

False confessions after repeated interrogation: the Putten Murder Case

WILLEM A. WAGENAAR

Netherlands Institute for Advanced Study in the Humanities and Social Science, Meijboomlaan 1, 2242 PR, Wassenaar, The Netherlands, and Department of Psychology, Leiden University, PO Box 9555, 2300 Leiden, The Netherlands. E-mail: wagenaar@nias.knaw.nl

Suggestive or misleading interrogation techniques may have the effect that innocent people start to remember having committed a serious crime. Confessions are therefore not the best possible evidence, especially not when it is obvious that the interrogation contained elements of suggestion and deception. The problem is illustrated by a case that has become famous in The Netherlands, because two innocent men were imprisoned for about eight years, after obviously false confessions. The confessions were obtained during long and repeated interrogations in which various types of psychological deception were used. In the end, the amount of contradiction, and even of sheer impossibilities, made it clear that the confessions were false and the men innocent. Some of the literature on the creation of false memories is reviewed. It is argued that the practice of criminal investigation may elicit even stronger effects, because empirical research is constrained by ethical limits. The objective of criminal investigation seems to put no limit on what is deemed acceptable, even though we know quite well that the elicitation of false confessions is a serious risk. European agreements about criminal interrogation techniques may provide an effective protection against undesirable practices; but it will not be easy to convince the European legislators of this.

Introduction

Confessions are sometimes called ‘La Reine de la Preuve’, or ‘The Queen of Proof’, apparently on the assumption that no innocent persons will confess to a crime they never committed. This assumption is wrong: there are many reasons

to make false confessions. Gudjonsson¹ distinguishes three major categories: *voluntary*, *coerced-compliant* and *coerced-internalized* false confessions. In the first category we find people with a morbid desire for notoriety, people with an unconscious need to expiate guilt over previous transgressions, people who make insufficient distinction between fact and fantasy, and people who try to protect the real culprit. Coerced-compliant false confessions happen when suspects want to escape temporarily from the hardships of the interrogation or the custody. Usually they cherish the belief that they may retract their false confession, and that the truth will come out eventually. At any rate, they do not themselves believe in the veracity of their confession. In the third category, coerced-internalized false confessions, we find innocent confessors who have come to believe their own confessions, even though sometimes they have no clear memory of committing the crime. This article deals especially with a subsection of this third category, which I will label 'Coerced-memory-based' false confessions. Here, we find persons who produce false confessions based on a false recollection of committing a crime. It is my thesis that some types of interrogation, especially repeated interrogations, may elicit such false memories.

Autobiographical memory

Sincere confessions in the Coerced-memory-based category are based on what one remembers of episodes in one's own life. The question of where a false belief in being guilty of a serious crime may come from, is therefore rapidly reduced to the question of whether a false memory of committing a crime can be implanted in someone's mind. Not everybody's mind; just 1% of the population would be sufficient to create a disturbing number of judicial errors. However, empirical research about the malleability of autobiographical memory suggests a much higher proportion of the population could be susceptible. In fact, there is no reason to believe that anyone would be exempt from such false beliefs, given that the methods for implanting false memories are almost without limits. One example is the effect of *misleading post-event information*.² The general procedure of experimental studies on this effect contains three stages. First, an event is presented by means of a slide series, a movie, or just a written story. Then after the first retention interval, a questionnaire is administered, with all sorts of questions about the story. Some of the questions may contain a misleading element. One may ask: 'Did the blue car stop at the traffic light?' whereas in fact it had been a green car. There are two control groups. The first group gets the confirmatory question: 'Did the green car stop at the traffic light?' The second group is simply asked the neutral question: 'Did the car stop at the traffic light?' Then, after a second retention interval, a forced-choice test is administered, in which each question compares two versions of the story. The critical question

contains two versions of the car at the traffic light, one with a green car, the other with a blue car. In this manner, it is established whether the memories of subjects in the experimental group were altered by the introduction of the word 'blue'. The score may be expressed by the difference between the experimental group and the two control groups. Generally, these differences amount to tens of percent, which means that misleading cues may distort the recall of simple events that happened in somebody's life.

At the basis of this phenomenon is a mechanism sometimes referred to as *source amnesia*. In the green car/blue car paradigm, a reasonable question would be: 'Are you certain that no one else told you about the colour of the car?' This question addresses possible conflicting sources of knowledge in memory. The tacit assumption is that we do not only store information, but also the source of the information. We are supposed to remember where the colour of the car came from: from the original presentation, or from the questionnaire. But a vast body of literature has revealed that this *source awareness* can be rather weak. We know many things without remembering how we obtained the information (the seminal paper is by Johnson, Hashtroudi and Lindsay³). The storage and retrieval of information in memory is sometimes represented by the metaphor of a library with bookshelves and a catalogue. When it is difficult to retrieve information, this does not mean that the book has disappeared from the shelves. The damage is usually caused by the fact that the retrieval cues do not correspond to entries in the catalogue. In terms of this metaphor, source amnesia means that the catalogue does not say when the entries in the catalogue were made, or by whom. If the position information in the catalogue is mischievously changed, so that the entry becomes linked to a new book, eventually the *wrong* book, there is no way to find out that there was a previous link, or to what position the entry used to refer before the change was made. The old book has not been removed from the shelves; but it will be extremely difficult to find! It is obvious that, likewise, confessions of the coerced-memory-based type require source amnesia for the manipulation that produced the false recollection of the criminal act.

