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Dissociative Amnesia and Trauma: A Perspective from the Theory of Structural Dissociation

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Abstract

In DSM-IV dissociative amnesia is addressed as a discrete clinical entity, which may take the following forms: localized amnesia; continuous amnesia; systematized amnesia; generalized amnesia; and selective amnesia. In the clinical arena, however, it more commonly presents as one of the features of more complex and extensive disorders, primarily of complex dissociative disorders and frequently in acutely or chronically traumatized patients. Dissociation results from faulty integration of the complex and intricately coordinated neuro-bio-psychological systems which constitute the personality, usually developing when traumatizing events are experienced. This deficit entails a dissociation of the personality into two or more dissociative parts of the personality – dynamic and active, but rigid and relatively closed subsystems. Based on this conceptual approach, some of these dissociative parts may contain traumatic memories and, when reactivated, cause re-experiencing and re-enactments, whereas the rest remains relatively intact and is involved in daily living and is phobic of the parts involved in the traumatic memories. Thus, the dissociation is maintained by a series of phobias, that need careful attention in treatment. The standard of care is phase-oriented treatment, preceded by a thorough neurological investigation and the use of standardized diagnostic procedures and scales for dissociative disorders. The difficult challenge of exploring and integrating traumatic memories and further aspects of one's personality requires that the individual's integrative capacity be sufficient. Hence, the initial goal is not the rapid (and forceful) resolution of the amnesia, but rather establishing a sense of safety and stability in daily living and in therapy.

Keywords: Amnesia, dissociation, dissociative disorders, diagnosis, treatment

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Amnesia, the inability to retrieve existing memories and/or to form new ones, may stem from clear-cut physical damage to brain tissue and the memory-contents may thus often be irretrievable. However, in cases of Dissociative Amnesia (DA), the memory-contents are retrievable, at least in principle. Clearly, a thorough neurological investigation is indicated in all cases, but the presence of organic factors does not necessarily rule out the co-existence of a functional component.

As its name implies, dissociative amnesia (DA) is a form of amnesia that has much in common with other dissociative phenomena. DA is most frequently encountered as a feature or symptom of more compound dissociative or other trauma-related disorders, although it may also manifest as a discrete disorder. In general, it is thus prudent to approach the treatment of DA gradually and in the framework of a phase-oriented treatment regimen. This ensures addressing the broader issues stemming from the compound disorder as a whole and ascertaining that the patient is indeed fit to cope with the retrieved amnestic memories, rather than aggravating the patient's condition by premature actions, unless one is dealing with one of the rare cases of isolated DA.

That DA may come in various forms and degrees of complexity has been observed over time. For instance, in 1931 Culpin [1, p. 26], Lecturer in Psychoneuroses at the London Hospital Medical College, wrote in regard to traumatized World War I combat soldiers: "[T]here was every gradation between a short period of 'unconsciousness' after a shell-burst and the loss of memory for a lifetime, but the mental processes were identical throughout." These mental processes involve a dissociation of the personality, which is intimately associated with traumatizing events, and dissociation is in fact increasingly recognized to be a common feature in various trauma-related disorders [2]. Criterion B for PTSD includes dissociative re-experiencing; dissociation features predominantly in Complex PTSD [3], and the CAPS devotes numerous sections to it; it is a pivotal diagnostic feature of acute stress disorder (ASD) and a key risk factor for subsequent PTSD [4]; and virtually all cases of dissociative identity disorder (DID) stem from chronic traumatization [5].

The following discussion of dissociative amnesia, and of dissociation in general, is based on the understanding that traumatizing events, especially recurrent severe traumatization and even more so in early life, involve integrative failures in the structural and functional integrity of the complex components which form the personality, i.e., a dissociation of the personality [6].

Forms of Dissociative Amnesia

The DSM-IV [7] refers to possible degrees of complexity in the presentation of dissociative amnesia, defining it as a dissociative disorder in its own right and as a symptom of more complex dissociative disorders. The DSM-IV defines the negative dissociative symptom (or disorder) of dissociative amnesia as "one or more episodes of inability to recall important personal information, usually of a traumatic or stressful nature, that is too extensive to be explained by ordinary forgetfulness" [7, p. 481]. This definition contains a number of inaccuracies and inadequacies, including being overly abstract, vague , nonspecific, incomplete [8]. For instance, it gives clinicians no concrete signs or symptoms with which to determine the presence of amnesia; it omits any mention of the essential feature of dissociative amnesia, i.e., its reversibility. The inclusion of the expression "too extensive" is problematic: there can be many instances of dissociative amnesia with regard to brief periods of time—for instance, during the most threatening moments of traumatic experiences. And in patients with DID, most episodes of amnesia do not directly involve traumatic experiences, but rather apparently mundane actions such as buying something or writing something [8].

