

# **Dissociative amnesia: methodological limits, conceptual limits, and alternative explanations**

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## **SUMMARY**

The 1990s saw a fierce opposition between proponents of the idea of traumatic repression and skeptics, arguing that such a concept was not supported by scientific evidence. Today it is more commonly called dissociative amnesia and included in the 5<sup>e</sup> edition of the Diagnostic and Statistical Manual of Mental Disorders, this concept is still widely used by psychologists, even though its evidence for existence is still unconvincing. In this article, we offer a critical look at the concept, review the evidence put forward by its defenders and develop their methodological and conceptual limitations. We also propose alternative mechanisms to explain the phenomenon of recovered memories: false memories, reinterpretation of traumatic events, avoidance strategies, etc. Finally, we conclude with a call for caution to the scientific and clinical community.

**Keywords :** dissociative amnesia; repression; recovered memories; therapy; false memories.

## **Dissociative Amnesia: Methodological Limits, Conceptual Limits, and Alternative Explanation**

## **ABSTRACT**

The 1990s witnessed a strong opposition between researchers and psychologists who supported the idea of repressed memories and their skeptical counterparts, explaining that such a concept was not supported by scientific evidence. The former supported the idea that traumatic memories could be pushed beyond the boundaries of consciousness. The latter argued that ordinary mechanisms of memory functioning (eg, false memories, ordinary forgetting)

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were more likely to explain why some people could suddenly remember traumatic events for which they had no memory until then (ie, recovered memories). Today more commonly referred to as dissociative amnesia and included in the 5th edition of the Diagnostic and Statistical Manual of mental disorders, the belief in repression is still widely used and disseminated by psychologists, even though evidence of its existence is still unconvincing. In this article, we propose a critical analysis of the concept of dissociative amnesia. To do this, we review the evidence adduced by its advocates and develop their methodological and conceptual limitations. We also propose alternative mechanisms to explain the phenomenon of recovered memories: false memories, reappraisal of traumatic events, avoidance strategies, non-disclosure of abuse, etc. Finally, with regard to therapeutic but also judicial issues (ie, judicial expertise), we conclude with a call for caution addressed to the scientific and clinical community. **Keywords:** dissociative amnesia; repression; recovered memories; therapy; false memory.

Among the controversies that vigorously animate scientific activity in psychology, one of the best known is that surrounding dissociative amnesia (formerly called unconscious repression or sometimes called traumatic amnesia; see Otgaar et al., 2019, for a demonstration of the shift in the naming of *repression* until *dissociative amnesia*; see *infra*). In the 1990s, several cases of (false) memories recovered during psychotherapy led to wrongful convictions of individuals accused of sexual violence against their children (see Loftus, 1993, as well as Loftus, 2019). These events were surrounded by confrontations between two camps: on the one hand, (i) opponents of the idea of the accuracy of memories recovered in therapy, relying on work on the reconstructive and fragile aspects of memory, generally considering such memories to be false; on the other hand, (ii) supporters of the idea of the accuracy of such memories and defenders of therapeutic practices dedicated to the recovery of supposedly repressed memories.

So-called “recovered memory” therapies rely on the mechanism of unconscious traumatic repression. When an event is too shocking to the point of generating trauma in an individual, the memory of this event would then be pushed outside the boundaries of consciousness, making it inaccessible. Freud (1893-1895/1953) was one of the first to describe this mechanism. Even today, many clinicians adopt such a view and consider this mechanism as part of the various pathological mechanisms of memory (eg, Dalenberg et al., 2012; Brand, Schielke, & Brams, 2017a, b; Brand et al., 2018). In practice, this notion seems to be widely shared in society, since we observe real support from clinical psychologists (Dodier, Melinder, Otgaar, Payoux, & Magnussen, 2019; Dodier & Payoux, 2017; Otgaar et al., 2019; Patihis, Ho, Tingen, Lilienfeld, & Loftus, 2014), police investigators (eg,

Dodier, Tomas, Payoux, Elissalde, 2019), or even more generally, the general public (eg, Dodier & Payoux, 2017; Melinder & Magnussen, 2015; Otgaar et al., 2019; Otgaar, Wang, Howe et al., 2020; Otgaar, Wang, Dodier et al., 2020; Patihis, Ho, et al., 2014;

Despite increasing criticism of the very existence of dissociative amnesia (see, recently, Dodier, 2019; Dodier & Tomas, 2019; Engelhard, McNally, & van Schie, 2019; Merckelbach & Patihis, 2018; Otgaar et al., 2019; Patihis, Otgaar, & Merckelbach, 2019), this notion appears in the 5<sup>e</sup> edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM; American Psychiatric Association, 2013). It is defined as an inability to recall normally stored autobiographical information that cannot be explained by ordinary forgetfulness, substance use, or neurological disorder(s), usually resulting from intense stress or trauma.

The primary objective of this article is to critically present this mechanism. A review of the evidence put forward by proponents of dissociative amnesia will be conducted, before developing their methodological and conceptual limitations. A review of practices related to the recovery of memories that have allegedly been the subject of dissociative amnesia will then be proposed. To this end, we will briefly describe the work on false memories and memory distortions. However, we will specify that as an alternative to dissociative amnesia, other processes and phenomena can explain the absence of traumatic memories. Finally, we will conclude with a call for caution to the scientific and clinical communities regarding the consideration of dissociative amnesia as a scientifically valid psychological phenomenon. The second objective is to provide a French-speaking contribution to the controversy related to the phenomenon of dissociative amnesia, which is the subject of (almost) exclusive publications in English (eg, Brand et al., 2018; Dalenberg et al., 2012; Otgaar et al., 2019; Lynn et al., 2014; Merckelbach & Patihis, 2018). The fact that most of the scientific literature on the issue of memory, in general, is published in English has already been identified as a possible obstacle to the updating of knowledge by French mental health professionals (see Dodier & Payoux, 2017).

Before going further, it is necessary to note that this article is not intended to assert that dissociative amnesia does not exist. Rather, the aim is to emphasize both the lack of evidence for a link between trauma and forgetting and the more parsimonious alternative empirical evidence, thereby creating an obstacle to the claim that dissociative amnesia exists.

