



Pergamon

International Journal of Law and Psychiatry
24 (2001) 23–42

INTERNATIONAL JOURNAL OF
**LAW AND
PSYCHIATRY**

Memory for murder A psychological perspective on dissociative amnesia in legal contexts

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Mental health professionals and legal decision-makers often hear reports of memory impairment from both perpetrators of extreme violence such as homicide (e.g., Kopelman, 1995; Roesch & Golding, 1986; Schacter, 1986a), and from complainants and eyewitnesses (e.g., Loftus, 1993). Adult complainants, for example, have testified about their recovery of repressed memories for a violent incident(s) following a lengthy period of amnesia (e.g., Loftus, 1997; Porter, Yuille, & Lehman, 1999). Although these two types of cases differ in the timing of the memory loss (current vs. historical), both require a consideration of the validity of dissociative amnesia. Dissociative amnesia refers to amnesia for a traumatic (and, in this context, criminal) experience which has a psychological origin. Whereas dissociative amnesia refers to a process of forgetting following a traumatic experience, a *dissociative state* refers to an altered state of consciousness occurring during a traumatic experience. *Dissociation* is the more general term referring to the separation of any normally integrated psychological processes, encompassing both dissociative amnesia and the dissociative state.

This article offers a broad overview of dissociation in cases of violent crime from a psychological perspective. The paper is organized around several related themes. First, we underscore that the legal system does not use a consistent approach for evaluating reports of dissociation. Next, the legal significance of dissociation is described, pointing to the need for a more uniform approach. Controversies surrounding the validity and origin of dissociation are reviewed. In Section 5 of the paper, we investigate the credibility of dissociative amnesia reports with attention to specific types of claimants such as the psychopathic offender. Approaches for evaluating amnesia reports are described.

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1. Inconsistent response of the legal system

It is clear that the North American legal response to reports of dissociation has been inconsistent (e.g., McSherry, 1998), both in terms of the variable response to different defendants and between defendants and complainants/witnesses. With defendants, the most common response has been to give limited credibility to such reports (e.g., Parwatikar, Holcomb, & Menninger, 1985; Roesch & Golding, 1986). However, there have been exceptional landmark cases (discussed below) in which evidence for dissociative amnesia has contributed to the exculpation of a defendant. Despite an overwhelmingly negative response toward perpetrator reports, courts often have expressed a belief that dissociative amnesia is a valid phenomenon in recovered or “delayed” memory cases (e.g., Loftus, 1997). For example, in *M.(K.) v. M.(H.)* (1992), the court ruled:

... during the assaults the incest victim typically learns to shut off pain by “dissociating,” achieving altered states of consciousness ... as if looking on from a distance at the child suffering the abuse. To the extent that this defense mechanism is insufficient, the victim may partially or fully repress her memory of the assaults and the suffering associated with them.

Testimony concerning recovered memories has led to convictions for historical violence abuse (e.g., Loftus, 1993). However, other courts have denied the validity of recovered memories or acknowledged the lack of scientific information available on the issue. This dissonance in the law concerning amnesia for violence in accused persons and witnesses is highly problematic due to the legal significance of dissociation.

2. Legal significance of dissociative amnesia

The legal system is founded on memory-based evidence (e.g., Stone, 1984). When someone involved is unable to recall an alleged criminal event, courts can experience considerable difficulty in formulating decisions. Both dissociative amnesia and the dissociative state have emerged as important considerations in numerous legal cases. In particular, reports of dissociation are significant because of this high prevalence in legal contexts as well as their relevance to specific legal constructs.

2.1. Prevalence of reports of amnesia in forensic settings

Reports of dissociative amnesia are common in the legal system. Amnesia is reported in a significant proportion of cases involving murder or attempted murder (e.g., Bradford & Smith, 1979; Schacter, 1986b). Estimates of memory impairment in homicide cases range from 10% to 70% (Bradford & Smith, 1979; Guttmacher, 1955; Leitch, 1948; O’Connell, 1960; Parkin, 1987; Schacter, 1986a, 1986b). For example, Bradford and Smith (1979) found that 65% of a sample of 30 murderers reported no memory for their crime. In a study of 203 men charged with violent or nonviolent crimes, 19 reported partial or complete amnesia for the incident (Taylor & Kopelman, 1984). Of the amnesia cases, nine were for homicide, six for nonfatal interpersonal violence, and four for severe property damage. Dissociative

amnesia is also commonly seen in cases of dissociative identity disorder (DID) (American Psychiatric Association, 1994). In this controversial psychological disorder, actions performed by one identity or “alter” are not recalled by other alters. Homicide cases involving DID defendants are becoming increasingly common in North America (Owens, 1997). Memory impairment is also reported by perpetrators of spousal violence (Dutton, 1988, 1998; Martin, 1977; Walker, 1979), although the exact prevalence is unknown. In spousal violence incidents, the memory impairment is usually circumscribed to the pinnacle of the violent activity, a phenomenon known as a “redout” (Swihart, Yuille, & Porter, 1999). Overall, the evidence suggests that the incidence of reported amnesia increases with the severity of the violence (e.g., Bradford & Smith, 1979; Taylor & Kopelman, 1984).

