nijenhuis, 2015, p. 353, italics added*

Eighth, Nijenhuis and his colleagues have repeatedly identified phobias as the motivator for accomplishing and maintaining these dissociative divisions. But a phobia is not an ability. *Phobias provide a motivation to avoid, but they do not explain (or provide) the remarkable mental ability to create and maintain alters.*

The bottom line here is that (1) Janet was wrong about high hypnotizability being a pathological trait, (2) and hence wrong about high hypnotizability being a symptom of hysteria, and (3) Nijenhuis (2015) already thinks that dissociation is enabled and maintained by an ability. Conversely, Janet never claimed that hysteria is *caused* by a lack of ability to synthesize trauma; Janet said that an inadequate capacity to synthesize events is found in many kinds of mental disorder (Crabtree, 1993; Janet, 1889). Nijenhuis agrees:

> Many forms of psychopathology involve a certain lack of integration, but it is not helpful to regard all integrative problems as manifestations of dissociation.
>
> *Nijenhuis, 2015, p. 548*

Accordingly, it would make good sense for Van der Hart and colleagues (1) not to repeat Janet's error about high hypnotizability, and (2) not to claim – or even imply – that an inability to synthesize *causes* a dissociative disorder.

### *Defense*

Van der Hart and colleagues have taken up Janet's mantle in the feud with Freud (Nijenhuis & Van der Hart, 2011; Van der Hart & Dorahy, this volume). Van der Hart and colleagues: inability to synthesize! Freud: defenses! Janet and Freud were two great psychologists; each elaborated a comprehensive clinical psychology. Each used their own fledgling psychology to explain hysteria. Janet insisted that severe hysterics (i.e., DID patients) had an inability to synthesize and integrate traumatic events; Freud insisted that hysteria was a defense against unacceptable ideas and urges.

Janet: passive, nonmotivated inability to integrate. Freud: active, motivated defense. The debate continues today:

> Dissociation as a *defence* in psychoanalytic thinking can be distinguished from dissociation as *insufficient psychological capacity for integrated functioning* (e.g., Liotti, 2009) [italics in original]. In the latter Janetian sense, dissociation may come to have a secondary defensive value. However … *Janet's dissociation does not occur for the primary purpose of psychic defence (i.e., ego-derived expulsion or 'splitting off' of noxious internal experience*).
>
> *Van der Hart & Dorahy, Chapter 1, this volume, p. ?? italics added*

They further note: "… [A]ny defensive purpose [that] this failed integration has is secondary to it rather than teleological of it." (Van der Hart & Dorahy, Chapter 1, this volume, p.??)

*Defense and inability-to-synthesize are two very-different conceptions of the same clinical phenomena – one is an intentional action; the other is a deficit – an inability.* All individuals defend against events and ideas that they find to be unacceptable or intolerable; they defensively *refuse* to tolerate and integrate them. They *avoid* them. The more that those events and ideas are unacceptable, (1) the more unwilling the person is to tolerate and integrate them, and, therefore, (2) the more the person avoids those events and ideas, and 'pushes' them away. In contrast, Janet claims that hysterics are *unable* to integrate particular events. The difference, of course, is that Freud focuses on *motivation and will*, whereas Janet focuses on cognitive/emotional *inability* to synthesize and integrate (Liotti & Liotti, 2019).

Their respective frames of reference turned Freud's attention to the defensive functioning of the ego, and turned Janet's attention to (what Freud and ego psychologists would call) the limitations of a weak ego (i.e., an insufficient capacity for integrative functioning).

Irony abounds. The problem with the model of structural dissociation – in fact, the problem with all trauma models of dissociation – is that *they focus too much on trauma* (and fail to take heed of the many, painful/distressing experiences that fall short of frank trauma). As noted earlier in this chapter, all trauma models espouse the same causal formula: *Traumatic stressor + being overwhelmed → pathological dissociation*; *traumatic stressor + being overwhelmed → structural dissociation*. My point here is that trauma models of dissociation are almost inherently Janetian: trauma (i.e., 'being-traumatically-overwhelmed') is easily equated with 'being-unable-to-synthesize-those-events':

> *[T]his notion of trauma as a breaking-point highlights the inability to integrate* the implications of an event into the existing conceptions of one's self and the world, recapitulating the historical linking of trauma and dissociation. … As such, *the concept of trauma is intimately connected with the concept of dissociation …*
>
> *Moskowitz et al., 2019, p. 18, italics added*

This sentiment, of course, is held in common by all trauma models of dissociation: "trauma is intimately connected with dissociation." What is wrong with that? Hasn't the dissociation field espoused the trauma model of dissociation since the 1980s? Yes, it has, but …

The problem with the trauma model is "trauma." Van der Hart and colleagues' model of trauma-related structural dissociation contains two dubious claims: (1) structural dissociation *requires* "trauma"; and (2) avoidance and defense do not cause structural dissociation:

> *"[B]eing overwhelmed" implies an insufficient integrative capacity for the task at hand. … If dissociation is a defense … then it would seem that he or she is not overwhelmed*, i.e., overcome, submerged, crushed, inundated. … [D]uring a

> traumatizing event … *the individual is indeed overwhelmed*. … [I]ntegrative capacity is lowered, rendering the client unable to integrate experience precisely because *defenses have failed*.
>
> *Van der Hart & Rydberg, 2019, p. 192, italics added*

Yes, indeed. During trauma, a person's defenses and coping skills are truly overwhelmed; his or her defenses have failed. Nevertheless, I think that Van der Hart and colleagues are wrong about these matters. *I think they are wrong to assume that trauma-related structural dissociation requires being overwhelmed by trauma*; I think they are wrong to insist that motivated, defensive dissociation cannot occur. Like all theories, their claims about trauma and defensive dissociation are hypotheses; they are not empirical facts. My hypothesis is that chronic dissociation is a motivated, high-hypnotizability-enabled avoidance of pain and distress – that is, dissociation is not about "trauma" *per se* (Dell, 2019). *Structural dissociation is initially generated either long before, or shortly after, a person is traumatically overwhelmed* (Dell, 2019, 2021).

### *After Trauma*

Charcot (1889/1991) and Israeli researchers of terrorist attacks (Yovell, Bennet & Shalev, 2003) have reported that the onset of hysterical symptoms and dissociative amnesia, respectively, do not occur at the time of the "trauma." Instead, their onset is delayed. They observed that functional sensory-motor disorders and dissociative amnesia arose only subsequent to the trauma, "*after a period of incubation*" (Charcot, 1889/1991, p. 385, italics added). Breuer and Freud (1893) said the same. Neither Charcot nor Yovell and colleagues explain why this delay occurs; they simply report their repeated observation of the delay.

### *Before Trauma*

In childhood, I think that defensive/dissociative avoidance/distancing from pain and distress most often takes place *before* a person is overwhelmed (Dell, 2019, 2021). As noted above, evolution has shaped every living organism to promptly avoid or to withdraw from any source of pain and distress – in order to prevent the organism from being 'traumatized' and dying. *All* children who are mistreated by their parents find ways to avoid or defend themselves from their pain and distress. All of them. But only a small percentage of them defend themselves with pathological dissociation (i.e., those who are highly hypnotizable). That is the central message of this chapter: *only a small percentage of children – no matter how mistreated or traumatized they are – have the ability to spontaneously deploy the mental defense of dissociative-distancing* (Dell, 2019; see especially, Dell, 2021).

The essential developmental point here is this: *when a highly hypnotizable child is repeatedly mistreated, she will probably enact various motivated, mental (i.e., 'hypnotic'/ dissociative) distancing-maneuvers* (Dell, 2009, 2019, 2021) – *long before she encounters frank trauma*. Dysfunctional parents may (or may not) traumatically-overwhelm their children, but inflicting frank trauma is an infrequent aspect of most dysfunctional parenting. Dysfunctional parenting and frequent mistreatment – short of trauma – is more than sufficient to motivate pathological dissociation. Thus, I propose that frank trauma is not needed; trauma is *not* the necessary and sufficient gateway to structural dissociation.