## SCIENTIFIC EVIDENCE OF AMNESIA DISSOCIATIVE

Several prospective studies have reported in populations (clinical and nonclinical) periods of memory loss between the traumatic event and the interview with the research team (e.g., Briere & Conte, 1993; Elliott, 1997; Elliott & Briere, 1995; Goodman et al., 2003; Herman & Schatzow, 1987; Williams, 1994, 1995). For example, Briere and Conte asked victims of sexual violence whether "during the period of time between the first forced sexual experience and the day [they] turned eighteen, [they] had experienced a period of time when [they] could not remember the forced sexual experience?" (our translation). Using this question, they were able to highlight that approximately 60% of victims had experienced a period of memory loss. It seems reasonable to consider that after a traumatic event it is possible to live a period without memories of the facts, before they are recovered, after a – sometimes long – delay. According to some authors, these substantial percentages of individuals experiencing this absence of memories would be due to amnesia itself resulting from a dissociative state generated by the traumatic event (Dalenberg et al., 2012). Such an interpretation is then part of the "trauma-dissociation" model which suggests a causal link between trauma and the development of dissociative disorders, such as dissociative amnesia (see Dalenberg et al., 2012; but see also, for a critique, Lynn et al., 2014). As such prospective studies could not suffice to prove the reality of amnesia caused by trauma, several experimental methods have been developed, the results of which have made it possible to argue in favor of dissociative amnesia.

In an attempt to address the controversy surrounding dissociative amnesia (then still called repression) and recovered memories, Anderson and Green (2001) developed the so-called "Think/No-think" (T/NT) paradigm: participants are presented with a list of pairs of unrelated words (e.g., chore/cockroach) during a learning task. After a certain time, these same participants are presented with this list again, but only the first of the two words in the pair (e.g., chore) appears in front of them. For some pairs, participants are asked to indicate the missing word; for others, they are asked not to think about it. Once the T/NT phase has been completed, participants are given a cued recall task, during which they have

the opportunity to recall the word pairs. The results observed in the original study led to the conclusion that the words in the NT condition were less well recalled than the others. According to the authors, these results confirmed the existence of an inhibitory control mechanism that allows individuals to suppress unwanted memories. The results observed by Anderson and Green (2001), as well as other results from the use of this paradigm (eg, Anderson et al., 2004; Benoit & Anderson, 2012; Bergström, de Fockert, & Richardson-Klavehn, 2009; Gagnepain, Henson, & Anderson, 2014) have been used by proponents of the existence of dissociative amnesia to argue in its favor (eg, Brand, Collins, & McEwen, 2018; Brewin, 2007; Dalenberg, 2006; Dalenberg et al., 2012).

Another experimental paradigm that has produced results consistent with the mechanism of dissociative amnesia is that of motivated forgetting. Freud (1916/1949) was one of the first to describe motivated forgetting by sharing an anecdote in which he felt unable to remember a word, which he then attributed to a painful association he had with it. He then concluded that a motivation to forget something painful could lead to its forgetting. According to some authors, dissociative amnesia would be a form of motivated forgetting (Dalenberg et al., 2012). This paradigm, developed by Woodward and Bjork (1971), consists of asking participants either to recall ("to-be-remembered") or to voluntarily forget ("to-be-forgotten") words initially presented during a study phase. Typically, the results observed are that participants recall, during a third phase, more words followed by the instruction "to-be-remembered" than those followed by the instruction "to-be-forgotten". In view of the links between this paradigm, its instructions, its results and the phenomena of dissociative amnesia, some authors have sought to replicate the results but by including variables directly linked to the notions of trauma, repression, or dissociation. Thus, for example, it was observed that participants with repression coping styles forgot more words followed by the instruction "to-be-forgotten" than other participants not displaying this coping style (Myers, Brewin, & Power, 1998). This difference was also found to be larger when the words were self-rated as relevant to the participants (i.e., negative evaluation of the word), leading the authors to suggest that motivated forgetting may primarily concern autobiographical memories (Myers & Derakshan, 2004). Similarly, some studies have found greater forgetting of words related by meaning to trauma and followed by a "to-be-forgotten" instruction than those not

followed by such an instruction (DePrince & Freyd, 2001, 2004). Again, such findings have been paralleled with dissociative amnesia (DePrince et al., 2012).

Finally, one argument put forward is that of a positive correlational link between a traumatic past and the occurrence of dissociative symptoms, measured by means of the Dissociative Experience Scale (DES; see Dalenberg et al., 2012). Indeed, this measure includes items relating to memory disturbances following a dissociative disorder.

However, as we will see in the following section, these data, *a priori* encouraging for the recognition of dissociative amnesia by the entire scientific community, show both methodological and conceptual limits.

## METHODOLOGICAL AND CONCEPTUAL LIMITS RELATED TO DISSOCIATIVE AMNESIA

### Methodological limitations

**Prospective studies.** Several limitations preclude the conclusion that prospective studies allow us to interpret the proportions of reports of absence of traumatic memories for long periods (sometimes decades) as dissociative amnesia. First, as has been repeatedly noted, many prospective studies have not provided evidence corroborating the facts described by participants (e.g., Lynn et al., 2014; Lynn, Lilienfeld, Merckelbach, Giesbrecht, & van der Kloet, 2012). Of course, this is not to suspect any lying on the part of participants, but rather to warn against either some false memories of complete events (i.e., see below) or significant distortions of memories.

A second limitation of these studies is that dissociative amnesia here is, at best, an interpretation of the authors. The question asked of participants generally took the following form: "During the period of time between the first forced sexual experience and the day you turned eighteen, did you have a period of time when you could not remember this forced sexual experience?" (example from Briere & Conte, 1993, p. 24). A positive response to this question does not

could not allow us to conclude anything other than this: a certain proportion of participants reported having experienced during a period of time, between the onset of the violence and a given time (eg, the day of their 18th birthday), an inability to remember this violence. It has also been suggested that such question formulations do not allow us to identify the multiple causes that could explain an absence of memories (eg, continuous memories but reinterpreted over time, ordinary forgetting; see the discussion on this subject in McNally, Clancy, & Barrett, 2004).

Even more problematic, the only French data to our knowledge on this subject, taken from the survey "Impact of sexual violence from childhood to adulthood" (Salmona, Roland, Fall, Morand, & Salmona, 2015), was obtained by asking participants to check, from a list of symptoms, which they had had since the reported sexual violence was committed. Among these symptoms was the item "amnesia(s)". Such an investigation method amounts to asking participants to perform a self-diagnosis. Since amnesia is a memory disorder, we can question the knowledge, capacity and professional skills of all participants to perform such a self-diagnosis. In itself, there may be definitions of amnesia that are both lay (i.e., non-specialists) and professional (i.e., specialists). The question that arises here is that of the beliefs of non-specialists about what amnesia is. In a study published in 2011, Simons and Chabris, for example, showed that while approximately 80% of the general public believed that amnesia refers to an inability to remember one's own name or identity, 0% of specialists adhered to this definition. Then, several authors have already warned about the authenticity of self-reported amnesia (Giesbrecht, Lynn, Lilienfeld, & Merckelbach, 2010). Finally, no distinction was possible between (i) total amnesia (or forgetfulness) or partial amnesia (or forgetfulness), or (ii) between the different types of amnesia (i.e., anterograde amnesia, retrograde amnesia, amnesia caused by organic damage, dissociative amnesia, etc.). Clearly, if survey and questionnaire methodologies present real advantages for identifying individuals' experiences and attitudes, the data obtained by Salmona et al. (2015) – i.e., 34% of participants reported one or more amnesias – appear partial, and do not allow us to establish, as the authors did, conclusions concerning a prevalence of dissociative amnesias following sexual violence.

