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CHAPTER 16

Misapplication of Psychology in Court

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Expert witnesses exist to help the fact finder – be it judge or jury – with the decisions that have to be made. That seems to be a simple and quite obvious statement, but in this chapter I will try to demonstrate that this may have various implications; some of the paradoxical kind. I start with the bottom line of this Chapter: in many cases the expert can only be of any help if they assume the role of fact finder in the case. Many of the issues discussed below also apply to expertise in other fields than psychology, but I limit myself to psychological issues.

THE COURT AND THE SCIENTIST

In most criminal trials two main decisions have to be made. It has to be decided whether or not the defendant committed the crime he is accused of and then it has to be decided what to do with him. These are not scientific decisions of any kind, but practical judgements to solve a practical matter in society. Nevertheless, these decisions have to be based as much as possible on what happened in the past in relation to the crime and also as much as possible on what we know about the accused. To serve that purpose, criminal trials are designed to reduce uncertainty to an extent that a decision can be based on more or less solid grounds.

Most criminal cases are relatively routine matters in this respect. A reasonable estimation is that these routine cases comprise some 88 % of the serious cases that are handled by courts (Crombag, van Koppen and Wagenaar, 1994, pp. 20 ff). However, a non-negligible number of cases pose problems of decision making. The problems more often than not fall outside the domain of the law. Then, the defence, the prosecution or the court can turn to an expert to shed some light on the matter.

An expert is usually a scientifically trained individual who is expected to give an 'objective' judgement on the matter put before him that would lead to an uncontested true fact. That is a paradox, because scientists are not the kind of people who are in the habit of producing certainty. In days of old, the idea that scientists produced certainty was indeed

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entertained, but philosopher Karl Popper showed us that the scientific endeavour is in fact quite different (Popper, 1934, 1968). Popper learned that we only have hypotheses and theories that are verified or falsified by sound empirical research. A hypothesis or theory that is supported with empirical research is only true temporarily and forms no more than a proposition for continued discussions amongst peers. On logical grounds a hypothesis can only be supported or falsified, but never be proven right. Scientific 'facts', then, are no more than interpretations of observations on which there is a certain agreement amongst the participants in the relevant scientific field. One step further, the scientific industry can be regarded as a social field (Hofstee, 1980) where scientific 'facts' are not more than issues on which the peers agree on at a certain point in time, until somebody comes up with a better theory. Contrarily, in criminal trials a judgement has to be made based on the available evidence. That judgement should be final and uncontested. Terminating social conflicts with a court ruling is in the interest of victims, society at large, but also in the interest of the accused. Final court verdicts should end discussions once and for all. Thus, the scientific endeavour is not aimed at producing the kind of certainty the judge or jury requires.

ASSESSING ALLEGATIONS OF SEXUAL ABUSE

In criminal cases, not only is a higher level of certainty required than the scientist often can provide, but it should also concern the specific case. Scientists, however, are in the habit of producing statements on general states of affairs.

Let me give an example: the experiment in psychology. We want to know whether sexually abused children display distinctively different behaviour, when playing with anatomically correct dolls, than children that have not been abused (see for instance Cohn, 1991; Faller, 2005; White *et al*., 1986). Indeed, we find that between the experimental group, the abused children, and the control group, the nonabused children, a difference is found: the abused children, on average, display more behaviour with the dolls that can be interpreted as sexual. The difference is such that we conclude it cannot be attributed to chance, so we call the difference significant. That is a sound conclusion in the domain of psychology; the study is ready to be published in an academic journal.

Is all this useful for the fact finder in a criminal trial? No, and for various reasons. First, the difference in playing between the two groups may be significant, but that does not mean it is a great or even a meaningful difference. Second, the fact finder is not interested in differences between group means, but in something completely different. The judge or jury wants to know, with as much certainty as possible, whether alleged victim Claudia has been abused by her uncle Bert. Not: does sexual abuse cause different playing behaviour with dolls, but: can we deduce from Claudia's playing behaviour that she was abused sexually (see on this problem also Rassin and Merckelbach, 1999). For that forensic use, anatomically correct dolls fail dramatically, for instance because many nonabused children are curious and also put their finger in the doll's vagina.[1] An expert should discuss this matter in his report or testimony at trial, but he can only do so if he is sensitive enough for the differences between psychological research and the problems faced by the fact finder.

[1] The Dutch Supreme Court (Hoge Raad) saw this problem and banned the use of these dolls from forensic use. See Hoge Raad 28 February 1989, *Nederlandse Jurisprudentie* 1989, 748 (*Anatomically Correct Dolls*).