Reports of dissociative amnesia are not limited to perpetrators of extreme violence. Individuals who commit noncriminal violence and who witness extreme violence have made similar reports. Although again, the exact prevalence rates are not clear, amnesia has been reported in cases of sanctioned homicide such as self-defense, by soldiers during wartime (e.g., Kardiner, 1941; van der Hart, Brown, & Graafland, 1999), and by police following victim-instigated homicides (e.g., Parent, 1996). Further, as mentioned, complainants and witnesses have reported blocking traumatic memories for violent incidents from consciousness for extended periods but later came to recover them (e.g., Loftus, 1993, 1997; Porter, Birt, Yuille, & Lehman, 2000; Porter & Marxsen, 1998). The prevalence of dissociative amnesia reports in complainants appears to have been increasing in the past decade (e.g., Bowman & Mertz, 1996; Knapp & Vandecreek, 1997). Using archival data, Canadian researchers (Read & Connolly, 1999) have examined more than 1200 Canadian cases of sexual assault in the 1980s and 1990s. This research indicates that evidence for recovered or delayed memories has emerged in about 5% of sexual assault cases.

2.2. *Relevance of amnesia to specific legal constructs*

In addition to the high prevalence of amnesia, a second major reason for the importance of considering dissociation in legal settings is its relevance to specific legal constructs. Dissociative amnesia can be relevant to both competency to stand trial and criminal responsibility.

2.2.1. *Competency to stand trial*

According to the original philosophy of competency to stand trial (*Dusky v. United States*, 1960; Hale, 1736), a defendant’s ability to remember and relate the incident under investigation should be a fundamental consideration in determining competency (e.g., Roesch & Golding, 1986; Roesch, Ogloff, & Golding, 1993). An accused who cannot recall the crime, may be unable to meaningfully assist in the defense and, therefore, should not be considered competent. An early American case to address this issue was *Wilson v. United States* (1968). The judge concluded that although amnesia is related to competency to stand trial, it is not a sufficient factor alone to negate competency. He recommended that each report of amnesia be evaluated on its own merits in any particular case. Many courts have cited the decision in *Morrow v. Maryland* (1982) arguing that amnesia is relevant to competency when the loss of memory would “obscure the search for truth” at trial. However, courts more often have disregarded amnesia reports in defendants, apparently because of concern over the

potential for malingering (e.g., Melton, Petrila, Poythress, & Slobobin, 1997; Parwatikar et al., 1985; Roesch & Golding, 1986). For example, in *New Jersey v. Badger* (1988), the accused had previously been diagnosed with multiple personality disorder and argued that he was unable to defend himself in the absence of any memory for his alleged crime (attempted burglary). The court determined that the defendant was competent to stand trial despite his report of amnesia for his crime, reasoning that: “New Jersey has flatly refused to allow amnesia concerning a crime to be a bar to prosecution.” In spite of the legal system’s apparent denial of amnesia in the context of competency hearings, most standardized competency tests in North America include questions that address the defendant’s memory for the crime (Roesch et al., 1993).¹

2.2.2. *Criminal responsibility*

Amnesia in defendants is also relevant to the issue of criminal responsibility (McSherry, 1998). In Canada, criminal responsibility relates to the capacity of the person to appreciate the nature and quality of the act or know that the act was wrong. In order to establish criminal responsibility, it is necessary to show an element of criminal intent (*mens rea*) and that the actions were *conscious* and *voluntary* (*R. v. King*, 1962). One consideration is that dissociative amnesia can originate from the defendant’s mental state at the time of the offense, in particular, from a dissociative state (e.g., Jackson & Griffiths, 1991). Courts have acquitted defendants following evidence for “automatism,” or the performance of unconscious, automatic acts conducted during a dissociative state and often followed by amnesia. In the 1971 case *R. v. K.*, the Ontario High Court of Justice extended the automatism defense from being caused by a physical event (established in *Bleta v. The Queen*, 1964) to further include a “psychological blow” or trauma (cf. *Rabey v. The Queen*, 1980). In *R. v. K.*, the court heard evidence that a severely depressed unemployed man went into an unconscious dissociative state and asphyxiated his wife after she told him that she was about to terminate the relationship. Accepting testimony that this act resulted from a state of automatism, the court acquitted the defendant of manslaughter. A major element of this evidence was that the defendant was unable to recall the homicide.

In subsequent cases, courts have used the “reasonable person” principle in guiding decisions when it is argued that psychological trauma induced a dissociative state. This criterion requires that a reasonable person could have reacted in a similar fashion given a comparable psychological stressor. In the landmark case *R. v. Parks* (1992), Parks was acquitted of the murder/attempted murder of his parents-in-law following expert testimony that he had been in a dissociative state of automatism during the homicidal attack (he was sleepwalking). In the more recent Canadian case, *R. v. Joudrie* (1996), Joudrie admitted to shooting her husband following years of spousal violence and alcohol abuse. Following expert psychiatric and psychological testimony that she had entered a dissociative state prior

¹ The concept of competency to stand trial (and hence the relevance of amnesia to the construct) is confined to countries relying on an adversarial system of justice such as England, Scotland, Australia, Canada, and the US, but not in countries with an inquisitorial approach such as Denmark, Switzerland, and Austria (Harding, 1993).

to the shooting, the jury found her not criminally responsible and she was hospitalized (see McSherry, 1998, for a detailed examination of the case). As a result of her dissociative state, Joudrie was unable to recall her violent act.