Adopting Pierre Janet's categorization of dissociative amnesia [9], the DSM-IV [7] distinguishes the following types (see also [6,8,10,11]): localized amnesia; generalized amnesia; continuous amnesia; systematized amnesia; and, not mentioned by Janet, selective amnesia. Localized amnesia pertains to the inability to recall all events that occurred during a circumscribed period of time. A basic example would be amnesia for a specific traumatizing event such as a violent rape; Janet [12] reports a young woman's amnesia for the death of her mother that she witnessed. Generalized amnesia consists in the failure to recall encompasses the person's entire life. This type of dissociative amnesia may occur in various degrees of severity. In some cases, it seems that the patient has to learn over again all that she or he had learned before and doesn't seem to recognize his or her partner and family members [13,14]. Continuous amnesia, the inability to recall events subsequent to a specific time to and including the present, is rarely diagnosed. Neurological factors might be involved [15]. Systematized amnesia pertains to the loss of memory for certain categories of information. For instance, the patient is amnesic for everything that related to her or his family. Janet [9]

mentioned a woman who, after confinement, forgot not only the birth of her child, but also the facts connected with it. Selective amnesia, finally, pertains to the inability to recall some, but not all, of the events during a circumscribed period of time. On a micro-scale this might, for instance, pertain to remembering a rape, but not the most threatening part of it, i.e., the pathogenic kernel [6] or "hot spot" [16]. The existence of this pathogenic kernel also may have caused amnesia to develop for the entire event; the resolution of this kernel then is essential in the recovery of the memory [17].

Understanding Dissociation

The DSM-IV defines dissociation as "a disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment" [7, p. 477]. It is the essential feature of dissociative clinical phenomena – symptoms and disorders. However, the DSM-IV definition of dissociation is problematic, in that it does not acknowledge that these disruptions may also pertain to motor and sensory modalities, as is stated in the ICD-10 with regard to the dissociative disorders of movement and sensation [18].

In the general literature on dissociation, there seems to be a lack of clarity and consensus regarding the phenomena to which it pertains. Apart from the trend to overlook somatoform dissociative phenomena, in the phenomenological descriptions of apparently dissociative symptoms, for instance, it remains unclear why certain phenomena are regarded as dissociative in nature. Examples are alterations of consciousness such as narrowing of consciousness, absorption, and imaginative involvement. Often the mechanism underlying symptoms that should be called dissociative is glossed over. Furthermore, some authors label avoidance symptoms in PTSD as dissociative and overlook the fact that its' positive (intrusive) symptoms likewise involve dissociation [e.g., 19].

In response to the inaccuracies they perceived in the definitions of dissociation in DSM-IV and other sources, Nijenhuis and Van der Hart [20] proposed a more inclusive and simultaneously more precise description of the dissociative nature of these disorders, based on the concept of dissociation of the personality, which is reproduced here with some changes. Trauma-related dissociation, then, entails a division or partition of an individual's personality, that is, of the dynamic, bio-psychological system as a whole that determines his or her characteristic mental and behavioural/social actions. This division of personality constitutes a core feature of trauma. It evolves when the individual lacks the capacity to integrate adverse experiences in part or in full, although it may also play a (limited) adaptive role in the short term. The division involves two or more dynamic but insufficiently integrated and excessively stable subsystems. These subsystems exert functions, and can encompass any number of different mental and behavioural actions. These subsystems and states can be latent, or be activated in sequence or in parallel. Each dissociative subsystem, that is, dissociative part of the personality[1], minimally includes its own, at least rudimentary first-person perspective. Manifesting as each dissociative part, the individual can interact with other dissociative parts and other individuals, at least in principle. Dissociative parts maintain particular psychobiological boundaries that keep them divided, but they can in principle dissolve. The psychobiological boundaries of the dissociated parts are

[1] There are other labels for dissociative parts of the personality that are also used in the field, such as ego states, dissociated or dissociative self-states, personality states, modes, identities, modes, alters: each with their specific disadvantages and advantages.

seen as being semi-permeable, rather than completely closed, and thus enable selective interaction with other dissociative parts. Under certain conditions a certain part may temporarily assume overall executive control of mental functioning.

