CHAPTER 7

Amnesia for homicide as a form of malingering

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A RELATIONSHIP BREAKDOWN TURNED DEADLY

For about 18 months, Ferdinand, 27, and Jane, 22, had had a very problematic relationship. Then, during the first weeks of 2003, Jane decided to put an end to it. Ferdinand said he felt angry and depressed about their relationship breakdown. He phoned and e-mailed Jane, who stayed at her parents, but she didn't want to talk to him. On 20 February 2003, Ferdinand went to the house where Jane and her parents lived. Later, Ferdinand would say to the police that he went there to return a kitchen knife that Jane once gave him as a birthday present. Ferdinand rang at the door and Jane's father answered it. He refused to let Ferdinand in. They started an argument, during which Jane's father allegedly laughed in an arrogant manner. At least that is what Ferdinand said when he was interrogated by the police. Ferdinand got angry–angrier than he had ever been before. He stabbed the father across his neck and body. The father died from the stab wounds. Ferdinand fled the scene and after two days of wandering around he turned himself in to the police.

During the interrogations, Ferdinand told the police that he was unable to remember what had happened precisely. He said that he

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recalled how he went to the house and how the father had laughed. He also vaguely recalled that he had tried to beat the father. And next, there was a 'blackout'. The first normal thought occurred to him 24 hours later.

Ferdinand was charged with murder, and during the investigations, the court ordered a psychiatric evaluation. Two psychiatrists interviewed Ferdinand during four sessions. In their 31-page report to the court, they concluded that Ferdinand had reacted with an acute dissociative state to the father's arrogant laughing. More specifically, the psychiatrists opined that Ferdinand had a narcissistic personality structure and that against the background of the relationship breakdown, the father's laughing had triggered an overwhelming rage in him. Also, the experts stressed that as a child, Ferdinand had been physically abused by his father. This is what Ferdinand told the psychiatrists about his youth: 'During one of the abuse incidents, I said to my father that he should not beat my mother. My father looked at me and laughed'. The psychiatrists advised the court to consider that Ferdinand had completely lost control over his behaviour and that this resulted in the stabbing. During the court proceedings, the psychiatrists took the witness stand and said: 'In our report, we conclude that the defendant suffered from acute dissociation and lack of control during the incident. We have based our conclusions on the facts as related by the defendant, which show that he suffered from amnesia for the crime'. Furthermore, the experts informed the court about the following rule: 'the more a defendant has specific memories about an incident, the more this defendant was fully aware of what happened during the incident, and the less likely it is that he suffered from lack of control'. For reasons to be explained below, the court found the conclusions of the psychiatric experts not fully convincing. However, citing the psychiatrists' expert testimony about Ferdinand's rage and his narcissistic personality, the court ruled that this was a case of reduced criminal liability. Thus, Ferdinand was convicted of manslaughter rather than murder and sentenced to eight years in prison.

CRIME-RELATED AMNESIA IN A HISTORICAL PERSPECTIVE

The story of Ferdinand is a real[1] and fairly prototypical case of what has been termed crime-related amnesia (Christianson & Merckelbach, 2004). Crime-related amnesia refers to a claim raised by defendants

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[1] More specifically, the case was tried by the superior court of **'s** Hertogenbosch. The case number is LJN: AR 4567.

or convicted perpetrators that they cannot remember essential details of the crime they have committed or even of their entire life including the crime. The phenomenon is not new. For example, the German neurologist Liepmann (2002, p. 635) remarked in his 1910 paper on a Korsakow case of amnesia: 'This year, I have had the opportunity to observe no fewer than five defendants who claim to have lost their memory of many years of their lives. Understandably, these statements are met with a certain degree of mistrust'.

Even before the turn of the century, there had been, especially in France, high-publicity cases in which murderers claimed to be amnestic for their crimes. A fine example is the famous l'affaire Valroff (1893), in which a butler murdered his Lordship. Interestingly, the details of such cases reflected the pre-occupations of contemporary French psychiatry. Thus, in the Valroff case, the defendant said that he was somnambulistic and under the influence of a hypnotic trance when he committed his murder (Ellenberger, 1970). Much the same is true for our era, although in our times, it is Hollywood that shapes the notions laypeople have about amnesia. In an impressive article, Baxendale (2004) catalogued the various movies in which amnesia appears: from 'Les Dimanches de Ville d'Avray' (1962), in which a fighter pilot developed amnesia after having killed a child, to 'The Eternal Sunshine of the Spotless Mind' (2004), in which the leading character tries to erase his memories of a failed relationship by undergoing a procedure that roughly resembles transcranial magnetic stimulation. To be sure, the influence of cinematographic pathology on how psychiatric symptoms are expressed has been amply documented. Cases in point are involuntary visual images known as flashbacks, which are considered to be a key symptom of Post Traumatic Stress Disorder (PTSD). Jones, Hodgins Vermaas, McCartney, Beech, and colleagues (2003) showed, on the basis of archival data, that flashbacks were extremely rare in cohorts of stressed soldiers up to World War II. It was only in the more recent cohorts that the symptom began to surface. The authors link this to 'the mass production of affordable television sets in the 1950s and 1960s and the subsequent introduction of video recorders' (Jones et al., 2003, p. 162). Apparently, traumatised soldiers use the video playback metaphor to describe their intrusive recollections. Meanwhile, static and technical metaphors to describe memory phenomena are not limited to traumatised soldiers. Both psychology undergraduates and licensed psychotherapists tend to think that metaphors such as the computer or the video-apparatus provide appropriate descriptions of memory (Merckelbach & Wessel, 1998). When taken to its logical conclusion, this type of metaphor not only allows for exact photocopies of reality (e.g., flashbacks), but also

for complete memory erasion (e.g., amnesia) due to technical failures (e.g., a psychological blow) or calculated manipulation (e.g., repression).