The last limitation concerning this method of investigation is the great variability of the results. Indeed, some prospective studies have

highlighted that, in the majority, individuals with a traumatic past caused by physical or sexual violence remember the facts particularly well (eg, 81% of reported violence, Goodman et al., 2003). Others have shown that 38% of participants did not remember the violence 17 years after reporting it to the police (Williams, 1995), or that almost 60% of participants reported an absence of memories of sexual violence for a significant period of time (Briere and Conte, 1993). Such differences are probably due to the methodologies used (i.e., the three studies cited as examples used three different methodologies to arrive at their results), it seems, even today, complicated to draw clear conclusions from prospective studies, both on the underlying mechanisms and on the extent of the phenomenon.

**The Think/No-think paradigm.** For several reasons, it is difficult to draw an analogy between the results obtained using the T/NT paradigm (i.e., suppression of unwanted memories) and the mechanism of dissociative amnesia. To begin with, dissociative amnesia does not result from an instruction from a third party. It would be the traumatic shock that would cause a dissociative state, and would not allow the encoding of the traumatic memory in the same way as ordinary memories (although stored completely; Brewin, 2007). In the T/NT paradigm, it is only because an experimenter asks participants not to think about the second word of certain pairs that we see an inhibitory effect appear that impairs recall (Anderson & Green, 2001).

The second limitation is that the results obtained, notably by Anderson & Green (2001) seem somewhat insufficient to argue in favor of the existence of amnesia phenomena for parts of events, or even entire events. Although presenting significant effects, the princeps study described above shows that in the NT condition, the rates of correct recall of words were all equal to or greater than 72%, even after 16 repetitions of the NT instruction. This suggests, despite the suppression of memories, the preservation of good recall abilities.

The third limitation is that the results obtained using this paradigm are far from consensual. While several authors have managed to obtain similar results, namely a lower recall of words in the NT condition, other authors have not observed such an effect, or have even failed to replicate the original results, such as Bulevich, Roediger, Balota, and Butler (2004), using three experiments. More



Recently, Wessel, Albers, Zandstra, and Heininga (2020) conducted a “multiverse” analysis (i.e., an analysis that examines all possible and plausible analyses that exist to test a particular hypothesis) on several experiments of suppressed memories, and failed to find any consistency in the observed effects. For example, while effects were sometimes found when the cue presented during the recall task was one of the words in the studied pair, this was not the case when the retrieval cue was a novel word (e.g., name of the category to which the word to be recalled belongs, e.g., “toy” when the word to be recalled is “doll”; values ranging from .054 to > .999 depending on the samples).

Of course, the point here is not to reject the ability of individuals to inhibit memories via active forgetting processes (see, for a recent literature review, Anderson & Hulbert, 2020), but rather to highlight the limited evidence that such work provides for the assertion of the existence of dissociative amnesia.

One of the assumptions related to dissociative amnesia is that “repressed” (or dissociated) memories would continue to exert an influence on thoughts subsequent to the onset of amnesia, which would impact individuals’ mental health (Freud, 1915; see Wang, Luppi, Fawcett, & Anderson, 2019). However, recent data have shown that memories suppressed using the T/NT paradigm do not exert such an influence, leading authors to be cautious about the idea that suppressed cognitions play a role in individuals’ mental health (Wang et al., 2019).

Finally, it would seem that this paradigm provides more insight into the functioning of memory in healthy individuals, since evidence of suppressed memories has been observed rather systematically in non-clinical populations, which was not the case in clinical populations (i.e., anxiety disorders, mood disorders; Stramaccia, Meyer, Rischer, Fawcett, Benoit, in press).

**Motivated forgetting.** The first limitation is similar to that raised concerning the analogy between the results obtained by means of the T/NT paradigm and dissociative amnesia: from an experimental point of view, motivated forgetting is systematically the result of an instruction on the part of the experimenter. Not only does forgetting come, albeit indirectly, from an external source, but in addition, the motivation to forget a particular word is the choice either of the experimenter (i.e., a priori decision on the part of the experimenter of the words entering into one or the other condition), or of chance (i.e., a priori and random decision of the words entering into one or the other condition).

Several authors have used this paradigm with trauma-related material (vs. neutral and/or positive and non-trauma-related; e.g., Elzinga, de Beurs, Sergeant, van Dyck, & Phaf, 2000; McNally, Metzger, Lasko, Clancy, & Pitman 1998; McNally, Clancy, & Schacter, 2001) and/or with traumatized or dissociated participants (e.g., Baumann et al., 2013; Elzinga et al., 2000; Patihis & Place, 2018; Zoellner, Sacks, and Foa, 2003), with a history of sexual violence (e.g., Cloitre, Cancienne, Brodsky, Dulit, & Perry, 1996; McNally et al., 1998), or who have recovered memories after a period without memories or report having repressed traumatic memories (McNally et al., 2001). The hypothesis tested was that these populations would show a greater tendency than control groups to forget traumatic material in the "to-be-forgotten" condition. However, McNally et al. (1998) found that individuals diagnosed with posttraumatic stress disorder did not show a significant decrease in recall of trauma-related words that were instructed to "to-be-forgotten." Similarly, McNally et al., (2001) found no difference in forgetting of trauma-related words between participants reporting recovered memories of abuse, participants reporting repressed traumatic memories, and those with continuous memories. Cloitre et al. (1996) showed that childhood abuse was associated with better recall in the "to-be-remembered" condition, but not with greater forgetting in the "to-be-forgotten" condition. Finally, as a final and most recent example, Patihis and Place (2018) failed to provide solid evidence of a link between dissociation/trauma and motivated forgetting. Taken together, these data seem to support an idea that is the opposite of that put forward by the defenders of the mechanism of dissociative amnesia: individuals who have experienced traumatic experiences would be just as capable, or even better in some cases, of recalling traumatic material. With non-clinical populations, Barnier et al. (2007), for their part, did not highlight any difference in forgetting between words with positive, neutral or negative valence, knowing that, overall, the frequency of forgetting was higher for non-emotional words than for emotional words.

