

MALADAPTIVE DAYDREAMING IS A DISSOCIATIVE DISORDER

Supporting Evidence and Theory

Nirit Soffer-Dudek and Eli Somer

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*I have lived with this for as long as I can remember. I was a neglected latchkey kid. I would ride the swing in our backyard for hours and go into my fantasies. Around 10 I had received a boom-box CD player ... I'd put on the music and let my world melt away so that I could create a new one that was my kind of ideal. My daydream characters first came from cartoon shows and later from animated feature movies, like *The Beauty and the Beast*. I daydream whenever in movement, be it walking, jogging, on a bicycle, skiing, or even riding a car.... Nowadays I'm living a second, way better life with figures that I feel attached to. I spend many hours every day in my inner world. I'm never lonely there. My insecurities go away. It brings emotions to my otherwise numb and uneventful life. These emotions I feel in my daydreams are very real. I've sobbed or laughed or smiled countless times while daydreaming. The relationships in my head feel more real than the ones I have in reality. I have lived multiple lives and experienced unimaginable joy and trauma that I created in my head. I love the people in my head more than most people in real life. It's like it gives my existence meaning. I'm afraid of what my life will be like if I get help for it, but I've suffered enough. I need help.*

23-year-old female

Maladaptive daydreaming (MD) is a distinct clinical condition that involves an extensive addictive-compulsive immersion in vivid fantasy featuring complex scenarios, often accompanied by stereotypical movements while listening to evocative music. These patterns of behavior become maladaptive by causing distress or interfering with daily functioning (Schimmenti, Somer, & Regis, 2019; Schupak & Rosenthal, 2009; Somer, 2002). This capacity for immersive daydreaming (ID) seems to be an immensely rewarding behavior that can become time-consuming and detrimental as it spirals out of control, interfering with important obligations, like other behavioral addictions (Bigelsen, Lehrfeld, Jopp, & Somer, 2016; Pietkiewicz, Nęcki, Bańbura, & Tomalski, 2018). Despite the paucity of scientific research on this novel construct, scores of internet users have embraced the term widely, expressing delight at discovering countless others who struggle with this mental activity. Online forums dedicated to MD include many thousands of adherents (e.g., a “Reddit” MD community has over 79,000 members; retrieved on June 16th, 2022, from www.reddit.com/r/MaladaptiveDreaming/), and a Google search for the term “maladaptive daydreaming” produced around 951,000 results (“all results” search) and 328,000 (verbatim search) (retrieved June 16th, 2022).

To facilitate research on clinical samples, a set of diagnostic criteria for a future nosology of a *daydreaming disorder* have been proposed (Somer, Soffer-Dudek, Ross, & Halpern, 2017). Specifically, diagnosing MD relies on reports of persistent and recurrent fantasy activity in a six-month period that is vivid and fanciful as indicated by a sense of intense absorption/immersion including visual, auditory, or affective properties and at least one more feature, such as: daydreaming triggered, maintained or enhanced with exposure to music, or stereotypical movement (e.g., pacing, rocking, hand movements), yearning to daydream when prevented, and repeated unsuccessful attempts to curb daydreaming. These symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning, and cannot be better explained by substance use or another condition.

The purpose of this chapter is to describe the phenomenological and empirical links between MD and dissociative disorders (DD) and to discuss their theoretical implications. We aim to examine the possibility that MD is best conceptualized as a DD. To this end, we will first discuss *dissociative absorption* (DA).

Dissociative Absorption and the Disintegration of Conscious Experience

Dissociation is defined as a disruption of the normal integration of experience (Chu, 1998). Like most mental phenomena it is a dimensional construct spanning from normal occurrences in daily life, to severely incapacitating psychopathology, with the extreme being dissociative identity disorder (DID). As a way of coping it can be utilized in a healthy, growth-promoting way or it can be overused and then evolve into dysfunctional behavior (see Linde-Krieger, Yates & Carlson, Chapter 9, this volume, for a development perspective). In evaluating an individual's functional versus dysfunctional uses of dissociation, Putnam (1997) identified three dissociation-related processes: (1) To divide attention into two or more streams of consciousness; (2) To compartmentalize information and affect; and (3) To alter identity and/or create distance from self.

These functions represent incremental levels of experiential disintegration with the third function probably evolving from the former ones. We posit that a decrease in the integration of psychological and somatoform elements is the basis for a decrease in the experience of a coherent, unified sense of self and self-in-relation-to-others. As evident from the case example above, MD is characterized by episodes of partially controlled distancing from the self or “real-life” identity in favor of experimenting with alternate protagonists/identities. We believe that this is achieved through a division of streams

of consciousness, as manifested in the concept of “absorption and imaginative involvement” or DA. In the following section, we will define DA and discuss its relevance to psychopathology in general, and dissociative psychopathology in particular. Later on, we consider its role in the development of MD.

DA is an empirically-derived factor representing the inclination to become fully immersed in one stimulus, either external, like a movie or a book, or internal, as in daydreaming (Carlson & Putnam, 1993). DA involves a narrowing of attention to the point where awareness of the surroundings fades, a process that may lead to acting on “auto-pilot.” At the normal end of this dimension lay common experiences such as “highway hypnosis” (suddenly realizing one has no memory for parts of the trip while driving; Williams, 1963), getting “lost” in a movie or play, “multi-tasking,” or engaging in automatized behaviors like washing dishes while simultaneously daydreaming. These behaviors are presumably easier to perform in a dissociated state, where self-conscious awareness, anxiety or other psychological functions are prevented from interfering with the automatic performance. Individuals with a tendency for DA report occasional confusion as to whether they did something or just planned to do it, and being unaware, at certain moments, of the passage of time. Since DA includes common, daily experiences, it is often referred to as “non-pathological dissociation” (e.g., Merritt & You, 2008).

However, the suggestion that DA is always “non-pathological” may be somewhat misleading. DA manifests specific clinical relevance by predicting psychopathology, in general (Leavitt, 1999; 2001; Levin & Spei, 2004; Soffer-Dudek, Lassri, Soffer-Dudek, & Shahar, 2015) and obsessive-compulsive symptoms, in particular (Soffer-Dudek, 2017a, 2019). Moreover, DA is strongly correlated with the other, purportedly “pathological” dissociative scales, of amnesia and depersonalization-derealization, and the DES-taxon (Levin & Spei, 2004). DA was more strongly correlated with “pathological” dissociation than with a non-dissociative measure of a similarly named “absorption” trait (Tellegen, 1982), which assesses several types of alterations of consciousness (Bregman-Hai, Kessler, & Soffer-Dudek, 2020). Finally, DA is highly elevated in DD (Leavitt, 1999, 2001; Ross, Ellason, & Anderson, 1995; Simeon, Giesbrecht, Knutelska, Smith, & Smith, 2009).