The study of misleading post-event information has demonstrated clearly that not everyone's memory is altered in such a simple manner, and certainly not about everything. One clear finding is that small, ostensibly peripheral details are more easily modified than the more central aspects of a memory. The question: 'Do you think you were momentarily distracted by the dog that crossed the street the moment you saw the two robbers leave the bank?' may be very effective for introducing a non-existing dog. A dog is a peripheral item when you witness an armed bank robbery. But the ending: 'the moment you saw the two robbers leave the circus?' will fail to replace 'bank' by 'circus', because the connection between 'robbers' and 'bank' is too central to the general theme of the witnessed robbery. A similar reasoning holds for introducing peripheral but implausible themes into

the remembered story. The phrase: ‘Do you think you were momentarily distracted by the elephant that crossed the street?’ will fail because it can be reasoned that an implausible detail like a live elephant would have been remembered. The effect of misleading post-event information suggests that autobiographical memory is malleable, but not that entire, important and emotional events, such as committing a murder, can be implanted. Murders and the like are neither peripheral nor plausible.

On the other hand, the techniques for the introduction of misleading post-event information are gentle compared with the practices of criminal interrogation. The ethical constraints are obviously quite different; whereas scientific researchers are bound by the rule that no harm should ever be done to human subjects, police investigators seem to believe that for the protection of society any type of harm may be done to suspects. This discrepancy constitutes a major obstacle to the study of problems of interrogation: we cannot simulate police practices in our experiments, and the objection against our conclusions is often that laboratory studies are not realistic. Our admonitions about the effects of suggestive interrogation practices are usually based on extrapolations of much milder effects in laboratory studies. Here is an example of such a study, in which an entire and somewhat emotional event is implanted in the subjects’ memories.

Loftus and Pickrell⁴ suggested to their subjects that, in their youth, they were lost in a shopping mall, or another public place. In the study they presented their subjects with descriptions of three autobiographical events provided by their relatives. A fourth, untrue, description of getting lost was added. This false description was carefully prepared, so that it contained a sufficient number of elements from the subject’s life. The false aspect was that the subject got lost for an extended period at the age of five, was found crying and was aided by an elderly woman, and subsequently reunited with the family. Subjects were asked to read the four stories, and to add more details, or eventually to indicate that they did not remember this. Then the subjects were interviewed twice, with an interval of about two weeks. In the interviews, subjects were asked to recall the four events, and to give details. They rated the clarity of their memories. Seven out of 28 subjects remembered the made-up event in the first stage; six of them remembered the episodes in the later interviews. There was a tendency for the clarity ratings to increase with time. It may be argued that most people got lost some time, some place, when young; therefore, the induced memories would still be based on actual experiences. But that is not the point; the six or seven subjects were made to agree that they were lost when they were five, in a particular place, following a particular scenario. This is not too far from suspects confessing that they were in a particular place, at a particular time which, as we shall see, may be the starting point for a much more elaborate confession. Remember for the time being, that some

people's autobiographical memories are malleable, and can be influenced in a systematic manner by the application of well-designed methods.

The Putten Murder Case^{1,2}

On Sunday, 9 January 1994, the 23 year-old flight attendant Christel Ambrosius was murdered in the house of her grandmother in the deserted woods of Putten, The Netherlands. Some witnesses had spotted a blue-greenish Mercedes in the neighbourhood. An inhabitant of Putten, Gerrit Schuchard, owned such a Mercedes, and was interrogated about his doings on this Sunday afternoon. Interestingly enough, there was much confusion about the colour of the Mercedes. All shades between light green and dark blue were mentioned. But finally the witnesses agreed that it had the colour of Gerrit's car. Usually Gerrit took a ride to let out the dog, accompanied by a variable group of others, such as his two son-in-laws Herman DuBois and Wilco Viets, and the somewhat simple-minded Willem Bettink. Herman, Wilco and Willem were also apprehended and subjected to lengthy interrogations. In the end Herman and Wilco were accused of the murder, found guilty and convicted, mainly on the basis of their confessions. The crown witnesses Gerrit and Willem had testified that they actually saw Herman and Wilco commit the murder. The confessions made to the police were retracted in court, but to no avail. Still they contained almost nothing but discrepancies. Herman and Wilco's stories changed all the time. They did not confirm one another, and were in contradiction with the physical conditions found in and around the house. The testimony of the two witnesses Gerrit Schuchard and Willem Bettink was also inconsistent, mutually contradicting, and in disagreement with the two confessions and the actual physical evidence. Worst of all was that traces of sperm were found on the victim, which according to the DNA-analysis had come from a fifth person and not from the suspects or the two witnesses. The indictment stated that the two suspects had raped Christel, and in the process had 'dragged' old sperm from the victim's vagina, which was put there by an earlier contact with an unknown person. It was never identified who this 'earlier contact' might have been, nor was it logically excluded that Christel was simply raped and murdered by this unknown man. The confessions had brought the investigations and the judicial reasoning to a definitive halt.