Finally, there is another irony about Van der Hart and colleagues' theory of trauma-related, structural dissociation. Despite their insistence that structural dissociation is not a defense (as Freud insists), *Van der Hart and colleagues' descriptions and explanations of dissociation are pervasively focused on defense:*

> Chronically traumatized individuals … *mentally avoid* their unresolved and painful past and present.
>
> *Van der Hart et al., 2006, p. 1, italics added*

> [S]urvivors can become anxious and *avoidant of any mental action*, such as having particular feelings, sensations, and thoughts that are consciously or unconsciously associated with the original traumatic experience(s).
>
> *Van der Hart et al., 2006, p. 14, italics added*

> Integration is prevented when an individual *avoids traumatic memories, suppresses thoughts about the traumatic experience*, and has a negative interpretation of intrusive trauma-related memories.
>
> *Van der Hart et al., 2006, p. 26, italics added*

> Once reactivated, *EP … has a tendency to engage in defensive behavioral reactions* such as running from danger, warding off attack, or freezing.
>
> *Van der Hart et al., 2006, p. 52, italics added*

> *Dissociative parts of the personality often contain various mental defensive action tendencies, so-called psychological defenses,* which range from normal to quite primitive and pathological.
>
> *Van der Hart et al., 2006, p. 65, italics added*

> We endlessly desire and strive to get the good things of life, and *we wish and struggle on end to evade or get rid of the bad things.*
>
> *Nijenhuis, 2015, p. 69, italics added*

> The final cause of traumatic experience is *the will to defend and find safety.*
>
> *Nijenhuis, 2015, p. 260, italics added*

Note, by the way, that these quotations apply equally well to children who experience dysfunctional parenting and repeated mistreatment that falls short of frank trauma (which is probably the vast majority of childhood mistreatment). Frank trauma is not necessary to 'push' or motivate mistreated children to create dissociated parts. Mistreated children are all about avoidance and defensive behavior. They don't need frank trauma to motivate their mental efforts to get away from what is happening. I discuss the nature of trauma below.

Finally, I want to return to Van der Hart and Rydberg's rejection of defensive dissociation:

> *If dissociation is a defense … then it would seem that he or she is not overwhelmed*, i.e., overcome, submerged, crushed, inundated.
>
> *Van der Hart & Rydberg, 2019, p. 192, italics added*

This is exactly my point. Structural dissociation (and other dissociative defenses) are mental efforts that can first occur only when a person is *not* in a traumatic state. Later in time – after the dissociative child has developed an automatized set of dissociative defenses – he or she may reflexively switch to another alter or create a new alter *in the midst of being genuinely traumatized*.

Finally, all mistreated children – of whatever hypnotic ability – engage in acts of physical and mental avoidance whenever they can. But highly hypnotizable children can do it differently. Their superior ability to alter their experience makes their mental acts of avoidance enormously effective; those mental acts take the child far 'away' from her painful circumstances (e.g., by 'turning off the pain,' 'going away,' 'going into the wall,' 'going up to the ceiling' and watching the little girl 'down there,' etc.). See Dell (2019, 2021).

I want to clarify two points. First, from my perspective, none of the immediately-forgoing examples of dissociative/mental avoidance involve structural dissociation. Second, the-little-girl-going-up-to-the-ceiling is *not* a symptom of depersonalization (such as feeling like your body is not yours, feeling disconnected from your body, etc.). The-little-girl-on-the-ceiling is also different from depersonalization-derealization breakdown phenomena (see "Disruption of the Framework of Perceptual Organization" below). The-little-girl-on-the-ceiling adds a great deal to depersonalized disconnection from one's body. I consider it to be an unusual feat, typical of 'hypnotic' phenomena (Dell, 2019).

### *Inability to Integrate Particular Events and Experiences*

Janet first applied his fledgling psychology of action to what was at that time called 'hysteria.' He concluded that hysterics have a weak ability to integrate their traumatic experiences and subsequently manifested diverse simultaneous existences (*diverses existences simultanées*). This ability/inability to integrate life experiences became the conceptual centerpiece of Janet's psychology of action. In the full flower of his psychology of action, however, it was apparent to Janet that a weak ability to integrate experiences was certainly not unique to trauma, structural dissociation, or the dissociative disorders. Van der Hart and colleagues agree:

> Integration is on a continuum, with everyone having some degree of integrative imperfection in life. However, *not all integrative failure results in structural dissociation*.
>
> *Van der Hart et al., 2006, p. 143, italics added*

> Many forms of psychopathology involve a certain lack of integration, but *it is not helpful to regard all integrative problems as manifestations of dissociation*.
>
> *Nijenhuis, 2015, p. 548, italics added*

My point here is that one's ability to integrate life experiences really has nothing to do with the *origin* of dissociative structures. On the other hand, Janet's analysis of the ability/inability to synthesize and integrate (i.e., his psychology of action) does provide Van der Hart and colleagues with an excellent, generalized "theoretical basis for clinical assessment and treatment of chronically traumatized patients" (Van der Hart et al., 2006, p. 131):

> Mental health is characterized by a high capacity for integration.
>
> *Van der Hart et al., 2006, p. 133*

> [T]he difficulty of coping with and integrating adverse experiences … relates to factors that limit the exposed individual's integrative capacity.
>
> *Nijenhuis, 2015, p. 77*

Accordingly, Van der Hart and colleagues (2006) use Janet's psychology of action to inform a rich set of (Phase 1) interventions (International Society for the Study of Trauma and Dissociation, 2011) that enable dissociative individuals to increase their capacity for integration – so that they become increasingly able to integrate their traumatic experiences and, eventually, their dissociative parts. These interventions make excellent clinical and practical sense. But they do not explain the *etiology* of structural dissociation. Van der Hart and colleagues need to look elsewhere than Janet's psychology of action to find a rigorous explanation of what *causes* structural dissociation.

## *Trauma*

The term, *trauma*, is used broadly and, mostly, inaccurately. When therapists and lay people speak of "traumas," "traumatic events," and "being traumatized," their use of those terms tends to be colloquial and metaphorical. The DSM's discussion of "trauma" is more empirically-grounded (APA, 1980, 1994, 2013), but not much better. DSM-5 obscures its inability to define trauma by using a broad, inclusive term, "Trauma- and Stressor-Related Disorders" (a regrouping that it borrowed from ICD-10 [1992]).

### *What is Trauma?*

When we avoid our unmindful, colloquial use of the term, we seem to know what trauma is. Krystal (1988), Herman (1992a, 1992b), Kluft (1984), and Van der Kolk (1996) have uniformly described trauma in terms of "unbearable and inescapable threatening … experiences … in the face of which a person is powerless" (Farina et al., 2019, p. 4). Nijenhuis (2015) says that traumatic experiences are "phenomenally overwhelming and injurious" (p. 254). Moskowitz et al. (2019) invoke the concept of *breaking point:* "one can conceptualize trauma as an individual's 'breaking point' when faced with events that are, for him or her, personally overwhelming" (p. 18).

These descriptions of psychological trauma "ring true"; they conceptualize the subjective essence of (what we consider to be) trauma. They also show that our everyday use of the words "trauma" and "traumatic" is usually an exaggeration. Most everyday references to "traumatic events" refer to events that are not actually *traumatic*; instead, these events are adverse, unpleasant, distasteful, and even emotionally painful. Rarely, however, are they events that leave the person "completely and decisively defeated" (Nijenhuis, 2015, p. 255).