Experts are often asked to apply scientific insights to the specific case (see the taxonomy by Gross and Mnookin, 2003). That could be more helpful to the fact finder in many more cases. Popper argued that his principle of falsification – that a hypothesis is never proven, but can only be falsified – only holds for general statements. It would not hold for specific statements. He was right, in the sense that many simple phenomena – such as the height of someone or their hair colour – can be established with little or no doubt. But as soon as things become somewhat more complicated, one is confronted with the same problems. Assessing whether a child has been sexually abused certainly falls into the more complicated category.

A better method than anatomically correct dolls, for establishing whether a child has been sexually abused or not, seems to be Statement Validity Analysis (SVA) (see Horowitz, 1991; Lamb and Sternberg, 1997; Undeutsch, 1983; Yuille and Cutshall, 1989). I write 'seems' because psychologists who use this method typically overstate their case. SVA consists of two parts: first Criteria Based Content Analysis (CBCA) (see Rassin, 1999; Vrij, 2005) to assess the interview of the alleged victim and, second, the Validity Check List (VCL) to assess characteristics of the child and the rest of the case. With CBCA the interview is analysed using 19 criteria to draw conclusions on the believability and validity of the statement (see for a fuller description Sporer, 1997; Vrij, 2005). The method, however, has been much criticized (see for instance Horowitz *et al*., 1997; van Koppen and Saks, 2003; Lamb and Sternberg, 1998; Rassin and Van Koppen, 2002; Ruby and Brigham, 1997). The gist of the argument is that CBCA has some scientific potential but has too low a diagnostic value to be used in a forensic setting. Ruby and Brigham summarize the state of affairs as follows:

> The CBCA may have the potential to enhance the objectivity of the investigation and prosecution of allegations of child sexual abuse. It might also aid in protecting those who are unfortunate enough to be at the receiving end of an unfounded child sexual abuse allegation. But much more empirical validation work is necessary before it can adequately fulfil such a role. (Ruby and Brigham, 1997, p. 729)

Again, the CBCA is a valid method in the psychological domain, because it can be used to discriminate between the statements of sexually abused children and nonabused children. Some argue that CBCA is valid enough only if it is supplemented with the VCL. Raskin and Esplin (1991a) propose that a useful statement assessment should be more than just scoring a statement of the 19 criteria on the CBCA (see also McGough, 1991; Raskin and Esplin 1991b; Wells and Loftus, 1991). In addition, information must be gathered outside the interview. Since children differ in their cognitive abilities and these differences influence the scoring of the criteria, information must be collected on these abilities and other personality characteristics of the interviewee. Also alternative hypotheses, on the genesis of the story as told by the child, must be investigated. The story may be in error because of earlier suggestive interviews by parents or others, by deficient memory of the child, or by other pressures on the child. For evaluating the latter elements, the VCL has been developed. The VCL consists of four clusters:

A. Psychological characteristics of the child
B. Interview characteristics of the child and the examiner
C. Motivational factors relevant to the child and others involved in the allegations
D. Investigative questions regarding the consistency and realism of the entire body of data.

The usefulness of the VCL, however, is currently unsupported; studies are very scarce and do not exceed casuistic illustrations (see Endres, 1997). Thus, it is not clear which role should be assigned to the psychological characteristics or motivational factors of the child in evaluating the veracity of the statements made. The VCL is neither based on sound empirical research (see Horowitz *et al*., 1997), nor is it limited to psychological insights. This is particularly troublesome because, since no clear-cut scoring scheme exists for the CBCA or the VCL. This leaves ample room for idiosyncratic interpretations by the expert psychologist and for other unwarranted influences in the expert's opinion (see for instance Merckelbach, Crombag and van Koppen, 2003; Risinger *et al*., 2002).

FACT FINDERS AS SCIENTISTS

Evaluating the meaning of expert testimony is not a straightforward task for the judge or jury. They are confronted with a paradoxical situation. The expert was hired, in the first place, because the fact finder does not know enough of the subject matter. After an expert has given testimony, however, the same fact finder has to evaluate whether the testimony is strong enough to serve as evidence. This problem is even enhanced, when two or more experts produce conflicting testimony. An extreme example was given by Fisher and Whiting 1998. A mother reported that her ex-husband had sexually abused their three-year-old son. The grandmother and aunt were present when the boy told this, and they confirmed the mother's story. Several experts gave their learned opinion on the case. One expert said no firm conclusions were possible on the veracity of the boy's statement. A second concluded that the boy was a victim of oral genital contact and masturbation. A third expert said that the account, by the boy, was implanted and advised that he be protected from his mother. Finally, the fourth expert was of the opinion that the boy could not have been abused by his father, because daddy did not fit into the profile of a paedophile. There is no way a fact finder could choose between these expert opinions, without a thorough knowledge of the field.