DuBois and Viets were not put under extreme duress, at least not in the physical sense. They had no hope to escape from their custody by first confessing and subsequently retracting their confession. They were probably not extremely bright

¹ Actual names and circumstances are used in the description of this case, because they were already revealed through the massive publicity given to the long sequence of investigations and trials, which lasted from 1994 to 2002.

² A readily available description is provided by Blaauw.⁵ The official reference is in a number of court rulings, referenced at the end of this paper.

(no indication of their IQ is found in the files), but they were surely able to understand that their confessions would lead to a long sentence. So why would they confess to the murder of Christel Ambrosius with the knowledge that they were innocent? There are a number of passages in the interrogations that indicate that they belong to Gudjonsson's category 3 of coerced–internalized false confessors; that is, confessors who have been falsely convinced that they committed the crime, although they cannot remember it. Here are some quotes:

Herman DuBois:

I must come to the conclusion that I have been in the house. The strange thing is that right now I cannot remember a thing of what happened in or around the house, even though I want to remember it very much. (p. 167)

If I must draw a conclusion, then I am following Wilco into the house. It makes me sad and angry that I cannot remember anything... (p. 168)

Wilco Viets:

I experience it as an immense pressure, everything you have explained to me about what has happened, and what I really should have known. (p. 174)

The case drives me crazy, as I know for sure that I did not commit the murder (p. 171).

These quotes do not suggest that Herman and Wilco's memories were affected. But look at the following statements:

Herman DuBois:

I am following Wilco, and we end up behind the house. Now I wonder: will she invite us to come in? This could be an answer. Why? Because she knew Wilco. I will certainly not take the initiative to enter the house. In my head the logical consequence is that she addresses Wilco. She asks: do you want to have a drink? and then it is gone. (p. 168)

The way I experience it, I screwed her first, and then Wilco. (p. 178)

I cannot indicate where in the house we have screwed her. I thought it was in the hall. But it is certain that she was also screwed by Wilco. (p. 179)

(Page numbers above refer to Ref. 5.)

After a right turn I saw a little house on the left-hand side of the Driewegenweg. Outside the house I honked, and Wilco began to wave his arms enthusiastically. I saw that Christel was entering the access to the house. Jointly we entered the house through the back door ... Then Wilco turned to me and made a sign that she could be screwed ... I also heard Christel say: 'Man, fuck off'. She was shouting this ... Immediately Wilco gave her an intentional blow on her head ... immediately I forced her on to the ground. I noticed that she resisted ... Wilco kept her at her wrists. I wanted to screw her. When I was ready, Wilco came upon her, and started to screw her ... Then there was a struggle and

there was some violence. I grabbed a knife ... Then I stabbed her with that knife in her throat. (Verdict Arnhem, p. 12)

Wilco Viets:

I am putting a definitive end to all these proposed flashes, images, fantasies, and dreams. It has just been the reality that on the afternoon of January 9, 1994, I was in that house ... (he saw Herman lying on top of the victim) in a door opening at the right-hand side of a hall. (He could not see whether the girl was raped because he was) too close, and looked Herman on his broad back. (The girl did not move); I could see this, because I was very close. I had the strong impression that the girl was unconscious. I saw that the girl moved only because Herman moved. Especially her legs and feet. Herman's energy was, so to say, transmitted to this girl. (p. 172)

She was lying with her back on the floor. Her right cheek was touching the floor. Her hair, she had long hair, was on the left side of her face. I told you already that I was the last one to return to the car; Herman, Gerrit and Willem were already in it. (Verdict Arnhem, p. 12).

These passages read like true memories, not like something the suspects have come to believe, without really remembering it. The overall impression of the enormous number of interrogations (cf. Table 1 later) is that the four men started by not remembering anything about a possible murder. Then, through the application of suggestive tricks by the interrogators, they became convinced that they had something to do with it, even though they could not remember specific details. Then they started to remember things, first in the form of flashes and images, finally as a more or less coherent story. The statements from this final stage were used as evidence, and cited in the various court rulings. How they evolved was not considered by the courts, or at least not mentioned in their verdicts.

Of course there are two explanations for the slow evolution of the stories; one is that they were created by the suggestive technique of interrogation, the other that the four men could only be induced gradually to tell the truth. The latter explanation is much in accord with common experience and simple logic. Criminals are not particularly thrilled to confess to rape and murder, and a little force might help a lot. The first explanation is less likely for two reasons. First because it assumes innocence. The assumption of innocence is the basis of criminal law in the western world, but it is not the working hypothesis of police investigators. In their minds, a slowly evolving confession is not placed in the perspective of innocence of the suspect. The second reason is that investigators, judges and jury members alike, do not really believe that innocent people will easily confess to rape and murder. The final acquittal of the accused, after eight years of legal battle and the completion of their sentence, indicates that the Court of Appeal in Leeuwarden came to believe the first explanation, that the confessions

were the product of suggestive interrogation techniques. The following arguments, among others, are listed in the verdict:

- a. The accused were kept in isolation for a period of two months. They entered into a state of disorientation, also assisted by the enormous number of interrogations, long and deep into the night hours.
- b. The disorientation was further promoted by the presentation of facts as if they were certain, whereas in fact they were uncertain, or sometimes blatantly untrue.
- c. The accused were fed each other's statements, so that a joint story could originate, even though they had no direct contact. The same holds for the key witnesses, Gerrit Schuchard and Willem Bettink. Especially the latter was known as intellectually backward, he had no resistance against the suggestions of the interrogators, and produced the most damning accusations, which were in turn presented as certain facts to the two suspects.
- d. The investigation was entirely directed at proving the guilt of the two accused. No attempts were made to falsify the hypothesis of guilt, or to investigate other possibilities.
- e. There are a few consistent statements in the confessions, but also a remarkable number of inconsistent statements.
- f. Many of the elements in the confessions, which were interpreted as 'intimate knowledge', were already in the public domain when the two men were arrested.
- g. Other details, not in the public domain, were presented to the suspects by the police, or strongly suggested to them, simply by repeating the same questions over and over again.
- h. Although the examining judge gave the two men an opportunity to withdraw their statements, it was obvious to them that by doing so they would worsen the conditions of their detention.
- i. The statements are characterized by speaking in dream images; by speaking in terms of logical conclusions on the basis of facts presented to them; by a continual change between confessions and denials, even after their confessions had been recorded; by sketching a large variety of ways in which the crimes could have been committed. In this sense the pattern of these confessions differs from what the Court usually encounters in criminal trials.

It is obvious that the court believed that these or similar practices may elicit false confessions of murder. Were these practices really employed on such a scale that this unlikely result could be obtained?

The false memories in the 'lost-in-the-shopping-mall' study cited above were

brought about by a deceptive trick. Information provided by family members was used to produce a compelling but untrue story. The effect of this trick is probably working through the same phases as were found in the Putten interrogations. At first no specific memories are found that correspond to the description being lost in the shopping-mall. The subjects do not detect the deception however, but rather feel that they must have forgotten something. Then they try to remember, and find some vague recollections, probably to some other instances of being lost, or stories about other children being lost. Then their active search will create some flash-like images, which gradually, through the application of logical inference, constitute a more or less detailed story. After a suitable time interval the story becomes sufficiently clear to be accepted as a real memory, whereas the source of the story gets forgotten. The starting point of this sequence is the application of a trick. Were such tricks applied in the Putten Murder case? We will distinguish six different types of tricks, although they may have happened simultaneously. The problem of identifying the occurrence of such tricks is that the interrogations are not recorded verbally. The investigators adopted the habit of making summary statements at the end of each interrogation, usually not more than two pages for one hour, and sometimes even no statement at all.

(1) Implantation of ideas when the accused states that his memory is vague or unreliable

An example is the question to Herman DuBois: ‘What did you tell Gerrit, when he asked why you were driving like crazy?’ (p. 65). In reality Herman did not remember having been there, let alone having driven very fast, or having talked to Gerrit about it. But the question may have shaped an image in his mind which, when reproduced later, would fit in nicely with Gerrit’s statement.

(2) Induce the accused to speak in a hypothetical manner

The investigators asked Wilco to imagine what he could have done after the victim was stabbed to death. He responded: ‘I think I would have cleaned up the mess, as I am a caring type ... I imagine that I was sitting on my knees, next to the victim, and that I removed some of the traces. It is quite possible, now I come to think of it, that I put some things away, that I erected a floorlight, and would have covered the girl ... I imagine she had no clothes on, and that I covered her with something close by. It was her grandmother’s house and there would have been a blanket around, or something’ (p. 173). The problem with such an exercise in imagination is that it will leave a more or less clear image in the mind of the accused, which later may be mistaken for a veridical memory.

(3) Explicit deception (such as the presentation of fabricated forensic evidence)

A crucial example is related to a textile fibre found on the clothing of Herman DuBois. The forensic laboratory concluded that there was ‘a possibility of a contact’ between Herman’s trousers and the doormat in the home of Christel’s grandmother. But since it was just an ordinary doormat, the fibre could have come from anywhere. Immediately Herman was informed that fibres on his trousers had come from the scene of the crime. Herman’s first reaction was to deny his presence there. But the next morning he made the statement cited above: ‘I must come to the conclusion that I have been in the house. The strange thing is that right now I cannot remember a thing of what happened in or around the house, even though I want to remember it very much’ (p. 167). This is an excellent illustration of the crucial step from denial to acceptance, and the subsequent active search for recollections.

(4) Confronting the accused with other people’s statements

Herman DuBois was told that Wilco said: ‘Let us tell nobody that we were in the woods’ (p. 165). And also that Wilco had declared that Herman had grabbed Christel, and had thrown himself upon her. Herman, instead of simply rejecting these statements, started to worry about his own memory, and tried to remember the things that Wilco had said. The second statement constitutes also a form of clear deception: Wilco had said nothing like it. On the contrary, the previous day Wilco had declared that he did not go with the others on the usual Sunday afternoon ride.