Alright, that is clear enough, but there is still a problem. Many not-fully-traumatic stressors leave a lasting impact – especially when they are repeated. Does that lasting impact constitute a "trauma"? This is where the matter gets murky. Proponents of the concepts of cumulative developmental trauma (Cloitre et al., 2009; Van der Kolk, 2005), attachment trauma (Farina et al., 2019; Isobel et al., 2017), or complex PTSD (Ford, 2015; Herman, 1992a; Roth, Newman, Pelcovitz, Van der Kolk, & Mandel, 1997; Şar, 2011) would probably say, "Yes." It is worth taking a closer look at these concepts.

### *Chronic Relational Trauma*

The symptoms of cumulative developmental trauma, attachment trauma, and complex PTSD are *personality traits*: dysfunctional beliefs and expectations, relational problems, cutting off from friends and family, tendency to revictimization,

mistrust of self and others, helplessness, despair, a feeling of permanent damage, feelings of worthlessness, shame, and guilt (see also Briere, 2000). These traits are, I think, best understood to be manifestations of attachment trauma:

> The pathogenetic model based on Attachment Trauma … link[s] early relational trauma, through … later traumas suffered at the hand of attachment figures, to the psychopathological processes … of Cumulative Developmental Trauma.
>
> *Farina et al., 2019, p. 5*

The essential manifestations of cumulative/attachment/complex trauma pertain to one's personality and self. They are not the symptoms of simple PTSD; they are not the result of a single traumatic event. They are the inevitable, deeply-human responses to chronic misattunement, insensitivity, mistreatment, and betrayal by parents and other attachment figures – including the world at large. These individuals are very deeply wounded – the original meaning of the word *trauma*. And some of them were, indeed, pushed beyond their breaking point so that they were completely and decisively defeated.

Some of these deeply wounded individuals have a dissociative disorder, but most do not. Why? Because a person's inability to integrate this kind of mistreatment cannot – by itself – generate structural dissociation. Structural dissociation requires a particular ability.

### *Why is the Dissociation of the Dissociative Disorders Different from All Other Dissociation?*

Many mechanisms and processes produce so-called "dissociative" experiences (Cardeña, 1994; Dell, 2009; Laddis, Dell, & Korzekwa, 2017). The central thesis of this chapter is that only the 'mechanism' of high hypnotizability can produce the kind of dissociation that occurs in the dissociative disorders. The mechanisms of all other "dissociative" symptoms are different – and they are incapable of creating a dissociative disorder.

### *Disruption of the Framework of Perceptual Organization*

*Most episodes of depersonalization or derealization are temporary disruptions or breakdowns of normal, neurocognitive and perceptual functioning.* These incidents occur (1) infrequently in normal individuals, (2) frequently in persons with Borderline Personality Disorder (BPD), (3) incident-specifically during highly-unexpected (Beere, 2009) or highly-stressful moments (e.g., peritraumatic "dissociation"), (4) as a consequence of neural disruption/toxicity secondary to drug ingestion, and (5) chronically in persons with Depersonalization-Derealization Disorder. None of these alterations of consciousness are caused by high hypnotizability or by structural dissociation (Dell, 2009, 2019; Rodewald, Dell, Gößling, & Gast, 2011; Steele, Dorahy, Van der Hart & Nijenhuis, 2009).

Beere (2009; Chapter 17, this volume) would characterize all of the above episodes of depersonalization and derealization as *disruptions of the framework of perceptual organization*. Such disruptions are especially common in BPD due to their neurodevelopmental failures of integration that are associated with an unstable sense of self, oversensitivity to interactions with others, susceptibility to cognitive-emotional misprocessing, inability to regulate their emotional reactivity, and impulsive behavior. BPD incidents of depersonalization and derealization are not defensive; they are breakdown phenomena that are spontaneous, unbidden, and maladaptive.

I am not saying that BPD patients never develop a comorbid dissociative disorder (i.e., structural dissociation). Some do (Korzekwa & Dell, Chapter 31, this volume); but the dissociative symptoms of structural dissociation are *not* an aspect of their BPD pathology. When a person with BPD has a comorbid dissociative disorder, that dissociative disorder arose in exactly the same way – and for the same 'reasons' – as it does in individuals who are not borderline: it arose as a hypnotizability-enabled defense against repeated pain and distress.

So, the bottom line about dissociation in BPD is that dissociation-like breakdown-phenomena (i.e., depersonalization, derealization, and nonreversible 'amnesia') seem to be inherent to many cases of BPD pathology. This means that BPD is not a dissociative disorder (see also Brand et al., 2016).

Conversely, a subset of highly-hypnotizable BPD persons may encounter repeated pain/distress and develop a comorbid, structural, dissociative disorder. They may also develop a minor (nonstructural) dissociative disorder (see below).

## Hypnotizability-Enabled Dissociative Defenses

According to the theory of structural dissociation, only the activity of dissociative structures can produce 'genuine' dissociative phenomena (Steele et al., 2009); all other dissociation-like phenomena are nondissociative alterations of

consciousness (e.g., Steele et al., Chapter 4, this volume). The autohypnotic model of the dissociative disorders defines a somewhat broader domain of dissociation.

> *The autohypnotic model's domain of the dissociative disorders consists of all hypnotizability-enabled, automatic/proceduralized, dissociative symptoms – regardless of whether those symptoms are generated by a dissociative structure* (Dell, 2021). Thus, in contrast to the structural model of dissociation, the autohypnotic model identifies several, minor (i.e., nonstructural) dissociative disorders: (1) chronic, proceduralized (i.e., automatic) blocking of pain, (2) out-of-body experiences that occur spontaneously *during pain, abuse*, or extreme threat (3) spontaneous, out-of-control, self-protective episodes of extreme, dissociative detachment (Allen et al., 1999, 2002), (4) spontaneous retreats into fantasy *in the midst of pain/distress,* and (5) reversible amnesias that do not involve a personified, or non-personified, dissociative part. These minor dissociative disorders do not require the presence of a dissociative structure: they are motivated, hypnotizability-enabled actions of self-defense and self-care that have become proceduralized and automatic (Dell, 2021). They are also common auxiliary defenses in DID patients.

It is of great importance to realize that *the chronic, dissociative symptoms of an adult always originated (usually in childhood) as active, intentional, mental efforts to escape or distance from pain and distress*. I suspect that the success of the child's mental efforts to get away from the pain was unexpected – in fact, so unexpected that the child does not realize that she made it happen. If the painful circumstances continue – as is inevitable with dysfunctional or abusive parents – these hypnotizability-enabled, mental acts of defense become organized into a reflexive, proceduralized pattern of distancing-maneuvers that constitutes a dissociative disorder (Dell, 2019, 2021).

This procedural automatization of 'autohypnotic'/dissociative defenses has two important consequences. First, whether minor (i.e., nonstructural) or major (i.e., structural), dissociative disorders tend to be unremittingly chronic because they are sustained by negative reinforcement (Dell, 2019, 2021). Second, by the time that a dissociative patient encounters a therapist (or researcher), the long-since-established automaticity of the patient's dissociative symptoms 'obscures' their motivated/defensive origins.

## Crucial Remaining Issues About High Hypnotizability

### *The Hypnotizability of Dissociative Patients*

Although there is little doubt that DID patients are more hypnotizable than other mental disorders (Bliss, 1986; Butler et al., 1996; Dell, 2017a, Frischholz, 1985; Janet, 1920/1965; Myers, 1940), the empirical demonstrations of that fact are still sparse (Bliss, 1983, 1986; Frischholz, Lipman, Braun & Sachs, 1992). This is probably due to the loss of interest in the relationship between hypnotizability and dissociation that took hold a quarter-century ago (Putnam & Carlson, 1998; Whelan & Nash, 1996). More research on the hypnotizability of DID and other dissociative disorder patients is needed. In particular, researchers should study the hypnotizability of trauma patients who report episodes of extreme dissociative detachment (Allen et al., 1999, 2002).