All of these findings are incompatible with the suggestion that pathological and “non-pathological” dissociation are distinct phenomena (see Rodewald, Dell, Wilhelm-Goßling, & Gast, 2010; Steele, Dorahy, & Van der Hart, Chapter 4 this volume), but rather suggest that they are closely connected. Although sporadic DA experiences (such as highway hypnosis) are not necessarily psychopathological, high levels of DA in an individual may indeed be indicative of psychopathology, and may also represent a foundation for the development of more extreme forms of dissociation. Indeed, according to Butler (2006), pathological and “non-pathological” dissociation “both involve a telescoping of the attentional field to concentrate on a narrow range of experience and the concomitant exclusion of other material (internal or external) from awareness and, to some degree, from accessibility” (p. 45).

This raises a question. Is the inaccessible material characterizing DA recorded in the brain, suggesting that DA is a common manifestation of *compartmentalization*, occurring also at the pathological end of the dissociative spectrum, or is the material inaccessible because it was not encoded in the first place, suggesting that DA is merely an alteration in attention? We suggest that it is the former, and view DA as a tendency for decreased integration of mental activity,¹ reflecting a Janetian framing of dissociation as disrupted integration of psychological functions (Van der Hart & Rydberg, 2019). Some support for this claim may be found in a neural correlate identified for DA, namely, decreased functional connectivity at resting state (Soffer-Dudek, Todder, Shelef, Deutsch, & Gordon, 2018), suggesting that neural functioning of high absorbers may be overall less synchronized across brain subsystems, similar to more extreme dissociation (e.g., Hopper et al., 2002). Driving, for example, is a complex activity (e.g., stopping at red lights), and it is unlikely that during highway hypnosis the red lights are not encoded or the driver is “unconscious” regarding driving. When driving while listening to unrelated auditory content, two separate neural systems are simultaneously active (Sasai, Boly, Mensen, & Tononi, 2016), suggesting that in common situations, our mental functioning may be divided. Rather than being unaware of driving, the experience of driving is probably simply less accessible (see differentiation between “phenomenal” versus “access” consciousness; Block, 2005). Consciousness seems to be made up of several internal and sensory impressions, and their perceived “binding” (e.g., Bayne & Chalmers, 2003) into a single sense of experiencing self may be weaker at certain moments.²

Disintegrative processes are the foundation for the dissociative re-composition of the self into enduring separately-functioning parts (Farina, Liotti, & Imperatori, 2019). Whereas we view DA mostly as disintegration, it seems to also involve a basic, low-level, temporary form of multiplicity. Specifically, highly absorptive individuals may act automatically (or semi-automatically) while absorbed in a daydream, and this action may range from merely executing well-rehearsed behaviors to engaging in more complex or less-rehearsed behaviors, similar to separate functioning parts. The more complex an automatic behavior is, the more likely we would consider it dissociation. For example, high absorbers given a free-writing task seemed to write in a more automatic and compartmentalized manner than low absorbers, as they were less successful in identifying their own words following the task (Bregman-Hai et al., 2020). As writing meaningful coherent passages is a complex task, and the content was original rather than well-rehearsed, it is likely that the writing was not “out of” awareness but rather that the subjective experience of writing was less integrated with other experiences and therefore was more difficult to access later. This is reminiscent of historical accounts describing “hysterical” or dissociative patients, such as the woman observed by Pierre Janet who was able to separate complex functions: she wrote one thing while speaking another (Janet & Prince, 1907; Van der Hart & Horst, 1989).

According to Janet, whereas normally our repertoire of automatic processes is bound together into one stream of consciousness, in dissociated states, one or more of these automatisms are split from this stream, and thus may be experienced as lacking voluntary control. DA may be the normative psychological mechanism on which such clinical cases develop. The performance of complex behavior with compartmentalized mental activity is reminiscent of trance or hypnotic-like states where individuals may perform an action and not necessarily recall the experience afterward (Bowers & Woody, 1996). Indeed, there is a connection between dissociation and hypnotic susceptibility (Cleveland, Korman, & Gold, 2015; Terhune, Cardeña, & Lindgren, 2011), and there is evidence that DA may be similar to hypnotizability in terms of neuropsychological functioning (Soffer-Dudek et al., 2018).

Hypnotic inductions consist of “instructions and suggestions for reducing awareness of exogenous stimuli and becoming absorbed in (i.e., effortlessly attentive to) the words of the experimenter” (Terhune et al., 2011, p. 1444). Absorptive states were first articulated by Breuer and Freud (1893/1955) who

described a phenomenon of *double conscience* labeling it as a ‘hypnoid state,’ a mental occurrence that was well-known already to contemporaneous scholars of consciousness (e.g., Azam, 1887; Binet, 1890). Breuer and Freud were interested in demonstrating a close connection between double consciousness and hypnosis, or the phenomenon then termed *somnambulism*. All of these concepts relate to present-day DID, in which the disintegration of conscious experiences becomes a dissociative or separated overarching organization of experience. Perhaps DA may represent an underlying basic trait, enabling the development of structural dissociation of identity, like DID.

As both disintegration and structural dissociation have been conceptualized as reactions to trauma (e.g., Farina et al., 2019; see Farina & Meares, Chapter 3, this volume), we wish to elaborate on our stance on trauma in the context of DA. Whereas severe dissociative psychopathology, especially DID, is strongly related to extreme forms of childhood trauma (Brand & Frewen, 2017; Dalenberg et al., 2012), DA is unrelated to childhood trauma (Irwin, 1999; Somer & Herscu, 2017). Yet, evidence suggests that DA is no less characteristic of post-traumatic stress disorder than depersonalization-derealization is (Armour, Contractor, Palmieri, & Elhai, 2014; Özdemir, Celik, & Oznur, 2015). It seems reasonable to hypothesize that a natural inclination towards mild DA could be a risk factor in the face of trauma or adversity, enabling the development of more extreme absorption as well as other dissociative symptoms. Nevertheless, trauma or distress may be one of several possible pathways to DD. For example, depersonalization-derealization disorder without childhood trauma is common; in fact, patients with this disorder had lower levels of reported childhood trauma than patients with depressive disorders (Michal et al., 2016). Whereas depersonalization-derealization symptoms do characterize peritraumatic responses, they are also present in panic attacks, suggesting they are common, possibly learned, reactions to overwhelming emotion that can become habituated. Indeed, it seems that the relationship between trauma and dissociation is much stronger when measured among individuals with DID alone than when examined in mixed DD samples or non-clinical samples (Dalenberg et al., 2012). The notion that trauma may not always be responsible for mild or moderate dissociation symptoms underlies our etiological model of MD detailed below. We maintain that MD is a DD not as extreme as DID, and as such, may either stem from trauma or alternative pathways, but in any case, relies on a very strong inclination for DA.

Finally, we wish to highlight one more observation regarding DA. It has been suggested that whereas the Dissociative Experiences Scale (DES-II; Carlson & Putnam, 1993) factors of depersonalization-derealization and amnesia have clinical-level counterparts (depersonalization-derealization disorder and dissociative amnesia, respectively; DSM-5, American Psychiatric Association, 2013), DA does not and, therefore, should not necessarily be regarded as dissociative or as inherently associated with psychopathology (Kihlstrom, 2005; Kihlstrom, Glisky, & Angiulo, 1994). However, as mentioned above, DA seems to be a dimensional trait, with linear associations to psychopathology. What, then, is the abnormal version of DA? We suggest that MD is a pathological manifestation of extreme absorption, or in other words, an *Absorption Disorder*.