As Baxendale (2004) showed, the Hollywood portrayal of amnesia is often highly misleading. Here, the video erase metaphor leads scriptwriters to assume that certain events have the potential to erase autobiographical memories in a highly precise way with sharp limits for beginning and end of the amnesia, for example, from 11 p.m. to 12 a.m. However, this type of movie amnesia bears little resemblance to amnesia as it is seen in the clinic. To the forensic expert, amnesia at the movies is a blessing in disguise: it seduces criminals who want to feign amnesia to come up with a description of their memory problems that is not very plausible (see also the chapter by Jelicic & Merckelbach in this volume).

WHY FEIGN AMNESIA?

Like Liepmann (2002), some clinicians are very skeptical about the possibility for criminals to develop a genuine amnesia for their crime. For example, forensic psychologist Centor (1982, p. 240) wrote: 'My own experience, during a period of over 11 years in a forensic unit, failed to confirm even one case of psychogenic amnesia in the absence of a psychotic episode, brain damage, or acute brain syndrome'. Likewise, Ornish (2001, p. 27) wrote about dissociative amnesia that 'it is reminiscent of the defense suggested in the Steve Martin joke: Just tell the judge that you forgot it was against the law to rob a bank. Self-serving amnesia purportedly due to dissociation with a sharply defined onset and termination, especially in the absence of any major psychiatric disorder or alcohol intoxication, should be highly suspect'. And writing about sexual offenders, Marshall, Serran, Marshall and Fernandez (2005, p. 32) said: 'our clinical interactions with these amnesic sexual offenders suggested to us that most (if not all) of them had deliberately adopted this stance rather than having a genuine case of amnesia'.

So what about the Ferdinand case? Unfortunately, the psychiatrists did not read all the depositions that the police obtained from various witnesses. Had they done so, they would have seen that there was one witness who had provided critical collateral information about Ferdinand. This witness was a friend of Ferdinand's. The friend told the police that he had a meeting with Ferdinand the day after Jane's father was stabbed to death. The friend stated that Ferdinand had told him the following about the tragic incident: 'Somehow, Jane's father saw the knife. Ferdinand said that the father's facial expression became

fearful. The father retreated and hid behind his daughter. Ferdinand told that he followed him with the intention to teach him a lesson, to show that there was nothing to laugh about. Ferdinand described that he had then stabbed the father. I asked him how many times he had stabbed. Ferdinand answered that he had stabbed several times'. Obviously, this is not an eyewitness describing his conversation with an amnestic criminal. There can, in other words, be little doubt that Ferdinand feigned his amnesia.[2]

But why should defendants like Ferdinand try to feign amnesia for their crimes in the first place? There are three related motives. To begin with, claiming amnesia allows you to exploit your right to remain silent in an elegant way. A defendant would make an uncooperative impression if he were to say to his police interrogators: 'I'm not talking to you guys. I've got the right to remain silent and I'm going to use that right'. Saying, instead, that you would like to help the police, but that you can't remember is a smarter solution. In Ornish's (2001, p. 27) words, when feigning amnesia 'the defendant can testify in his own defence while evading answering cross-examination questions about his criminal behavior because of his purported inability to remember due to amnesia while dissociated'.

Second, claiming amnesia elicits what might be termed a psychiatric expert cascade. Thus, if a defendant says he can't remember committing a crime, chances are fairly high that the police, prosecutor or judge will order a psychiatric evaluation of the defendant. In an unpublished study, we gave a case vignette similar to Ferdinand's to 108 law students and lawyers. The large majority of the respondents (i.e., 74 %) felt that a court would be well-advised to have the amnestic defendant examined by a psychiatrist (Merckelbach, Cima & Nijman, 2002). The point is that judicial decision-makers lack expert knowledge about human memory and at the same time, they are concerned that they might overlook an important disease from which the defendant is suffering. And while it is true that 'no court has found a defendant incompetent to stand trial solely because of amnesia' (Parwatikar, Holcomb & Menninger, 1985, p. 202), it is also the case that psychiatric experts have a pathology bias. The tendency of such experts to conclude that normal individuals are brain damaged or abnormal has been well-documented. Wedding and Faust (1989, p. 241) summarise the relevant literature as follows: 'Across a series of studies examining the accuracy of clinicians, normal individuals have been misdiagnosed as brain

[2] One is reminded of the words of Leo Tolstoy (1869) who, in his 'Kreuzer Sonata', wrote this about defendants like Ferdinand: 'When people say they don't remember what they do in a fit a fury, it is rubbish, falsehood'. See also Wagenaar and Crombag (2005).

damaged in about one out of every three cases'. In the case of Ferdinand, it eventually became clear that his amnesia was feigned, but at that point, psychiatrists had already examined him and concluded that he suffered from a narcissistic personality disorder, which the court considered as a mitigating factor. A study by Pyszora, Barker and Kopelman (2003) further underlines this point. In their sample of 207 criminals who had been sentenced to life imprisonment, 59 (29 %) individuals claimed or had claimed to be amnestic for their crime. Those with amnesia claims more often had a psychiatric report prepared pre-trial and more often had undergone CT or MRI examination (see below) than those without amnesia claims. On a related note, those with amnesia claims more often used the defence of diminished responsibility or lack of intent during trial than did those without amnesia claims, who more often relied on an alibi defense.

Third, even when defendants are eventually convicted, claiming amnesia confers an advantage: it allows them to avoid painful memories of the crime and it gives them an excuse not to speak about their crimes with social workers or therapists (Marshall et al., 2005). Indeed, from this perspective, amnesia claims are a risk factor for recidivism. Christianson and Merckelbach (2004) briefly address several cases in which amnesia claims were associated with re-offending. Data collected by Cima, Nijman, Merckelbach, Kremer and Hollnack (2004, p. 220) showed that, in their sample of 308 forensic male patients, claims of amnesia were typical among older patients with a long criminal career. This led the authors to conclude that 'such claims are the product of a learning process. Thus, it may well be that those who are familiar with the penal system have experienced the advantage of claiming amnesia' (Cima et al., 2004, p. 220).