### *The Question of Whether Trauma Causes High Hypnotizability*

In the last quarter of the twentieth century, some investigators claimed that trauma increases hypnotizability. This notion was first raised by J. Hilgard (1970, 1974). She described two pathways to high hypnotizability: (1) a strong liking for fantasy and reading, and (2) harsh punishment during childhood. Hilgard's (1974) evidence for these two pathways was statistically significant, but of small-medium magnitude (i.e., $r = \sim.30$).

A few years later, Nash and colleagues raised the issue anew. They presented evidence (Nash & Lynn, 1985–1986; Nash et al., 1984) that the high hypnotizability and high dissociativity of dissociative individuals might have "a common traumatogenic etiology" (Whalen & Nash, 1996, p. 193). Subsequent research, however, led Nash and colleagues to conclude that their earlier findings had been spurious (see Putnam & Carlson, 1998). Similarly, in a study with highly-rigorous methodology, Putnam, Helmers, Horowitz, and Trickett (1995) found no difference in the hypnotizability of sexually abused girls and matched controls.

The general form of this hypothesis (i.e., that early trauma increases hypnotizability) is the proposal that there is a sensitive period (Knudsen, 2004) in early childhood for skill acquisition. Experts in music or sports – like adults with a dissociative disorder – often started their musical or athletic training early in childhood. Accordingly, some have proposed that adult expertise in music or sports was boosted by practice during an early sensitive period (e.g., Baharloo,

Johnston, Service, Gitschier & Freimer, 1998; Schlaug, Jancke, Huang, Staiger & Steinmetz, 1995). Recent research, however, indicates that adult musical expertise is fully explained by genetic aptitude – rather than by practice during a sensitive period (Wesseldijk, Mosing & Ullén, 2021).

Informal discussions at conferences have shown me that some experts on the dissociative disorders still suspect that repeated trauma during childhood increases hypnotizability. In my experience, this belief is especially prevalent among proponents of the structural model of dissociation – for two reasons, I think.

First, the two progenitors of the structural model of dissociation – Janet and Myers – explicitly claimed that trauma increases suggestibility. Janet said that trauma brought about a retraction of the field of consciousness and a sharp increase in suggestibility. Myers, who was deeply grounded in Janetian psychology, wrote that shell shock immediately produced a "disordered personality" that was "characterized by amnesia, fission of personality, and suggestibility" (Myers, 1940, p. 75).

Van der Hart and Rydberg (2019) recently said that vehement emotions during trauma generate a pervasive sense of powerlessness, a lowered level of consciousness, and a narrowed field of consciousness – all of which leads to mental disaggregation:

> Janet adds that after this "complete dissociation" – involving the actual disaggregation or dissociation of mental systems – *consciousness weakly reappears, with heightened suggestibility*, and … the *idée fixe*. This is a whole set of experiences dominating consciousness and functions as *a malignant hypnotic condition* in which the dissociative part of the personality present during the trauma remains fixated …
>
> *Van der Hart & Rydberg, 2019, p. 195, italics added*

Second, if trauma causes high hypnotizability, then high hypnotizability is just another posttraumatic symptom. In short, Janet's and Myers' claims – that trauma and dissociation cause extreme suggestibility – have freed the proponents of structural dissociation from the need to consider the possibility that high hypnotizability *causes* structural dissociation.

## Temporary Increases of Hypnotizability

Certain circumstances may temporarily increase hypnotizability: pregnancy, impending surgery, and severe injury. A version of this idea was first proposed by Charcot (1889/1991); he said that traumatic shock might temporarily produce a hypnotic state that was susceptible to autohypnotic suggestion:

> [I]t may be inquired whether the mental condition occasioned by the Nervous Shock experienced at the moment of the accident [i.e., the traumatic event] and for some time after, is not equivalent in a certain measure … to the cerebral condition which is determined in "hysterics" by hypnotism.
>
> *Charcot, 1889/1991, p. 305*

Such increases in responsiveness to hypnotic suggestion are not lasting.

There is an extensive literature on stress-related, opioid and non-opioid hormonal mechanisms of anesthesia (e.g., Lichtman & Fanselow, 1991; Van der Kolk, Greenberg, Boyd & Krystal, 1985; Watkins & Maier, 1986). These hormonal mechanisms are unrelated to the hypnotizability-enabled pain-reduction (Spiegel, Bierre & Rootenberg, 1989). Importantly, hypnotically-induced anesthesia is not neutralized by naloxone (Goldstein & Hilgard, 1975; Spiegel & Albert, 1983) – whereas opioid-hormonal, stress-related anesthesia is neutralized by naloxone. Finally, stress-related anesthesia is temporary, not permanent.

### *Impending Surgery*

In 1846, Esdaile reported that 80% of his patients achieved hypnotic anesthesia prior to surgical amputations. Esdaile did not demonstrate that this presurgical intervention produced greater hypnotic responsiveness than their everyday responsiveness to hypnosis, but, logically, that would seem to be the case. Bejenke (2007) has reported that trance and suggestibility increase substantially in immediately-presurgical patients – even with patients who are typically not hypnotizable. This responsiveness, Bejenke reports, lasts until the patient recovers.

An impressive series of modern studies has demonstrated that presurgical hypnotic interventions produce a significant reduction in the use of propofol and lidocaine; reduced pain, nausea, fatigue, and discomfort; and produced cost savings due to shorter times in the operating room (Lang et al., 2000; Lang & Joyce, 1996; Lang & Rosen, 2002: Montgomery et al., 2007).

### *Pregnancy*

Two studies have documented an increase in hypnotic responsiveness during pregnancy (Alexander, Turnbull, & Cyna, 2009; Tiba, 1990). Tiba (1990) administered the 12-item Harvard Group Scale of Hypnotic Susceptibility (Shor & Orne, 1962) to 180 pregnant women in Hungary. The Hungarian population-mean Harvard score is 5.15, but Tiba's sample of second- and third-trimester pregnant women obtained a mean score of 8.12. Women in their first pregnancy obtained a mean Harvard score of 9.0!

Alexandra et al. (2009) administered the Creative Imagination Scale (CIS; Barber & Wilson, 1979) to 37 third-trimester pregnant women in Australia (mean CIS score = 23.5, SD = 6.9) and administered it again, 14 to 24 months after delivery (mean CIS score = 18.7, SD = 6.6; $p < .001$). The effect size of this mean difference was 0.84, "suggesting that the hypnotizability change was both statistically significant and clinically meaningful" (p. 13).

### *Severe Injury*

There is no evidence that trauma causes a permanent increase in hypnotizability, but life-threatening events may produce a time-limited increase in a person's ability to alter their experience of pain and emotion. We know, for example, that human beings have biological "animal defenses" that spontaneously alter their perceptions in ways that increase their ability to survive in moments that threaten imminent death (for detailed accounts of these evolution-prepared defenses, see Bolles & Fanselow, 1980; and Dell, 2009).

Hypnosis reduces most patients' postsurgical pain, reduces their postsurgical emotional distress, and speeds their recuperation (Esdaile, 1846; Montgomery, David, Winkel, Silverstein, & Bovbjerg, 2002; Montgomery, DuHamel & Redd, 2000; Montgomery, Schnur & David, 2011). The largest meta-analysis of the literature on hypnotic pain-reduction (3,632 participants in 85 studies) found that direct analgesic suggestions reduced pain by 42% in high hypnotizables, 29% in medium hypnotizables, and 17% in low hypnotizables (Thompson et al., 2019). Thus, most patients, with the exception of low hypnotizables, respond well to hypnotic suggestions for reduced pain.