Complexities arise when evidence of a dissociative state or dissociative amnesia is offered in court. One issue concerns how each phenomenon relates to personal control over behaviour. The presence of the dissociative state or altered state of consciousness may influence control over and, thus, responsibility for one's criminal actions. From noncriminal samples, there is substantial evidence that control of one's actions may be diminished during a dissociative state (e.g., Kihlstrom, Tataryn, & Hoyt, 1993). In terms of criminal responsibility, amnesia may provide evidence for the prior dissociative state but the dissociative state (and not the amnesia per se) could reduce a person's responsibility. In fact, some defendants describing a dissociative state during a violent crime were not subsequently amnesic for the act. It is important that the two phenomena be distinguished in such cases. Cases involving possible intoxication and dissociative amnesia as they relate to criminal responsibility are especially complex (e.g., Kopelman, 1995). For example, if a dissociative state but not intoxication is considered directly relevant to responsibility (as in Canada), it may be essential to evaluate whether the amnesia has a biological basis. In the Canadian murder case *R. v. Robinson* (1996), the court ruled that: "if intent and capacity are to be anything more than catchwords, then all factors bearing upon capacity and intent, such as dissociative state, stress and drunkenness, must be considered jointly . . . as part of an overall picture and their respective influences, each upon the other, assessed."

3. Controversies over dissociative amnesia

It is generally agreed that a required antecedent of dissociative amnesia is a traumatic event. Janet (1904) observed that under usual conditions a person's psychological elements are organized in a unified stream of consciousness but that during certain circumstances such as severe stress, one or more of these elements (e.g., memory) can become dissociated from the rest. In the modern conception, dissociative amnesia has been characterized as a sudden inability to remember important personal information not caused by brain trauma or ordinary forgetfulness (American Psychiatric Association, 1994). The effects of trauma on memory are currently the subject of an international research effort (e.g., Read & Lindsay, 1997; Yuille & Daylen, 1998). Several frameworks have been offered to explain how someone could "forget" a traumatic experience. The most prominent conceptions include repression, amnesia resulting from a dissociative state, and state-dependent memory.

3.1. Repression

One common explanation for amnesia in perpetrators of homicide is that they have "repressed" the memories. According to Freud (1922), repression involves a traumatic event being actively buried in the unconscious, a process independent of ordinary forgetting. Focusing on repression in murderers, Parwatikar et al. (1985, p. 99) stated that for some murderers, "their sense of being good persons is contradicted by the fact that they have done

something socially unacceptable . . . In order to cope with this internal conflict often resulting in depression, the individual may repress from consciousness the memory of their violent actions.” Similarly, Parkin (1987) asserted that dissociative amnesia in murderers is a form of defense reaction to repress the experience or allow them to be recalled only under conditions that do not reflect the individual’s normal personality.

Although the above explanation for amnesia is interesting, scientific skepticism over the validity of repressed memories is steadily increasing (e.g., Holmes, 1990; Loftus, 1993, 1997; Loftus, Joslyn, & Polage, 1998). Despite opposing arguments (e.g., Williams, 1994), there have been no studies that convincingly demonstrate the validity of repression. Further, its theoretical bases are not consistent with the current scientific understanding of memory (see Finer, 1997; Loftus et al., 1998; Porter & Marxsen, 1998). It is becoming clear that memory is fundamentally constructive rather than operating like a storehouse (e.g., Koriat & Goldsmith, 1996; Porter, 2000). The theory of repression, asserting that memories can remain perpetually unchanged in the unconscious, is not readily accommodated by a reconstructive understanding of memory. In its official statement on recovered memories, the Canadian Psychiatric Association argued that memories recovered in adulthood should never be accepted without corroborating evidence (Blackshaw, Chandarana, Garneau, Merskey, & Moscarello, 1996). In 1998, the Canadian Psychological Association concluded that justice might not have been served in criminal cases where people have been convicted of offenses based solely upon repressed or “recovered” memories without corroborating evidence. Legal commentators have recently been underscoring the need for courts to be made aware of the growing scientific skepticism (e.g., Finer, 1997).

Despite the lack of scientific evidence for repression, it continues to be accepted as valid by many North American courts (see Loftus, 1997; Read & Lindsay, 1997). Repressed memory evidence has been frequently used to convict accused persons and often has been accompanied by questionable statements by legal decision-makers. For example, in the California case *Evans v. Eckelman* (1990, pp. 608–609), the judge stated that “it has been widely recognized that the shock and confusion engendered by parental molestation, together with the parents’ demands for secrecy, may lead a child to deny or block the traumatic events from conscious memory.” In the Canadian case *R. v. Francois* (1994), Francois was convicted of repeatedly raping a 13-year-old girl in 1985. The only evidence presented at trial was the testimony of the complainant who stated that she had repressed the sexual assaults until her memories returned in a flashback in 1990. According to the complainant, the police suggested that if she thought long enough about her past, she might remember something in a “flashback.” She testified that the flashbacks occurred while she was concentrating on what the police had told her and watching television. The jury soon returned with a guilty verdict, which was upheld by the Court of Appeal. The rationale from the appellate court transcript (Judge J. McLachlin) reads:

It was . . . for the jury to determine, on the basis of common sense and experience, whether they believed the complainant’s story of repressed and recovered memory . . . The jury’s acceptance of the complainant’s evidence concerning what happened to her cannot . . . be characterized as unreasonable.