In any case, in view of the disparities in the results obtained using this paradigm, it seems important to propose more global analyses (eg, meta-analyses, "space-study" type analyses) which would allow (i) to see more clearly the meaning of the results, (ii) to identify and take into account possible methodological differences and/or limitations, and (iii) to identify possible publication biases (i.e., tendency to publish only manuscripts presenting significant results).

**Links between traumatic past and occurrence of dissociative symptoms.** Here again, the results obtained do not provide evidence of the existence of dissociative amnesia following the experience of a traumatic event. As stated several times (eg, Otgaar et al., 2019; Lynn et al., 2014; Patihs & Lynn, 2017), the DES does not provide a measure of memory disturbances corresponding to past definitions of repression (see below), or to the current definition of dissociative amnesia by the DSM-5. Indeed, the scale rather refers to memory disturbances, but in no case to forgetting the traumatic event. Among the items of the second version of the DES, where participants and/or patients are asked for each proportion to indicate at what percentage of their time this happens to them, there is for example: "Some people have the experience of driving or getting into a car, a bus or a subway, and suddenly realize that they do not remember what happened during the trip" (our translation). Another example, "Some people have the experience of finding themselves dressed in clothes that they do not remember putting on" (our translation). Thus, beyond the fact that strong correlations between the scores obtained with the DES and having a traumatic past are not always found in the literature (Patihs & Lynn, 2017), it has been shown that these scores, conversely, correlate positively and significantly with measures of diminished attentional control (see Codon & Lynn, 2014; Merckelbach, Muris, & Rassin, 1999). In other words, DES does not provide good evidence of dissociative amnesia, but rather of reduced cognitive abilities.

**Table I.** Summary of empirical arguments in favor of dissociative amnesia and methodological limitations identified in the literature.

**Table I.** Summary of empirical evidence of dissociative amnesia and methodological limitations identified in the literature.

	Evidence for dissociative amnesia	Reviews
Studies pros-prospects	<p>Observation in people of periods without memories of the traumatic events experienced.</p> <p>Prevalence ranges from approximately 16% (Melchert &amp; Parker, 1997) of people reporting having experienced a traumatic event to 59% (Briere &amp; Conte, 1993).</p> <p>Interpretation of these periods as the result of dissociative mechanisms leading to an inability to remember.</p>	<p>Lack of corroboration of facts.</p> <p>Dissociative amnesia is an interpretation but is not observed.</p> <p>High variability of results in prevalence studies.</p>
Paradigm T/NT	<p>Experimental demonstration of unwanted memory suppression capabilities.</p> <p>Results replicated by some studies.</p>	<p>Conscious and third-party induced mechanism.</p> <p>The extent of memory suppression seems minimal compared to what dissociative amnesia would be (i.e., inability to remember parts of events or entire events).</p> <p>Lack of replication by other studies.</p> <p>Observed mainly in healthy individuals, less significant effects in clinical populations.</p>
Paradigm from oblivion motivated	<p>Experimental demonstration of voluntary forgetting of unwanted memories.</p> <p>Replicated with trauma-related material and/or autobiographical memories.</p>	<p>Conscious and third-party induced mechanism.</p> <p>Absence of difference in some studies between clinical/trauma populations (eg, post-traumatic stress disorder) and control populations.</p> <p>No difference in some studies regarding forgetting of trauma-related words vs. non-related and/or neutral words, with clinical populations.</p>
Dissociative Experience Scale	<p>Positive correlation between traumatic past and occurrence of dissociative symptoms (eg, memory disturbances).</p>	<p>The memory disturbances measured in DES do not refer to dissociative amnesia.</p> <p>Positive correlations between DES score and measures of attentional control.</p>

## Conceptual limits

**Dissociative amnesia as a new name for repression.** As stated in the introduction, it seems that, conceptually, dissociative amnesia is a new name for unconscious repression. Indeed, as early as 1994, Holmes insisted on the idea that in the absence of both experimental and clinical evidence for the validity of repression, its proponents began to emphasize dissociative aspects of memory, and thus began to speak of dissociative amnesia. However, an "idea-by-idea" analysis conducted by Otgaar and colleagues (2019) demonstrated that the definition given by the DSM (5<sup>e</sup> edition; American Psychiatric Association, 2013) to dissociative amnesia is very similar to the definition given to repression by many authors in the 1990s (eg, Loftus, 1993). The question of why the notion of "repression" was not included and described in previous versions of the DSM, while the 5<sup>e</sup> edition of the manual proposes a description of dissociative amnesia arises. Several reasons have been put forward in the literature (Otgaar et al., 2019): (i) the team responsible for updating the manual was overwhelmingly composed of psychiatrists, and did not include any specialists in memory functioning (Yan, 2007); (ii) the team did not include any researchers and/or specialists who had expressed doubts about the validity of certain dissociative disorders (see Otgaar et al., 2019); (iii) the clinical literature includes a very large quantity of case studies describing individuals reporting dissociative amnesia, which may suggest that this is a phenomenon whose recognition is consensual within the scientific community (see, for example, Brand et al., 2009; Sharma, Guirguis, Nelson, & McMahon, 2015; Stanioiu, Markowitsch, & Kordon, 2018).

This change in the name of the phenomenon is also observable: it has been shown that between 2010 and 2019, 71 articles published in a scientific journal focused on dissociative disorders directly addressed the issue of dissociative amnesia, while between 1990 and 1999, no article addressed it (Otgaar et al., 2019). Such a change in name was then interpreted as (i) an attempt to give a more scientific endorsement to repression, and (ii) one of the reasons why the "memory wars" (i.e., the name given to the controversy, both scientific and clinical, surrounding repressed and recovered memories; Crews, 1996) would still be in force at the end of the second decade of the XXI<sup>e</sup> century (see Dodier, 2019; Patihis, Ho et al., 2014).

**Post-traumatic stress disorder.** Research on posttraumatic stress disorder, rather than highlighting any inability to recall events, reveals that affected individuals instead experience flashbacks, re-experiencing symptoms, and intrusive memories (see McNally, 2003). Thus, several authors have explained that complete loss of memories of a traumatic event would be particularly rare among trauma victims (e.g., Holocaust survivors, Wagenaar & Groeneweg, 1990; concentration camp survivors, Merckelbach, Dekkers, Wessel, & Roefs, 2003; victims of sexual violence, Goodman et al., 2003). In fact, it would seem that, in the case of sexual violence, the accuracy of memories is positively correlated with the severity of the violence (Alexander et al., 2005). A recent longitudinal study examining the quality and accuracy of memories of genital contact experienced approximately 20 years earlier showed that the level of PTSD intensity was not associated with lower accuracy of the accounts, which were generally quite accurate (Goldfarb, Goodman, Larson, Eisen, & Qin, 2019). In other words, unlike dissociative amnesia, which links trauma to forgetting, it appears that people who have experienced trauma, or who have PTSD, generally remember their experiences only too well (McNally, 2003).