There is little research, however, on the question of whether humans undergo a spontaneous, temporary increase in their ability to manage pain (1) during moments of severe injury and imminent threat to life, and (2) during recuperation from injury. We know that evolution has selected for a set of spontaneously-occurring, biological alterations that facilitate recuperation after injury (Bolles & Fanselow, 1980), but we do not know whether there are comparable increases in the ability to alter experience (Dell, 2021) that seems to underlie responsiveness to suggestions for pain reduction. Madeo, Castellani, Chiara and Santarcangelo (2015) have presented evidence which suggests that Gray's Behavioral Inhibition System (Gray, 1990; Gray & McNaughton, 2000) may manage negative affect and pain so completely during recuperation that a person's hypnotizability makes no additional contribution to managing that pain and emotion.

I have argued that evolution has not selected for the trait of hypnotizability (Dell, 2021). If natural selection had been brought to bear on hypnotizability, then most people would be highly hypnotizable. On the other hand, *it makes more sense to hypothesize that evolution has selected for a temporary increase in the ability to alter one's experience of pain* (i.e., 'autohypnotic' ability; see Dell, 2021) *in circumstances with high relevance to survival* – pregnancy, severe injury, and immediately-impending severe injury and pain (i.e., amputation, surgery). From an evolutionary perspective, such an ability to successfully manage or alter our experience, during circumstances that potentially endanger survival, *should* be prevalent in the general population (and it should not be constrained by one's everyday level of hypnotizability).

## *Humans Have a Natural, Biological Ability to Alter Experience*

There seems to be a natural, biological, human ability to alter one's experience that exists and operates independently of any hypnotic induction (Dell, 2021). Individual differences in this ability range from low to high and are largely commensurate with the person's assessed hypnotizability. More importantly, these *preexisting, individual differences in the ability to alter experience seem to be the 'substrate' that enables each individual's response to so-called hypnotic suggestions.*

Since the late 1700s, Western culture has discussed and used a Western concept (i.e., hypnosis) and various Western techniques (i.e., hypnotic inductions, suggestions) in order to bring about impressive alterations in hypnotic subjects' experience (e.g., arm so heavy it cannot be lifted, forgetting the number "4," not seeing objects or people directly in front of the subject, not smelling ammonia, etc.). I have argued that the concept and techniques of hypnosis are a Western, culture-bound entity that are enabled by a natural, biological, human ability to alter experience – an ability that is little acknowledged in Western culture (Dell, 2021).

Because Western culture seldom acknowledges the existence of this natural human ability to alter experience, Westerners seldom use this ability unless they cross paths with a hypnotist. There are, however, at least two important

exceptions to this generalization. First, individuals who enjoy fantasizing may unknowingly use their ability to amplify and enrich their fantasies. Some of these individuals become fantasy-prone personalities (Wilson & Barber, 1981, 1983) or maladaptive daydreamers (Somer, Chapter 35, this volume). Second, children who are repeatedly subjected to inescapable pain and discomfort will make mental efforts to escape from their circumstances and, unwittingly/unknowingly, access their latent ability to alter their experience (by blocking pain, 'going away,' 'going' to a fantasy world, 'going up to the ceiling' and 'watching the little girl down there,' making another alter, etc.). Repeated use of these mental 'escapes' generates a proceduralized, autonomously-functioning, dissociative disorder (Dell, 2019, 2021).

Finally, Dienes et al. (2020) have suggested that this same ability – which they call "*phenomenological control*" – plays a role in subjects' responding to the demand characteristics of experimental studies (Orne, 1962), the vicarious experience of another's pain, mirror touch synesthesia, and even the rubber hand illusion.

## Summary and Conclusions

For the last 40 years, the trauma model has provided the dissociative disorders field with a guiding paradigm. The extensive trauma-histories of severely dissociative patients have made the trauma model compelling. Nevertheless, most "trauma survivors" do *not* have a dissociative disorder. The trauma model needs to identify the factors that determine why only some "trauma survivors" develop a dissociative disorder.

For the last 15 years, the dominant trauma model has been Van der Hart and colleagues' (2006) model of structural dissociation of the personality. The structural model follows the writings of Janet and Myers. Van der Hart and colleagues have used Janet's psychology of action to great advantage in conceptualizing the motivational dynamics of dissociative parts and formulating their treatment.

Janet's understanding of high hypnotizability (i.e., suggestibility) and its relation to hysteria and the dissociative disorders was wrong. He was erroneously convinced that the high hypnotizability of these patients is a pathological feature of their mental disorder. Accordingly, he rejected the possibility that high hypnotizability was a crucial – in fact *the* crucial – etiological factor in these disorders. Van der Hart and colleagues' theory of structural dissociation of the personality has followed Janet's example; they, too, reject the etiological importance of high hypnotizability for the dissociative disorders.

### *The Bottom Line*

The 'autohypnotic' model of the dissociative disorders rejects all current versions of the trauma model. *Trauma has no capacity to cause a dissociative disorder. Only high hypnotizability can do that*. Yes, pain/distress/trauma is regularly associated with pathological dissociation, but trauma is a *motivator* of dissociation – not its cause. Only highly hypnotizable individuals have the mental ability to 'go away,' 'go into the wall,' block pain, 'go up to the ceiling' and 'watch the little girl down there,' forget that it happened, make alters, and so on. These are ability-enabled 'hypnotic' phenomena, not posttraumatic symptoms.

## References

Allen, J. G., Console, D. A., & Lewis, L. (1999). Dissociative detachment and memory impairment: Reversible amnesia or encoding failure? *Comprehensive Psychiatry*, *40*, 160–171.

Allen, J. G., Fultz, J., Huntoon, J., & Brethour, J. R. (2002). Pathological dissociative taxon membership, absorption, and reported childhood trauma in women with trauma-related disorders. *Journal of Trauma & Dissociation*, *3*, 89–110.

Alexander, B., Turnbull, T., & Cyna, A. (2009). The effect of pregnancy on hypnotizability. *American Journal of Clinical Hypnosis*, *52*, 13–22,

American Psychiatric Association (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

Baharloo, S., Johnston, P. A., Service, S. K., Gitschier, J., & Freimer, N. B. (1998). Absolute pitch: An approach for identification of genetic and nongenetic components. *American Journal of Human Genetics*, *62*, 224–231.

Barber, T. X., & Wilson, S. C. (1979). The Barber Suggestibility Scale and the Creative Imagination Scale: Experimental and clinical applications. *American Journal of Clinical Hypnosis*, *21*, 84–108.

Beere, D. (2009). Dissociative perceptual reactions: The perceptual theory of dissociation. In P. F. Dell & J. A. O'Neil (Eds.), *Dissociation and the dissociative disorders: DSM–V and beyond* (pp. 209–222). New York, NY: Routledge.

Bejenke, C. (2007, October). *Hypnosis and anesthesiology*. Paper presented at the meeting of the Society for Clinical and Experimental Hypnosis, Anaheim, CA.

Bliss, E. L. (1983). Multiple personalities, related disorders and hypnosis. *American Journal of Clinical Hypnosis*, *26*, 114–123.