In its decision on the CBCA, the Dutch Supreme Court ruled that, in these kinds of situations, the court has to explain why it follows the testimony of one expert and rejects the testimony of another (*Hoge Raad 30th March 1999, Nederlandse Jurisprudentie 1999,* 451, CBCA).[2] Experts sometimes differ, in their opinions, because one is a good scientist whilst the other is a quack. More often, however, differences of opinion are inherent in the operations of the scientific community. That community lives by differences of opinion; it is current and future debate and discussion that drives progress in the field. Hence, the experts are asked to generate certainty but subsequently confront the fact finder with differences in opinion and a scientific discussion. My experience in cases, where other experts were also consulted, is that we soon have interesting discussions that, also soon, are hardly relevant to the case at hand. Then the fact finder has to choose between these conflicting opinions. The fact finder is, in principle as a nonexpert, not able to make that judgement.

The judge or jury nevertheless bears the sad fate that a choice has to be made. Lacking subject knowledge, the evaluations has to be done in an indirect manner. In the USA for

[2] See, for a comparable American case: *New Jersey* v. *Cavallo*, 88 N.J. 508, 443 A.2d. 1020 (1982), in which the courts are given the task – in cases of doubt about a statement by an expert – to ask for a second expert or, in cases where experts differ, to consult scientific literature of legal precedents. Of course this does not solve anything.

many decades, the precedent for this evaluation was the so-called Frye-criterion (*Frye* v. *United States,* 293 F. 1013, D.C. Cir., 1923):

> Just when a scientific principle or discovery crosses the line between experimental and the demonstrable stages is difficult to define. [. . .] [W]hile the courts go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have general acceptance in the particular field in which it belongs.

This appears to give a solution: do not decide yourself, but go by the judgements of the peers. But general acceptance does not solve anything at all since, for instance, a lot of nonsense is generally accepted in a field like astrology. The judge needs another criterion (see also Van Kampen, 1998).

The US Supreme Court gave the judges a helping hand with its decision in *Daubert* (*Daubert* v. *Merrell Dow Pharmaceuticals Inc.,* 509 U.S. 579, 113 S.Ct. 2795, 1993). In that decision it gave five criteria to the judges for assessing the admissibility of expert testimony: (1) the theory or technique is testable; (2) it has been subjected to peer review or published; (3) there are maintainable standards controlling the use of the technique; (4) scientists generally accept it works; and (5) there is a known error rate. By now, there has been a large flow of discussion in the scientific community on this decision (see, for instance recently, Brodin, 2005; Dahir *et al*., 2005; Groscup *et al*., 2002; Kovera, Russano and McAuliff, 2002; Owen, 2002). In the literature on Daubert one generally assumes that the Supreme Court gave an exhaustive list of criteria. It did not, because just prior to giving the list I quoted, the Supreme Court wrote:

> Faced with a proffer of expert scientific testimony, then, the trial judge must determine at the outset [. . .] whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue. This entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue. We are confident that federal judges possess the capacity to undertake this review. Many factors will bear on the inquiry, and we do not presume to set out a definitive checklist or test. But some general observations are appropriate.

In fact, in *Daubert* and subsequent decisions (*General Electric Co.* v. *Joiner,* 522 U.S. 136, 118 S.Ct. 512, 39 L.Ed.2d 508 (1997) and *Kumho Tire Co.* v. *Carmichael,* 119 S.Ct. 1167 (1999)) the Supreme Court ordered the American judge to evaluate expert testimony himself. Apparently the Supreme Court considers the judge capable of doing so. In that sense, the *Daubert* decision is the same as a recent landmark decision by the Dutch Supreme Court (*Hoge Raad 27 January 1998, Nederlandse Jurisprudentie* 1998, 404, *Shoemaker*). This case concerns the work of a shoemaker in a murder committed during the Helmond carnival. The police engaged a shoemaker to compare the soles of the suspect's shoes with sole traces found at the scene of the crime. The Appellate Court used the shoemaker's report as evidence. The Supreme Court sensed that being a shoemaker is something different from being a sole trace expert and held that the Appellate Court should have explained in its decision: (1) why this particular expert could be considered an expert in sole marks; (2) if so, what method the expert used; (3) why this method could be considered reliable; and (4) why this expert could have applied the method competently.

Are these requirements necessary? Yes, and a lot more are too (see Knörnschild and Van Koppen, 2003; Van Koppen, 2000; Van Koppen and Penrod, 2003; van Koppen and

Saks, 2003; Saks, 2003). These requirements are not necessary because experts do not do their best or would pull the court's leg. They are necessary because many experts do not understand their role in the criminal trial and are not sensitive to differences between their own science and the application of their science in the forensic context.