MD and DD: Phenomenological Similarities

Maladaptive daydreamers (MDers) can spend many hours a day absorbed in fantasy (Soffer-Dudek & Somer, 2018) that is experienced with a strong sense of vividness and presence (Bigelsen et al., 2016). Increased vividness of visual imagery is a property of DA; healthy individuals who were high in DA were significantly faster at a mental rotation task (Bregman-Hai et al., 2018). In MD, this increased vividness is even more intense: Individuals with MD often report that they enjoy daydreaming like most people would enjoy a good movie (a male MDer told us: “*who needs TV? I have one in my head!*”).

During daydreaming, the consciousness state of individuals with MD is characterized by a certain duality, in that they are simultaneously acting on two planes: on one hand, they are completely engaged in their inner world and disconnected from external reality, but on the other hand, they also retain awareness as to their whereabouts, respond when their name is called or the phone rings, and avoid collision with objects or vehicles as they move about. In other words, while immersed in their daydreams, MDers do not lose complete touch with reality, but rather split their resources between two activities. Indeed, many MDers have reported that when daydreaming in public they take care not to exhibit any bodily gestures, facial expressions, or mouthing of imagined inner conversations, as they are concerned about being shamed for this behavior (Bigelsen & Schupak, 2011). This dialectic demonstrates a simultaneous dual-mode of awareness, which may resemble conversations “in the background” characterizing DID. In the following case example, the daydreamer describes a constant sense of parallel consciousness, with attention divided between the real and the imagined experience.

My imagination would come bursting in at the worst of times, for example during an exam or at the dinner table. They were in the form of dancing figures. These figures would burst through the doors and windows of whatever room I was in, they would sing, spin and laugh around me, making jokes and encouraging me to join them. I always found them irritating. I wanted, needed to concentrate but couldn't with all the racket they were causing. So, I would come up with imaginary scenarios to get rid of them, (a black hole swallowing them up, a rainstorm washing them away in a flood, a dragon flying in and scaring them off) which of course drew me deeper into the world of fantasy ... I started a new dance course last year, and I realized that I daydream of me dancing in front of my friends even when I'm dancing.

26-year-old female

Daydreaming involving fanciful, intense imagery is not rare among children. By age seven, about 37% of children create imaginary companions (IC; Taylor, Carlson, Maring, Gerow, & Charley, 2004). These children could very well manifest the trait for ID. IC may be a source of comfort when a child is experiencing difficulties, and some children probably utilize IC to cope with stressful experiences. Evidence shows that the capacity for absorptive imagination resulting in the creation of IC may lead to better adjustment in some instances (Taylor, Hulette, & Dishion, 2010). However, in cases involving attachment failures and continuous traumatic distress, either MD or DID could be an expected outcome. Otherwise stated, ID is the trait necessary for the development of complex inner worlds (Somer, 2019), as exemplified in the following case.

I've been struggling with MD for the last ten years. It all started probably because of trauma related to my father's infidelity, especially between the ages of 9 to 14. I created a world of my own to escape depression, anger issues, undiagnosed OCD and anxiety, and the fact that my mother used to rely on me as a confidant for her marital problems ... My parents finally reconciled, I was finally ... doing therapy, but the daydreaming never stopped. I didn't feel bad about my near-constant state of daydreaming. Maybe I felt a little weird about it since I knew other people just don't live "second lives" like that. I am very self-aware, and I always kept it a secret.

20-year-old female

Another central phenomenological similarity of MD with DID, is the creation of internally-narrated characters, at times including an idealized self (Regis, 2013; Somer, 2002), which the daydreamer identifies with. Individuals with MD typically have strong emotional connections and intense engagement with their daydream characters (Zsila, McCutcheon, & Demetrovics, 2018). For example, they may be moved to tears by something a character said. Although their scripts are self-generated, they don't always feel they are. A similar experience of reduced sense of agency for one's creation has been reported by novelists, many of whom feel like passive reporters of narratives that appear "independently," without conscious editing (Bowers, 1979; Taylor, Hodges, & Kohányi, 2003). Not coincidentally, writers appear to be especially high on DA (Taylor et al., 2003). This creative source of inspiration is a milder, more adaptive version of the ability to mentally create alternative identities experienced as distinct from one's self, as observed in DID. This trait of externalizing thoughts, self-identities, narratives, and dialogues to invented "characters" seems to lie on a continuum of agency and control; in MD it is less extreme than in DID and closer to the common experience of novelists, in that characters take on a life of their own and plots develop in unanticipated directions. Yet unlike most novelists, MDers seem to have inconsistent control over the narratives in their minds as the focus on the lives of the protagonists becomes an addiction (Pietkiewicz et al., 2018). The following case example demonstrates how a fictional, invented character becomes a focus of desire and love.

...at some point in my life around teenage years, I created an alter-ego which I talk to during daydreaming, mostly at nights and up to 4 hours on good days, with whispering dialogues, and moving my body... I'm daydreaming him still every day. I am too ashamed to tell my husband about him because I am afraid I have a more intense attraction to my imaginary lover. It is like cheating... The moment I start daydreaming, I am with him... smiling... crying... talking to him.... Another thing that is really embarrassing to me and I never talked about in my life is ... I have this Teddybear from my childhood and the moment I daydream about my fantasy boyfriend I use it as feedback for hugs. I even kiss it. When I go to sleep after some hours of daydreaming, I place it always ... so I can sleep in its "arms."

28-year-old female

Taken together, these similarities suggest that MD may be a DD. We will now turn to review empirical evidence relating to these two constructs.

MD and DD: Empirical Evidence

Qualitative Findings

MD was first identified at the turn of the millennium and published as an extended case report involving six patients treated in a clinic specializing in stress, trauma, and DD (Somer, 2002). Not surprisingly, all members of the original MD cohort reported a history of serious childhood adversities, and presented with elevated dissociation scores, leading the author to believe that MD may have its roots as a trauma-related dissociative defense mechanism. Subsequently, 90 self-identified MDers provided descriptions showing that similar to DD, MD started at a young age, helped in the regulation of distress, involved subjective alterations of perception, and was difficult to control (Bigelsen & Schupak, 2011). Two other studies, one phenomenological (Somer, Somer & Jopp, 2016a) and one relying on Grounded-Theory methodology (Somer, Somer & Jopp, 2016b) showed that similar to the known functions of DD, participants continuously utilized DA in compensatory fantasy as a means to soothe loneliness and other painful outcomes of emotional abuse. For example, respondents sought missing emotional support from imagined families and fantasized about social status and competence to counteract parental criticism. Importantly, respondents described absorptive daydreaming in MD as based on an innate propensity for ID that preceded childhood adversities. This represents another similarity with dissociative tendencies as some studies suggest they are also influenced by genetic factors (Becker-Blease et al., 2004).