Bliss, E. L. (1986). *Multiple personality, allied disorders and hypnosis*. New York, NY: Oxford University Press.
Bolles, R. C., & Fanselow, M. S. (1980). A perceptual-defensive-recuperative model of fear and pain. *Behavioral and Brain Sciences*, *3*, 291–323.
Boon, S., & Draijer, N. (1993). The differentiation of patients with MPD or DDNOS from patients with a Cluster B personality disorder. *Dissociation*, *6*, 126–135.
Braid, J. (1855/1970). The physiology of fascination and the critics criticized. In M. M. Tinterow (Ed.), *Foundations of hypnosis: From Mesmer to Freud* (pp. 365–389). Springfield, IL: Charles C. Thomas. (Original work published 1855).
Brand, B. L., Şar, V., Stavropoulos, P., Krüger, C., Korzekwa, M., Martínez-Taboas, A., & Middleton, W. (2016). Separating fact from fiction: An empirical examination of six myths about dissociative identity disorder. *Harvard Review of Psychiatry*, *24*, 257–270.
Breuer, J., & Freud, S. (1893). On the psychical mechanism of hysterical phenomena: Preliminary communication. In J. Strachey (Ed. & Trans.), *Standard edition of the complete psychological works of Sigmund Freud* (Vol. 1, pp. 3–17). London, UK: Hogarth Press.
Breuer, J., & Freud, S. (1895/1955). Studies on hysteria. In J. Strachey (Ed. & Trans.), *Standard edition of the complete psychological works of Sigmund Freud* (Vol. 2). London, UK: Hogarth Press.
Briere, J. (2000). *Inventory of Altered Self Capacities (IASC)*. Odessa, FL: Psychological Assessment Resources.
Briere, J. (2006). Dissociative symptoms and trauma exposure: Specificity, affect dysregulation, and posttraumatic stress. *Journal of Nervous and Mental Disease*, *194*, 78–82.
Butler, L. D., Duran, R. E. F., Jasiukaitis, P., Koopman, C., & Spiegel, D. (1996). Hypnotizability and traumatic experience: A diathesis-stress model of dissociative symptoms. *American Journal of Psychiatry*, *153*, Festchrift Supplement, 42–63.
Cardeña, E. (1994). The domain of dissociation. In S. J. Lynn & J. W. Rhue (Eds.), *Dissociation: Clinical and theoretical perspectives* (pp. 15–31). New York, NY: Guilford Press.
Cardeña, E. (2011). One Split Too Many … *Journal of Trauma & Dissociation*, *12*, 457–460,
Carlson, E. B., Dalenberg, C., & McDade-Montez, E. (2012). Dissociation in posttraumatic stress disorder, Part I: Definitions and review of research. *Psychological Trauma: Theory, Research, Practice, and Policy*, *4*, 479–489.
Charcot, J. M. (1889/1991). R. Harris, (Ed. & Trans.), *Clinical lectures on diseases of the nervous system* (Vol. 3). London, UK: Tavistock/Routledge.
Cloitre, M., Stolbach, B. C., Herman, J. L., Van der Kolk, B., Pynoos, R., Wang, J., & Petkova, E. (2009). A developmental approach to complex PTSD: childhood and adult cumulative trauma as predictors of symptom complexity. *Journal of Traumatic Stress*, 22, 399–408.
Coons, P. M., Bowman, E. S., & Milstein, V. (1988). Multiple personality disorder: A clinical investigation of 50 cases. *Journal of Nervous and Mental Disease*, *176*, 519–527.
Cox, R. E., & Barnier, A. J. (2013). Shifting self, shifting memory: Testing the self-memory system model with hypnotic identity delusions. *International Journal of Clinical and Experimental Hypnosis*, *61*, 416–462.
Crabtree, A. (1993). *From Mesmer to Freud: Magnetic Sleep and the Roots of Psychological Healing*. London: Yale University Press
Dalenberg, C. J., Brand, B. L., Gleaves, D. H., Dorahy, M. J., Loewenstein, R. J., Cardeña, E., Frewen, P. A., Carlson, E. B., & Spiegel, D. (2012). Evaluation of the evidence for the trauma and fantasy models of dissociation. *Psychological Bulletin*, *138*, 550–588.
Dell, P. F. (2009). Understanding dissociation. In P. F. Dell, & J. A. O'Neil (Eds.), *Dissociation and the dissociative disorders: DSM-V and beyond* (pp. 709–825). New York, NY: Routledge.
Dell, P. F. (2017a). Is high hypnotizability a necessary diathesis for pathological dissociation? *Journal of Trauma & Dissociation*, *18*, 58–87.
Dell, P. F. (2017b). What is the essence of hypnosis? *International Journal of Clinical and Experimental Hypnosis*, *65*, 162–168.
Dell, P. F. (2019). Reconsidering the autohypnotic model of the dissociative disorders. *Journal of Trauma & Dissociation*, *11*, 48–78.
Dell, P. F. (2021). Hypnotizability and the natural human ability to alter experience. *International Journal of Clinical and Experimental Hypnosis*, *69*, 7–26.
Dienes, Z., Lush, P., Palfi, B., Roseboom, W., Scott, R., Parris, B., Seth, A., & Lovell, M. (2020, 25 June) Phenomenological Control as Cold Control. *Psychology of Consciousness: Theory, Research, and Practice*. https://doi.org/10.1037/cns0000230
Esdaile, J. (1846). *Mesmerism in India and its practical applications in surgery and medicine*. London, UK: Longmans, Brown, Green, and Longmans.
Farina, B., Liotti, M., & Imperatori, C. (2019). The role of attachment and disintegrative pathogenic processes in the traumatic-dissociative dimension. *Frontiers in Psychology*, *10*, 933.
Foote, B., Smolin, Y., Kaplan, M., Legatt, M. E., & Lipschitz, D. (2006). Prevalence of dissociative disorders in psychiatric outpatients. *American Journal of Psychiatry*, *163*, 623–629.
Ford, J. D. (2015). Complex PTSD: research directions for nosology/assessment, treatment, and public health. *European Journal of Psychotraumatology*, 6, 27584.
Freud, S. (1894). Neuro-psychoses of defence. In J. Strachey (Ed. & Trans.), *Standard edition of the complete psychological works of Sigmund Freud* (Vol. 3, pp. 45–61). London, UK: Hogarth Press.
Freud, S. (1910). Five lectures on psycho-analysis. In J. Strachey (Ed. & Trans.), *Standard edition of the complete psychological works of Sigmund Freud* (Vol. 11, pp. 9–55). London: Hogarth Press.
Freud, S. (1914). Repression. In J. Strachey (Ed. & Trans.), *Standard edition of the complete psychological works of Sigmund Freud* (Vol. 12, pp. 146–158). London, UK: Hogarth Press.
Frischholz, E. J. (1985). The relationship among dissociation, hypnosis, and child abuse in the development of multiple personality disorder. In Kluft, R. P. (Ed.), *Childhood antecedents of multiple personality* (pp. 99–126). Washington, DC: American Psychiatric Press.

Frischholz, E., Lipman, L., Braun, B., & Sachs, R. (1992). Psychopathology, hypnotizability, and dissociation. *American Journal of Psychiatry*, *149*, 1521–1525.

Goldstein, A., & Hilgard, E. R. (1975). Failure of opiate antagonist naloxone to modify hypnotic amnesia. *Proceedings of the National Academy of Sciences*, *72*, 2041–2043.

Gray, J. A. (1990). Brain systems that mediate both emotion and cognition. *Cognition and Emotion*, *4*, 269–288.

Gray, J. A., & McNaughton, N. (2000). *The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system*. Oxford, UK: Oxford University Press.

Harriman, P. L. (1943). A new approach to multiple personalities. *American Journal of Orthopsychiatry*, *13*, 638–643.

Herman, J. L. (1992a). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress*, *5*, 377–391.

Herman, J. L. (1992b). *Trauma and recovery: The aftermath of violence from domestic abuse to political terror*. New York, NY: Basic Books.

Hilgard, E. R. (1965). *Hypnotic susceptibility*. New York: Harcourt, Brace, and World, Inc.

Hilgard, J. R. (1970). *Personality and hypnosis: A study of imaginative involvement*. Chicago, IL: University of Chicago Press.