The judge further wrote that:

without pronouncing on the controversy that may surround the subject of revived memory amongst experts . . . it was open to the jury, with the knowledge of human nature that it is presumed to possess, to determine on the basis of *common sense and experience* (italics ours) whether they believed the complainant's story of repressed and recovered memory.

The Supreme Court subsequently overturned the appeal court decision. This case gives a compelling example of the problems that arise when recovered memories are at issue.

Interestingly, in another Canadian case (*R. v. Campbell*, 1996), the judge advocated the validity of repression in *both* the complainant and defendant. The charges concerned childhood sexual assaults that were recalled by the complainant only in adulthood. Although the defendant denied the allegations, the trial judge surmised that he “himself may have repressed or dissociated from any recollection of what to his moral background and makeup would be repulsive and horrible acts . . . I could take it that [the defendant] could be testifying honestly as to what he recalls, and he does not and cannot recall these acts” (the defendant denied having repressed the acts). This unsupported conjecture provided grounds for appeal and the conviction was reversed.

Some judges have noted the difficulty of evaluating recovered memory evidence because of the professional debate in the field of psychology (e.g., *Kelly v. Marcantonio*, 1996; *S.V. v. R.V.*, 1996; *State v. Hungerford*, 1997). The Tennessee appellate court in *Hunter v. Brown* (1996) rendered the opinion that “we find that there is simply too much indecision in the scientific community as to the credibility of repressed memory.” Recently, there have been many “retractors” whose recovered memory allegations led to court convictions. There have also been several successful civil suits against therapists who have implanted memories in their clients who came to believe that their new memories had been long repressed (e.g., Bowman & Mertz, 1996; Finer, 1997; Knapp & Vandecreek, 1997).

3.2. *Dissociative states*

The next major explanation for dissociative amnesia for violent crime is the presence of a dissociative state concurrent with the offense (e.g., Tanay, 1969). This pattern has been seen in both victims and perpetrators (Kihlstrom et al., 1993). In Canada, dissociative amnesia has been taken as evidence that a defendant experienced a dissociative state at the time of the violent act (e.g., Jackson & Griffiths, 1991; McSherry, 1998).

During a dissociative episode, control over one's actions may be diminished, making it relevant in establishing criminal responsibility (e.g., McSherry, 1998). There are common elements in most clinical descriptions of a dissociative state. van der Kolk, van der Hart, and Marmar (1996) argued that “primary” dissociation occurs when a person is faced with an overwhelming, stressful experience. Components of the experience may not become integrated into personal memory. The information in question becomes split from autobiographical memory and is not available in consciousness. “Secondary” dissociation occurs after a person has already begun to dissociate, causing further disintegration and dissociation. Distancing maneuvers such as switching perspectives in order to experience oneself as a spectator during the trauma are used to detach oneself from painful emotions and stress.

According to Spiegel and Cardeña (1991), the dissociative state is characterized by a sense of detachment from one's physical or psychological being (*depersonalization*) or from the surrounding social and physical environment (*derealization*). During depersonalization, one experiences a feeling of being detached, or as if one is an outside observer of oneself, or feeling like an automaton. Kubin, Pakianathan, Cardeña, and Spiegel (1989) found that the four most common features of depersonalization were an altered sense of relatedness to emotions, thoughts, or body sensations, a precipitating event, a sense of unreality or dreamlike state, and sensory alterations. In contrast, during derealization the environment is experienced as unreal or dreamlike. Kihlstrom et al. (1993) noted that throughout the traumatic experience the person is aware of what is occurring in the environment and of the contradiction between reality and his/her subjective unreality. That is, the person perceives things only "as if" they were not real. Finally, the person experiences a flattened emotional state during the experience.

Why would some murderers experience such a mental state while others would not? Certain psychological features such as depressed mood, hysterical traits, and psychosis have been found to be associated with reports of amnesia for crime (Hopwood & Snell, 1933; Kopelman, 1987, 1995; Parwatikar et al., 1985; Taylor & Kopelman, 1984). Further, there may be an innate capacity to dissociate (e.g., Bernstein & Putnam, 1986; Carlson & Putnam, 1993; Ludwig, 1983). Research also indicates that dissociation is associated with the particular manner in which the homicide occurred. In the majority of cases in which offenders report amnesia for their crimes, the offense was not premeditated (Hopwood & Snell, 1933; Kopelman, 1995; Taylor & Kopelman, 1984). Rather, many murderers who plan and premeditate their offense(s) remember their crimes vividly (e.g., Cox, 1991).

In some studies of memory for homicide, the nature of the impairment has been suggestive of a dissociative state (e.g., McSherry, 1998). In Bradford and Smith's (1979) sample, approximately 60% of the memory impairments were circumscribed only to the action of the crime itself. With one exception, all murderers stated that the memory was "hazy" or "patchy" (the other reported a complete blackout). Compared to the murderers who did not experience memory loss, amnesics reported higher levels of emotional arousal at the time of the offense. In an early study of amnesia and crime, Hopwood and Snell (1933) discussed 100 cases of perpetrator amnesia. In 90% of the cases, the crime involved murder or attempted murder while the others included arson and sexual offenses. They argued that most crimes that result in amnesia are "those accompanied by strong emotional reactions" (p. 32). The literature suggests that the expected course of memory impairment for violence is a progressive blurring of memory for the time immediately following the onset of the dissociative state, proceeding to a complete or partial amnesic period when the homicide occurs. The first author of the present article recently completed a forensic evaluation that revealed a dissociative state in a murderer. The subject was a 20-year-old offender with no prior criminal history who was beginning a life sentence for murdering his girlfriend and her young child. On the day of the killings, he had been laid off from his job. Upon returning home, his girlfriend informed him that she was ending the relationship. He reported that when he heard this news he started to feel "weird." His memory for the ensuing argument and the killings is hazy. He stated that he knew his actions were wrong during the murders but that he was unable to control