An analysis of MDers' artworks and their verbal descriptions shed further light on the similarities of the MD experience to dissociation (Somer, Somer, & Halpern, 2019). Respondents portrayed MD as a shielded space that buffers external stressors ("...the daydream acts like a protecting bubble that makes me forget about all the worries of the world and makes me feel safe..." p. 105). Self-representations revealed an uncomfortable split whereby a vivacious colorful inner life is agonizingly dissociated from the experience of a dismal grey reality of disappointing failures to accomplish real-life objectives (for a sample representation, see the Image titled "A pictorial representation of the MD experience" which can be found on the Routledge website).

In sum, MD was portrayed in several qualitative studies as preferred to a presence in real life because the imaginary world provided protective, corrective, or compensatory experiences.

Quantitative Findings

A history of childhood trauma and abuse was reported by 27% of MDers (Bigelsen & Schupak, 2011). Thus, extensive DA in the context of childhood trauma may contribute to the development of MD in some cases, but MD seems to arise from alternative trajectories in other cases. Still, compared to control groups, MD was significantly more prevalent among survivors of childhood sexual abuse (Abu-Rayya, Somer, & Knane, 2020) and individuals recovering from substance use disorder. MD was linked with emotional neglect in their childhoods, and partially mediated the relationship between their reports of trauma and dissociation (Somer, Abu-Rayya, & Nsairy Samaan, 2019). Moreover, fantasy among adults with MD exposed to childhood trauma may not only serve as a mere coping mechanism but potentially manifests a pathological preoccupation with unresolved childhood adversities. Specifically, a history of childhood physical and emotional neglect, as well as emotional abuse were associated with the employment of trauma-related empowerment and compensatory daydreaming themes about idealized versions of original families (Somer, Abu-Rayya, & Brenner, 2020).

While MD does not necessarily stem from childhood trauma, it is strongly related to dissociation. This association was empirically demonstrated in English-speaking, Israeli, and Italian samples of MDers or mixed samples, and when comparing MDers to non-clinical controls. The associations were mainly manifested with the total score on the DES-II, the depersonalization-derealization factor, and the DA factor, with especially large effect sizes for the latter (Bigelsen et al., 2016; Ferrante, Marino, Guglielmucci, & Schimmenti, 2020; Jopp, Dupuis, Somer, Hagani & Herscu, 2018; Schimmenti, Sideli, La Marca, Gori, & Terrone, 2019; Somer, Lehrfeld, Jopp, & Bigelsen, 2016). A measure closely related to dissociation, the Tellegen Absorption Scale (TAS, Tellegen, 1982), was used in a study on MD in an Arab sample, showing that MD and absorption are related but distinct constructs (Abu-Rayya, Somer, & Meari-Amir, 2019). The strong relationship between MD and dissociation is also exemplified through the high prevalence of each syndrome when sampling the other. In an MD sample, average DES-II scores were approximately 29 (Ferrante et al., 2020), only slightly below the suggested clinical cut-off score of 30 for a DD (Carlson & Putnam, 1993). Ferrante and colleagues also showed that shame and dissociation (either total DES-II or DA) fully mediated the relationship between emotional trauma and MD severity. Among inpatients with high levels of trauma and dissociation (predominantly DID or other specified DD), almost half the sample met the full criteria for MD (Ross, Ridgway, & George, 2020). Close to a quarter of the remaining inpatients met the criteria for unspecified MD, meaning that there was vivid fantasy activity but it persisted for less than six months. Importantly, dissociative inpatients with MD were significantly higher on several symptom scales including dissociation, and were more likely to have DID, compared to those without MD.

In line with data emerging from qualitative studies, quantitative research confirmed that childhood trauma and current social isolation are major pathways in the emergence and preservation of MD symptoms (Somer & Herscu, 2017) and that MD symptoms are associated with poorer emotion regulation (Greene, West & Somer, 2020). Although correlational, this finding may indicate that like other DD, the daydreaming strategy might be an ineffective coping mechanism. Finally, a daily diary study suggested that depersonalization-derealization symptoms were elevated on days in which MD was more intense and frequent, and on the days following them (Soffer-Dudek & Somer, 2018). Although these findings cannot indicate causality, the temporal pattern of this within-person investigation suggests that MD may play a part in generating dissociative detachment.

In sum, numerous studies employing different research strategies identified strong links between MD and dissociation. Similar to DID/Other Specified DD, MD is also associated with an experiential split or disintegration, entails a detachment or distancing from the self in favor of alternate identities, implies intense emotional involvement with inner characters and a reduced sense of agency, is linked with shame and a concealed inner world, involves distress or functional impairment, emerges during childhood, is influenced by childhood trauma, and is utilized to distract from past and current hardships.

A Proposed Continuum of Agency and Control

Based on the evidence reviewed above, we propose a model describing both the possible etiological pathways leading to MD and its relationship with dissociation. As can be seen in Figure 34.1, we suggest that MD is located on a continuum representing the sense of controllability and agency experienced for internal characters. We propose that the development of symptoms towards the end of this continuum may be a product of the combination of a diathesis and a reinforcing element. The diathesis is an innate ability for extreme DA (“absorption and imaginative involvement”) that also spans a continuous dimension. The roots of MD lie in a normal form of intense absorption termed ID (West & Somer, 2020), representing a capacity for strong absorption in vivid, fantastic imagery, with a rich inner world that is not inherently abnormal. We suggest that this diathetic behavior is reinforced, turning the ability for ID into a handicap.