**An epistemological limit.** The DSM (5<sup>e</sup> edition; American Psychiatric Association) describes dissociative amnesia as involving a period during which an individual experiences an inability to remember an autobiographical event, usually traumatic. This notion is consistent with repression, the description of which included the notion of inaccessible memories (Loftus, 1993). A major epistemological limitation then appears here in that, then, such a phenomenon would not be falsifiable. As Otgaar and colleagues (2019) rightly point out, the only observable evidence that a memory has been stored is its expression during a recall. However, the very idea of recalling a memory is incompatible with the idea of an inability to remember. Thus, the very concept of dissociative amnesia, as defined by its proponents, suffers from logical errors that undermine its epistemological validity.

According to some authors expressing an adherence to the notion of dissociative amnesia, individuals end up recovering such dissociated memories when a recovery cue allows their resurgence (eg, Brand et al., 2017a, b). Such a conception then seems incompatible with a

idea of "inability" to remember (ie, dissociative amnesia) or "inaccessibility" (ie, repression). On the contrary, this would be a rather ordinary functioning of forgetting and memory recovery.

This review of the limits does not allow, as we specified in the introduction, to affirm that dissociative amnesia does not exist. However, nothing in the studies cited in support of this mechanism proves, in fact, its existence. However, as we will see in a future section, several therapeutic practices seem associated with the recovery of such memories.

## "Recovered memory" therapies and false memories

Despite the fact that dissociative amnesia is not a phenomenon with sufficient evidence of its existence and that publications expressing skepticism are in the majority<sup>XXI</sup> century (Dodier, 2019), some therapeutic techniques are, at least partially, focused on the recovery and management of traumatic memories. As has been recently clarified in the literature, it seems rare for therapists to clearly display their intention to help suffering patients recover memories buried in their unconscious (Patihis & Pendergrast, 2019). While some therapeutic methods have the explicit objective of acting on traumatic memories (eg, eye movement desensitization and reprocessing, commonly called EMDR, Shapiro, 2018), others whose main objective is not to focus on such memories (eg, modern psychoanalytically inspired psychodynamic therapies, Shedler, 2010; cognitive and behavioral therapies; Beck, 2016) can sometimes focus on past traumas (eg, Cohen, Mannarino, Kliethermes, & Murray, 2012). Moreover, the latter have already been described as sometimes being associated with scientifically unfounded methods (Hipol & Deacon, 2013). The question that then arises is what risk is associated with such focuses on memories of past trauma.

For over 40 years, numerous studies on the ease with which episodic or autobiographical memories can be biased have helped to understand the extent to which therapeutic techniques (eg, hypnosis, guided imagery) associated with explicit suggestions can result in the development of false memories. The early work of Loftus and Palmer (1974) also highlighted the fact that

Subtly changing a word in a question (e.g., "How fast were the cars going when they crashed?" vs. "How fast were the cars going when they collided?") could alter memories of an event. In their study, after showing participants a video of a car accident and asking them the questions it prompted, the researchers asked participants whether or not they remembered seeing broken glass after the accident, when there was none. Their results showed that the more violent the verb was (i.e., "collided" is perceived as more violent than "crashed"), the more participants incorrectly recalled seeing broken glass. Although the experimental paradigm has evolved since its creation, the 40 years of research following Loftus and Palmer's study have led to the conclusion that the misinformation effect (i.e., the integration into the memory of an event of one or more elements encoded after the experience of said event) is one of the most robust effects in psychology (Loftus, 2005; Payoux & Verrier, 2017).

It is one thing to induce individuals to recall broken glass when there were none in the original event. It is quite another to induce false autobiographical memories of entire events in individuals. Yet a large number of studies have used experimental paradigms designed to create such false memories in participants. The first such study was conducted by Loftus and Pickrell (1995). The method was as follows: experimenters presented participants with a booklet containing four episodic narratives describing an event from their childhood. Of these, three narratives had been obtained from the participant's relatives and were authentic, and one narrative was completely false and fabricated (i.e., a story describing the participant's getting lost in a shopping mall), but based on evidence that was credible to the participant. Participants were asked to indicate in the booklet what they remembered about each of the events described, with the option to indicate that they remembered nothing. Participants were then interviewed twice (one to two weeks apart) by the research team, and were asked to recall everything they remembered about the events, based on their memories of the events, not the descriptions in the booklet. Results showed that 25% of participants partially or completely recalled experiencing the invented event. Such findings have been replicated several times, including for memories of criminal and emotional events (Shaw & Porter, 2015; but see also, for a review, Wade, Garry, & Pezdeck,



2018; and for a response, Shaw, 2018). More generally, systematic reviews and meta-analyses on the induction of false memories of entire events have shown proportions of false memories ranging from 15% of participants (Brewin & Andrews, 2017; but see also, for reviews, Otgaar, Merckelbach, Jelicic, & Smeets, 2017; Nash, Wade, Garry, Loftus, & Ost, 2017) to 30% (Scoboria et al., 2017).

The issue of false memories nevertheless remains complicated to grasp from an applied point of view. Indeed, several methods exist to study the development of false memories (eg, the Deese/Roediger-McDermott task, the misinformation paradigm, the rich false memory induction paradigm, imagination inflation). However, it has been shown that the development of false memories following a specific task does not predict the development of false memories in other tasks (Patihis, Frenda, & Loftus, 2018). Similarly, it seems that individual characteristics do not predict the appearance of false memories, regardless of the tasks used (Nichols & Loftus, 2019). In other words and to summarize: false memories concern everyone, and we cannot predict in which context they are most likely to appear. The question that now arises is: which therapeutic methods are more associated with false memories?