At the same time, these and other possible requirements do not solve the paradox for the court. The paradox can partly be considered a problem of communication. The typical lawyer who serves as judge does not have any training in scientific methods or thought during his university education (Crombag, 2000). More training of lawyers would help, but it should be noted that even in psychology alone the subdisciplines are quite diverse: perception by witnesses, the quality of interrogations (Gudjonsson, 2003; Vrij, 2002), the validity of confessions (Gudjonsson, 2003), identification procedures (Cutler and Penrod, 1995; Wells and Seelau, 1995; Wells *et al*., 1998), the scent line-up (Schoon and Van Koppen, 2002), but also reports related to the insanity defence and future dangerousness of the defendant (De Ruiter, 2000, 2004). To bridge the gap between judges and experts, legal training could be filled with courses on a large range of subjects that should also include basic training in medicine, DNA, finger prints, accountancy, and so on. Little room would remain to teach law students any law.

High demands on experts do not solve the paradox either, but it may help. Of course the court is not concerned with the track record of the expert, but hiring someone with an impeccable curriculum vitae at least raises the probability that the expert opinion in a specific case is of good quality. Still, the court has to evaluate whether the expert opinion in this particular case is any good. That judgement can only be based on an evaluation of the content of the opinion. I do not see how lawyers could perform that task, let alone lay jurors.

TRANSFERRING FROM ONE FIELD TO ANOTHER

What may be a valid line of reasoning in psychology may be far off in the forensic field. I give three examples; one on post-traumatic stress disorder (PTSD), one on child sexual abuse and one on amnesia.

Take the following, unfortunately all too common, case. A grown woman files a complaint against her stepfather. She claims he has been abusing her for many years. The stepfather denies the accusations. Without any additional evidence, fact finders are hesitant to go along with the complaint. In fact, under Dutch law, judges cannot convict on a single witness or victim statement alone. However, help may be available from psychologists.

We know that long-term sexual abuse is related to PTSD in later life (Beitchman *et al*., 1992; Cahill, Llewellyn and Pearson, 1991; Feerick and Snow, 2005; Neumann *et al*., 1996). So prosecutors hope that her accusations can be validated in some way or another, for instance by a psychologist who diagnoses PTSD in the complainant. A psychologist is asked to assess the psychological state of the complainant and give a report. In several cases, which I have come across, these reports (see, for instance, the case described in Van Koppen and Merckelbach, 1998) typically conclude: this woman suffers from PTSD, this is an indication of a trauma in childhood, probably of a sexual nature.

Please note that the court – or one of the parties involved – asked the psychologist to validate the trauma with a possible PTSD. The psychologist, in making the diagnosis, then

follows the DSM-IV-TR (American Psychiatric Association, 2000). This lists the criteria for a diagnosis. For PTSD, the first one reads as follows:

> A. The person has been exposed to a traumatic event in which both of the following were present: (1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others (2) the person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganized or agitated behavior (American Psychiatric Association, 2000, no 309.81).

In order to make a diagnosis, the first task of the psychologist is to establish whether a trauma occurred. That can only be done by asking the complainant: 'Did you suffer a trauma?' This is common practice in intakes for psychotherapy, where the word of the future patient is taken for granted. For forensic purposes this manner of working has a consequence that in fact the psychologist says to the fact finder: She suffered a trauma, because she says so. In practice, this circular reasoning remains completely hidden to the fact finder, because the criteria for the diagnosis are not revealed in court.

Apart from this problem, inferring sexual abuse in the past, from a present syndrome, is also for other reasons less straightforward than it seems. First, not everybody who has a traumatic past develops psychiatric symptoms. It is estimated that 20–50 % of trauma victims do (Kendall-Tackett, Williams and Finkelhorn, 1993). Second, the reverse relation is neither evident, because less than 10 % of individuals with psychiatric symptoms has a traumatic history in their youth (Rind, Tromovitch and Bauserman, 1998). Third, the individuals with both psychiatric symptoms and a traumatic youth cannot readily be identified, because they suffer from a wide range of syndromes and symptoms (Figueroa *et al*., 1997). Indeed, the causal relation between PTSD and any other psychiatric symptoms is so weak that experts can never validly testify on this subject. Some seem to try to circumvent this problem by using a rhetorical trick: they testify that the psychiatric symptoms are 'consistent' with a traumatic past (Rassin and Merckelbach, 1999). Formally this statement is usually not wrong, but it lacks any relevant content. For instance, having leukaemia is consistent with exposure to radioactive fall-out, but leukaemia can have a host of other causes and thus having leukaemia does not imply, in any way, that the patient has been exposed to fall-out. Nevertheless, the 'consistency' trick leaves the impression with judges and jurors that there is a relevant relation (see the discussion by Miller and Allen, 1998).