(5) Inform the accused about true details of the crime

Wilco Viets was informed by the investigating judge(!) that the victim was killed by stabs in the neck and the throat. Later his story would accommodate these details, and create the suggestion of intimate knowledge.

(6) Induce the accused to make guesses

Herman is asked to guess from where the murder weapon had come. His suggestion is that it came from the boot of Gerrit’s car, because it was open when they came back from the house. It might have been dropped in a well, in the Van Eeghenlaan, in Gerrit’s barn, in Wilco’s house (p. 169). The problem with such suggestions is that if one of them proves to be correct, the impression of intimate

Table 1. The use of deceptive tricks in the Putten Murder Case (nr. of interviews)

Trick	DuBois	Viets	Bettink	Schuchard
Memory implantation	17	23	—	10
Hypothetical speak	4	12	2	7
Deception	1	14	1	2
Confrontation with information from others	16	21	4	4
Informing about details of the crime	4	5	2	22
Inducement of guessing	1	6	2	2
Total no. interviews held	67	43	21	61

knowledge will ensue. Alternatively, the act of guessing might create an image that will later be reproduced as a real memory.

An analysis of the use of these deceptive techniques was made by Van Koppen,⁶ in his written report to the defence. Table 1 represents some of his results.

The overall picture is that Herman DuBois and Wilco Viets were excessively exposed to memory implantation and information from others. Bettink was exposed to fewer tricks, of all sorts. Schuchard was especially fed with factual information about the crime. These differences are easily explained by the fact that the four men were interrogated by different members of the team. It is also possible that the different roles, as accused or as eyewitness, induced the usage of a different repertoire of tricks.

Even though the statistics in Table 1 suggest strongly that the accused and the Crown witnesses were placed in a situation in which false testimony and false confessions might easily emerge, it is still not proven that such techniques actually suffice to create false memories. In the next section we will present a very brief overview of the research on this problem.

False memories

False memories are most frequently studied in the context of the so-called 'recovered memory syndrome'. This relates to the phenomenon that some people seem to remember psychological trauma that occurred earlier in their lives, and of which they were oblivious for many years. It was claimed that such a sudden return of memory is improbable to say the least, that it is far more likely that the memories are false, and that they are elicited by suggestive therapeutic techniques.

Earlier discussions can be found in Loftus⁷ and Lindsay and Read⁸. A later discussion about the full breadth of what is now known as 'The Memory Wars', can be found in the reports of a worldwide experts meeting held in 1996.⁹

The debate about the veracity of recovered memories is based upon two types of studies: case histories and studies of experimenter-induced deception. Case studies are again divided in two classes: studies of cases in which the claim of a recovered memory is critically investigated, and studies of the recollections of people who were demonstrably involved in psychologically traumatic events. In the latter category we find studies on victims of accidents, physical violence, war and violent political action. An example is the study by Wagenaar and Groeneweg¹⁰ on the memories of concentration camp survivors. The general rule of such 'victim studies' is that the event as such, and the rough story line, are always accessible, in any period of one's life. Details of the story may easily get changed or forgotten, but that is not what is meant by 'recovered memories'. There are some studies in which the suggestion is put forward that sexual trauma behaves in a different manner; that, unlike other traumatic experiences, sexual trauma may be repressed and forgotten, to the extent that later on the victim denies having been involved in it.¹¹ However, the problem with such studies is that, unlike other traumas, there is no objective basis to assume that the traumatic event did really happen and that it created an initial memory. The study of Williams¹¹ involved the recollections of young women, whose mothers took them to a clinic because of the suspicion of sexual abuse. For an unknown number of these (then) girls the suspicion was unjustified. Others were below the age of three, which means that they were still in the period of so-called 'childhood amnesia'; the fact that they did not remember the abuse does not necessarily point to repression. Whether the total of such cases accounts for the 38% 'repression of sexual abuse' reported by Williams¹¹, is unclear.

The natural solution is then to investigate individual cases, for instance on the basis of the file of a criminal or civil law suit. Examples can be found in the cases discussed by Schooler *et al.*¹² the critical analysis of the case of Jane Doe by Loftus and Guyer¹³ and the problems with the case of Yolanda.¹⁴ Although at first glance such studies may seem helpful, the truth is that case histories cannot logically prove the veracity of recovered memories.¹⁵ First because there is no independent proof of the occurrence of the traumatizing event; secondly because it is logically impossible to prove that an event was ever forgotten. Thirdly, because almost without exception there has been post-event information, in therapy or otherwise, that could have created a false memory. Fourthly, because even if we overcome the first three problems, it cannot be proven that the final recollection is a reliable copy of the memories that were lost. Sometimes it is attempted to bring such discussions to a conclusion by relying on the legal verdict that a recovered memory of sexual abuse is a true representation of what happened in the past. But here

we suffer from a nasty type of circularity. The existence of a particular memory phenomenon is proven on the basis of a verdict that itself is based upon the conviction that such a phenomenon exists, frequently induced or supported by a memory expert who testified about it in court. The 'Memory War' has produced two sides of so-called 'believers' and 'non-believers'. If believers are unable to prove their theory with accepted scientific means, it should not happen that the theory is in the end declared proven, only because believers testify about it in court.