Experimental research has indicated that some memory transfer may occur among dissociative parts without them realizing it ([e.g., 21]. Phenomenologically, this dissociation of the personality manifest in dissociative symptoms. Many familiar trauma-related symptoms can be seen as stemming from this, including seemingly negative symptoms (such as amnesia, "freezing", derealisation, depersonalization, and the loss of certain skills such as reading) and positive symptoms (such as intrusions in the form of flashbacks or of "voices"). Moreover, this approach provides a rationale for various feature of severe, complex trauma-related disorders, such as psychoform symptoms (such as amnesia, hearing voices, thoughts being "put in one's mind," and many other Schneiderian first rank symptoms of passive influence that were previously considered to be symptoms of schizophrenia [22,23], somatoform symptoms (such as anaesthesia or tics, the reexperiencing of bodily sensations) and performing actions related to the trauma [11,20,24].

Dissociation of the Personality as an Integrative Failure

Much of the literature addresses dissociation as a defense mechanism. However, as Janet [25] already argued and the definition presented above indicates, dissociation, and thus the dissociative disorders, primarily involve a trauma-induced integrative deficit, which the dissociative individual subsequently may use as a defense [6,26]. This dissociation of the personality persists, and is actually actively maintained, by the actions of that part of the personality which takes the responsibility for daily-life functioning, in order to keep at a distance the dissociative parts involved in storing and re-enacting the traumatic memories. In other words, dissociation of the personality is maintained by a series of phobias of inner experiences, that need to be carefully addressed and eventually overcome in the course of therapy [6].

In terms of the theory of structural dissociation of the personality [6], two main categories of dissociative parts can be distinguished. One type tends to function primarily in daily life while avoiding reminders of the trauma, while the other is primarily fixed in various defenses (fight, flight, freeze, "feigned death" or collapse), as they were at the time of the trauma (frozen in time). A single traumatizing event may cause a division of personality into two dissociative parts - one being the so-called apparently normal part of the personality (ANP) [6,27], and the other the emotional part of the personality (EP) [6,27], each with its own first-person perspective. The ANP generally predominates in daily life while trying to avoid traumatic memories, while EP remains stuck in trauma-time: reliving traumatic experiences and engaged in animal defenses when triggered. The ANP may have amnesia for the traumatic memories that the EP has stored and remains engaged in, or it may have knowledge of the traumatizing event, albeit without a sense of personal ownership ("It happened, but not to me") [6].

Levels of Dissociation of the Personality

The division of the personality into a single ANP and a single EP is called primary dissociation of the personality, which characterizes simple posttraumatic dissociative disorders, including simple PTSD and simple dissociative amnesia as a discrete disorder. The ongoing dissociation between ANP and EP may serve an adaptative purpose to some degree when the necessary social support or capacity to integrate traumatic experiences and

memories are lacking. The concept of dissociation of the personality provides a rationale for the presence of both negative dissociative symptoms, such as depersonalization and a degree of dissociative amnesia and anesthesia, as well as positive dissociative symptoms, such as recurrent intrusions of traumatic memories, repetitive movements (such as tics) and Schneiderian symptoms.

When an individual faces chronic or prolonged traumatizing events, especially during childhood where the integrative capacity is naturally lower due to developmental limitations, the dissociation can become more complex and chronic. This secondary dissociation of the personality also involves a single ANP, but more than one EP. The creation of multiple EPs may be based on the failed integration among relatively discrete defenses, such as fight, flight, freeze and collapse, as well as intolerable affective experiences such as shame or loneliness. Each EP might have different physical manifestations. For instance, one EP may be tense and hypervigilant, while another may be immobile or even be collapsed [28]. Secondary dissociation of the personality might characterize Complex PTSD (cf. [3]), trauma-related Borderline Personality Disorder and DDNOS-subtype 1, i.e., the subtype most similar to DID.