A comparable problem occurs in some expert evidence on sexual abuse of children. In many such cases there is no physical evidence, and there are no eyewitnesses. With very young alleged victims a police interview is hardly useful; many older children are not able to make a clear-cut statement. Experts are sometimes called to give an assessment of the behaviour of the child. Indeed many child victims of sexual abuse demonstrate behavioural problems. These behavioural problems are seen as a sign of sexual abuse. This has even been given a name: Child Sexual Abuse Accommodation Syndrome (Summit, 1983).

It is then concluded that because a child suffers from behavioural problems there must have been sexual abuse. This is again a misapplication of psychology in court. Children may suffer from behavioural problems for many other reasons than just sexual abuse. Even if the child has been abused, the behavioural consequences are far from evident. One reason

is that sexual abuse can involve a wide range of behaviours by the perpetrator, varying from a single act of masturbation in the presence of the child to repeated rapes. It can be expected that this range of forms of abuse do not have the same effects. Indeed, children's reactions are quite heterogeneous (Fisher and Whiting, 1998; London *et al*., 2005). Thus there is no more or less fixed pattern of behavioural symptoms that would allow a conclusion of sexual abuse of a particular child (Sbraga and O'Donohue, 2003). This supports the argument that this kind of expert evidence should not be permitted (Freckelton, 1997) or at least be considered very carefully (Miller and Allen, 1998).

THE AMNESIC KILLER

The third example of misapplication of psychological reasoning occurs in cases where the accused claims amnesia for the crime. This is not an uncommon phenomenon. A considerable minority of defendants claims that they suffer from amnesia for the crime they supposedly committed (Gudjonsson, Kopelman and MacKeith, 1999; Leitch, 1948; Taylor and Kopelman, 1984). A fair estimate seems to be that some 25 % of people accused of serious violent offences claim amnesia for the offence (Cima et al., 2004; Pyszora, Barker and Kopelman, 2003).

Amnesia could have an organic source, such as, for instance, dementia (Savla and Palmer, 2005), sleeping problems that cause sleep walking (Fenwick, 1993; Jacobs, 1993; Oswald and Evans, 1985), or closed head injury (Ahmed *et al*., 2000; Ellenberg, Levin and Saydjari, 1996). Some contend that crime-related amnesia could also come from a so-called psychological trauma: strong emotions could lead to memory loss (Kopelman, 1995; Porter *et al*., 2001; Swihart, Yuille and Porter, 1999). It is assumed than a psychological 'blow' may cause neurological dysfunction, but it remains difficult to establish how this would work (McNally, 2003; Parkin, 1997, p. 147; Schacter, 1996). Of course, the accused can feign his amnesia. Suspects can do so, because it seems to present them with some advantages. For instance, during interrogation they need not call in their right to silence, but can keep quiet on the basis of 'I am sorry, but I cannot remember what happened'. That discharges them from explaining often very grim details of the crime and their own life. They may also hope that the case will be dealt with more favourable if everybody believes they just forgot. In that, the amnesic killer from Drenthe was successful.

In the Dutch province of Drenthe a man was accused of strangling his wife (see on this case also Merckelbach *et al*., 2005; Wagenaar and Crombag, 2005, Chapter 12). He tells the police they were in the middle of a nasty divorce. One night they had a row in their living room and his wife announced that she would do anything to get him into trouble. She promised to go to the police the next day to accuse him of sexually molesting their daughter. The man's story continues as follows. He got very angry, he turned hot, started to sweat and his ears began to buzz. The light went out in his eyes. He came to in the garden with his hands loosely around the neck of his wife. She did not move any more and he realized she was dead. He then drove to the police station and turned himself in. He cannot remember anything between the moment his light went out in the living room and the moment he came to in the garden.

This is the story he maintained with the police, the psychologist and two psychiatrists who examined him, and during the trial. The prosecution asked these psychologist and psychiatrists to examine the suspect. All three described him as a physical and psychological

healthy man. In addition, all three came to the conclusion that he suffered from an acute dissociative disorder. One of them wrote, for instance:

> He had an acute dissociative disorder with a breakthrough of aggression. [. . .] This was to an extent that he, if it is proven that he committed the facts, cannot be held accountable. The deed occurred while the defendant could not influence it. He only came to himself after he strangled his wife. During an acute dissociative disorder any logical thinking is out of the question and one acts automatically.

The court followed the psychiatrists and psychologist, the man was not held accountable. Since he appeared to be of sound body and mind at the time of the trial and thus the chance of recidivism was considered low, he was not committed to a hospital for the treatment of mental disorders and was acquitted altogether (Rechtbank (District Court) Assen, 12th June 2002, *LJN-AE* 3911).