The other line of reasoning is directed at the question of whether memories of entire events, such as an extended period of sexual abuse, can be implanted by the use of deceptive techniques. We saw the example of remembering to be lost in a shopping mall. But that is a small trauma compared with being abused for many years. The problems faced by experimenters are of two kinds. First, it is unethical to suggest such memories to human subjects. Second, the thesis is not that *everybody* would be vulnerable to a deception of this kind, it is quite possible that only a small group of people, with a pre-existing psychological problem or disorder, could be made to generate a false memory. As a result, the empirical studies can always be criticized as not quite proving that false recollections of sexual abuse can be induced by the use of deceptive techniques, such as some forms of interrogation or psychotherapy. But here are some examples that come close.

Van Mancius¹⁶ described a study in which subjects saw three different crime-related video passages A, B and C. Immediately after the presentation, some questions were asked about the subjects' opinions on some of the issues in the videos. Then, after two weeks, subjects in the control group received more questions about the events in videos A, B and C; subjects in the experimental group received a few questions about A, B and C, but the majority of questions were about a video D, which they had never seen. Since the subjects were questioned about their opinions, not about the factual contents of the video, they found it relatively easy to answer the questions. Still, by doing so, some elements of the video were smuggled into their minds. After another two weeks all subjects were asked to describe the videos that they had seen. Twenty-seven of the 46 experimental subjects described a video with at least some elements from video D. Seventeen of those showed a complete implant, which means that they described only two of the videos A, B or C, and produced an equally detailed description of video D. These memories of a criminal event were created only by asking questions that provided some verbal knowledge about the event.

It is likely that just imagining an event will lead to storage of the resulting images in memory. Because of the effect of 'source amnesia', there may subsequently be a problem of realizing that these events were only imagined. A simple demonstration is found in a study by Garry *et al.*¹⁷ In step 1, subjects completed the Life Event Inventory. This is a questionnaire in which subjects

Table 2. Percentages of subjects who changed their probability estimates in the Life Events Inventory in the study by Garry *et al.*¹⁷

	Probability		
	Decreased	Remained the same	Increased
Events not visualized	10%	65%	25%
Events visualized	9%	57%	34%

estimate the probability that they were ever involved in simple events such as being taken to an emergency room late at night, having found a \$10 bill, being saved by a life guard, or having broken a window with one's hand. In step 2, which was administered two weeks later, the experimenter picked four of these events, and asked the subjects to visualize them. The subjects were assisted by a well-established technique, which is not infrequently used in police interrogations. Immediately after the visualization, step 3 was taken: subjects were told that the experimenter had misplaced last week's Life Event Inventory test, and they were asked to complete it again. The question is whether the probability ratings for the four visualized events had gone up. The results are given in Table 2.

The effect is statistically reliable, but not large. It should be realized, however, that the experimental manipulation is very small, just a bit of visualization! This effect of visualization, or imagination, is called *imagination inflation*, and was confirmed extensively.¹⁸

A much more subtle set-up was tested in the following study by Mazzoni *et al.*¹⁹ First-year psychology students were routinely taking part in a 'standard' set of psychological tests. One of the tests, administered in the Department of Experimental Psychology, was the Life Events Inventory, mentioned above. In the Department of Clinical Psychology, the same students took part in an individual session of dream interpretation. Here, a deceptive schedule was followed, in which the dream presented by the student was systematically interpreted as a sign of a forgotten traumatic event from before the age of 3 years. The steps taken were that the dream was first related to a particular type of feeling, like fear, or loneliness. The student was made to agree with this interpretation. Then the feeling was globally related to a class of events that is known to cause such feelings. A specific event was introduced as the most likely candidate, and it was suggested that this event must have happened. If there was no recall of this target event, the mechanism of repression was explained to the subject. Three to four weeks later the administration of the Life Events Inventory was repeated. The results for the

Table 3. Percentages of subjects who changed their probability estimates in the Life Events Inventory after suggestive dream interpretation¹⁹

	Probability		
	Decreased	Remained the same	Increased
Not suggested in dream interpretation	40%	30%	30%
Suggested in dream interpretation	13%	9%	78%

suggested events ‘Got lost in a public space’, ‘Was abandoned by my parents’ and ‘Found myself lonely and lost in an unfamiliar place’ are shown in Table 3.

The conclusion is obvious, suggestive dream interpretation induced a massive shift towards remembering the suggested event.

Misleading effects of interrogation techniques

The limits of experimental manipulation are more or less reached in the design by Mazzoni *et al.*¹⁹ Actually suggesting a past of repeated sexual abuse would be ethically unacceptable. In the same vein, the interrogation methods applied to Herman DuBois and Wilco Viets would be unacceptable if applied in a psychological laboratory. The question of whether the objectives of a criminal investigation are a sufficient excuse for the application of such techniques is, in my view, not relevant. The real worry is not the ethical aspect of interrogation methods, but the risk of obtaining false evidence. It is obvious that 40 to 60 interrogation sessions with, in principle, highly cooperative suspects cannot possibly be aimed at obtaining increasingly factual information. We do not know how long the sessions lasted, because beginning and end are only mentioned in 26 of the 244 interrogations. Based on these 26 sessions, we arrive at an estimated average of two hours per session; it might well be longer. At the end of 80 to 120 hours there is really not much more to say, even about a murder, if that whole event lasted not more than ten minutes or so. It was unavoidable that the long sequence of interrogations led to visualizations, and therefore also to some degree of imagination inflation. Did it also cause the two men to confess a murder they never committed?