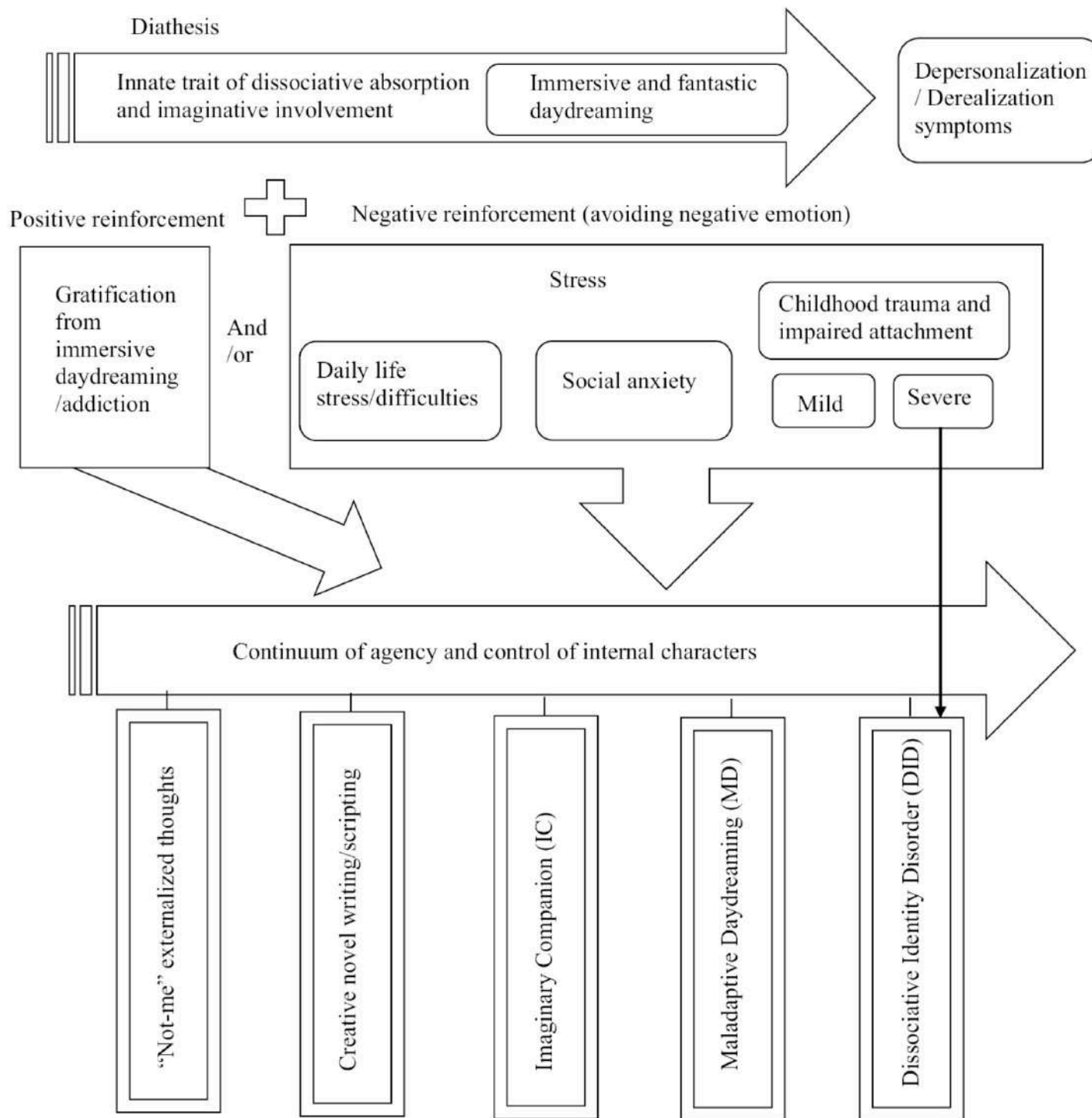


FIGURE 34.1 A proposed model depicting possible etiological pathways to the development of MD and its hypothesized relationship with dissociation

In some cases, the presence of stressors will underlie the reinforcement, as the shift of attention towards the unfolding fantasy may lead to the amelioration of distress. Adversities may or may not involve childhood trauma or impaired early attachment; the more severe and early the trauma, the more likely the person will be to develop DID, rather than MD. A common stressor often reported by MDers is social anxiety, frequently compensated for with a fantasized pleasant social world (Somer & Herscu, 2017). Yet in other cases, the reinforcement may simply rely on the gratifying sensations created by the ID (Bigelsen & Schupak, 2011). Therefore, our model is not a diathesis-stress model per se, but rather includes a pathway to MD independent of stress, going through addiction alone (still, MD will inevitably generate distress as an outcome). In other words, according to this paradigm, the trait of absorptive-ID (top of Figure 34.1) can move further towards psychopathology the more it is reinforced, either through positive reinforcement (the gratifying essence of ID) or negative reinforcement (the respite from aversive stressors provided by ID). Stronger reinforcement of any type will lead to the more pathological end of the continuum of agency (bottom of Figure 34.1). At the lower severity or normal end of the agency continuum, we include creative novel writing or scripting, and childhood ICs, which may also involve a reinforcing element contributing to their maintenance. Moreover, the normal end of the continuum may also be associated with thoughts the person is unable or unwilling to accept as part of their self-narrative, or in other words, “not-me” parts (Chefetz & Bromberg, 2004). For example, a person has a thought in which they badmouth their employer; the thought is experienced as “coming out of no-where,” and is related to as “what I would have said if I would have been an assertive person,” or even attributed to what a TV character would have said in the same situation.

Finally, we suggest that as a consequence of directing attention inward, intense absorption may bring about depersonalization and derealization symptoms (also see Perona-Garcelán et al., 2020). Upon exiting the daydream and the reorientation to external reality a discontinuity in the normal sense of being-in-the-world is often experienced. Many MDers report that their daydreaming is so vivid that reentry into a dull real-world generates detachment from it. Indirect support for the idea that extreme inwards-attention is associated with depersonalization and derealization may be found in the usefulness of grounding interventions, requiring outwards-focusing (Neziroglu & Donnelly, 2010). Relatedly, a similar process probably occurs in obsessive-compulsive disorder (OCD), where intense absorption in ruminations and obsessions engulfing awareness inwardly leads to dissociative detachment upon exiting the absorbed state (Soffer-Dudek, 2014). Notably, experience-sampling studies show that DA or daydreaming are accompanied by dissociative detachment (Cardeña & Marcusson-Clavertz, 2016; Vannikov-Lugassi & Soffer-Dudek, 2018). Also, rumination (entailing inwards-focusing) predicted an increase in depersonalization/derealization when assessed monthly, perhaps suggesting a long-term cumulative effect (Vannikov-Lugassi, Shalev, & Soffer-Dudek, 2021).

What are the implications of theorizing the existence of a continuum of agency and control over internal characters? Perhaps the realization that some cases may display mixed features of MD and DID, as the following vignette presents. The main diagnosis of this woman seems to be MD, but it is atypical in that dissociative phenomena are highly elevated.

Last week I stumbled [...upon] the term MD and some articles, and I was completely overwhelmed. I'm doing this since I was a kid... I was always called a calm and daydreaming person/kid. My earliest memory about daydreaming must be when I was around 7 years, I used to imagine stories with me as the main person Suffering in teenage years from depression, body dysmorphic disorder, and anxiety, nothing was ever diagnosed, and I never have been visiting a psychologist. I guess I was always scared someone could think I'm crazy The moment I start daydreaming, I am him [the main internal character], moving, mouthing while he's talking. He also has a kind of relationship with another man. He used to be straight in my teenage years but I can't remember from which point on I changed him to be gay. Maybe when I self-struggled with sexual identity. Everything about him is very detailed in my head, from certain birthmarks up to his background... The only time I'm not daydreaming through him is when I listen to music, then I'm playing myself as a famous and successful person acting even dance moves out. In my teen years, I also had the problem of identifying myself when I was looking in the mirror, I could not tell how I really look.

32-year-old female

This case exemplifies the gradual splitting of identity. Its dissociative severity is higher than in prototypical MD, and it also shows how an IC may develop into MD, which in turn may bring about depersonalization. In the following excerpt, we share a case suggesting MD may perhaps morph into full-blown DID, again supporting the notion of a continuum.

