EXPERT EVIDENCE ABOUT MEMORY

in New Zealand Sexual Violence Trials and Appellate Courts 2001 to 2020

Suzanne Blackwell, Fred Seymour, Sarah Mandeno

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ABSTRACT

In criminal proceedings in Aotearoa New Zealand there has been an increase in applications to admit expert evidence about memory, most commonly by defence counsel. Almost all these cases have involved allegations of historical child sexual abuse. Memory evidence has been admitted in some cases but deemed inadmissible in others. Thus, memory expert evidence may be regarded as contentious in our courts – as it is in courts in similar commonwealth jurisdictions. This project arose out of concern that the nature of memory expert evidence offered to the courts exaggerates memory fallibility in relation to sexual violence complaints and that the research cited in support lacks relevance or ecological validity. At issue is whether jurors need educating about memory, whether memory evidence represents settled science and/or whether memory witnesses inappropriately offer opinion about the credibility of witnesses. In Part One we describe the relevant legislation and case law in New Zealand, and case law in other commonwealth common law jurisdictions. We then examine the requirements for expert evidence as set out in the Code of Conduct for Expert Witnesses (Schedule Four, High Court Rules) and discuss memory expert evidence in relation to these rules. In Part Two we summarise the opinions commonly given by memory expert witnesses in our courts and describe the studies they cite in support. We observe that briefs of evidence cover similar topics regardless of the case or the court for which they are prepared. Topics include lay public knowledge about memory, then the specific memory topics that have been addressed in briefs of evidence: eyewitness identification and transference, false memories from post-event information, imagination inflation, false memory implantation, memory fallibility in personally experienced traumatic events, 'recovered' memory, and children's memory reports and suggestibility. We consider the potential implications for victims/survivors of sexual violence and child sexual abuse should memory evidence of this nature be more widely accepted in our courts.

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INTRODUCTION

In criminal proceedings in Aotearoa New Zealand there has been an increase in applications, most commonly by defence counsel, to admit expert evidence about memory. Our experience encompassing the last 20 years has indicated that this has been almost exclusively in the context of sexual violence trials. Most of these cases have involved allegations of historical child sexual abuse, but allegations of recent child sexual abuse and allegations of sexual violence against adults have also featured. A recent informal survey by us of crown prosecutors identified only one case over the last 15 years where expert evidence about the phenomenon of memory had been offered by defence or prosecution apart from in sexual violence trials. This was an appeal of conviction for assault on a child and the expert evidence was proffered to raise doubts about memory of the complainant child and her siblings who witnessed the assault.[1]

On occasions, the proposed memory evidence has been deemed inadmissible on the basis that jurors do not need educating about memory; that is, that such evidence is not substantially helpful since it can be assumed that jurors already have common knowledge of memory through their own experience. Memory evidence or proposed memory evidence has also been questioned on the grounds that the opinions given by memory expert witnesses do not represent settled science and/or that opinions given are potentially misleading. The Crown has called rebuttal expert witnesses in support of such arguments.

Thus, memory expert evidence has become contentious in our courts – as it has in courts in similar commonwealth jurisdictions. It is, therefore, timely to consider memory expert evidence in relation to our legislation and case law, and in relation to the scientific basis for memory expert evidence. Accordingly, in this report we examine both the law and the science in relation to memory expert evidence. This report includes consideration of the expert evidence about memory that has been offered for admissibility in sexual violence trials and in appellate courts determining appeals in sexual violence cases in Aotearoa New Zealand.

In Part One we describe the relevant legislation and report case law in New Zealand and, in addition, we report the case law in other commonwealth common law jurisdictions. In a second chapter we examine the requirements for expert evidence in relation to the Code of Conduct for Expert Witnesses (Schedule Four, High Court Rules). There has been concern that the memory expert witnesses have speculated about memory in areas that were without factual basis in the evidence available to the court,[2] and that the briefs of evidence have also invariably engaged with the specifics of the cases and offered opinion about the credibility of witnesses. Offering opinion on case specifics and witness credibility is unorthodox for expert evidence, where the purpose of expert evidence is usually regarded as being for the purpose

1 *P (CA354/2017) v R* [2018] NZCA 361 [11 September 2018] at [24]. The Court of Appeal referred to the evidence as being "offered in this case to directly impugn a fact witness." The appeal was dismissed.