When we follow the reports of the interrogation closely, even though roughly 10% of what was said is reported, we notice that the DuBois and Viets were always

in doubt about the reality of their memories. They saw images and flashes, but they never lost the concurrent feeling that actually they had not been at the scene of the murder. They made positive statements of how they raped and killed the victim, but always as a description of their visualizations. They came to the logical conclusion that these visualizations were true, because of the factual (but misleading) evidence given to them by the police. The presentation of their confessions as true memories resulted from this combination: images that lacked a concordant 'reality feeling', and logical inference that added the inescapable context of reality, but without a clear 'sense of reality'. Hence, their memories were somewhere halfway between the two categories in Gudjonsson's third category of coerced–internalized false confessions. The fluctuation between believing and not believing their own memories ended in the latter stage of the trial in total disbelief. But by then the harm had been done. They argued that their confessions were obtained under strong pressure from the police, endless interrogations at all times of the day, and threats. They realized that the images in their memories had been implanted by the police, and were unrelated to what had really happened. This retraction is not unlike what happens to quite a few people who became convinced that they had been the victims of sexual abuse. Many retract their story and sue their therapists for the damages of suggestive forms of psychotherapy²⁰. In 2002, eight years after the murder of Christel Ambrosius, the Putten two were acquitted by the Appeal Court in Leeuwarden. The verdict argued that the discrepancies between the two confessions, between the confessions and the testimonies of Schuchard and Bettink, and between the confessions and the physical evidence, were too large. The course of events, as contained in the charge, was simply impossible. This fact, combined with the circumstance that an unknown man had left traces of semen on the body, made it less than likely that Christel was murdered by Herman DuBois and Wilco Viets.

Still, as an argument in the scientific discussion about memory-based false confessions, the Putten Murder story is somewhat unsatisfactory. It is not more than a case history, and contains all the weaknesses of case histories as scientific proof. The case does not prove that suggestive interrogation techniques create false memories, because we do not know as a fact that DuBois and Viets experienced something like clear, reality-linked memories. There is ample evidence that they were always aware of the difference between these recollections and other, more normal memories. What is worse: we still cannot know to what extent these memories were created by the interrogation techniques, simply because we do not know as a fact that the two men were really not involved in the murder. The discrepancies in their statements only demonstrate that some of their confessions must be false, but leaves the possibility that some parts were true. Withdrawal of the entire collections of their statements, and the exonerating testimony of their families, stating that the men had been at home on that particular

Sunday afternoon, can be construed as a joint effort to escape punishment. The final acquittal does not constitute scientific evidence. The eventual discovery of the unknown fifth man, or even his complete confession, does not lead to the certain conclusion that false memories were implanted in the minds of Herman DuBois and Wilco Viets, since the same could be argued about the memories of this up-to-now mysterious suspect.

What we *do* know, however, is that the interrogation techniques employed by the investigating officers, especially the aspect of almost endless repetition of the same questions about the same facts, which enables the interrogators to resort to the six types of deceptive techniques, cause the mental processes that were shown to produce false memories in well-controlled experimental conditions. The creation of false memories of sexual abuse or murder in empirical studies is not possible. Hence, the laboratory studies described above constitute more or less the best that science can produce. Since the protection of the rights of the accused is the first responsibility of a criminal court, the warning that goes out from these studies should be sufficient. Interrogations should not be prolonged interminably, they must be recorded entirely; and they should not employ any of the tricks described above.

European legislature

The rights of criminal defendants are protected in the various systems of criminal law of the European member states. These laws show vast differences, both with respect to investigation methods that are or are not permitted; and to the criteria for the acceptance of confessions as legal evidence. The law that unites the European countries is expressed in Article 6 of the European Convention of Human Rights. The article describes the rights in very broad terms, but without a specific reference to standards for criminal investigation methods, or to the selection and evaluation of evidence. It is stated that every defendant is entitled to a fair and public hearing by an independent and impartial tribunal. But does this mean that confessions made in non-public police interrogations can never supersede a later public denial? Does it mean that unfair tricks are also prohibited in the non-public stages of the interrogation? Does it mean that the courts in which these fair and public proceedings are held, may not be fed by criminal files collected in an entirely different attitude? Does it mean that the text of pre-trial interrogations must be presented in court literally and completely? It is stated that the defendant is presumed to be innocent until proved guilty. But does this mean that the police should actively seek the information that may falsify the accusation? Does it mean that even a defendant's confession does not change his or her condition of 'presumed innocence', so that the search for falsification, eventually for other suspects, will just go on? It is obvious that these questions

have been answered in entirely different manners in the various member states. For The Netherlands, I argue that all these questions are answered in the negative. Article 6 of the European Convention does not mean all this. I challenge the readers to consider the situation in their own home countries.