The psychologist and psychiatrists, who served as experts in this case, not only accepted a psychological trauma as an explanation for the accused's amnesia, but also gave the diagnosis 'dissociative amnesia'. 'The essential feature of dissociative disorders [is a] disruption of the usually integrated functions of consciousness, memory, identity, or perception of the environment' (see American Psychiatric Association, 2000, pp. 392). However, it is quite uncertain 'whether dissociation means anything more than a score on a questionnaire of uncertain meaning, a phenomenon that exists in the world of *some* psychiatrists and psychologists rather than in the world of psychiatry' (Wagenaar and Crombag, 2005, p. 199, emphasis in original).

Whether or not such psychogenetic amnesia exists, is doubtful. For instance, concentration camp survivors make all kinds of errors in their recollections, but do not show amnesia for the time they were incarcerated in the concentration camp (Yehuda *et al*., 1996). A psychological originating amnesia is at least very rare and short lived, if it exists at all (McNally, 2003, p. 210; Schacter, 1996, p. 225). It is a fair estimate that the number of defendants of violent crime who feign amnesia considerably outnumber those with genuine amnesia, be it of the organic or psychogenetic type (Christianson and Merckelbach, 2004).

So the experts in the Drenthe case made three errors. First they accepted the existence of dissociative amnesia, while its existence is at least doubtful or the likelihood of feigned amnesia is much higher than any psychogenetic form. Second, they accepted the dissociative amnesia as a sign that the defendant was not in control during the crime. Please note that loss of control is not part of the definition of dissociative amnesia in the DSM-IV-TR (American Psychiatric Association, 2000). For the question whether he was in control during the crime, his later amnesia is immaterial (in that sense, *United States Court of Military Appeals, 4 U.S.C.M.A. 134, 1954 CMA Lexis 572, 15 C.M.R. 134, April 9, 1954 (United States* v. *Olvera)*. See also Wagenaar and Crombag, 2005, Chapter 12).

The third problem is the same as the one I discussed in the case of PTSD. The experts knew that the man lost his memory from one source: the man told them. The psychologist tested him with a battery of tests, but the only validation of his amnesia came from himself during the interviews. The experts did not test the veracity of his amnesia, while they could have done so. There are several possibilities for distinguishing genuine from feigned amnesia. Organic amnesia, from a physical trauma, seems to follow a fixed pattern (Hodges, 1991; Meeter and Murre, 2004). Amnesia, because of sleeping problems, can be traced using neuropsychological tests and measures like the electro encephalogram (EEG). Since most faking amnesiacs are not aware of the typical patterns by which amnesia

develops and the symptoms that go along with it, they have a tendency to exaggerate their symptoms (Christianson and Merckelbach, 2004; Iverson, 1995). The Structured Inventory of Malingered Symptomatology (SIMS, see Smith, 1997; Smith and Burger, 1997) is based on the idea that many malingerers tend to exaggerate their symptoms. A second test could be the Symptom Validity Testing (SVT, see Denney, 1996; Frederick, Carter and Powel, 1995; Merckelbach, Hauer and Rassin, 2002). That is a questionnaire especially developed for each crime in which, in a yes/no format, the defendant is asked about details of the crime (for instance the murder weapon or the shawl the victim was wearing). The accused has to answer all questions. If the amnesia is genuine, the number of right answers will be around chance. If the amnesia is faked, the accused will try to evade the right alternatives and thus will score well below chance. Even if the defendant knows how the test works – and tries to give about 50 % right answers if a yes/no format is presented – he still has to take care that the sequential pattern of correct and incorrect answers is random. That is a difficult task. Whether or not the sequential pattern is random can be checked using the so-called runs test (see Cliffe, 1992).

If the experts in the Drenthe case had not made so many errors, the accused would probably not have been home free.

ANSWERING THE WRONG QUESTION

Fact finders want experts to answer questions in the form: given symptoms A we can observe now, what does it tell us about the likelihood of phenomenon B that may have occurred in the past? An example of this is: now we observe behaviour of the alleged victim (A); what does this tell us about the occurrence of sexual abuse against that child (B)? Psychologists are not used to answering this type of question. First, their diagnosis is always aimed at predicting the future, rather than explaining the past. Second, they usually start from a known situation – the story told by the prospective client during intake – and investigate whether certain symptoms are in accordance with that state of affairs. Taking this typical psychological attitude can cause the psychologist to answer the wrong question, as can be demonstrated by the case of the pimp and his two prostitutes.

In a case in the south of The Netherlands a pimp was accused of molesting two of his prostitutes and raping one of them. Although the police knew of the violent character of the pimp, the case confronted them with a problem: the prostitutes had also accused the pimp of forcing them to sell their bodies but, after the pimp was arrested and detained in custody, both women continued to work in that trade all the same. Were they just making up their whole story, or was it typical for women who had been forced into prostitution to continue in the trade even after the force has been removed? To answer these questions, the prosecution called in a psychologist the very day before the case was scheduled for trial in the district court.