2 *Ieremia v R* [2020] NZCA 17 [18 February 2020] at [58] and *B (CA463/2018) v R* [2020] NZCA 18 [18 February 2020] at [21]

of educating the jury at the level of principle and not seeking to comment on the veracity or credibility of those who make allegations or those who are accused.[3]

In Part Two we summarise the opinions commonly given by memory expert witnesses in our courts, then in relation to each topic, we describe the studies that they cite in support. This includes firstly a consideration of the literature that has been cited in memory expert witness briefs in support of their assertion that jurors need expert evidence to correct misconceptions commonly held about memory. Then we examine each of the specific memory topics that have been addressed by memory expert witnesses, including eyewitness identification and transference, false memories from post-event information ('the misinformation effect'), 'imagination inflation', false memory implantation studies, memory fallibility in personally experienced traumatic events, 'recovered' memory, and children's memory reports and suggestibility.

With respect to Part Two, it is important to state what this report is NOT about. It is not a review of the literature about memory. It is not a critique of the memory research. It is not about the applicability of memory research to all expert testimony. It is confined to the evidence given by memory expert witnesses only in sexual violence trials and appellate courts in Aotearoa New Zealand. However, as we indicate, the expert evidence about memory offered in this regard has been almost exclusively in the area of sexual violence.

This project arose out of our increasing concern that the nature of memory expert evidence offered to the courts seems to be focussed on portraying the memories of complainants and other prosecution witnesses as necessarily flawed. We have increasingly been concerned that research cited in support of opinions expressed in the briefs of evidence of memory expert witnesses has exaggerated memory fallibility in relation to sexual violence complaints – which, as noted already, is the context for almost all such briefs. In particular, we consider much of the research cited to have limited relevance or ecological validity to the issues inherent in sexual violence trials. If flawed expert evidence is presented to the courts, it has the potential to become yet another barrier to victims/survivors of sexual violence accessing the courts and experiencing fair trials. The costs for the community of such an outcome is also significant.

Two of the authors of this report are psychologists (SB and FS) – the other being a lawyer (SM) who has worked both as prosecuting and defence counsel. We have extensive experience as clinical psychologist practitioners working with child and adult victim/survivors of sexual abuse, and their families, and extensive experience working with offenders. We have often been engaged by the Crown as expert witnesses to give educative evidence in sexual violence trials (commonly referred to as 'counterintuitive evidence') addressing common misconceptions about sexual abuse about such issues as delayed reporting, processes of reporting such as incremental reporting and recantations, ongoing contact with the alleged

[3] The Supreme Court in *DH v R* [2015] SC 35 at [30]

offender, and proximity of others during offending.[4] We have also been engaged by the Crown to give expert evidence in response to memory expert evidence called by the counsel for the defence or appellant. We have conducted file reviews for the prosecution and the defence and have also provided reports for defence counsel for pre-trial hearings, for sentencings and the appellant courts. We have conducted research on court processes in relation to sexual violence trials involving child and adult complainant witnesses[5] [6] [7] [8] and children's experience of the criminal justice system[9] [10] in which we have argued the need for courts to better address the needs of complainant witnesses in the interests of providing greater protection of witness wellbeing. We have argued that in so doing, this will enhance complainants' ability to give their best evidence, leading to fairer trial outcomes. In the work we have done, we may reasonably be perceived as being advocates for complainants. We are. At the same time, we are not arguing that complainant's reports are always accurate because, as we will discuss in subsequent chapters, memory reports may be disjointed with gaps and with inaccuracies for some peripheral details of events. In addition, inconsistencies or inaccuracies in the reports of complainants may not necessarily reflect memory inaccuracy, but rather other motivations and individual circumstances.

We are not blind to the rights of defendants. We do not regard the advancement of conditions that support or protect complainants' outcomes is incompatible with defendants' rights to fair process, or to serving better justice for all. We concur with Ashworth and Redmayne (2005)[11] that "the purposes of the criminal process are accurate determinations and fair procedures at all times" (p. 26).

We gratefully acknowledge the New Zealand Law Foundation and the Michael and Suzanne Borrin Foundation whose joint funding of this research made it possible. In preparing this report we acknowledge the support of Justice Jan-Marie Doogue, who was the Chief Judge of the District Court at the time we first proposed this project. We also thank our advisers and the reviewers of drafts of the report.

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4 See Seymour, F., Blackwell, S., Calvert, S., & McLean, B. (2014). Counterintuitive expert psychological evidence in child sexual abuse trials in New Zealand. *Psychiatry, Psychology and Law, 21,*511-522.