Hilgard, J. R. (1974). Imaginative involvement: some characteristics of the highly hypnotizable and the non-hypnotizable. *International Journal of Clinical and Experimental Hypnosis*, *22*, 138–156.

Howell, E. F. (2005). *The dissociative mind*. New York, NY: Routledge.

Howell, E. F. (2011). *Understanding and treating dissociative identity disorder*. New York, NY: Routledge.

International Society for the Study of Trauma and Dissociation (2011). Guidelines for treating dissociative identity disorder in adults, 3rd Revision: Summary version. *Journal of Trauma & Dissociation*, *12*, 188–212.

Isobel, S., Goodyear, M., and Foster, K. (2017). Psychological trauma in the context of familial relationships: a concept analysis. *Trauma, Violence and Abuse*, 20, 549–559.

Janet, P. (1886). Les actes inconscients et le dédoublement de la personnalité pendant somnambulisme provoqué. *Revue Philosophique*, *22*, 577–592. [Reprinted in (1928) *American Journal of Psychiatry, 8*, 209–234]

Janet, P. (1889). *L'automatisme psychologique: essai de psychologie expérimentale sur les formes inférieures de l'activité humaine* [Psychological automatism: Experimental psychological essay on the inferior forms of human activity]. Paris, France: Félix Alcan.

Janet, P. (1907/1910). The subconscious. In M. Prince (Ed.), *Subconscious phenomena* (pp. 53–70). Boston, MA: Richard G. Badger, The Gorham Press.

Janet, P. (1920/1965). *The major symptoms of hysteria*. New York, NY: Hafner Publishing Company.

Janet, P., & Raymond, F. (1898). *Névroses et idées fixes* (1). Paris, France: Félix Alcan.

Kampman, R. (1976). Hypnotically induced multiple personality: An experimental study. *International Journal of Clinical and Experimental Hypnosis*, *24*, 215–227.

Kluft, R. P. (1984). Aspects of the treatment of multiple personality disorder. *Psychiatric Annals*, *14*, 51–55.

Kluft, R. P. (2018). Freud's rejection of hypnosis, Part 1: The genesis of a rift. *American Journal of Clinical Hypnosis*, *60*, 307–323.

Knudsen, E. I. (2004). Sensitive periods in the development of the brain and behavior. *Journal of Cognitive Neuroscience*, *16*, 1412–1425.

Krystal, H. (1988). *Integration and self-healing affect-trauma-alexithymia*. Hillsdale, NJ: Analytic Press.

Laddis, A., Dell, P. F., & Korzekwa, M. I. (2017). Comparing the symptoms and mechanisms of "dissociation" in dissociative identity disorder and borderline personality disorder. *Journal of Trauma & Dissociation*, *18*, 139–173.

Lang, E., Benotsch, E., Fink, L., Lutgendorf, S., Berbaum, M. Berbaum, K., Logan, H., & Spiegel, D. (2000). Adjunctive non-pharmacological analgesia for invasive medical procedures: A randomised trial. *Lancet*, *355*, 1486–1490.

Lang, E., & Joyce, J. (1996). Self-hypnotic relaxation during interventional radiological procedures: Effects on pain perception and intravenous drug use. *International Journal of Clinical and Experimental Hypnosis*, *44*, 106–119.

Lang, E. V., & Rosen, M. P. (2002). Cost analysis of adjunct hypnosis with sedation during outpatient interventional radiologic procedures. *Radiology*, *222*, 375–382.

Leavitt, H. C. (1947). A case of hypnotically produced secondary and tertiary personalities *Psychoanalytic Review*, *34*, 274–295.

Lichtman, A. H., & Fanselow, M. S. (1991). Opioid and nonopioid conditional analgesia: The role of spinal opioid, noradrenergic, and serotonergic systems. *Behavioral Neuroscience*, *105*, 687–698.

Liotti, L., & Liotti, M. (2019). Reflections on some contributions to contemporary psychotraumatology in the light of Janet's critique of Freud's theories. In G. Craparo, F. Ortu, & O. van der Hart (Eds.), *Rediscovering Pierre Janet: Trauma, dissociation, and a new context for psychoanalysis* (pp. 93–104). New York, NY: Routledge.

Madeo, D., Castellani, E., Chiara, M., & Santarcangelo, E. L. (2015). Pain perception and EEG dynamics: Does hypnotizability account for the efficacy of the suggestions of analgesia? *Physiology and Behavior*, *145*, 57–63.

Meares, R., & Barral, C. (2019). The holistic project of Pierre Janet, part I: *Desintegration* or *désagrégation*. In G. Craparo, F. Ortu, & O. van der Hart (Eds.), *Rediscovering Pierre Janet: Trauma, dissociation, and a new context for psychoanalysis* (pp. 106–115). New York, NY: Routledge.

Middleton, W., & Butler, J. (1998). Dissociative identity disorder: an Australian series. *Australian and New Zealand Journal of Psychiatry*, *32*, 794–804.

Mitchell, T. W. (1921). *The psychology of medicine*. London, UK: Methuen & Co.

Montgomery, G. H., Bovbjerg, D. H., Schnur, J. B., David, D., Goldfarb, A., Weltz, C.,… Silverstein, J. H. (2007). A randomized clinical trial of a brief hypnosis intervention to control side effects in breast surgery patients. *Journal of the National Cancer Institute*, *99*, 1304–1312.

Montgomery, G. H., David, D., Winkel, G., Silverstein, J. H., & Bovbjerg, D. H. (2002). The effectiveness of adjunctive hypnosis with surgical patients: A meta-analysis. *Anesthesia and Analgesia, 94*, 1639–1645.

Montgomery, G. H., DuHamel, K. N., & Redd, W. H. (2000). A meta-analysis of hypnotically induced analgesia: how effective is hypnosis? *International Journal of Clinical and Experimental Hypnosis*, *48*, 138–153.

Montgomery, G. H., Schnur, J. B., & David, D. (2011). The Impact of Hypnotic Suggestibility in Clinical Care Settings. *International Journal of Clinical and Experimental Hypnosis*, *59*(3), 294-309.

Moskowitz, A., Heinimaa, M., & Van der Hart, O. (2019). Defining psychosis, trauma and dissociation: Historical and contemporary conceptions. In A. Moskowitz, M. Dorahy, & I. Scha¨fer (Eds.), *Psychosis, trauma and dissociation* (2nd ed., pp. 9– 29). Chicester, NY: Wiley-Blackwell.

Moskowitz, A., & Van der Hart (2020). Historical and contemporary conceptions of trauma-related dissociation: A neo-Janetian critique of models of divided personality. *European Journal of Trauma & Dissociation*, *4*, 100101.

Myers, C. S. (1940). *Shell shock in France 1914–1918*. Cambridge, UK: Cambridge University Press.

Nash, M. R., & Lynn, S. J. (1985–1986). Child abuse and hypnotic ability. *Imagination, Cognition and Personality*, *5*, 211–218.

Nash, M. R., Lynn, S. J., and Givens, D. L. (1984). Adult hypnotic susceptibility, childhood punishment, and child abuse: A brief communication. *International Journal of Clinical and Experimental Hypnosis*, *32*, 6–11.

Nijenhuis, E. R. S. (2015). *The trinity of trauma: Ignorance, fragility, and control*. Bristol, CT: Vandenhoeck & Ruprecht.

Nijenhuis, E. R., and Van der Hart, O. (2011). Dissociation in trauma: a new definition and comparison with previous formulations. *Journal of Trauma & Dissociation*, *12*, 416–445.

Nijenhuis, E. R. S., Van der Hart, O., & Steele, K. (2002). The emerging psychobiology of trauma-related dissociation and dissociative disorders. In H. D'haenen, J. A. den Boer, & P. Willner (Eds.), *Biological psychiatry* (pp. 1079–1098). Chicester, NY: John Wiley & Sons.