RED-OUTS AND DISSOCIATIVE AMNESIA

That those who claim amnesia for their crime feign a memory disorder is one possible interpretation of the phenomenon. Researchers differ in the extent to which they believe that this interpretation may account for all or a large majority of crime-related amnesia cases. For example, Pyszora and co-workers (2003) found that only a small minority (7 %) of prisoners claiming amnesia denied their offence. In fact, denial was significantly less likely in prisoners than in control prisoners (7 % versus 37 %, respectively). The authors wrote: 'We would argue that this provides evidence against the commonly held assumption by police, the legal profession, prison staff, and clinicians that a claim of amnesia is used as an easy way of denying the offence or responsibility

of it' (Pyszora et al., 2003, p. 487). A similar line of reasoning can be found in Kopelman (1995, p. 435), who opines that many crime-related amnesias are authentic because in such cases, it is often the defendant himself who reports the crime to the police. As Kopelman (1995, p. 435) states: 'This makes an account of amnesia as simulation to avoid punishment seem less plausible'. However, the argument is not as compelling as it may seem at first sight. Consider the case of Ferdinand: there was an abundance of technical and eyewitness evidence pointing to him as the murderer. For him, it would have made no sense to deny that he killed the father of his ex-girlfriend. In his situation, it was far better to tell the dissociative amnesia story, so as to set into motion the psychiatric expert cascade. There is no empirical evidence showing that claims of crime-related amnesia are typical for cases such as Ferdinand's, i.e., cases in which the technical evidence against the defendant is overwhelming. Yet, there are indirect indications from Pyszora et al.'s (2003) study, in which alibi evidence was found to be significantly less likely in amnesia than in control cases.

A second interpretation of crime-related amnesia is that it is a genuine memory deficit resulting from the stress and extreme emotions that perpetrators experience when they commit a crime (e.g., Arboleda-Florez, 2002). The idea here is that an intense provocation (i.e., a 'psychological blow') caused the defendant to act like an automaton and that he committed his crime in this automatic (i.e., unconscious and/or uncontrollable) state. Closely related to this interpretation is the notion that perpetrators of violent crimes may be traumatised by their own actions and that, through repression or related mechanisms (e.g., dissociation), they later find it difficult to retrieve memories of the crime. Consider Ferdinand's case. If there had not been the eyewitness testimony of his friend implying that Ferdinand remembered the details of the crime, we–as the psychiatrists did in this case–would have focused on Ferdinand's self-report about the extreme rage that he felt when his father provoked him by laughing arrogantly. Ferdinand said that he had never felt such an intense rage before, and this description is reminiscent of what Swihart, Yuille and Porter (1999) have dubbed 'red-outs', i.e., episodes of explosive aggression during which the individual is said to lose control and for which he/she later claims to be amnestic. In this context, authors commonly use the terms functional or dissociative amnesia to stress that the amnesia claim is authentic and has a psychological causation (e.g., Porter, Birt, Yuille & Hervé, 2001). Again, the idea behind this term is long-standing in forensic psychiatry. For example, in what seems to be the first systematic empirical study on amnesia and crime, Hopwood and Snell (1933) examined the cases of 100 prisoners who had claimed amnesia during

their trials. The authors argued that amnesia claims were typically raised in highly emotional murder cases and that the large majority of them (78%) were bona fide, in the sense that they were the result of repression or dissociation. A similar view is echoed in a study by Grierson (1936, p. 369), who stated about repression: 'this mental mechanism is most frequently met with in cases of serious crime. The extent of the amnesia from repression varies; it may cover the crime only, but more frequently it extends to periods before and since that experience'.

There are, however, more recent theoretical assumptions that bear relevance to dissociative amnesia in offenders and the way in which extreme emotions may affect memory encoding. Horowitz (1978) argued that unassimilated traumatic experiences are stored in a special kind of 'active memory', which has an intrinsic tendency to repeat the representation of contents. Only when the individual develops a new mental 'schema' for understanding what has happened is the trauma resolved. Other researchers claim that traumatic memories lack verbal narrative and context and that they are encoded in the form of vivid sensations and images. For example, some neuroimaging studies of trauma patients have suggested that Broca's area, responsible for translating personal experiences into communicable language, is inactivated Rauch, van der Kolk, Fisler, Alpert, Orr, Savage, Fischman, Jenike and Pitman, 1996, see also Chapter 6 in this volume). Furthermore, van der Kolk (1988) argued that in states of high sympathetic nervous system arousal, the linguistic encoding of memory is inactivated and the central nervous system reverts to the sensory and iconic forms of memory that predominate in early life. Thus, when imagery and bodily sensations become dominant and in the absence of verbal narrative, traumatic memories resemble the memories of young children. Moreover, Payne, Nadel, Britton and Jacobs (2004) argued that traumatic stress impairs the function of the hippocampus and the formation of memories. This causes stressful events to be encoded in a 'fragmented' manner. 'At the same time, emotion works (via the amygdala) to promote memory for the gist of an event, leading to well-encoded memories for the thematic content of an emotion event. . . ' (Payne et al., 2004, p. 44). Along similar lines, Buchanan and Adolphs (2004) emphasised the role of the amygdala in the enhancement of memory for emotional events, during the period of memory consolidation as well as during retrieval of emotional memories.

There are still other reviews that reiterate the point that crime-related amnesia might be a genuine condition resulting from an avoidant style of coping with the extreme emotions involved in committing a crime. For example, in his scholarly review, Moskowitz (2004,