5 Blackwell, S. & Seymour, F. (2015). Expert evidence and jurors' views on expert witnesses, *Psychiatry, Psychology and Law. 22*:5, 673-681.

6 Blackwell, S., & Seymour, F. (2014). Prediction of jury verdicts in child sexual assault trials. *Psychiatry, Psychology and Law. 21*:4, 567-576.

7 Randell, I., Seymour, F., Henderson, E., & Blackwell, S. (2016). *Evaluation of the Whangarei Young Witness Pilot Protocol*. University of Auckland;

8 Blackwell, S.J.Y. (2007). *Child sexual abuse on trial:* Unpublished doctoral thesis. The University of Auckland.

9 Randell, I., Seymour, F., Henderson, E., & Blackwell, S. (2018). The experiences of young complainant witnesses in criminal court trials for sexual offences. *Psychiatry, Psychology and Law, 25,* 357–373;

10 Randell, I., Seymour, F., McCann, C., Anderson, T., & Blackwell, S. (2020). Young witnesses in New Zealand's sexual violence pilot courts. https://www.lawfoundation.org.nz/wp-content/uploads/2020/05/2018_45_10_Young-Witnesses-in-NZs-Sexual-Violence-Pilot-Courts-final-research-report-rcvd-7.5.2020.pdf

11 Ashworth, A., & Redmayne, M., (2005). *The Criminal process* (3rd edition), Oxford: Oxford University Press.

PART ONE:
LEGAL GUIDELINES AND MEMORY EXPERT EVIDENCE

In the following at Chapter One we describe the legislation relating to expert evidence and report case law in New Zealand and in other commonwealth common law jurisdictions. In Chapter Two we describe the provisions and guidelines for experts that apply to all expert evidence, then consider the implications of this for those who give evidence about memory.

It may be useful to some readers for the definitions of expert evidence to be recounted briefly here. As a general rule, only evidence of fact is admissible in Court proceedings in New Zealand. Evidence of fact is that which is experienced by one of the five senses – taste, touch, seen, heard, smell. Opinion evidence is, conversely, generally inadmissible. The exception is the giving of expert opinion evidence. Expert evidence is opinion expressed within the expert's area of expertise, in situations where interpretation of the facts requires special skill and knowledge. Expert evidence is an exception to the general rule that in legal settings a witness must limit his or her evidence to facts personally observed and must not offer opinion or belief as to the meaning of those facts, this function being for finders of fact: that is, judges or jurors.

In New Zealand, as in other common law countries, there are three main rules governing admissibility of expert evidence. These are (1) the expertise rule (the proposed expert must be an expert), (2) the field of expertise rule (the proposed expert evidence must derive from a recognised field of expertise), and (3) the basis rule (that the information upon which the expert opinion is based must be proved by admissible evidence).[12] These rules are embodied in s 4 and s 25 of the Evidence Act 2006.

In general, the admissibility of expert evidence in New Zealand courts and tribunals is governed by the 'substantial helpfulness' test as indicated in s 25(1) Evidence Act 2006, as follows: "…an opinion by an expert that is part of expert evidence offered in a proceeding is admissible if the fact-finder is likely to obtain substantial help from the opinion in understanding other evidence in the proceeding or in ascertaining any fact that is of consequence to the determination of the proceeding."

With regard to the conduct of expert witnesses, the general provisions are set out in The Code of Conduct for Expert Witnesses (Schedule Four, High Court Rules). This is focus of the main focus in the second chapter. Although this document was introduced for use in civil proceedings it has become accepted practice for experts to acknowledge and comply with its provisions in matters before the criminal (and other) courts.

[12] *R v Turner* (1975) QB 834.

CHAPTER ONE

CASE LAW ON ADMISSIBILITY OF EXPERT EVIDENCE ABOUT MEMORY

This chapter considers the admissibility of expert evidence about memory to assist triers of fact in their assessment of evidence in sexual violence trials. First, we review the legislation relevant to the admissibility of evidence in general and with respect to memory. We then consider case law in Aotearoa New Zealand, limited to decisions of the higher courts only. Finally, other common law jurisdictions will be discussed. In this chapter, as in the following chapters of this report, we do not specify the names of the memory expert witnesses, although these are reported in the various judgments of the Court.