Finally, tertiary dissociation of the personality involves not only more than one EP, but also more than one ANP. This disjunction and division of the ANP may occur when daily-life experiences become triggers for traumatic memories and/or become overwhelming for ANP, and result in further dissociative divisions. The patient's personality becomes increasingly divided in an attempt to maintain functioning while avoiding traumatic memories. This seems to be characteristic of patients with DID. In low-functioning DID patients, many ANPs and EPs may seem virtually indistinguishable from each other, and all of them appear to have traumatic memories [6]. See Figure 1 for an overview of the levels of dissociation of the personality.

Dissociative Amnesia and the Levels of Dissociation of the Personality

The various types of dissociative amnesia can, in principle, can be related to the effects of these three (underlying) levels of dissociation of the personality (see Figure 1). Thus, the patient as one dissociative part of the personality, say the ANP, does not remember, or rather does not know, what is remembered by another dissociative part, say an EP. A specific example is the phenomenon of a dissociative fugue, which the DSM-IV considers to be a specific diagnostic category. In this condition, the individual as a dissociative part different from the ANP, suddenly engages in unexpected travel away from home or a place of work, with an inability to recall the individual's past [7]. Sooner or later the ANP re-emerges and resumes executive control, and is usually bewildered by the unknown circumstances he or she is in. Some patients may present with dissociative amnesia in its pure form, without other dissociative phenomena [29]. However, the more common presentation of dissociative amnesia is as a part of a more complex dissociation of the personality, alongside other dissociative symptoms. The amnesias are usually more widespread in terms of their contents and more reactive to triggering events. In other words, they do not pertain to traumatic experiences only. For instance, DID patients may report time gaps in daily life, ranging from very short periods of a few minutes — which may also involve parts of therapeutic sessions - , to hours and up to several days in a row. All these amnesic periods refer to periods of time at which other parts assumed executive control. In some DID patients, an ANP may exist that has generalized amnesia for the patient's life before a certain event; this may imply that this dissociative part came into existence during or right after that event. An example is the adult woman with a

history of severe sexual abuse and related traumatic childbirth. In her marriage, she got voluntarily pregnant and during the delivery—a powerful trigger of these particular traumatic experiences, developed a new dissociative part, i.e., the Mother ANP. This ANP was mentally so far away from the EPs keeping the traumatic memories, that she was able to fulfill the caretaking tasks with regard to her baby.

Dissociative Amnesia versus Hypermnesia

Negative and positive dissociative symptoms are two sides of one coin, so to speak. Thus, as Janet [12] already pointed out, whereas some parts, especially ANP(s), may have amnesia for traumatic experiences, other parts (EPs) are characterized by hypermnesia for the same experiences, i.e., they have characteristically vivid traumatic memories. When these traumatic memories, and the EPs involved, are reactivated, they are experienced by the ANP as distressing intrusions. However, during "dissociative flashback episodes" [7, p. 428] or reenactments (partial or complete), the ANP and certain EPs have switched roles, with these EPs assuming executive control. During the reenactment, ANP may be in a dispositional (latent) state and not witness the reenactment and subsequently have no knowledge of what happened, thus manifesting dissociative amnesia for the traumatic reenactment. Van der Hart and colleagues [30] found that DID patients may also experience hypermnesia with regard to non-traumatizing events. Experimental research with DID patients has shown that when ANP has knowledge of certain traumatic experiences, this knowledge has a noetic quality, i.e., lacking a sense of personal ownership of these memories (contrary to the EP) and each responds accordingly. Studies demonstrate that different dissociative parts involve not only different subjective reactions, but also distinct cardiovascular responses and cerebral activation (fMRI) patterns in response to a trauma- memory related script [31].

Diagnosis

The diagnosis of DA requires a systematic and thorough approach. Disorders causing CNS dysfunction, especially neurological disorders and traumatic brain injuries (such as neurovascular or space occupying processes, and minimal TBI, including blast wave injuries) must be investigated. Note, however, that organic and functional factors should not be seen as mutually exclusive.