A confession is not really the ‘Queen of Proof’, as suggested by some. Confessions must be evaluated against what we know about the manner and the conditions in which they were obtained. Especially because confessions make such a damning impression, the safeguards for obtaining and evaluating them must be adequately formulated and implemented. The European nations still have a long way to go in this respect.

References

1. G. H. Gudjonsson (1992) *The Psychology of Interrogations, Confessions and Testimony* (Chichester/New York: Wiley).
2. E. F. Loftus (1979) *Eyewitness Testimony* (Cambridge, USA: Harvard University Press).
3. M. K. Johnson, S. Hashtroudi, D. S. and Lindsay (1993) Source monitoring. *Psychological Bulletin*, **114**, 3–28.
4. E. F. Loftus and J. Pickrell (1995) The formation of false memories. *Psychiatric Annals*, **25**, 720–724.
5. J. A. Blaauw (2000) *De Puttense Moordzaak* (Baarn: Fontein).
6. P. J. Van Koppen (2000) Report on the Interrogations of Wilco Viets, Gerrit Schuchard, Willem Bettink and Herman DuBois in the so-called Putten Murder Case. Letter to the defence counsel, personal communication.
7. E. F. Loftus (1993) The reality of repressed memories. *American Psychologist*, **48**, 518, 537.
8. D. S. Lindsay and J. D. Read (1994) Psychotherapy and memories of childhood sexual abuse: a cognitive perspective. *Applied Cognitive Psychology*, **8**, 281–338.
9. J. D. Read and D. S. Lindsay (eds.) (1997) *Recollections of Trauma, Scientific Evidence and Clinical Practice* (New York: Plenum Press).
10. W. A. Wagenaar and J. Groeneweg (1990) The memory of concentration camp survivors. *Applied Cognitive Psychology*, **4**, 77–87.
11. L. M. Williams (1994) Recall of childhood trauma: a prospective study of women’s memories of child sexual abuse. *Journal of Consulting and Clinical Psychology*, **62**, 1167–1176.
12. J. Schooler, M. Bendixen and Z. Ambadar (1997) Taking the middle line: can we accommodate both fabricated memories and recovered memories of sexual abuse? In: M. Conway (ed.) *Recovered Memories and False Memories* (Oxford: Oxford University Press) pp. 401–456.
13. E. F. Loftus and M. J. Guyer (2002) Who abused Jane Doe? Hazards of the single Case History, Parts 1 & 2. *Skeptical Inquirer*, **26**, in press.
14. W. A. Wagenaar (1996) Autobiographical memory in court. In: D. C.

Rubin (ed.) *Remembering our Past, Studies in Autobiographical Memory* (Cambridge, UK: Cambridge University Press).

15. W. A. Wagenaar (1997) The logical status of case histories. In: J. D. Read and D. S. Lindsay (Eds.) *Recollections of Trauma, Scientific Evidence and Clinical Practice* (New York: Plenum Press).
16. E. Van Mancius (1994) Implanted memories: no difference between real and false memories. Doctoral Dissertation, Department of Experimental Psychology, Leiden University, The Netherlands.
17. M. Garry, C. G. Manning, F. F. Loftus and S. J. Sherman (1996) Imagination inflation: imagining a childhood event inflates confidence that it occurred. *Psychonomic Bulletin & Review*, **3**, 208–214.
18. J. R. Paddock, M. Noel, S. Teraanova, H. W. Eber, C. Manning and E. F. Loftus (1999) Imagination inflation and the perils of Guided Visualization. *The Journal of Psychology*, **133**, 581–595.
19. G. A. L. Mazzoni, P. Lombardo, S. Malvagia and E. F. Loftus (1999) Dream interpretation and false beliefs. *Professional Psychology: Research and Practice*, **30**, 45–50.
20. H. I. Lief and J. M. Fetkewicz (1995) Retractors of false memories: the evolution of pseudomemories. *The Journal of Psychiatry & Law*, **23**, 411–436.

Verdicts in the Putten Murder Case

Criminal Court Zutphen, LJN-nr: AE1685, case 06/030123–94, 19 December 1994; LJN-nr: AE1687, case 06/030120–94, 19 December 1994.

Court of Appeal Arnhem, LIN-nr: AE1889, case 21–000102–95, 3 October 1995; LJN-nr: AE1892, case 21–000103–95, 3 October 1995.

Supreme Court, LJN-nr: AA9800, case 03256/00 H and 03257/00 H, 26 June 2001.

Court of Appeal Leeuwarden, LJN-nr: AE1877, case 24–000688–01 and 24–000687–01, 24 April 2002.

About the Author

Willem A. Wagenaar is a permanent fellow of the Netherlands Institute for Advanced Study in the Humanities and Social Sciences (NIAS), in Wassenaar, The Netherlands; and full professor of experimental psychology at Leiden University. During the past 15 years he served as an expert witness on perception and memory problems in more than 500 trials.