The prosecution chose this psychologist because she had done some research on molested prostitutes. She read the police reports of the prostitutes' statements, and spoke to each of them for an hour. The following day she testified in court on the results of her short investigation. She told the court that she recognized the pattern of behaviour of both girls – they were quite young prostitutes – from her studies of prostitute behaviour: 'The story they told tallied with the behaviour of pimps I encountered before. [ ] I was not surprised by the things I heard and read.'

The psychologist did not give the answer the court needed. That would have been the answer to the question: 'What can we infer from the continuation of being a prostitute about what the pimp did to the two women?' The psychologist answered the reversed question: 'Do maltreated prostitutes commonly show this kind of behaviour?' The answer to that question is of little relevance, but the major problem is that this is often not detected by the court.

A more hidden version of the answering-the-wrong-question problem was described by Rassin and Merckelbach (1999). The extent to which an accused is sensitive to suggestion by the interrogators can play a role in making false confessions (Gudjonsson, 2003). Gudjonsson developed an instrument to measure the level of suggestibility of individuals, the Gudjonsson Suggestibility Scale (GSS) (Gudjonsson, 1984, 1987, 1992; Merckelbach *et al*., 1998). Assume we administer the GSS to an accused who allegedly made a false confession. Does that give the fact finder relevant information as to the veracity of the confession? It is assumed that confessions by individuals who score high on the GSS should be accepted with caution, because these individuals are prone to making false confessions (Kassin, 1997; Kassin and Norwick, 2004; McCann, 1998). A GSS score, then, would be relevant for the evaluation of the confession, but it remains unclear how relevant and in what manner. False confessions are generated by a number of factors; amongst others, pressure in and out of the interrogation room, the circumstances of the accused's detention, and the psychological demeanour of the accused. Possible motives of the accused to make a false confession – even in the absence of any pressure to do so – may be relevant. Only part of the psychological demeanour of the suspect can be measured with the GSS. However, the other relevant factors can be so powerful that even someone with the lowest GSS score would make a false confession. The confession of someone with a particularly high GSS score may be true. GSS scores, then, seem to be relevant only in the context of all the other relevant factors. It can contribute to an explanation of what happened during the interrogations, but in itself it is not relevant.

STAYING WITHIN YOUR DOMAIN

This shows that it is naïve to expect that an expert's opinion, on one topic, can ascertain the truth of past events. Facts do not exist; only interpreted facts exist. Facts can only be assessed in the context of an interpretation by a particular individual for a particular purpose. This always takes the form of a narrative or story (Bennett, 1992; Bennett and Feldman, 1981; Crombag, van Koppen and Wagenaar, 1992; Pennington and Hastie, 1986, 1993; Wagenaar, van Koppen and Crombag, 1993):

> Narratives are the only conceivable means for ordinary people to use in organizing, recalling, comparing, and testing the vast amounts of information that go into American-style legal judgements (Bennett, 1992, p. 153).

The context given in the story is vital to the interpretation. 'Science without context [. . .] is meaningless at best and dangerous at worst', Gallop and Stockdale (1998, p. 70). This context seems to be at odds with the requirement that experts should not step outside their domain and limit themselves to what is subjected to their opinion (Dwyer, 2003). To be of any use to the fact finder, however, experts at least should be sensitive to the decisions the fact finder is facing in criminal cases, but that is not enough. They should also take the

context of their expertise into account. In many, if not most, cases the expert's opinion is only of use if a wider context, a wider narrative, is discussed than just the very narrow aspect that is subjected to the expert. For instance, an expert who is asked to evaluate a child's statement in a sexual abuse case can only do so effectively and meaningful when he also assesses, amongst others, the family interaction, possible preparations to the interview of the child by the parents, the manner in which the allegations were first disclosed, possible other perpetrators and possible reasons why the child would make false accusations or could have been induced to do so.

I draw a second example from the type of psychological expertise that is very common: on identity parades (see in general Cutler and Penrod, 1995; Wells *et al*., 1998). Much is known of how a proper identification procedure should be conducted, and in the Netherlands there are clear-cut rules about how the police should conduct such procedures (Van Amelsvoort, 2005; Werkgroep Identificatie, 1992). Still they are frequently performed improperly by the police. The most common error made is that a one-person show-up is used instead of a proper multi-person identity parade with a witness who knows the perpetrator just from the crime scene.

An identity parade is used to assess whether the appearance of the suspect corresponds to the memory the witness has of the appearance of the perpetrator. A good identity parade, live, with photographs or on video, seeks to accomplish two purposes simultaneously: to try to learn from an eyewitness who perpetrated a crime and, at the same time, to test the accuracy of that eyewitness's memory of the offender. This dual objective is achieved by confronting the witness with a line-up of people, all of whom conform to the general description of the perpetrator. One of these is the suspect; the others are innocent foils unknown to the witness. The witness's task is to indicate the one person in the parade they recognize, if they recognize anyone at all.