Legislative Guidance on the Admissibility of Evidence

The subjects that can be canvassed in a criminal trial are limited by the laws of evidence. All evidence must pass the threshold of relevance and probity required by sections 7 and 8 of the Evidence Act 2006 (**the Act**) to be admissible at trial. These provide:

> **7 Fundamental principle that relevant evidence admissible**
>
> (1) All relevant evidence is admissible in a proceeding except evidence that is
>
> (a) inadmissible under this Act or any other Act; or
>
> (b) excluded under this Act or any other Act.
>
> (2) Evidence that is not relevant is not admissible in a proceeding.
>
> (3) Evidence is relevant in a proceeding if it has a tendency to prove or disprove anything that is of consequence to the determination of the proceeding.
>
> **8 General exclusion**
>
> (1) In any proceeding, the Judge must exclude evidence if its probative value is outweighed by the risk that the evidence will -
>
> (a) have an unfairly prejudicial effect on the proceeding; or
>
> (b) needlessly prolong the proceeding.
>
> (2) In determining whether the probative value of evidence is outweighed by the risk that the evidence will have an unfairly prejudicial effect on a criminal proceeding, the Judge must take into account the right of the defendant to offer an effective defence.

The test for the admission of expert evidence is set out in s 25 of the Act as follows:

> **25 Admissibility of expert opinion evidence**
>
> (1) An opinion by an expert that is part of expert evidence offered in a proceeding is admissible if the fact-finder is likely to obtain substantial help from the opinion in understanding other evidence in the proceeding or in ascertaining any fact that is of consequence to the determination of the proceeding.

(2) An opinion by an expert is not inadmissible simply because it is about—
   (a) an ultimate issue to be determined in a proceeding; or
   (b) a matter of common knowledge.

(3) If an opinion by an expert is based on a fact that is outside the general body of knowledge that makes up the expertise of the expert, the opinion may be relied on by the fact-finder only if that fact is or will be proved or judicially noticed in the proceeding.

(4) If expert evidence about the sanity of a person is based in whole or in part on a statement that the person made to the expert about the person's state of mind, then—
   (a) the statement of the person is admissible to establish the facts on which the expert's opinion is based; and
   (b) neither the hearsay rule nor the previous consistent statements rule applies to evidence of the statement made by the person.

(5) Subsection (3) is subject to subsection (4)

The question for the Court is whether the evidence will be substantially helpful to the fact finder, whether a jury or a judge in a Judge-alone trial. Proposed expert evidence is not inadmissible simply because it goes to the ultimate issue or is a matter of common knowledge.[13] It is however, for the Court to determine, having regard to the particular issues of the trial, whether the proposed evidence will be substantially helpful.

In civil proceedings, experts are required by s 26 to conduct themselves in preparing and giving expert evidence in accordance with the applicable rules of court set out in the High Court Rules; Schedule 4 Code of Conduct for Expert Witnesses (the Code). In practice, the Code is also adopted in criminal trials.[14] Our perusal of expert briefs of evidence, and our own work (FS and SB), indicates that since 2006, experts in criminal trials have referred to the Code and stated their compliance with it as a matter of course. The Law Commission has recommended that s 26 be amended to make this a statutory requirement.[15]

Frailties of memory about identification evidence

The frailties of memory in the context of cases relying upon identification evidence are recognised within the Evidence Act. Section 126 provides:

126 Judicial warnings about identification evidence

(1) In a criminal proceeding tried with a jury in which the case against the defendant depends wholly or substantially on the correctness of 1 or more visual or voice identifications of the defendant or any other person, the Judge must warn the jury

13 Section 25(2) Evidence Act 2006
14 As recommended by the Court of Appeal in *Lisiate v R* [2013] NZCA 129, (2013) 26 CRNZ 292
15 Law Commission (2019). *The Second Review of the Evidence Act 2006* (NZLC R142, 2019) at 54.

of the special need for caution before finding the defendant guilty in reliance on the correctness of any such identification.

(2) The warning need not be in any particular words but must—

(a) warn the jury that a mistaken identification can result in a serious miscarriage of justice; and

(b) alert the jury to the possibility that a mistaken witness may be convincing; and

(c) where there is more than 1 identification witness, refer to the possibility that all of them may be mistaken.

(3) If evidence of identity is given against the defendant in any criminal proceeding and the defendant disputes that evidence, the court must bear in mind the need for caution before convicting the defendant in reliance on the correctness of any such identification and, in particular, must bear in mind the possibility that the witness may be mistaken.