I've had MD for as long as I can remember. I have 7 alters and three different “dream worlds” that I flee to for at [least] 4 hours a day but usually around 8.... I'm not sure if it's unusual for the host personality to talk to their alters in their head, but me and my first alter talk all the time. We converse regularly and she always calls me “weaker half” and “pathetic” as well as comments on my situations and offers her perspective. She, as long as I can remember, always had expressed a desire to me that she wishes that she was in control. And last night I had a very scary thing happen to me. I don't know how to describe it, but it was like me..., and her..., switched places. She was in control of my body. I don't remember the whole episode clearly but she was talking about how “reality is more boring than she expected” and she objectified my body. She still daydreamed compulsively. And in those daydreams, I was the alter. I was in the dream world and she was in reality. She had complete control over my body and I couldn't escape the dream world. She did things like dress up and put on makeup, which are things I never do because I'm very tomboyish, but are things that are very normal for her because she's rather feminine. I don't know what's happening and it scares me.... I would also like to note that I do suffer from derealization and depersonalization episodes very often, and they usually last for a month or two. And I have lost most memory of my childhood and early teenage years and now my memory loss is extending to where I can't remember the directions to places I normally go to like my work. I'm concerned that something much worse is developing within me and I don't know what to do or think about the situation.

18-year-old female

The case above is at the more severe end of the continuum, seemingly moving in the direction of DID diagnostic criteria mixed with MD elements. We posit that MD may be a risk factor for developing DID in the face of severe trauma. Our thoughts are compatible with ideas presented by Ross and colleagues (Ross, 2018; Ross et al., 2020) who argued that there may be an overlap between MD and some cases of DID with elaborate inner worlds and high numbers of “alter personalities”; they suggested that MD may provide insight into the mechanisms responsible for polyfragmented DID. These ideas of Ross and his colleagues are in line with our notion that the capacity for absorptive daydreaming could be the psychological infrastructure that may lead, under specific circumstances, to the development of complex inner worlds (Somer, 2019). Fantasy worlds containing ICs could be the juncture where trajectories leading to MD and DID might part. In other words, as a coping mechanism, childhood absorption in an inner world of imaginary protagonists could evolve into abnormal absorption (MD) in some children, whereas others may reintegrate their projected ICs as alter identities to develop DID. In this process the imagined object becomes an alternate subject, thereby creating an overlap between MD and DID.

To conclude, MD and DD share several common characteristics and can sometimes overlap, yet they also differ in important aspects. Table 34.1 summarizes the similarities and differences between the constructs.

TABLE 34.1 Shared versus differential elements of Maladaptive Daydreaming and Dissociative Disorders

	<i>Maladaptive Daydreaming</i>	<i>Dissociative Identity Disorder</i>	<i>Depersonalization-Derealization Disorder</i>	<i>Dissociative Amnesia</i>
“Double consciousness”	Present	Present	Somewhat present (a gap between perception and experience)	Not present
Narrow attentional spotlight	Present	Present	Unknown	Unknown
A tendency to direct attention inwards	Present	Present	Present	Absent
Gaps in memory	Mostly absent. Minor uncertainty regarding occurrences during daydreaming may be present. More rarely, a confusion between imagined and real events is reported.	Present	Absent	Present
Creation of alternate identities	Present	Present	Absent	Only in Fugue states
Complexity of internally-created world	Complex (e.g., rich landscapes/architecture, several protagonists)	Sometimes complex (e.g., polyfragmented DID, detailed experiences of inner spaces)	N/A	Not complex (In Dissociative Fugue: one identity, no alternation)
Degree of agency and control associated with characters	Mild	High	N/A	High (Fugue)
Vividness of internally created world	Vivid	Vivid	N/A	N/A
Intense emotional reaction to internal characters	Present	Present	N/A	N/A
Urge to engage in the inner world	Present	Sometimes	N/A	N/A
Ego syntonic features	Present	Sometimes present	Absent	Absent
Triggered, maintained, or enhanced by kinesthetic activity, stereotypical movements	Present	Absent	Absent	Absent
Triggered, maintained, or enhanced by exposure to music	Present	Absent	Absent	Absent
Impairment	High	Extreme	High	Moderate to extreme, depending on the extensiveness of amnesia
History of traumatic or severe stress	Sometimes	Almost always	Sometimes	Almost always

Related Issues and Future Directions for Research

Absorption, MD, and the Neo-Janetian Perspective

Janet argued that the integrative failure in hysteria is manifested in a retraction or narrowing of the field of personal consciousness (Janet, 1907, 1909). We argue that MD could be construed, from a Neo-Janetian structural dissociation point of view, as an integrative failure of consciousness.

Janet postulated that humans maintain a hierarchy of degrees of reality they ascribe to behavior, thoughts, imagination, and various perceptions of the past, present, and future (Janet, 1928). Trauma survivors may place their traumatic memories too high in that hierarchy resulting in flashbacks experienced as occurring in the present. In contrast, fantasies would, at the adaptive end of the spectrum, not lead to the experience of these mental actions taking over present reality and representing it. MD occurs mostly within a unified sense of identity (excluding coexisting major DD) and operates in an imaginary reality. This relates to the discussion of “hypnotic states” reviewed above (Breuer & Freud, 1893/1955). Because of MD’s relationship to dissociation, it is plausible that MD is also a form of hypnotic DA.

However, in contrast to Breuer and Freud's early clinical observations, MD is on the lower end of the continuum of agency and control of internal characters; it is dimensionally (but not categorically) different from such self-propelling states as the hypnoid states in hysterical attacks or Jung's complexes (Jung 1907/1960), Watkins' ego-states (Watkins & Watkins, 1977), Bromberg's self-states (Bromberg, 2006; Chefetz & Bromberg, 2004; Howell, 2011), or Young's schema modes (Young, Klosko, & Weishaar, 2003). The protagonists in the fantasy worlds of MDers rarely assume a complete sense of agency and certainly do not take full control over the body of individuals against their will or unbeknownst to them. However, in cases like the latter excerpt demonstrating how MD seemed to gradually morph into potential DID, there is not only a duality of awareness prevalent in the prototypical manifestation of MD but also significant structural dissociation of identity.

The modern theory of the Structural Dissociation of the Personality (TSDP, See Van der Hart & Steele, Chapter 15, this volume) seems to have limited utility in explaining the pathological form of DA (i.e., MD) as a dissociative phenomenon. The TSDP states that DD involve erecting and maintaining boundaries between dissociative parts of the personality, first created because the traumatized individual does not have sufficient integrative capacity and later maintained because the individual develops a series of intense phobias or fears, that keep them apart in separate personality organizations (Van der Hart & Moskowitz, 2020). TSDP theorists suggest that DA is an inclination for experiencing alterations in consciousness, which should not be referred to as "dissociation" at all (Rodewald et al., 2010; Steele et al., Chapter 4 this volume). As we explained above, we do not agree with this stance; rather, we maintain that DA relies on basic dissociative mechanisms, that enable the development of more severe DD, and it may also become pathological in and of itself.