p. 35) remarks that 'although some amnesia claims are undoubtedly simulated, it appears unlikely that the majority are'. Evidence for this position comes from two sources. To begin with, studies suggest that prevalence rates of Post Traumatic Stress Disorder (PTSD) symptoms in homicide perpetrators are probably higher than has previously been thought (e.g., Pollock, 1999). The large majority of homicide perpetrators suffering from PTSD (95 %) have been involved in reactive (i.e., provoked and unpremeditated aggression) rather than instrumental (i.e., goal-directed) violence and the condition is rare, if not absent in perpetrators who have psychopathic traits and who have been involved in instrumental violence (Pollock, 1999).[3] In keeping with this, Christianson and Von Vogelsang (2003) found, in their study on homicide cases, that crime-related amnesia claims were more typical for reactive homicide cases (56 %) than for instrumental homicide cases (30 %). Another line of research providing tentative evidence for the concept of dissociative amnesia concerns studies examining the prevalence of dissociative symptoms in criminal and forensic samples. There is growing evidence that these samples exhibit heightened levels of dissociative symptoms (e.g., derealisation experiences; see review by Moskowitz, 2004). For example, Spitzer, Liss, Dudeck, Orlob and co-workers (2003) found, in their group of 57 forensic patients incarcerated for violent crimes, sexual crimes, or arson, that 25 % had clinically raised scores on the Dissociative Experiences Scale (Bernstein & Putnam, 1986; DES). In a similar vein, Cima, Merckelbach, Klein, Schellbach-Matties, and Kremer (2001) noted extremely high DES scores in their sample of 30 forensic patients. However, Cima and co-workers also documented that these heightened DES scores were related to abnormal frontal functioning rather than traumatic experiences. This is consistent with a study by McLeod, Byrne and Aitken (2004), who found that male prisoners' raised levels of dissociative symptoms were not related to the violence of their crimes.

While from a clinical stance red-outs or functional/dissociative amnesia does have some intuitive appeal, these concepts seem to fly in the face of well-established memory principles. For the perpetrator,

[3] We address the issue of PTSD in criminal populations because one symptom of PTSD is thought to be the inability to remember important aspects of the trauma. On the other hand, Collins and Bailey (1991) demonstrated in their study that prison inmates suffering from PTSD report symptoms like nightmares, hypervigilance and insomnia, but not amnesia. Clearly, the precise connection between PTSD and claims of crime-related amnesia deserves further study. Note, however, that so far, studies have been unable to document a connection between dissociative or PTSD symptoms and claims of complete amnesia for crimes (McLeod et al., 2004; Rivard, Dietz, Martell & Widawski, 2002).

a violent crime is (1) an act, (2) that is carried out by the perpetrator himself and (3) that, at least in cases of reactive violence, the perpetrator feels remorseful about later. Against this background, crime-related amnesia is an unlikely outcome, given that an extensive body of memory literature shows that (1) people remember acts better than other types of information (e.g., words; action-superiority effect; Engelkamp & Zimmer, 1994), (2) people remember their own acts far better than acts they only have witnessed (self-reference effect; Symons & Johnson, 1997) and (3) people have recurrent thoughts about memories they try to suppress because they feel ashamed about them (white-bear effect; Wegner, Schneider, Carter & White, 1987).[4]

Another finding that is difficult to reconcile with the idea of dissociative amnesia is that this phenomenon appears to be rare in people who have been the victims of evidently traumatizing events (e.g., concentration camps; Merckelbach, Dekkers, Wessel & Roefs, 2003 a, b; Yehuda, Elkin, Binder-Brynes, Kahana, Southwick, Schmeidler & Giller, 1996). On a related note, eyewitnesses to extreme violence only rarely report that they are amnesic for the events they have witnessed (Porter et al., 2001). These considerations have led various authors to be critical about the assumption that dissociative amnesia is a prevalent phenomenon among traumatised individuals. In fact, some (e.g., McNally, 2003, p. 157) have gone so far as to conclude that 'the notion that the mind protects itself by repressing or dissociating memories of trauma rendering them inaccessible to awareness, is a piece of psychiatric folklore devoid of convincing empirical support'.

ORGANIC AMNESIA

A third interpretation of claims of crime-related amnesia is that they are genuine and originate from structural or transient brain damage. Here, the amnesia is the acute manifestation of brain dysfunction and, therefore, it is known as organic amnesia. An example would be the Canadian case of *Bleta v the Queen* (1964), in which a victim first hit the perpetrator on his head, who as a result sustained concussive injury. During the immediate post-injury phase, the perpetrator killed the

[4] Some authors have argued that even from a psychodynamic point of view, functional/dissociative amnesia is an improbable outcome. For example, Arboleda-Florez (2002, p. 573) concludes: 'Psychoanalytic unconscious acts, however, take place when the individual is fully conscious and is capable of registering and retaining the memory for the event: he knows the what, but fails to grasp the why. For legal purposes, psychoanalytic unconscious acts do not qualify as automatisms'.

victim. Evidence shows that in cases such as these, there is a serious probability that perpetrators acted in a state of dazed consciousness and afterwards suffer from an authentic amnesia for their violent behaviour (McCrory, 2001). It should be added, though, that in acute concussion cases, dazed consciousness and agitated behaviour resolve within 20–30 minutes post-injury. Thus, logically, the amnesia can only pertain to this relatively short time frame.[5]

When a defendant performs criminal actions without conscious knowledge, he or she is said to be in state of automatism. The notion of automatism dates back to the 19th century, when British neurologist Huglings Jackson used it to describe the bizarre behavior of patients with temporal lobe epilepsy (Kalant, 1996). In Anglo-Saxon law systems, it is common to make a distinction between two types of automatisms. One type is sane automatism, in which an external force (e.g., a severe blow to the head; injection with insulin) leads to confusion and lack of full behavioural control. The other type is insane automatism, in which an internal factor (e.g., cerebral tumor, an epileptic seizure) has these consequences (e.g., Arboleda-Florez, 2002). As Fenwick (1993) has pointed out, the distinction between sane and insane automatisms does not always make medical sense. For example, both legal and medical authors strongly differ as to whether sleepwalking violence is a form of sane or insane automatism (see also Cartwright, 2004). From a legal point of view, the distinction does matter, because a perpetrator found not guilty due to sane automatism walks free from court, whereas a verdict of not guilty due to insane automatism often results in mandatory referral to a secure hospital. However, medical and legal scholars do seem to agree that a crime committed during a state of automatism–e.g., during sleepwalking, an epileptic seizure, hypoglycemia, concussion–is difficult to remember later on.[6] That is, whenever structural or transient brain dysfunctions create a condition of automatism, organic amnesia will ensue.