them. He described his experience as being detached from the events, “hyperperceptive,” and observing himself from above waving a knife prior to the killing. He was unable to recall seeing himself actually doing the killings. In another case, a female murderer described her dissociative state occurring in the minutes after the crime: “I just kept driving. We went to the bank and I pulled up right in front of the bank doors. I was not in my right mind; everything was a foggy dream . . . I was just in a daze” (Walford, 1987, p. 38).

3.3. *State-dependent memory factors*

The third major explanation for dissociative amnesia implicates state dependent memory. Murder is often an unplanned, reactive, spontaneous crime associated with extreme arousal (e.g., Correctional Services of Canada Research Division, 1995; Kopelman, 1995). For example, Taylor and Kopelman (1984) reported that in 87.5% of the amnesia cases in their sample the victim was either the perpetrator’s lover, wife, close friend, or a family member, suggesting the influence of emotional factors. There is considerable evidence that the emotional state can influence how one recalls an experience (e.g., Eich, 1989; Eich, Macaulay, & Ryan, 1994). Information acquired in a particular mood state is more easily remembered in a similar state than a different one (Bower, 1981). In Bower’s (1992) review, he concluded that the original emotion must have been intense and must be very different from the current emotional state for state dependent forgetting to occur. Extreme violence is associated with states of emotional arousal unlikely to be experienced in any other context (Parkin, 1987). Thus, state dependency may contribute to a subset of cases of amnesia in homicide offenders (Kopelman, 1995; Schacter, 1986b; Swihart et al., 1999). Consistent with state dependency, in Bradford and Smith’s (1979) study, 60% of the memory impairments were circumscribed solely to the homicidal action. Cases of spousal violence are also associated with extreme arousal (Dutton, 1988, 1998; Ganley, 1980; Martin, 1977; Swihart et al., 1999; Walker, 1979). Dutton (1988, p. 60) described offenders’ impaired memories for the assaultive incidents:

. . . from interviews with the wife and from police and medical testimony depict the male as being in a highly aroused state of rage . . . The men usually remember the events leading up to the actual battering and the aftermath (some were shocked and sickened by what they had done), but not the intervening battering.

Similarly, many battered women report memory impairment for killing their husbands in self-defense, as in the case of *P.* who killed her husband after suffering years of severe abuse (*Vancouver Sun*, 15 November 1995). Ten years later, she could only recall a violent fight, the fear she experienced before her husband’s death, and then his body below her, with no memory for the intervening events. This pattern of recall strongly implicates state dependency in some cases of spousal assault and homicide by battered spouses.

Memory impairment for violence may also relate to acute intoxication, either due to a blackout or from state dependency (Kopelman, 1995; Lisman, 1974; Lynch & Bradford, 1980; Parwatikar et al., 1985; Taylor & Kopelman, 1984). For example, a recent study found that 51.6% of a sample of defendants charged with murder had used alcohol or drugs before

the homicide (Leong & Arturo, 1995). Long-term alcohol abuse also can lead to progressive memory impairment, even after the individual has been sober for a number of years, as in Korsakoff's syndrome (Brandt, Butters, Ryan, & Bayog, 1983). Because amnesia resulting from intoxication is a different phenomenon from amnesia resulting from purely psychological states or reactions, it is important to determine whether drugs and/or alcohol played a role in the perpetration of a crime.

3.4. *Implicit memory*

Following amnesia for homicide, few perpetrators go on to eventually recall the violent act. However, it is possible that violent crimes may be recalled *implicitly*. Implicit memory is revealed when a person is influenced by previous experience in the absence of any conscious or intentional attempt to recollect the experience (e.g., Graf & Schacter, 1985, 1987). Relevant examples include déjà vu, negative reactions to certain sounds or smells, panic attacks, and irrational fears. Kihlstrom et al. (1993) provided evidence that dissociative amnesia does not necessarily extend to implicit memory for a traumatic event (cf. Tobias, Kihlstrom, & Schacter, 1992). For example, Christianson and Nilsson (1989) described a woman who suffered severe amnesia after being raped on a brick pathway along where she had been jogging. A week later, she reported that the words "bricks" and "path" popped into her mind but did not know why. She also showed an intense emotional reaction to pieces of crumbled bricks along the pathway on which the assault had occurred, even though she was unable to explicitly remember the event. Kaszniak, Nussbaum, Berren, and Santiago (1988) reported a similar case of a victim of an attempted homosexual rape who suffered amnesia for the incident, but became severely distressed when shown a Thematic Apperception Test card often interpreted as a person being attacked by another from behind. Such case examples with victims indicate that some forms of dissociative amnesia may not be accompanied by a loss of implicit memory for the experience. The implicit recollection can take the form of an emotional response to cues associated with the traumatic event. However, further research is needed to address whether a murderer who cannot explicitly remember the crime may reveal implicit memory for the event when confronted with particular cues.