In *R v Turaki*,[16] the Court of Appeal expanded upon what the content of the warning could include, in light of the New Zealand Law Commission's *Evidence Code and Commentary* (1999):[17]

(a) The ways in which events surrounding the witness's observation of the defendant may have influenced the quality of the identification evidence (e.g. time of observation, lighting, distance of witness from offender, weather conditions, the stress inherent in the situation, whether violence was used, or whether a weapon was involved);

(b) The ways in which any factors particular to the individual witness may have influenced the quality of the identification evidence (e.g. poor eyesight or hearing, or bias);

(c) The fact that, if the witness and defendant are of different race/ethnicity, the identification may be less reliable;

(d) The greater the period of time between the sighting and the identification, the greater the likely deterioration of memory.

In the case of eyewitness identification evidence, the trial counsel will seek a judicial direction warning the jury, or the judicial fact finder will be asked to remind himself or herself, of the reliability risks of eyewitness identification.

16 *R v Turaki* [2009] NZCA 310 at [90].

17 New Zealand Law Commission *Evidence Code and Commentary* (NZLC R55-Volume 2 1999) at C398.

Frailties of memory due to elapse of time

The frailties of memory are further recognised in the context of the elapse of time since the incident or incidents from which the charges arose. The specific provision is s 122(2)(e) of the Act, but the whole of s 122 is set out to provide context:

122 Judicial directions about evidence which may be unreliable

(1) If, in a criminal proceeding tried with a jury, the Judge is of the opinion that any evidence given in that proceeding that is admissible may nevertheless be unreliable, the Judge may warn the jury of the need for caution in deciding—
  (a) whether to accept the evidence:
  (b) the weight to be given to the evidence.

(2) In a criminal proceeding tried with a jury the Judge must consider whether to give a warning under subsection (1) whenever the following evidence is given:
  (a) hearsay evidence:
  (b) evidence of a statement by the defendant, if that evidence is the only evidence implicating the defendant:
  (c) evidence given by a witness who may have a motive to give false evidence that is prejudicial to a defendant:
  (d) evidence of a statement by the defendant to another person made while both the defendant and the other person were detained in prison, a Police station, or another place of detention:
  (e) evidence about the conduct of the defendant if that conduct is alleged to have occurred more than 10 years previously.

(3) In a criminal proceeding tried with a jury, a party may request the Judge to give a warning under subsection (1) but the Judge need not comply with that request—
  (a) if the Judge is of the opinion that to do so might unnecessarily emphasise evidence; or
  (b) if the Judge is of the opinion that there is any other good reason not to comply with the request.

(4) It is not necessary for a Judge to use a particular form of words in giving the warning.

(5) If there is no jury, the Judge must bear in mind the need for caution before convicting a defendant in reliance on evidence of a kind that may be unreliable.

(6) This section does not affect any other power of the Judge to warn or inform the jury.

Children's evidence

Evidence given by children is generally to be treated in the same way as that given by adults. Section 71 of the Act abolishes the common law tests of competency for child witnesses.

Section 125 of the Act provides:

125 Judicial directions about children's evidence

(1) In a criminal proceeding tried with a jury in which the complainant is a child at the time when the proceeding commences, the Judge must not give any warning to the jury about the absence of corroboration of the evidence of the complainant if the Judge would not have given that kind of a warning had the complainant been an adult.

(2) In a proceeding tried with a jury in which a witness is a child, the Judge must not, unless expert evidence is given in that proceeding supporting the giving of the following direction or the making of the following comment:

(a) instruct the jury that there is a need to scrutinise the evidence of children generally with special care; or

(b) suggest to the jury that children generally have tendencies to invent or distort.

(3) This section does not affect any other power of the Judge to warn or inform the jury about children's evidence exercised in accordance with the requirements of regulations made under section 201.

It is within this context that expert memory evidence has been given in our courts, as will be discussed in the next section.

In addition to s 125, guidance regarding children's evidence is provided in Regulation 49 of the Evidence Regulations 2007 as follows:

49 Warning or informing jury about very young children's evidence

If, in a criminal proceeding tried with a jury in which a witness is a child under the age of 6 years, the Judge is of the opinion that the jury may be assisted by a direction about the evidence of very young children and how the jury should assess that evidence, the Judge may give the jury a direction to the following effect:

(a) even very young children can accurately remember and report things that have happened to them in the past, but because of developmental differences, children may not report their memories in the same manner or to the same extent as an adult would:

(b) this does not mean that a child witness is any more or less reliable than an adult witness:

(c) one difference is that very young children typically say very little without some help to focus on the events in question:

(d) another difference is that, depending on how they are questioned, very young children can be more open to suggestion than other children or adults:

(e) the reliability of the evidence of very young children depends on the way they are questioned, and it is important, when deciding how much weight to give to their evidence, to distinguish between open questions aimed at obtaining answers from children in their own words from leading questions that may put words into their mouths.