[5] The issue of acute post-injury states during which an illegal act is performed for which the defendant later claims amnesia figures in a number of cases of Australian footballers who had to appear before disciplinary tribunals (McCrory, 2001). One celebrated case (2004) is that of St. Kilda tagger Steven Baker, who pleaded guilty to striking the Tigers' Kane Johnson in an off-the-ball incident. While Baker pleaded guilty, he told the tribunal he had no memory of the incident even though he said he could remember the lead-up to the incident. Video footage of the incident showed Baker run several metres to strike Johnson on the eye, while also revealing that Johnson had pushed Baker to the ground from behind just moments before the strike occurred.

[6] Many authors address the issue of alcohol or drug intoxication in the context of automatisms. Here, we do not deal with this complex legal issue. Suffice it to say that a crime-related amnesia claim on the basis of an alcohol blackout is not as plausible as it may seem. See Chapter 9 for a discussion of alcohol blackouts.

The difficulties associated with an alleged defense of automatism and a defendant's claim of amnesia are exemplified in the following case. NN, a 40-year-old man, was at a nightclub in Malmö, Sweden, together with a female friend. They had both consumed some alcoholic beverages during the evening, and NN was tipsy. Another man and his friend had approached NN a few times during the course of the evening. They were provocative, and the third time they came to NN's table they attacked him. He received several blows to the head and tried to defend himself, but was struck on the forehead with an object and collapsed to the floor. NN was under threats from a criminal gang and feared for his life. Because of these threats, he was carrying a loaded pistol. After being struck to the ground, he immediately got up and pulled his gun. The man who had struck him fled, and NN followed him, shooting after him at every opportunity until the weapon was empty The man died as a result of his bullet wounds (in the turmoil, NN also shot and seriously injured one of his own friends), and NN, who was picked up by the police minutes after the shooting, was charged with murder. He did not try to escape and he was completely unaware of what had happened or what he had done. His memory function improved when he was at the police station, but at that time, he had no real recollection of what happened immediately before, during and after the shooting. Later, NN remembered brief fragments from outside the nightclub and when he was arrested.

The medical history of NN showed that he had suffered head trauma at several times in his life, with resultant effects on memory and symptoms of epilepsy. Thus, there were reasons to suspect that the amnesia and behaviour displayed by NN in connection with the criminal event may have a neuropsychiatric basis. In connection with a single-vehicle accident in 1987, NN became disoriented and amnesic (memory loss). There were suspicions of intracranial bleeding/skull injury and epilepsy, but adequate assessment and treatment did not occur because NN left the hospital. Ten years later, in 1997, NN sought medical care for muscle spasms and in 1999, an epileptic seizure was triggered in connection with playing a home-video game; this resulted in memory loss. An EEG test was conducted in 2001, after NN's repeated attempts to receive help with memory disturbances and headaches. Note that repeated episodes of memory loss or 'blackouts' are one of the primary clinical symptoms of brain injury. The neuropsychological assessment conducted on NN also showed certain symptoms of neuropsychological dysfunction, thus indicating possible problems associated with brain injury. Thus, it is fully conceivable that a blow to the head or extreme stress could have triggered epileptogenic activity in NN, at the same time as he performed appropriate motoric

actions, but in the absence of conscious control of these actions, such that the attack on him was followed by marked anterograde amnesia. In clinical contexts, this type of epileptic attack has been established in patients using deep electrodes from the amygdala and hippocampus and has also been observed in association with fits of rage and violence. Additional factors that may have aggravated effects on NN's memory are that he, besides receiving a blow to the head and possibly experiencing epileptic activity, was also under the influence of alcohol, benzodiazepines and anabolic steroids. These substances in combination have significant deleterious effects on memorial ability. Thus, two crucial questions arise: is the case of NN a reliable example of organic amnesia and did the defendant NN have the mental state required for a criminal conviction?

Depending on the precise type of underlying brain dysfunction, the various features–e.g., length and intensity–of organic amnesia vary, but in general, they have been well-described in the literature. For example, retrograde amnesia (i.e., memory loss pertaining to the period before the head trauma) as a result of severe head trauma will gradually resolve, thereby following a pattern that is known as Ribot's law (Haber & Haber, 1998), after the 19th century French memory expert Theodule Ribot. According to this law, older memories return sooner in the weeks following the head trauma than do more recent memories, and eventually the amnesia will largely disappear and be limited to the traumatic event itself and the few seconds that preceded it. A defendant who claims severe retrograde amnesia as a result of brain trauma, but whose memory recovery does not follow Ribot's law, should be approached with respectful skepticism (Christianson & Merckelbach, 2004). As another example, in less severe cases of brain injury, there might be a post-traumatic amnesia pertaining to the period immediately after the brain trauma. However, when a defendant who sustained a mild concussion claims a post-traumatic amnesia extending over several hours, the possibility of malingering should be seriously considered (McCrory, 2001). Or consider an automatic defence on the basis of hypoglycemia: the mere fact that a defendant suffers from diabetes is insufficient to back up such a defence, as a recent meta-analysis showed that this condition is associated with only mild cognitive deficits, among which memory problems are not the most prominent (Brands, Biessels, de Haan, Kappelle & Kessels, 2005). Admittedly, in rare instances, complete anterograde amnesia might be associated with acute hypoglycemia (Strachan, Deary, Ewing & Frier,

2000), but in such cases coma is likely to occur, which is not the best condition for committing a crime.[7]

Organic amnesia requires that the defendant be currently suffering or has been suffering from a brain dysfunction. Even when this can be shown to be the case, the causal relationships between brain dysfunction, the criminal act and subsequent amnesia need not be obvious. A fine illustration is provided by the case of *R. v Chhoa* (1998), in which the defendant was accused of having been involved in a fatal automobile accident. Chhoa claimed to be amnestic for his role in the accident and this claim was in itself plausible. However, it was unclear whether his amnesia was the result of a head injury that he had sustained during a fight that took place immediately before the accident or whether it was the result of the automobile accident per se. In the first case, there would have been room for an interpretation by which concussion led to an automatic state, which in turn led to reckless driving. In the latter case, the most plausible interpretation would be that the accused was fully functional and therefore responsible when his car crashed into a bridge abutment, leading to the death of two of his friends (Arboleda-Florez, 2002).