4. **Typical patterns of memory for murder in witnesses**

Although amnesia sometimes occurs in perpetrators of homicide, this is not typical of memory for violence by witnesses (Porter & Birt, in press). Yuille and Cutshall (1986) investigated the memories of 13 eyewitnesses to murder 4 to 5 months after the incident. By comparing the memory accounts to forensic evidence and initial reports to police, they found that the witnesses generally had highly accurate, detailed memories that were resistant to misinformation. Wagenaar and Groenewed (1990) examined the memories of concentration camp survivors more than 40 years after they had first testified in Nuremberg. For the most part, their memories for the brutal violence they had experienced and witnessed corresponded closely with their original testimony. Malmquist (1986) studied 16 children between the ages of 5 and 10 who had witnessed the murder

of their parent and found that every child held vivid recollections for it, even though half reported that they wanted to banish the scene from memory. Children's memories for the homicide recurred as flashbacks and usually pertained to the wounds inflicted on the parent. Thus, most *witnesses* to extreme violence have vivid memories for the event over time rather than the significant memory impairment seen in many perpetrators.

Nonetheless, some witnesses have testified that they repressed memories of viewing a homicide and only recovered the memory in adulthood. In a 1990 California case, George Franklin was convicted of murder on the basis of delayed memories (MacLean, 1993). Franklin received a life sentence for murder following testimony by his adult daughter that she had recovered a memory of witnessing him sexually assault and murder her friend during her childhood. The appellate court later overturned the conviction given the questionable validity of the recovered memory.

Although extreme arousal does not often lead to amnesia in witnesses, it can sometimes affect attentional, perceptual, and memorial processes. Research has consistently found that emotional stress narrows attention such that a witness tends to focus on the central details of an emotional experience rather than peripheral details (e.g., Burke, Heuer, & Reisberg, 1992; Christianson & Hubinette, 1993; Christianson & Loftus, 1990). For example, police officers who have killed in the line of duty often recall the event vividly but have difficulty remembering peripheral information. However, although vivid, their memories tend to be experienced in an unusual way such as a slow-motion videotape or through "tunnel vision." Parent (1996) interviewed 34 such police officers in British Columbia and found that their memories contained visual, auditory, and temporal (e.g., in slow motion) distortions.

5. The credibility of reports of dissociative amnesia

In cases of self-defense or other sanctioned homicide, there would be little reason to question a report of memory impairment. However, when a report of amnesia emerges in a criminal case, the stakes are greater and the honesty of the report will be less clear. Evaluating the credibility of reports of dissociative amnesia in both defendants (Kopelman, 1995; Roesch & Golding, 1986) and complainants (e.g., Loftus, 1997; Porter et al., 1999) has posed challenges for the judiciary. The consequences of such judgments can be considerable. If malingered amnesia is mistakenly viewed as valid evidence for a dissociative state (a false-positive error), the court could hand down a lighter sentence or acquit the defendant. As a result, the defendant might be sent to a forensic psychiatric hospital for treatment (as in *R. v. Joudrie*, 1996) rather than prison. If true amnesia is seen as malingered, the defendant may be required to stand trial or be found responsible for the crime.

There are different considerations in assessing the reports of complainants and defendants. A major concern with complainants or witnesses who report recovered or delayed memories is not malingering but, rather, that some recovered memories may actually be "false" or implanted (e.g., Hyman, Husband, & Billings, 1995; Loftus, 1997; Porter et al., 1999; Read & Lindsay, 1997). Research has demonstrated that some people can be led to "recover" entire events that never actually occurred (e.g., Loftus, 1993, 1997). For example, Porter et al. (1999) demonstrated that false emotional childhood

memories (e.g., animal attack, serious accident) could be elicited in more than half of participants over multiple interviews. Psychological therapies with a focus on recovering repressed memories of trauma are apparently used by a significant proportion of mental health professionals in North America and Great Britain (Poole, Lindsay, Memon, & Bull, 1995). Coupled with many well-known anecdotes of mistaken “recovered” memories in court cases (e.g., Bowman & Mertz, 1996; Loftus, 1993, 1997), such research provides evidence that at least some recovered memories in legal settings may be sincerely held, but mistaken, reports. This conclusion does not rule out that some recovered or delayed memories may be based on true events (e.g., Porter et al., 1999). In fact, there is considerable evidence that some recovered memories are valid (see Read & Lindsay, 1997). As Bowman and Mertz (1996, pp. 598–599) point out, “a more sober view reveals that the real question is not whether delayed recall exists, but rather to what degree it exists and how to distinguish accurate retrieved accounts from mistaken accounts.”

Although the difficulty of discriminating real and false memories has been recognized for some time (e.g., Loftus, 1993), recent research has found that they can be differentiated by the characteristics of the memories themselves (e.g., detail, vividness, perspective) and individual differences in susceptibility to false memories (Hyman & Pentland, 1996; Pezdek, Finger, & Hodge, 1997). For example, individuals who are susceptible to implanted memories tend to be more dissociative and introverted than nonsusceptible individuals (Porter, Birt, et al., 2000). Further research on memory content features and individual differences could lead to more accurate evaluations of recovered memory reports in legal settings.