The standard use of screening instruments for dissociative disorders, such as the DES [32] and the SDQ-20 [33], and of diagnostic assessment instruments, such as the SCID-D [34] or the DDIS [5], is recommended. In general, awareness of the possible presence of a dissociative disorder is insufficient to date. It is important to be aware that DA is commonly encountered within the context of broader dissociative disorders and/or other trauma-related disorders, and is often co-morbid with depression, anxiety disorders, eating disorders and personality disorders. Patients often present with predominant symptoms belonging to these disorders and the dissociative amnesia is often missed. These patients may receive different psychiatric diagnoses with a related treatment approach that is bound to fail if the underlying dissociation of the personality remains unrecognized. Furthermore, the nature of amnesia complicates the diagnostic inquiry since patients are unaware of their periods of amnesia [1,9,35], i.e., the periods during which other dissociative parts of the personality took over executive control without ANP being aware of it. When they are specifically asked, and more so once they commence treatment appropriate for their dissociation, patients may become more aware of gaps and time losses in their present life and of amnesia for earlier life events. Treatment

The goal of treatment should indeed be the relief of the dissociative amnesia, followed by realization of the traumatic experience as an event of the past, receiving its proper place in own's "autobiography". However, the process of bringing the amnestic contents into awareness should be approached with care, ensuring first that the patient is currently capable of enduring this, especially where DA presents in the context of a more compound disorder (or where this possibility has not been fully investigated). Using a trauma-dissociation model, Myers [27] conceptualized the process as follows with regard to primary dissociation of the personality:

> [to] deprive the [EP] of its pathological, distracted, uncontrolled character, and [to] effect its union with the [ANP] hitherto ignorant of the emotional experiences in question. When this re-integration has taken place, it becomes immediatly obvious that the [ANP] differed widely in physical appearance and behavior, as well as mentally, from the completely normal personality thus at last obtained. (p. 69)

The main task of the treatment is the exploration of the EP and resolution of its traumatic memory, whilst easing the ANP's phobias of both. Clinicians should recognize that such phobias may involve not only intense fear of confronting the traumatic memories (for instance, of disintegrating and going crazy) and the event-related emotional contents such as terror, disgust, shame, rage or helplessness, but also the fear of realizing that the horrible event really took place. In all this, the patient is in great need of the therapist's understanding and acceptance. The judicious, gentle and permissive use of hypnosis may be an important adjunct in treatment. However, this requires special clinical training, and an awareness of the potential suggestive effects of hypnotic interventions with regard to content of the traumatic memory is essential [36].

Once again, it is important to note that when dissociative amnesia is part of a more encompassing disorder based on a history of chronic interpersonal traumatization, i.e., probably entails a more severe level of structural dissociation, premature exploration should be diligently avoided and the application of a phase-oriented treatment approach is indicated [6,17,36]. The first phase is oriented toward establishing a sense of safety and stability, symptom reduction, and skills training. The aim is to gradually raise the patient's integrative capacity, which is imperative for the task of facing the momentous challenges of the next phase. An essential part of the first treatment phase is helping the patient to develop empathic and cooperative relationships with dissociative parts [6]. When the integrative capacity of the patient has been raised such that he or she is able to maintain a more stable awareness of ANP(s) and key EP(s) in the present and to experience a degree of internal empathy and cooperation, as well as regulate emotions and related mental actions, the second treatment is initiated. This phase is dedicated to the exploration and integration of traumatic memories. Often this exploration does not involve encouraging the ANP's search for a specific traumatic memory, but rather the invitation to the EPs involved to share this experience with ANP in a structured manner, preventing overload. The third treatment phase involves further personality integration and reconnection to ordinary life, away from trauma. In complex cases, the phase-oriented treatment naturally tends to take the form of a spiral, with a periodical return to a previous treatment phase. Each of these phases can also be described in terms of overcoming specific trauma-related phobias, that, together, maintain the dissociation of the personality and thus prevent the resolution of the dissociative amnesia [6]. Naturally, not all patients are capable of completing all of these phases: some of them should be supported in living with their amnesia and receive only phase 1 treatment. Conclusion

Faults in the integrated functioning of the personality underlie dissociative amnesia, can exist in its own right or be part of a more encompassing dissociation of the personality. In DA certain dissociative parts of the personality may temporarily take over executive control of mental functioning and retain the record of subsequent events, witholding this knowledge from other parts. This conceptual approach to the underpinnings of DA provides a rationale for its clinical characteristics, the frequently overlooked associated diagnostic complexities and the overall approach to treatment, and explains the possibility of retrieval of the amnestic contents.