The result of a properly conducted identity parade has a very high diagnostic value (Wagenaar, van Koppen and Crombag, 1993). It is essential, however, that the procedures minimize the likelihood that an identification is the result of judgements of the relative similarity of a member of the line-up to the witness's memory (i.e. that the witness chooses the suspect who looks most like the memory of the perpetrator rather than the one who is the perpetrator), or that subtle or not so subtle cues suggest to the witness who is the 'right' suspect to choose. There are many more requirements, however (Van Amelsvoort, 2005; Cutler and Penrod, 1995; Wells *et al*., 1998). All these requirements boil down to the same thing: if the witness pointed out the suspect, we can conclude that the suspect is recognized as the offender only if all other cues by which the witness could know who the suspect in the line is, apart from his own memory of the offender.

The one-person show-up should be used in one situation and one situation only: when the witness already knew the perpetrator before the crime took place. The identification then takes place at the scene of the crime and showing the suspect to the witness can only serve to prevent administrative errors ('Is this the neighbour you meant?'). If the witness knows the perpetrator by name, this procedure is unnecessary. If used with a witness who saw the perpetrator only at the scene of the crime, the one-person show-up is much more likely to yield false identifications than are properly constructed line-ups (see Dekle *et al*., 1996; Lindsay *et al*., 1997; Yarmey, Yarmey and Yarmey, 1996).

In Dutch police practice, most identifications are attempted using the one-person show-up. In fact, the police regularly make every conceivable error in conducting identification procedures. A good exception was the case of the Park Rapist in Drachten, in the North of

the Netherlands. A man had raped a number of women in the local park. All the victims described that a young man approached then while riding a bike in a peculiar manner: he steered with his elbows. The police made an arrest. A video was made that was an almost perfect identity parade. Although the two victims who participated were instructed in writing, the video started with a repetition of the most important instructions both on screen and read aloud. Then a police officer played a probe foil showing how he rode the bike steering with his elbows and then he was shown close up. Thereafter the video was stopped to check whether the witness completely understood the procedure. Only then were the suspect and foils shown, in the same manner as the probe foil.

The two rape victims both identified the suspect. But there remained another problem: the victims and the suspect all lived in the vicinity of the park and came there regularly. Thus the possibility that the victims recalled the suspect from sight from other occasions than the rape could not be excluded; indeed they could have recognized him but not from the crime. This, of course, decreased the diagnostic value of the identifications in the otherwise impeccable identity parade. The magnitude of the decrease is unknown; only something can be said about the direction. This opinion could only be given after studying the whole case file and taking information into account that was not formally put to the expert.

I gave these examples to demonstrate that the context is important. Of course, this varies, depending on the case at hand, but it also demonstrates that an expert should always go through the whole case, looking for elements that may be relevant to their opinion. In some cases, it will result in an opinion that encompasses all or almost all of the elements in the case that are relevant to the fact finder as well. Crombag and Wagenaar (2000) argued that experts should, in their opinions, always consider the proposed scenario and rival scenarios of what may have happened. In these cases, the expert can only be of help to the fact finder if he enters the province of the fact finder. That again is a paradox. The expert can only be helpful to the fact finder by assessing alternative scenarios. That will blur the distinction between the work of the expert and the work of the fact finder. So be it.

CONCLUSIONS

Psychologists can be very helpful to fact finders in deciding criminal cases. However, serving as a psychology expert in court can pose many problems. A few of these problems I have discussed above. Part of the problem is related to the difference between decision making in science and decision making in criminal cases. Science is a different endeavour than legal decision making. Another part of the problem is that psychologists, as scientists or as therapists, do not understand the special role of forensic expertise in court. For forensic expertise there are different rules than for psychology in general. Transferring statements from one part of the field to the other can be silly or even misleading in the legal domain.

All this is not just a problem of communication between psychologist, jurists and lay jurors. Indeed, if all forensic psychologists were also lawyers and all lawyers were versed in psychology, some of the problems could be evaded, but even this is a hypothetical situation. The fact finder cannot check whether an expert opinion in a specific case is sound or not. That is not just a matter of principle, but a highly practical problem. In legal precedents, one tried to circumvent this by assessing expert opinions indirectly. That has resulted in requirements such that there is a known error rate of the method used by the expert – as if legal decision making has a known error rate. Or that the expert's theory should be

testable – as if this would say anything on the validity of the theory and its application in the specific case. Or that a method has been subjected to peer review – as if the peers know anything about the forensic application and do not just apply notions that are valid only in the psychological domain. In short, the helpfulness of the psychologist to the fact finder does pose many paradoxical difficulties that leaves one to wonder: is it ever helpful and, if so, how do we know?

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