Unlike the problem of sincere but mistaken “amnesia” in complainants/witnesses, the primary concern with defendants is intentionally falsified amnesia (McSherry, 1998; Roesch & Golding, 1986). The accurate determination of the credibility of amnesia reports in defendants is difficult because the primary source of information is self-report (Herman, 1995; Schacter, 1986a, 1986b). There are a number of motivations for malingered memory impairment in criminal offenders. Feigned amnesia may serve to support a legal defense (e.g., intoxication, provocation), to elicit sympathy from jurors or family members, to raise a doubt about involvement in the crime, or to avoid using the much more risky and cognitively taxing approach of explicit deception (e.g., concocting an alibi) (Porter & Yuille, 1995, 1996). A motivation to mangle amnesia in psychopathic offenders (see below) may simply be pathological lying or even “duping delight” (Hare, 1993, 1998; Hare, Forth, & Hart, 1988; Hervé & Hare, 1999; Raskin & Hare, 1978).

Despite these diverse motivations for deception, the assumption that all reports of amnesia by defendants are fabricated is unfounded. There are several lines of evidence indicating that some reports of memory impairment by defendants are sincere. First, a subset of amnesic offenders has little to benefit from malingered amnesia. For example, some convicted murderers admit their guilt but maintain a report of amnesia. Some offenders recall events before and after the crime but are unable to recall the violent action itself, a pattern that seems unlikely to be deceptive. For example, Sirhan Sirhan held no recollection of murdering Robert Kennedy even though he admitted planning and even covering up the crime after it took place (Bower, 1981, 1992; Moldea, 1995). In a well-known Canadian case, Margaret

MacDonald was convicted of murdering two consecutive husbands (Gould & MacDonald, 1987). After her eventual release, MacDonald admitted her guilt but maintained that she was unable to recall the murders despite remembering events before and after they took place. Vincent Cockreill, convicted of fatally shooting an Canadian police officer in 1974, reported two decades later that he could not remember the shooting: “I remember grabbing it (the gun) and there’s a space there. It’s just gone. But I must have pulled the trigger. I take full responsibility” (*Vancouver Sun*, 12 February 1995) (for related cases see Swihart et al., 1999). The validity of amnesia in perpetrators of violence is further supported by the occurrence of amnesia in the context of sanctioned homicides as described earlier. Finally, some research has found discriminating features of amnesic and nonamnesic homicide offenders. Parwatikar et al. (1985) found that substance abuse and certain MMPI profiles discriminated admitted murderers who recalled the offense from those who had been convicted but still reporting amnesia. Lynch and Bradford (1980) used polygraphy to demonstrate that 63% of individuals diagnosed with antisocial personality disorder were being deceptive in their amnesia reports compared to 50% of people with no personality disorder or other psychopathology.

Forensic psychologists or psychiatrists may be asked to provide an opinion concerning the validity of an amnesia report (e.g., Kopelman, 1995; Melton et al., 1997). The optimal approach for evaluating such a claim is to conduct a thorough investigation using multiple hypotheses and techniques (e.g., McCann, 1998; Vrij, Memon, & Bull, 1998). Malingered amnesia may be expected more often in murderers who deny involvement in the offense in question. It appears that malingerers are more likely to exaggerate and recount symptoms of extreme severity (e.g., “I cannot recall anything from morning until midnight”) (see Rogers, 1997). Schacter (1986b) argued that false reports of amnesia in offenders may be revealed by a description of a very sudden onset of amnesia (contrary to the typical more progressive pattern) and low ratings on “feeling of knowing” judgments (i.e., when asked if (s)he could retrieve the memory under *any* circumstances, the malingerer is more likely to respond in the negative). Although Schacter’s suggestions may prove useful, they remain untested in offenders and should be considered tentative.

Specific techniques used to evaluate a report of amnesia have included polygraphy and “symptom suggestion.” The polygraph depends upon the assumption that a person will show an emotional/physiological response when being deceptive, reflecting a fear of detection and/or guilt about lying. However, the polygraph is prone to false-positive errors (e.g., Iacono & Patrick, 1999) and can also be fooled by means of “countermeasures” such as drugs or mental imagery (e.g., Honts, Raskin, & Kircher, 1994). Nonetheless, the use of the polygraph often elicits admissions from a subset of guilty suspects (e.g., Gale, 1988). “Guilty knowledge” techniques offer a promising means for assessing malingered amnesia. If a person truly does not recall an event, (s)he should not respond physiologically to guilty knowledge information significantly above baseline. Variations of the guilty knowledge testing also can be used outside of the context of the polygraph examination. The examiner can create a series of forced choice crime-related questions in which the suspect is asked to “guess” the correct answers. For example, if a suspect responds correctly to a very small proportion (less than chance) of questions pertaining to the crime, he/she is likely to be malingering. Another useful technique in identifying

malingered amnesia is known as *symptom suggestion* in which false characteristics of the claimed psychopathology are provided to the suspect. With this technique, recommended when malingering is considered to be a clear possibility, the suspect's subsequent behaviours are monitored for possible incorporation of the false symptoms, which would indicate malingered amnesia. Symptom suggestion proved to be a key factor in establishing malingered amnesia in the Hillside Strangler murder case (Levin & Fox, 1985; Orne, Dinges, & Orne, 1984; Saks & Behnke, 1997). Finally, there is substantial evidence that people show a different constellation of verbal and nonverbal behaviours when they lie and when they tell the truth (e.g., Vrij, 2000). Recent research indicates that professionals in legal settings can be trained to increase their ability to detect deceit (Porter, Woodworth, & Birt, 2000).