In the case of NN, the degree and character of his memory loss suggest organic amnesia. NN displayed limited retrograde amnesia, but pronounced anterograde amnesia, which can be observed in cases of cranial trauma and epileptic attacks. The fact that NN showed islands/fragments of memory, some–though limited–recovery of detailed information and that he had a history of memory loss suggests that his amnesia was genuine. Moreover, given that NN, in the aftermath of the violence perpetrated by him, did not try to hide his crime or flee from the scene of the crime and was not conscious of his violent actions, but instead directed attention to his own injuries, is in accordance with a state of disorientation following an epileptic seizure. Accordingly, the defence argued for a state of insane (epileptic) automatism, and that his amnesia was relevant in showing that the defendant did not know what he was doing as a result of neurological disease. In court, the second author supported the possibility that NN had a genuine amnesia and committed his crime in a state of automatism caused by a subclinical seizure (a possibility that had been ignored in the psychiatric evaluation of NN). The appellate court,

[7] An illustrative case is *R. v Quick* (1973), in which the defendant, a diabetic, visited his ex-girlfriend's new boyfriend. While there, he felt unwell. He took a mixture of sugar and water, but ate nothing. Ten minutes later the defendant struck the victim on the head with an iron bar. The defendant later claimed to have been unable to control his actions because he had been hypoglycemic. Quick also claimed amnesia for the incident. See Arboleda-Florez (2002) for more recent cases.

however, ruled that NN was conscious of his actions, that he acted highly rationally and on the basis of definite goals, e.g., '. . . in that he carried a loaded pistol, followed and shot his antagonist . . . in that almost all shots fired hit the antagonist'. NN was convicted of murder and sentenced to 10 years in prison.

Turning back to the case of Ferdinand, with which we began this chapter, there was no indication that he suffered from a concussion, epileptic seizure, hypoglycemia or sleepwalking episode when he stabbed his ex-girlfriend's father. Nor had he consumed alcohol or drugs. Ferdinand himself used a video metaphor to describe how he reacted to what he considered to be the starting point of his amnesia, viz. the father's arrogant laughing: 'it was as if someone pushed the fader button; from that moment on, I heard nothing'.

EVALUATING AND TESTING

In the case of Ferdinand, the expert psychiatrists were quick to assume that Ferdinand's amnesia was a dissociative reaction to a psychological blow, the blow being the arrogant laughing of the father. Curiously enough, the experts did not ask themselves whether it was reasonable to assume that the arrogant laughing could qualify as a psychological blow to someone like Ferdinand. Ferdinand was very well trained in Thai fighting and, as a matter of fact, he had won the Dutch Thai boxing champions league for three consecutive years. It is difficult to see how an arrogant laugh could produce a severe psychological blow to someone with this background. One is reminded of Rosen's (2004) critical discussion of how, in clinical practice, concepts like psychological trauma and stress have been expanded and trivialized so as to accommodate relatively minor troubles. In a thoughtful review, McSherry (2004) summarises data showing that the provocation defence is generally raised by men who kill others in the context of a relationship breakdown. This author suggests that the doctrine of provocation is predominantly used to excuse male anger and violence against women and their families. What all this implies is that in Ferdinand's case–as in many Dutch court cases in which amnesia claims surface–the expert psychiatrists were not sensitive to other interpretations of his amnesia claim. This is also shown by their expert testimony before court, which communicated the message that amnesia points to automatism during the crime. Many authors have explained why this proposition is logically flawed: 'whereas there is no automatism without amnesia, not

every case of amnesia amounts to automatism' (Arbodela-Florez, 2002, p. 573; see also Kalant, 1996; Yeo, 2002).[8]

That the expert psychiatrists in the case of Ferdinand ignored the possibility that his amnesia claim might originate from other factors than a dissociative reaction (e.g., malingering) is further evinced by the lack of thorough neuropsychological testing in this case. As part of the psychiatric evaluation, Ferdinand was given an intelligence test and a couple of simple self-report scales, but there was no formal testing of his tendency to produce bizarre or unlikely symptoms. Over the past ten years or so, neuropsychology has made great progress in developing valid tests to detect malingering and insufficient effort (see for a review, Larrabee, 2005; see also the chapter by Jelicic & Merckelbach in this volume). Therefore, we agree with Denney and Wynkoop (2000, pp. 810, 811), who in their review concluded that 'the need to assess malingering in all forensic evaluations cannot be overstated . . . ' and 'failure to address malingering in forensic neuropsychological evaluations could reflect an inadequate, even incompetent evaluation'.

The failure to address the issue of malingering in Ferdinand's case might reflect the expert psychiatrists' assumption that the base rate of malingering is zero. This assumption was, and to some extent still is, an opinion that is fashionable in clinical quarters (e.g., Gerson, 2002). However, the available statistics indicate that, in the criminal arena, malingering of cognitive deficits such as amnesia is anything but rare. Thus, for example, in their survey of 131 neuropsychological experts, Mittenberg, Patton, Canyock, and Condit (2002) found that their respondents estimated the base rate of malingering in criminal cases referred to them to be in the range of 11–20 %. Likewise, Frederick and Denney (1998) estimated the base rate of malingering–including feigned amnesia–in a sample of 893 defendants referred for pre-trial evaluation to be on the order of 12 %. Additionally, there are good reasons to believe that even trained forensic experts miss 50 % of malingerers when they exclusively rely on patients' self-reports

[8] To complicate matters even further, some authors (Yeo, 2002) have argued that an impaired consciousness and/or a memory deficit is not essential for a state of automatism to exist. By this view, lack of control rather than lack of consciousness is the defining feature of automatism. The problem with this approach, however, is that it assumes that normal human beings are permanently in full control of their behaviour. As McSherry (2004) points out, the voluntary-involuntary dichotomy common in the legal context is foreign to psychological thinking. After all, most psychologists agree that 'human behavior is the result of rule-following by our automatic brains . . . A key feature of these rules is that they operate, for the most part, outside of our conscious awareness. That is to say, we follow the rules without really thinking about it, or more to the point, without choosing to' (Waldbauer & Gazzaniga, 2001, p. 363).

and have no access to the outcomes of appropriate psychological tests (Rosen & Phillips, 2004; Rubenzer, 2004).