MD manifests a duality of awareness containing mostly non-trauma related materials within one identity. Although DA and MD may start as a trauma-related means of coping, like depersonalization/derealization they represent an alteration in the unity of consciousness. We now briefly review the similarities between MD fantasies and posttraumatic memories, on one hand, and unusual nocturnal dreaming, on the other hand, both of which have been related to dissociation.

Memory, Flashbacks, Nocturnal Dreaming, and Daydreaming

Where are MD fantasies located on a spectrum of trauma flashbacks and nocturnal dreams? As mentioned above, flashbacks in PTSD seem to be memories experienced as if they were happening in the present and are thus conceptualized as "re-experiencing" symptoms (DSM-5, APA, 2013). Historically, Janet recognized that unlike normal memories, traumatic memories are inflexible, invariable (i.e., they do not change over time), and cannot be evoked at will (Van der Kolk & Fisler, 1995). This is also true for nocturnal re-experiencing symptoms (i.e., post-traumatic nightmares replaying the traumatic event; Phelps, Forbes, & Creamer, 2008). Repetitive post-traumatic nightmares have been described as "stuck" in an early stage of replay, as opposed to non-PTSD nightmares after trauma, which like normal dreams, are symbolic, associative and flexible, and evolve over time (Coalson, 1995; Hartmann, 1998). As opposed to post-traumatic nightmares, in normal dreams incorporation of full episodic memory is rare (Malinowski & Horton, 2014; Schwartz, 2003); conversely, novel imagery is constantly being created.

Are fantasies in MD more like nocturnal dreaming or like traumatic re-experiencing? Several MDers who reported childhood abuse also described trauma-reenacting MD, including a need for fantasizing either trauma-related compensatory experiences (e.g., being rescued, being a perpetrator, taking revenge) or trauma-related suffering/re-enactment (e.g., being captive/victimized) (Somer et al., 2020). However, more often than not, MD fantasies are creative, ever-changing, flexible, and original. MD narratives and imagery are internally generated or creatively manipulated. Moreover, unlike traumatic memories, they are often evoked at will, in response to a tempting urge or as a planned action. Thus, MD fantasies seem to range from a type of repetitive intrusive thought (e.g., flashback-like repetitive trauma-replay or rumination) to a dream-like novel creation and even a surprising experience.

Indeed, daydreaming and night-dreaming share neuropsychological mechanisms (Foulkes, 1999; Ichikawa, 2009; Solms, 1997) and seem to represent continuous attentional, narrative-making states (Cicogna, Cavallero, & Bosinelli, 1986; Levin & Young, 2002). It seems that this narrative-making mechanism is to a great extent impaired in PTSD, whereas in MD it is often enhanced. Further research is needed to better understand the similarities between ID and nocturnal dreaming.

Relatedly, in addition to the well-established role of trauma in dissociation (Dalenberg et al., 2012), alterations in sleep and dreaming or a "labile sleep-wake cycle" have also been suggested as a possible etiological factor for dissociative experiences (Van der Kloet, Merckelbach, Giesbrecht, & Lynn, 2012), and may also be relevant to MD. More specifically, sleep and waking states have been hypothesized to overlap in some people, resulting in dissociation (e.g., depersonalization) when sleep pervades waking, and unusual sleep phenomena such as parasomnias and unusual dream- and sleep-related experiences when wakefulness or arousal permeate sleeping (Mahowald & Schenck, 2001; Soffer-Dudek, 2017b). In accordance with the idea that imagination and dreaming share neural mechanisms, we have daily diary data showing that MD oscillated contemporaneously with unusual dreams that have been strongly related to dissociative experiences (Soffer-Dudek & Somer, in preparation). Interestingly, there are individual differences in the extent to which nocturnal dreams are vivid and bizarre, and they are congruent with the vividness and bizarreness of waking cognition, including dissociative experiences (Koffel & Watson, 2009; Kunzendorf, Hartmann, Cohen, & Cutler, 1997).

Fantasy Proneness

One of the contexts in which individual differences in bizarreness and vividness of daydreaming have been researched is the suggested trait of "fantasy proneness" (FP; Merckelbach, Horselenberg, & Muris, 2001; Wilson & Barber, 1983). While conducting studies on hypnotic susceptibility, Wilson and Barber noticed that a small group of individuals were excellent hypnotic participants and displayed an extensive and deep involvement in fantasy. Following in-depth interviews with them, they developed the concept of FP, which purportedly represented a cohesive trait including elements such as spending a large part of the time fantasizing with hallucinatory intensity, reporting vivid childhood memories, experiencing strong bodily concomitants

of fantasies, having out-of-body and other paranormal (e.g. telepathic) experiences, and having intense religious experiences (Merckelbach et al., 2001). Psychopathology was found to be inexplicably prevalent among high-FP individuals (Rauschenberger & Lynn, 1995; Waldo & Merritt, 2000).

It has been suggested that this stems from a confounded assessment measure of FP including heterogeneous items with uncertain face validity, rather than from the true maladaptive nature of daydreaming (Klinger, 2009; Klinger, Henning, & Janssen, 2009). Regardless of the specific assessment measure, we agree that FP involves several elements that are not necessarily present in individuals with ID. However, we also broaden Klinger's stance and maintain that the boundaries between normal and abnormal daydreaming should be empirically investigated. The experiences reported by MDers suggest that their daydreaming is abnormal in nature. For example, in the context of the COVID-19 lockdown restrictions in 2020, MDers around the world reported intensified urges to daydream and longer times spent in fantasy. The same study showed that in the shadow of this global stressor MD was related to an exacerbation of psychological distress and dysfunction, rather than with beneficial stress regulation (Somer et al., 2020).

Through our model above (Figure 34.1), we clarify *how and why* the innate ability for ID can go awry. We maintain that MD is distinct from FP: The definition of MD does not contain many elements included in FP such as paranormal beliefs, mystical and religious experiences, claiming to remember experiences from under age 3, or believing in the existence of dwarfs and fairies as a child. Assessment of MD relies on current-day experiences rather than a retrospective report of childhood occurrences and the definition of MD quite literally follows from its name; it is defined as daydreaming which is so excessive that it causes distress and/or impairs functioning. The distress and impairment stem from the consumed time, the obstructed life goals, and the shame associated with it. Indeed, a comparison of characteristics MD has in common with related constructs showed that FP shared one of the lowest numbers of features with MD (Schimmenti, Somer et al., 2019).