Beyond the induction of post-event information, several techniques sometimes used in therapy have been identified as potentially harmful to patients, in that they may contribute to the creation of erroneous memories (see Lilienfeld, 2007; Lynn, Lock, Loftus, Krackow, & Lilienfeld, 2003). Several experimental studies have highlighted links between these techniques and the creation of false memories, such as guided imagery (i.e., individuals are asked to imagine an event suggested by a third party; Garry, Manning, Loftus, & Sherman, 1996), hypnosis (Laurence & Perry, 1983; Patihis & Younès Burton, 2015), or even dream interpretation (i.e., after participants recounted their dreams and the experimenter systematically interpreted them as evocative of harassment suffered before the age of three, an increase in beliefs that these events really occurred was observed; Mazzoni, Loftus, Seitz, & Lynn, 1999). More recent work has shown that lateral eye movements—a technique central to EMDR—were associated with increased false memories in a misinformation paradigm (Houben, Otgaar, Roelofs, Smeets, & Merckelbach, 2019; Houben, Otgaar, Roelofs, & Merckelbach, 2018, but see also, for a review, van Schie & Leer, 2019). Similarly, a meta-analysis found a link

positive between post-traumatic stress disorder, traumatic past, depression and the development of spontaneous false memories for emotional material (Otgaar, Murris, Howe, & Merckelbach, 2017).

Psychotherapy is a particular context that seems conducive to such memory phenomena (Otgaar et al., 2019; Patihis & Pendergrast, 2019). As we have seen, it is relatively easy to lead individuals to remember (or at least believe in the occurrence of) elements or events that they have not experienced. Patihis and Pendergrast (2019) measured the prevalence of memories recovered during psychotherapy in the United States between 1970 and 2017 and concluded that this could concern 4 to 5% of Americans over the age of 20; which represented 11% of respondents to their survey who also reported having undergone therapy. While these data seem marginal, they should be put into perspective with the number of individuals that this could concern, namely between 9 and 12 million. In France, it has been estimated that this could also concern hundreds of thousands of people, since 6% of individuals who reported having undergone therapy between 1995 and 2018 also reported having recovered memories in this context (2.5% of the 1,312 respondents aged over 18 in total; Dodier, Patihis, & Payoux, 2019). Dodier, Patihis, and Payoux (2019) have also highlighted a very strong link between the fact that patients believe in the effectiveness of therapeutic methods to recover repressed (or dissociated) memories and recovering memories of past abuse in the context of therapy. Interestingly, both in the United States and in France, such recovered memories were associated with therapeutic methods whose objective is not, a priori, to focus on past traumas (eg, cognitive and behavioral therapies). Combined with the fact that clinical psychologists are overwhelmingly supportive of the idea that dissociative amnesia is a valid phenomenon (eg, Dodier & Payoux, 2017; Melinder & Magnussen, 2015; Otgaar et al., 2019), this then suggests, as has been shown in the past, that the development of false memories induced in therapy may depend more on the beliefs of therapists and patients, as well as explicit suggestions of past abuse, than on therapeutic practices themselves (eg, see the discussion on this in Robin, 2013, pp. 118-119).

Clearly, false memories represent a credible and widely scientifically proven alternative to dissociative amnesia. However, since suggestive interventions by a third party appear to increase the likelihood of false memories occurring, it is worth considering

to the retrieval context in order to estimate (theoretically) whether this hypothesis is relevant in the case of recovered memories. For example, a memory recovered spontaneously in the presence of a retrieval cue (eg, returning to the scene where the events took place) should more likely reflect an event personally experienced by an individual. We will see, in a following section, that other mechanisms relating to the ordinary functioning of memory or to avoidance strategies can explain certain recovered memories. We will also address the sensitive issue of simulated or feigned symptoms.

## Alternative explanations for dissociative amnesia

In this section, we will develop several alternative mechanisms to dissociative amnesia, in order to explain how individuals can experience forgetting of facts – or sometimes have the impression of having forgotten them – for long periods of time. We will also review the question of feigned symptoms, which may prove to be a credible and alternative hypothesis to dissociative amnesia in certain cases. The aim here is not to assert that these mechanisms are systematically at work, but rather to offer readers more parsimonious explanations. In other words, we will show that what is considered to be the manifestation of dissociative amnesia – a phenomenon with uncertain scientific bases – can be explained more economically by validated scientific theories.

The event is not experienced as a trauma at the time of its occurrence

In 1994, Williams conducted a prospective study to measure the proportion of women who would freely recall childhood abuse reported to the police 17 years earlier. The main result was that 38% of the women interviewed did not recall the abuse. More interestingly, the author showed an association between age and recall: the women who were youngest at the time of the abuse were those who recalled the abuse the least. This then led to the conclusion that dissociative amnesia was all the more likely when the abuse was suffered at a young age. However, it seems that, in this

case, one variable was not taken into account in the interpretation of such a result. Indeed, the very young age of some victims could have meant that the event was not experienced, at the time of its occurrence, as traumatic by the child (Clancy & McNally, 2005/2006). Despite the fact that violence is clearly reprehensible on moral, health and legal grounds, children may sometimes be too young to perceive the sexual nature of the acts committed by an adult against them (Loftus, Joslyn, & Polage, 1998; McNally & Geraerts, 2009). Indeed, young children generally know very little, if anything, about sexuality (Brilleslijper-Kater & Baartman, 2000). It has been shown that in such cases, the event was experienced as "bizarre, confusing and very uncomfortable" (McNally & Geraerts, 2009), but not in a traumatic way. Ordinary memory mechanisms (i.e., difficulty in accessing the memory trace of the event) could explain some cases of recovered memories. It is only later, sometimes decades, that a recovery index could allow access to memories of the violence. These will then be reinterpreted as violence suffered (McNally, 2005; Schooler, 2001), and generating, at that time, a psychological trauma (McNally & Geraerts, 2009).

#### The effect of stress on memory

While the argument of age and the passage of time is a credible alternative to dissociative amnesia when the violence was committed when the child was (very) young, it is less so when it comes to adolescents or adults. Indeed, adolescents have more developed knowledge about sexuality than younger children (Drennan, Hyde, & Howlett, 2009), as well as greater abilities to describe sexual violence (Milam & Nugent, 2017). Some proponents of dissociative amnesia have put forward the idea that the characteristic of dissociative amnesias starting at older ages was that they were generally partial (see Dodier & Tomas, 2019). However, other mechanisms linked to the influence of stress on memory and largely more supported by empirical data can explain such biases in the memories of victims of violence. The model defended by Deffenbacher (1994; see also Deffenbacher, Bornstein, Penrod, & McGorty, 2004) allows us to consider the functioning of stress-laden memories. The experience of a particularly stressful event would trigger a mode of activation of attentional control. An increase in this mode of activation at

Encoding would rather be beneficial for memories – which was also supported by the most recent meta-analysis on this subject (Shields, Sazma, McCullough, and Yonelinas, 2017) – because it would lead individuals to pay greater attention to the details allowing a good understanding of the event. However, a subsequent increase in the stress level would lead individuals to switch from an activation mode of attentional control to an excitation mode, which would be harmful to the quality of memories. Indeed, attention would then be shifted towards the elements allowing a good understanding of the source of the threat to the integrity (physical or psychological) of individuals, and towards elements allowing the development of stress management strategies (eg, escape). This is, for example, one of the mechanisms that would explain the weapon effect: the presence of a weapon (i.e., a source of threat to the physical integrity of a victim or witness) during the commission of a crime or offense would result in individuals being less able to physically describe the perpetrator (see Fawcett, Peace, & Greve, 2016; Fawcett, Russel, Peace, & Christie, 2013). In this case, it would not be amnesia, or even forgetting, but a partial encoding of the event.