Admittedly, the prevalence rates cited above pertain to malingering in general. We do not know what the true prevalence of feigned amnesia in the criminal arena is and we will never know, simply because it is impossible to establish with sufficient accuracy the ground truth. As Faust (1995, p. 255) said: 'Doctor each time you've been fooled, you don't know it, do you?'. But what we do know from several experimental simulation studies is that when normal participants are instructed to play the role of a murderer who is confronted with abundant evidence during interrogation, the most frequently chosen strategy of these participants is to claim amnesia for the criminal act and to attribute it to an internal force (i.e., an alternate personality) that they cannot control (Spanos, Weekes & Bertrand, 1986; Rabinowitz, 1989). We also know that offenders are highly motivated to forget their offences. When convicted homicide and sexual offenders serving their sentences in Swedish prisons were asked whether they had ever felt that they truly wanted to forget the crime event, 53 % of the homicide offenders and 35 % of the sexual offenders answered in the affirmative (Christianson, Bylin & Holmberg, 2005). When asked about their estimation of how often offenders generally deliberately feign loss of memory for the crime in order to avoid conviction, only 2 % of the homicide offenders thought that perpetrators of this type of crime never feign memory loss to some degree (see also below).

PSYCHOPATHY

Clearly, people differ in their ability to feign a disorder. Porter and co-workers (2001) argued that false claims of amnesia might be especially prominent in the group of psychopathic perpetrators. After all, malingering amnesia is a form of deception and deception is a hallmark feature of psychopathy.[9] Furthermore, due to their emotional deficiency, psychopaths are immune to intensive emotional stress and so genuine dissociative amnesia is an unlikely outcome in psychopathic offenders.

[9] It must be acknowledged, though, that empirical support for the psychopathy-malingering connection is mixed. For example, relying on a small sample of prison inmates, Poythress, Edens and Watkins (2001) found no significant correlation between a psychopathy scale and scores on instruments measuring the tendency to exaggerate or fabricate symptoms. On the other hand, there is evidence that people with psychopathic personality features exhibit an increased willingness to engage in feigning and deception across a broad range of forensic contexts (Edens, Buffington & Tomicic, 2000).

In an unpublished study, a sample of 37 male prison inmates were asked what they thought about the plausibility of crime-related amnesia claims and whether they themselves had amnesia for their crimes.[10] The inmates were also asked to fill out the Revised Gudjonsson Blame Attribution Inventory (Gudjonsson, 1984), a measure that explores to what extent individuals feel remorseful about their crime and whether they have a tendency to attribute it to external or internal factors. The large majority (70 %) of the inmates had committed violent or sexual crimes. Interestingly, while 23 out of 37 (62 %) inmates knew someone who claimed amnesia for his crime, only seven inmates (19 %) believed that these claims were bona fide. On the other hand, 10 inmates (27 %) said that they themselves had genuine amnesia for the crime for which they had been sentenced to jail. This is an interesting asymmetry: inmates are more skeptical towards others raising amnesia claims than they appear to be when they themselves raise such claims. Of course, this could be the result of a lack of self-knowledge, but another possibility is that the asymmetry reflects psychopathic individuals' familiarity with their own and others' deceptive strategies. Interestingly, a robust correlation was found ($r = -.52$) between the tendency to claim amnesia and a lack of remorse about the crime. All in all, this shows that in crime-related amnesia cases, experts are well-advised to include formal tests of psychopathy, precisely because 'reports of dissociative amnesia from psychopathic offenders are very likely to be fabricated' (Porter et al., 2001, p. 37).

What about Ferdinand? In his case, the court-appointed experts not only failed to include tasks and tests to assess malingering, but they also overlooked the possibility of employing standard psychopathy measures (e.g., the Hare Psychopathy Checklist-Revised; Hare, 1998). In Ferdinand's case, it would have been informative to use psychopathy measures, if only because the experts were unanimous in their impression that Ferdinand was a charming, intelligent and articulate person. Also, the experts knew that Ferdinand had lied to them about his criminal record: Ferdinand said that he had one previous conviction when, in fact, the official documentation showed that he had at least four previous convictions. Similarly, Ferdinand told different stories about why he had gone to the house of his ex-girlfriend's parents. To his friend, he admitted that he wanted to intimidate the parents and their daughter. To the experts, he said that, initially, he wanted to return the knife to show his ex-girlfriend that 'she need not be afraid

[10] These data come from an unpublished M.Sc. thesis (Schrijen, 2001).

of me'. Finally, during the court proceedings, the judge noted that the defendant 'seems to be more concerned with his own future than he is with the grief and pain of the family'. Ferdinand's pattern of behaviour is consistent with key features of the psychopathic personality, notably superficial charm, manipulative behaviour and lack of remorse. To be sure, it is only with specialised testing that one could have determined with sufficient confidence whether Ferdinand was a psychopath. But even in the absence of such tests, it is difficult to understand why the psychiatric experts accepted Ferdinand's stories about his amnesia, the knife and his unhappy childhood at face value. Again, given his behavioral characteristics, the experts should have taken the possibility into account that Ferdinand fabricated a story to cover up his premeditation and to invoke something that, at least according to Hollywood standards, looks like a psychological blow–the father's arrogant laughing reminding him of his own abusive father. Ferdinand's narrative might be a good example of how psychopaths 're-frame' the level of instrumentality of their crimes by minimising the degree of premeditation and exaggerating the victim's role in, and the spontaneity of, the offense (see Porter et al., this volume).