Thus, to summarize, converging evidence indicates that dissociative amnesia in defendants is authentic in some cases despite the general skepticism from legal decision-makers. Further, it can be concluded that amnesia is malingered in some cases (Melton et al., 1997). There is also evidence that some recovered memory reports are mistaken. Fortunately, there are now well founded approaches for differentiating deceptive from truthful amnesia reports.

5.1. A special case: "Amnesia" in the psychopathic murderer

There has been an enormous amount of research devoted to psychopathy in the past two decades (e.g., Hare, 1993, 1998). Psychopaths are a distinctive subgroup of violent offenders (15–25% of inmates) best described by their unique interpersonal and affective disposition. They are egocentric, manipulative, deceptive, callous individuals lacking remorse and affective depth (e.g., Hart & Hare, 1997). It is thought that a profound affective deficit may be a keystone of the disorder (e.g., Cleckley, 1982; Hare, 1996; Porter, 1996; Williamson, Harpur, & Hare, 1991), precluding experiences of remorse or empathy and allowing callous, ruthless behaviour. Psychopaths commit a disproportionate amount of antisocial and violent behaviour, extending to both nonsexual and sexual violence (Hart & Hare, 1997; Porter, Fairweather et al., 2000).

A diagnosis of psychopathy is relevant in cases of reported amnesia for two reasons. First, psychopaths use a high degree of manipulation, deception, and malingering relative to other offenders (e.g., Hare, 1998; Hare et al., 1988; Hervé & Hare, 1999) and would be likely to use a false claim of amnesia if any personal gains were anticipated. Secondly, psychopaths may, in fact, exhibit superior memories for their extreme violence compared to nonpsychopaths. They may be more likely to premeditate or fantasize about their homicidal violence given the strong relationship between psychopathy and sadism (e.g., Serin, Malcolm, Khanna, & Barbaree, 1994). Experimental research on memory for emotional stimuli suggests that psychopaths do not process or recall violent and nonviolent material differently whereas nonpsychopaths focus on central emotional details to the detriment of memory for peripheral information (e.g., Christianson et al., 1996). Also, psychopaths would be less likely to experience dissociative amnesia. The powerful emotional state that is associated with dissociation or state (trauma) dependency (e.g., Kihlstrom et al., 1993) would be unlikely to be experienced by an individual with such a

profound affective deficit (e.g., Hare, 1998; Hart, Forth, & Hare, 1991; Hart & Hare, 1997). Indeed, psychopaths seem to be largely immune to anxiety, depression, and trauma (Harpur, Hare, & Hakstian, 1989).

Many psychopathic offenders show no memory impairment for their violence, but, instead, recall it vividly. Factors that could facilitate memory for homicide by psychopaths include a high degree of premeditation and rumination after the crime. Premeditation should facilitate memory for the crime, as elaborative encoding and rehearsal improves memory in general (e.g., Craik & Lockhart, 1972; Neisser, 1982; Yuille, Davies, Gibling, Marxsen, & Porter, 1994). A specific category of premeditation seen in many serial offenders is fantasy engagement in which a sexual scene and/or homicide are replayed in the offender's mind, sometimes for years before the initial homicide occurs (e.g., Holmes & Holmes, 1998; Woodworth & Porter, *in press*). Heavily scripted, the fantasy may have a specific victim or type of victim, location, conversation, and action sequence. The crime itself will be memorable in both its similarity to the rehearsed fantasy and any script violations that may occur. In serial sexual homicide cases (usually associated with premeditation and planning), a claim of amnesia would be highly suspect.

In summary, reports of dissociative amnesia from psychopathic offenders are very likely to be fabricated. The skeptical stance by the courts towards amnesia is certainly appropriate with psychopathic offenders but may be less so with nonpsychopathic offenders.

6. Summary and conclusions

There is currently a complex and inconsistent state in the law relating to dissociation and dissociative amnesia (McSherry, 1998). Although dissociative amnesia in defendants is relevant to both competency to stand trial and criminal responsibility in principle, courts have typically assumed a skeptical stance toward such claims in practice. However, there is considerable evidence from both nonoffender and offender populations to support the validity of dissociative amnesia in defendants. Further, there is information available to aid in the evaluation of amnesia, such as the quality of the report itself and characteristics of the person reporting the amnesia (e.g., psychopathy). When consideration is given to the legal response to reports of dissociative amnesia by complainants, the situation becomes even more complex. While some courts have rejected recovered memory evidence, others have convicted defendants of historical offenses based on such evidence. In some cases, judges have argued that jurors should be left to decide on the validity of recovered memories based on their common sense and experience. The uncritical acceptance of the validity of repressed memories in complainants by many courts stands in stark contrast to the response to claims of amnesia from defendants. It seems apparent that the courts need better guidelines around the issue of dissociative amnesia in both populations. We think that the increasing scientific understanding of memory in the past decade (see Schacter, 1999) can meaningfully contribute to the development of such guidelines. Responsible, nonpartisan expert testimony from mental health professionals would be one step in the direction of rectifying the current state of law in regards to dissociation.

Acknowledgments

The first author was supported by an operating grant from the Social Sciences and Humanities Research Council of Canada (SSHRC). The second author was supported by a doctoral fellowship from the Natural Sciences and Engineering Research Council of Canada (NSERC), and the fourth author by a doctoral fellowship from SSHRC.

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