Orne, M. T. (1962). On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist*, *17*, 776–783.

Perry, C., & Laurence, J.-R. (1984). Mental processing outside of awareness: The contributions of Freud and Janet. In K. S. Bowers & D. Meichenbaum (Eds.), *The unconscious reconsidered* (pp. 9–48). New York, NY: John Wiley and Sons.

Putnam, F. K., & Carlson, E. B. (1998). Hypnosis, dissociation, and trauma: Myths, metaphors, and mechanisms. In J. D. Bremner & C. R. Marmar (Eds.), *Trauma, memory, and dissociation* (pp. 27–55). Washington, DC: American Psychiatric Press.

Putnam F. W., Guroff, J. J., Silberman, E. K., Barban, L., & Post, R. M. (1986). The clinical phenomenology of multiple personality disorder: Review of 100 recent cases. *Journal of Clinical Psychiatry*, *47*, 285–293.

Putnam, F. W., Helmers, K., Horowitz, L. A., & Trickett, P. K. (1995). Hypnotizability and dissociativity in sexually abused girls. *Child Abuse & Neglect*, *19*, 1–11.

Richet, C. R. (1883). La personnalité et la mémoire dans le somnambulisme. *Revue Philosophique*, *15*, 225–242.

Robinson, D. N. (1977). Preface. In P. Janet, *The mental state of hystericals: A study of mental stigmata and mental accidents* (pp. xxi–xxxvii). Washington, DC: University Publications of America.

Rodewald, F., Dell, P. F., Wilhelm-Gößling, C., & Gast, U. (2011). Are major dissociative disorders characterized by a qualitatively different kind of dissociation? *Journal of Trauma & Dissociation*, *12*(1), 9–24.

Ross, C. A., Miller, S. D., Reagor, P., Bjornson, L., Fraser, G. A., & Anderson, G. (1990). Structured interview data on 102 cases of multiple personality disorder from four centers. *American Journal of Psychiatry*, *147*, 596–601.

Ross, C. A., Norton, G. R., & Wozney, K. (1989). Multiple personality disorder: An analysis of 236 cases. *Canadian Journal of Psychiatry*, *34*, 413–417.

Roth, S., Newman, E., Pelcovitz, D., Van der Kolk, B., and Mandel, F. S. (1997). Complex PTSD in victims exposed to sexual and physical abuse: results from the DSM-IV field trial for posttraumatic stress disorder. *Journal of Traumatic Stress*, 10, 539–555.

Şar, V. (2011). Developmental trauma, complex PTSD, and the current proposal of DSM-5. *European Journal of Psychotraumatology*, *2*, 10.3402/ejpt.v2i0.5622.

Şar, V. (2017). Parallel-distinct structures of internal world and external reality: Disavowing and reclaiming the self-identity in the aftermath of trauma-generated dissociation. *Frontiers of Psychology*, *8*, 216.

Schlaug, G., Jancke, L., Huang, Y., Staiger, J. F., & Steinmetz, H. (1995). Increased corpus callosum size in musicians. *Neuropsychologia*, *33*, 1047–1055.

Shor, R. E., & Orne, M. T. (1962). *The Harvard Group Scale of Hypnotic Susceptibility, Form A*. Palo Alto, CA: Consulting Psychologists Press.

Spiegel, D., & Albert, L. H. (1983). Naloxone fails to reverse hypnotic alleviation of chronic pain. *Psychopharmacology (Berlin) 1983*, *81*, 140–143.

Spiegel, D., Bierre, P., & Rootenberg, J. (1989). Hypnotic alteration of somatosensory perception. *American Journal of Psychiatry*, *6*, 749–754.

Spiegel, H. (1974). The Grade 5 syndrome: The highly hypnotizable person. *International Journal of Clinical and Experimental Hypnosis*, *22*, 303–319.

Spiegel, H., & Spiegel, D. (1978). *Trance and treatment: Clinical uses of hypnosis*. New York, NY: Basic Books.

Steele, K. S., Dorahy, M. J., Van der Hart, O., & Nijenhuis, E. R. S. (2009). Dissociation versus alterations in consciousness: Real but different concepts. In P. F. Dell & J. A. O'Neil (Eds.), *Dissociation and the dissociative disorders: DSM–V and beyond* (pp. 155–169). New York, NY: Routledge.

Thompson, T., Terhune, D. B., Oram, C., Sharangparni, J., Rouf, R., Solmi, M.,…Stubbs, B. (2019). The effectiveness of hypnosis for pain relief: A systematic review and meta-analysis of 85 controlled experimental trials. *Neuroscience and Biobehavioral Reviews*, *99*, 298–310.

Tiba, J. (1990). Clinical, research and organizational aspects of preparation for childbirth and the psychological diminution of pain during labor and the psychological diminution of pain during labor and delivery. *British Journal of Experimental and Clinical Hypnosis*, *7*, 61–64.

Van der Hart, O., Nijenhuis, E. R. S., & Steele, K. (2006). *The haunted self: Structural dissociation and the treatment of chronic traumatization*. New York, NY: W. W. Norton & Company.

Van der Hart, O., & Rydberg, J. A. (2019). Vehement emotions and trauma-generated dissociation: A Janetian perspective on integrative failure. *European Journal of Trauma & Dissociation*, *3*, 191–201.

Van der Kolk, B. A. (1996). The complexity of adaptation to trauma: self-regulation, stimulus discrimination and characterological development. In B. A. van der Kolk, A. C. McFarlane, and L. Weisaeth (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society* (pp. 182–213. New York, NY: Guilford Press), 182–213.

Van der Kolk, B. A. (2005). Developmental trauma disorder: toward a rational diagnosis for children with complex trauma histories. *Psychiatric Annals*, 35, 401–408.

Van der Kolk, B. A., Greenberg, M. S., Boyd, H., & Krystal, J. (1985). Inescapable shock, neurotransmitters and addiction to trauma: Towards a psychobiology of post traumatic stress. *Biological Psychiatry*, *20*, 314–325.

Watkins, L. R., & Mayer, D. J. (1986). Multiple endogenous opiate and non-opiate analgesia systems: Evidence of their existence and clinical implications. In D. D. Kelly, (Ed.), *Stress-induced analgesia. Annals of the New York Academy of Sciences*, *467*, 273–299.

Wesseldijk, L. W., Mosing, M. A., & Ullén, F. (2021). Why is an early start of training related to musical skills in adulthood? A genetically informative study. *Psychological Science*, 32, 3–13.

Whalen, J. E., & Nash, M. R. (1996). Hypnosis and dissociation: Theoretical, empirical, and clinical perspectives. In L. K. Michelson, & W. J. Ray (Eds.), *Handbook of dissociation: Theoretical, empirical, and clinical perspectives* (pp. 191–206). New York, NY: Plenum.

Wilson, S. C., & Barber, T. X. (1981). Vivid fantasy and hallucinatory abilities in the life histories of excellent hypnotic subjects ("somnambules"): Preliminary report with female subjects. In E. Klinger (Ed.), *Imagery: Vol. 2. Concepts, results, and applications* (pp. 133–149). New York, NY: Plenum.

Wilson, S. C. & Barber, T. X. (1983). The fantasy-prone personality: Implications for understanding imagery, hypnosis, and parapsychological phenomena. In A. A. Sheikh (Ed.), *Imagery: Current theory, research, and application* (pp. 340–387). New York, NY: Wiley & Sons.

Yovell, Y., Bannett, Y., & Shalev, A. Y. (2003). Amnesia for traumatic events among recent survivors: A pilot study. *CNS Spectrums*, *8*, 676–685.