BRAIN AND MIND WORDS

In what is probably one of the most thorough reviews on the issue, Kopelman (2000) reminds us that the three types of amnesia–malingered, dissociative and organic–can best be seen as end-points along a continuum rather than as highly discrete categories. Accordingly, this author emphasises the overlap and dynamics that might occur between the amnesia types. An example would be the individual who previously experienced a transient organic amnesia as the result of head injury and who subsequently, when faced with a social dilemma, draws upon this experience to simulate amnesia. Kopelman's point bears strong relevance to the issue of crime-related amnesia. For example, a recurrent finding in the literature on crime-related amnesia is that offenders who raise amnesia claims more often have substance abuse problems than do offenders who do not make such claims (e.g., Cima et al., 2004; Hopwood & Snell, 1933; Pyszora et al., 2003). One interpretation of this is that offenders claiming amnesia are familiar with memory problems due to intoxication and use this experience strategically when confronted with the forensic evidence against them. Ferdinand's career as a Thai boxer is not without significance in this context. Studies show that severe head injuries leading to knock out are quite common in amateur and professional Thai boxers

(Gartland, Malik & Lovell, 2001). Thus, there can be little doubt that Ferdinand was familiar with the phenomenon of knock out.

Pyszora et al. (2003) noted that prison inmates who had claimed amnesia for their crimes were more likely to have had CT or MRI scans performed than were those who had not made such claims (the proportions were 11% and 2%, respectively). With MRI facilities now being widely available, we may expect that in the years to come brain scanning will be a standard procedure in crime-related amnesia cases.[11] While some authors are enthusiastic about this development, arguing that 'brain words can be more precise than mind words' (Fenwick, 1993), we feel that it is of some concern. Plainly, coloured PET or MRI scans have a seductive power in the courtroom (Kulynych, 1996), because they purportedly present a direct picture of the brain. However, these are, it fact, highly reconstructive images, depending on a series of technical steps each of which can be manipulated (Reeves, Mills, Billick & Brodie, 2003).

Assume, for example, that Ferdinand's lawyers had found a radiology department willing to make some scan images of Ferdinand's brain with the department's MRI machine. Giving his Thai boxing background, chances are good that the experts would have found frontal abnormalities, bilateral parietal decrements, ventricular enlargements and so on, because every brain that is scanned shows some form of 'irregularity'. But, then, the question arises of how such brain words may shed light on the issue of whether Ferdinand was unaware of or not responsible for killing his ex-girlfriend's father. On the basis of current scientific knowledge, we would argue that scanning evidence has limited evidentiary value in amnesia cases. We concur with Reeves et al. (2003, p. 94) who argued that 'to date, a functional deviation shown by imaging has never been causally associated with an isolated, complex behavior (including, but not limited to, assault, rape, and murder)'.[12] In other words, it would be a huge forensic leap of faith to argue, on the basis of a deviant imaging picture, that a defendant must have an authentic amnesia. Clearly, one of the

[11] For example, Ornish (2001) describes how one psychiatry department's scanning machine was financed by running the machine for lawyers who sought expert testimony about the brains of their clients.

[12] We do not deny that the literature offers exciting ideas about the neurobiological basis of crime-related amnesia. For example, Evans and Claycomb (1999) found, in their EEG study on six patients with dissociative amnesia for their violent behaviour, that the patients exhibited heightened alpha power at the frontal sites. The authors speculate that this EEG pattern reflects susceptibility to trance states. As is true of many such studies, the empirical merits of this speculation are, as yet, unknown: controlled studies including various reference groups (e.g., nonviolent participants) have not been conducted.

greatest problems in this regard is that 'the most common cause of brain atrophy is staying alive (aging)' (Lees-Haley, Green, Rohling, Fox & Allen, 2003, p. 589).

WHAT CAN BE LEARNED?

Let us first point out that not everything went wrong in Ferdinand's case. For example, the psychiatrists did not use diazepam or a related drug to reactivate Ferdinand's memories of the crime. While this strategy is recommended by some clinicians as a safe intervention for memory retrieval in amnestic patients (Ballew, Yasser Morgan & Lippmann, 2003), it is useless at best and dangerous at worst.[13] In his review, Piper (1993) concluded that truth serum drugs have a memory-distorting effect, eliciting confabulations and fantasies in people with memory complaints (see, for an example, Glisky, Ryan, Reminger, Hardt, Hayes & Humbach, 2004). This is not to say that therapeutic interventions to 'recover' memories in offenders claiming amnesia should never be used. As a matter of fact, such interventions might be important in sensitizing offenders to treatment. Marshall and co-workers (2005) proposed a series of face-saving techniques and found that these techniques produced a miraculous recovery of amnesia in the large majority (73 %) of offenders claiming amnesia.

Having said this, experts who have to evaluate claims of crime-related amnesia can learn the following lessons from the obvious errors made in Ferdinand's case as well as in the case of NN:

(1) Experts should ensure that they have access to the complete record of the defendant. In particular, third-party eyewitness testimonies about the defendant's behaviour before and after the crime might be informative.
(2) Experts should have access to collateral sources that might provide them with crucial information about the defendant's background.
(3) Experts should not take the defendant's self-report about his memory complaints at face value. That is, psychological testing of memory functioning is essential.
(4) Experts should routinely use appropriate tests and tools to evaluate the possibility of malingering.
(5) Experts are well advised to consider the medical records of the defendant critically and to ask themselves whether the amnesia

[13] Much the same holds, of course, for hypnosis. See Kebbell and Wagstaff (1998).

claim is consistent with well-established facts about organic amnesia (e.g., time frames, Ribot's law).

(6) Experts should not use PET, MRI or EEG data as a starting point for a forensic leap of faith.

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QUERIES TO BE ANSWERED BY AUTHOR (SEE MARGINAL MARKS)

IMPORTANT NOTE: Please mark your corrections and answers to these queries directly onto the proof at the relevant place. Do NOT mark your corrections on this query sheet.

Chapter 7

Q. No.	Pg No.	Line No.	Query
AQ1	166, 172, 181	42, 19, 06	Sense Not clear Please Check.
AQ2	186	26	As Per the Consistency we have corrected the author Initials.Please Check whether is this OK.
AQ3	188	40	Please Provide Reference Ranges.