Not thinking about or talking about the traumatic event does not mean you have forgotten it.

McNally (2007) pointed out a logical error in the interpretation of the results of prospective studies. Some studies have shown that participants who reported having experienced periods without memories also reported having tried, in vain, to remember the abuse. However, the principle of dissociative amnesia, or unconscious repression, is precisely that individuals are unable to remember traumatic memories because they are simply not aware of their existence. How then could participants have tried to remember without being aware of the existence of these memories, and therefore of the abuse? For this reason, McNally (2007) hypothesized that in such studies, participants actually interpreted the questions as "Have you had a period when you did not think about the abuse you suffered?" (p. 1085). However, not thinking about an event would rather refer to avoidance strategies rather than to phenomena of forgetting or amnesia (Otgaar et al., 2019).

Similarly, not talking about violence suffered is not indicative of amnesic states due to trauma. In Williams' study

(1994), among the 38% of women who did not mention violence in their free recall, it is quite possible that some chose not to talk about it, despite potentially precise memories. For example, one study showed that while the probability of victims disclosing sexual violence during a police interview increases up to the age of 11, this probability drops continuously up to the age of 16 (i.e., the highest age considered in the study; Leach, Powell, Sharman, & Anglim, 2017). Several explanations have been put forward for this development: (i) as adolescents grow older, they would feel more ashamed to discuss such facts (London, Bruck, Ceci, & Shuman, 2007); (ii) adolescents would feel more fear of possible reprisals from the aggressor (Goodman-Brown, Edelstein, Goodman, Jones, & Gordon, 2003); and (iii) they would not perceive certain violence as sexual violence (eg, in the context of romantic relationships; Bunting, 2008).

### Feigned amnesia

Dissociative amnesia is a phenomenon that is not only invoked for victims of traumatic events. The perpetrators of the events may also sometimes declare that they are suffering from amnesia that is the result of an unconscious mechanism, aimed at protecting them from the atrocity of the acts they may have committed (Porter, Birt, Yuille, & Herve, 2001). The question of the simulation of memory disorders in cases of violent crimes or offences is the subject of a significant amount of research internationally (see the literature review on this subject by van Oorsouw & Merckelbach, 2010). While this type of deception can be considered as a simple attempt to deny the facts, it turns out that the reasons are in fact more complicated. Although it seems difficult to consider this hypothesis when it comes to victims, we will see that the literature conducted on the perpetrators of criminal or delinquent acts is informative as to the complexity of the motivations which can lead to feigning amnesia of facts likely to cause trauma.

One of the first peculiarities of perpetrators of criminal acts observed in the literature is that the declaration of amnesia seems to concern mainly perpetrators of violent acts (Taylor & Kopelman, 1984). Then, a consensus was formed around the fact that the simulation of amnesia to reduce the severity of a sentence was implausible: studies have shown that those who declare amnesia

often report their crime themselves (Kopelman, 1995), engage in behaviors that could incriminate them, or admit it without any particular difficulty (Porter et al., 2001). These conclusions have led researchers to consider that feigning amnesia is above all a way of managing the inability of perpetrators of certain violent crimes to explain their actions, and in general, to discuss them with investigators (therefore also with personality investigators, psychologists, and psychiatrists; Cima, Merckelbach, Hollnack, & Knauer, 2003). More generally, declaring amnesia is not a guarantee that an individual is really suffering from dissociative amnesia, and the difficulty for mental health professionals is to be able to distinguish real difficulties in remembering from simulated amnesia.

### Other explanations

To conclude this section, and for the sake of brevity and clarity of the document, we will propose other alternative explanations in a more succinct manner. The skeptical authors recommend considering the possible occurrence of organic amnesias, which could be confused with dissociative amnesia. For example, McNally (2007) presented a case analyzed and interpreted by Brown, Schefflin, & Hammond (1998) where 2 children out of 38 who witnessed a lightning strike on a football field that caused a death had no memory of the events. McNally (2007) then pointed out that Brown et al. (1998) had neglected to specify that these two children had also been struck by lightning, and had almost died. However, the other children not struck by lightning all remembered the event. This led the author to conclude that "the amnesia in the two children struck by lightning resulted from a physical, not a psychological, aspect of the trauma" (McNally, 2007, p. 1084).

Another alternative is the question of infantile amnesia. This refers to an inability to recover episodic memories of events that occurred in (very) early childhood. The reasons for such an inability lie in the fact that the ability to preserve autobiographical and episodic memories over time is correlated with language and self-perception abilities, these being developing and extremely rudimentary in very young children (see Josselyn & Frankland, 2012). Today, authors agree to estimate the age limit of our childhood to which we can go back by means of episodic memories at the age of three on average, with variability

ranging from two to eight years (Bauer & Larkina, 2014). Furthermore, it appears that early childhood memories are often very imprecise, since in a corpus of “early memories,” these described more fragments of memories without details (e.g. absence of temporality, memories of clothing appearances, precise thoughts, conversations; Conway, 2013). Thus, an inability to remember events that occurred during early childhood would be more likely explained by infantile amnesia than by dissociative amnesia.

Dissociative amnesia is sometimes confused with psychogenic amnesia, including by researchers (Harrison et al., 2017; Brand et al., 2018). However, psychogenic amnesia refers to a different phenomenon. The latter refers to a retrograde, sudden and massive loss of autobiographical memories, which could not be attributed to brain damage (Kihlstrom & Schacter, 2000). Furthermore, it does not concern a specific traumatic event, but rather entire sections of individuals' lives, sometimes going as far as an inability to remember one's own identity. Three subtypes of psychogenic amnesia have been identified in the literature (McKay, & Kopelman, 2009): (i) psychogenic fugue, where people lose the memory of their identity and all of their autobiographical memories, and generally leading to periods of wandering that can last hours or days; (ii) focal psychogenic retrograde amnesia, where individuals persistently lose all of their retrograde memories but retain their anterograde memory abilities; (iii) dissociative identity disorder, where, according to some authors (eg, Dalenberg et al., 2012), the transition from one identity to another results in a loss of autobiographical memories of events experienced under the first identity (for reviews, see Lynn et al., 2014; Merckelbach & Patihis, 2018). Finally, as McNally (2007) points out, the term “psychogenic” does not mean that its cause is psychological, but rather that its cause could not be identified as organic.