The concept of FP has been part of an academic conflict revolving around the etiology of dissociation: The trauma versus fantasy debate. Proponents of the fantasy (socio-cognitive) model have suggested that DD stem from a tendency for cognitive lapses, heightened suggestibility, and elevated FP, where the relationship of trauma with DD stems from a tendency towards confabulated reports of fantasized trauma (Lynn et al., 2014), alongside iatrogenic suggestions inadvertently made by therapists or media outlets. Although we fully agree that fantasy and suggestibility are very relevant to the trauma research field and clinical work, we disagree on the suggested direction of causality. As opposed to the notion that a tendency for vivid fantasy may fuel false reports of imagined trauma, we maintain that a tendency to engage in immersive and addictive fantasy may be a result of the actual trauma, as a means of coping. Indeed, research suggests that false accusations of traumatic incidences are rare (Lisak et al., 2010), whereas cases of childhood and adult trauma are overwhelmingly prevalent (Gorey & Leslie, 1997). Heightened suggestibility, absorption, and a vivid imagination may represent basic innate traits that in the face of trauma provide the necessary foundation for the development of fantasy over-use evident in MD, or structural dissociation of the personality in DID. In other words, trauma survivors' common inclination towards a fantasy world should not be used against them to suggest the trauma is confabulated. Interestingly, proponents of the fantasy model have recently presented data spanning almost two decades of research on FP, suggesting that it is only weakly related to self-reported trauma (Merckelbach, Otgaar, & Lynn, 2020) which means that a tendency to confabulate and fantasize cannot be regarded as a major causal factor for the tendency to self-report childhood trauma. Notably, we are currently collecting data on children and adolescents with corroborated trauma backgrounds. Many of these children seem to withdraw into their elaborate internal worlds as a means of escape from reality in the face of stressful external demands or while gaming or using their smartphones. Some of them rely on TV characters or on videogame avatars to generate the initial setting but then proceed to develop the narratives in their minds (Renée Potgieter Marks, personal communication, August 21, 2020).

Moreover, MDers usually report that they are well aware of the boundaries between their fantasies and the real world (Bigelsen et al., 2016). Their heightened ability for creative imagination and vivid imaginary experience does not seem to confuse their rational judgment regarding what is real. Indeed, although most MDers have comorbidities such as depression and anxiety, psychosis is rare (Somer, Soffer-Dudek, & Ross, 2017). In fact, psychosis questions produced the smallest effect sizes among the measures employed to compare MDers with normative daydreamers (Bigelsen et al., 2016).

With that said, we continue to maintain that trauma is not a necessary etiological factor for either MD or certain DD such as depersonalization-derealization disorder (see Michal, Chapter 23, this volume). Dissociative experiences are associated with a wide range of psychological factors such as anxiety, overwhelming emotion, or panic, sleep and dreaming mechanisms, and OCD (see below). These potential etiological factors of dissociation and MD may be overlooked when focusing exclusively on trauma (Soffer-Dudek, 2014).

OCD and Embodiment

A central mechanism that may play a role in the development and/or maintenance of mild dissociative experiences (DA, MD, and depersonalization-derealization symptoms) is associated with the obsessive-compulsive spectrum. Accumulating evidence suggests that dissociative experiences and OCD are closely connected (e.g., Belli, Ural, Vardar, Yesilyurt, & Oncu, 2012; Pozza, & Dèttore, 2019; Soffer-Dudek, 2014, 2017a, 2019; Soffer-Dudek et al., 2015; Tatli, Cetinkaya, & Maner, 2018). O'Connor and Aardema (2012) conceptualized the nature of consciousness during obsessional thought as immersive and dissociative, almost as if "in a bubble." Moments of "awakening" from absorptive episodes may generate derealization alongside anxiety, obsessing, and checking to verify what had transpired (including one's actions) and to substantiate reality (Soffer-Dudek, 2014, 2019). Thus, it would be expected that a disorder of extreme DA such as MD would be strongly related to obsessive-compulsive symptoms. Indeed, in a daily diary study, we found that an increase in those symptoms both preceded and followed days with intensified MD (Soffer-Dudek & Somer, 2018), suggesting possible reciprocal effects between the two constructs.

Moreover, MD is strongly associated with OCD-spectrum symptoms, especially those relating to the body, including excoriation, trichotillomania, and body dysmorphic disorder (Salomon-Small, Somer, Harel-Schwarzmann, & Soffer-Dudek, 2021; Somer, Soffer-Dudek & Ross, 2017). This may relate to the central physical aspect of MD, stereotypical motion, but it may also be a general correlate of absorption, which may entail a disconnection from the physical sense of self, inherent also to depersonalization. Further study on embodiment, MD, and dissociation could examine whether these compulsive physical aspects are related to increased depersonalization or conversely aid in thwarting detachment from one's body in the face of intense mental immersion.

Attention and Control

Trauma, dissociation, and DA are related to impaired attention and impairment in executive control and cognitive inhibition (Bregman-Hai et al., 2018; Endo, Sugiyama & Someya, 2006; Spencer et al., 2016). Similarly, MD is strongly comorbid with attention-deficit/hyperactivity disorder (primarily inattentive type), which seems to derive from the constant urge to engage in daydreaming (Somer, Soffer-Dudek, & Ross, 2017). The degree of mental control seems to be impaired among MDers. MDers seem to have some control in that there is a certain voluntary element in starting the daydreaming, similar to behavioral addictions. Yet, control is impaired as the urge takes over rational judgment or when MD is experienced as intrusive. Future studies should strive to differentiate the concept of daydreaming from inattentiveness. Indeed, Soffer-Dudek (2019) showed that DA is separate from attention deficit and mind-wandering. Essentially, DA and MD are characterized by a narrow attentional spotlight, whereas inattention comprises multiple minor distractions.

Conclusion

To sum up, strong associations exist between MD and dissociation. We provided evidence to support our thesis that MD may be conceptualized as a dissociative absorption disorder. We further suggest that MD lies on an agency continuum of externalizing one's thoughts, feelings, and inner dialogues onto internally-generated alternative identities, with the end of the continuum being DID. We maintain that MD is etiologically based on an intrinsic ability for dissociative "absorption and imaginative involvement," which at its end becomes the ability for ID. This ability develops into abnormality the more it is reinforced, either by gratification alone or by risk aversion (i.e., escaping such difficult realities as social anxiety or trauma). Unlike individuals with DID, MDers seem to have more ego strength, better emotion regulation abilities, and much better self-concept integration and identity cohesion. Moreover, childhood trauma and attachment impairments are probably, on average, more severe in DID than MD, although further study is needed. Still, MD possesses clear dissociative features forming a possible risk factor for other DD. We hope this chapter encourages more research on, and clinical recognition of, MD, that will lead to the development of pertinent evidence-based treatment protocols.

Acknowledgment

All clinical cases presented in this chapter are published with permission

Notes

1. We differ somewhat from the view of Carleton, Abrams, and Asmundson (2010), who argued that absorption is a unifying or aggregative shift in awareness.
2. Relatedly, see philosopher Daniel Dennett's "multiple drafts" theory (1991), suggesting that no impression is either "in" or "out of" consciousness at any given moment, and thus there is no canonical or final subjective experience, but rather multiple versions of experience, some more salient than others (i.e., more accessed or interconnected). Moreover, modern neuroscience suggests that perhaps the neural correlate of consciousness (i.e., having a subjective experience) is large-scale integration of mental activity; Specifically, unconsciousness due to global anesthesia is associated with a reduction in functional connectivity, and low doses of anesthetics that cause partial reductions in connectivity may induce dissociation (e.g., depersonalization, amnesia) (Alkire, Hudetz, & Tononi, 2008).

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