## Ethical and clinical issues

As we have stated in this article, there is no consensus on the question of the very existence of dissociative amnesia. More importantly, the evidence for its existence seems, at best, limited, at worst, non-existent. In any case, the debate over recovered memories, although announced as over in the late 1990s by several researchers (eg, McHugh, 2003;



Paris, 2012), still seems to be in force. Although we have discussed the scientific issues at length, there are two issues that remain to be explored: the ethical and clinical issues.

Several articles of the French code of ethics for psychologists emphasize the importance for psychologists to rely in their practices on acquired and updated scientific data (articles 21, 34, and 38). The American Psychological Association also emphasizes the importance of such recourse in the daily practice of psychologists. This code states in particular that psychologists must promote trust in science (i.e., Preamble, principle C), a principle shared by a large number of codes of ethics internationally (Leach & Harbin, 1997). In view of the scientific controversy that exists around dissociative amnesia, and the fact that the majority position seems to be skepticism (Dodier, 2019), making a diagnosis of dissociative amnesia seems to contravene the ethical rules governing the profession. The argument for its presence in the DSM (5<sup>e</sup> edition, American Psychiatric Association) can then only be an argument of authority, in view of the weakness of the scientific proof represented by its inclusion in the manual (*see above*).

From a clinical point of view, its diagnosis has several limitations, regardless of the diagnostic context. As we have discussed, in the case where a patient has not recovered memories of violence suffered during childhood, a clinician assuming dissociative amnesia to explain a psychological state in one of his patients may present the risk of inducing false memories. What are now the limitations associated with such a diagnosis when a patient has, for example spontaneously, recovered such memories and shares them with his therapist? The first is that a psychologist could not, in fact, rely on any solid theoretical basis to conclude on a causal link between the trauma generated by the facts and forgetting. However, we know that a substantial number of clinical psychologists believe in the theory of repressed memories (and therefore, by extension, in dissociative amnesia). A recent analysis showed that out of 4,745 psychologists or psychiatrists surveyed, 58% of them expressed agreement with the hypothesis that traumatic memories could be inaccessible to recovery because of their traumatic nature (Otgaar et al., 2019). In France, 43% of psychologists and psychiatrists believed that the memories recovered in the context of psychotherapy were mostly or all true; this proportion rose to 52% among psychologists and psychiatrists also involved in forensic expertise (Dodier & Payoux, 2017). The popularity of a belief in

Is the existence of a phenomenon sufficient to make a diagnosis? The answer is no. Is it possible to infer a causal link between trauma and forgetting solely on the basis that the memories are traumatic in nature, because they relate violence suffered in the past? The answer is no. What objective elements can psychologists rely on to deduce this causal link, in the absence of convincing scientific evidence? To our knowledge, there is no standardized, reliable and valid measurement tool for estimating the probability of occurrence of dissociative amnesia. Its development would, in any case, face numerous obstacles in the absence of scientific consensus on its existence, and therefore, by extension, on its clinical description.

In the event that people come to consult a psychologist following the sudden recovery of traumatic memories, it seems important not to immediately propose the hypothesis of dissociative amnesia, in view of (i) the absence of sufficient scientific evidence, and (ii) the risks of such a diagnosis. Indeed, a patient could seek to recover additional memories, increasing the probability of developing false memories. It would be more appropriate to focus first on the context of such recovery (eg, suggestions by a third party, as part of another therapy, after confrontation with a contextual clue, after readings). Secondly, the implementation of an appropriate therapy should focus on the trauma linked to the recovery of such a memory, regardless of whether it is true or false, and not on a possible dissociative state whose trauma as a cause is questioned by the scientific community.

## CONCLUSION

We have proposed a critical reading of the concept of dissociative amnesia. We have seen in particular that the abandonment of the terminology "unconscious repression" has given way to that of dissociative amnesia, and that the controversy surrounding it is not over either in the scientific literature (Dodier, 2019; Otgaar et al., 2019), or in the clinical field (eg, Dodier, Patihis, & Payoux, 2019; Dodier & Payoux, 2017; Patihis, Ho, et al., 2014; Patihis & Pendergrast, 2019). However, the description of the evidence used to support dissociative amnesia is weak and directly questions the very existence of this phenomenon. It is obvious

that further research is needed. For example, in the absence of convincing scientific evidence, valid and reliable measurement tools, and objective elements to infer a causal link between trauma and forgetting, it would be relevant to explore the elements used by psychologists to make such diagnoses. Similarly, it would be interesting to estimate the prevalence of contexts in which individuals recover memories of past violence, which they did not have until now. Indeed, to our knowledge, there is no data to estimate, for example, the importance of the therapeutic context in the recovery of traumatic memories. This new data would make it possible to consider the establishment of practical guides in addition to existing ones (eg, Hammond et al., 1995) to help mental health professionals act with and on traumatic memories. Regarding the beliefs widely shared by the general public concerning the existence of dissociative amnesia mechanisms, it would be relevant to question their sources. As highlighted by Otgaar, Wang, Howe and colleagues (2020), media and fiction (eg, TV series, films) could play a role in the dissemination of such beliefs as references to the unconscious repression of traumatic memories seem to abound (Dieguez & Annoni, 2013).

We call on the clinical community to be cautious about the use of dissociative amnesia in therapeutic settings, but also in judicial settings. Several studies have shown that legal professionals have very limited knowledge about how memory works (eg, Dodier, Tomas, Payoux, & Elissalde, 2019; Wise, Safer, & Maro, 2011). It is then up to expert psychologists and psychiatrists to inform them about how memory works in judicial contexts. However, in view of the also limited knowledge of French expert legal psychologists and psychiatrists (Dodier, 2018; Dodier, Melinder, Otgaar et al., 2019; Dodier & Payoux, 2017), we can question the ability of experts to provide magistrates, investigators and lawyers with reliable and evidence-based explanations. It seems to us more than important to propose, from the studies of psychology (and in medicine), tools for critical reading of memory phenomena, which are sometimes popular, but nevertheless largely controversial. Education on the potential risks associated with such beliefs about how memory works raises issues that are, therefore, judicial, scientific and clinical.

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