Case Law on Admissibility of Expert Evidence in Sexual Violence Trials

Since the passing into law of the Evidence Act expert evidence regarding memory has been found admissible in some contexts and not so in others. In the following section we review the relevant case law, usually in matters of appeal. The history demonstrates that the admissibility of memory evidence is frequently contested; it is not routinely admitted but rather, is considered on a case-by-case basis. The Supreme Court has not yet considered the issue, although it has expressed an interest in doing so in an appropriate case.[18]

Whether proposed expert evidence is substantially helpful has been said to turn on an amalgam of relevance, reliability and probative value.[19] The court's gatekeeping role is an important one, designed to ensure that the expert does not unduly encroach on the fact finder's role, and the trial does not become a "trial by expert". As set out above, evidence bearing on the ultimate issue at trial, or evidence of matters within the fact finder's common knowledge and experience, are no longer automatically excluded. But these considerations continue to inform the test of substantial helpfulness. This is perhaps particularly so in the case of expert memory evidence, as such evidence is closely associated with witness credibility and reliability, which is for the finder of fact to assess for themselves.

Memory knowledge as lying outside common experience

In *D v R* [20] the Court of Appeal referred to the Law Commission report [21] (where the Commission expressed the opinion that people are not well-informed about memory) and said:[22]

> Subsequent judgments of this Court contest the Commission's premise that the ordinary human experience of jurors does not extend to the nature of memory and the circumstances in which memories may be reliable (or not). It has been held that jurors generally know how memory works, and that the stages of acquisition, storage and recall are common sense; also that jurors can evaluate for themselves the possibility that memory has been contaminated by external influences. To the extent that memory is a matter of ordinary human experience, expert evidence is not substantially helpful to a jury and so is inadmissible.[23]

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18 *B (SC18/2020) v R* [2020] NZSC 52 at [14].

19 *Mahomed v R* [2010] NZCA 419, at [35], endorsed in *Pora v R* [2015] UKPC9, [2016] 1 NZLR 277, at [41] citing *Daubert v Merrell Dow Pharmaceuticals, Inc* 509 US 579 (1993); Law Commission Evidence Law: Expert Evidence and Opinion Evidence (NZLC PP18, 1991) at [61]-[66]; *R v Gwaze* [2010] NZSC 52, (2010) 24 CRNZ 702 at [47].

20 *D (CA95/2014) v R* [2015] NZCA 171.

21 Law Commission *Total Recall? The Reliability of Witness Testimony* (NZLC MP13, 1999) at [193]

22 At [28]

23 *D (CA95/2014) v R* [2015] NZCA 171 citing *McLachlan v R* [2014] NZCA 462 at [34]; *DH (CA687/2012) v R* [2013] NZCA 670 at [33] and *B (CA196/2010) v R* [2011] NZCA 654 at [22] and [43].

In *M v R (CA68/2015)* [24],the Court returned to this theme. It said that in practice the courts are "cautious" about expert memory evidence. Further:

> [27][...] The ordinary rule is that courts treat memory as a jury matter because it is deemed to lie within jurors' experience and understanding. The experience and understanding of jurors extends generally to processes of acquisition, retention and recall, and they can evaluate for themselves the possibility of contamination. That being so, expert evidence about memory is ordinarily not substantially helpful and so is not admissible. Before admitting it, the court must identify some evidence or issue that the jury must understand or decide and satisfy itself both that it likely to lie outside their experience and understanding, and that the expert evidence will likely be of substantial help to them when understanding or deciding on that evidence or issue. [Footnotes omitted]

Other reasons for caution include:

> [28][..] (b) Memory is a developing science, which may increase the risk of error inherent in expert evidence.
>
> (c) The court must be satisfied that the witness rests his or her opinion on relevant specialised knowledge or skill.
>
> (d) Care may be needed to ensure that the witness's opinion complies with the Code of Conduct for Expert Witnesses, which requires transparency of qualifications, reasons and sources.

The Court detailed those memory phenomena with which it can be assumed jurors are not familiar:

> [29] It is not in dispute in this case that expert evidence may extend to infantile amnesia, retention of childhood memories into adulthood, retention of memory for trauma, and recovered memories. These are all phenomena with which jurors may not be familiar and which expert evidence may help them to understand.

In *Taula v R* [25] the Court of Appeal considered expert memory evidence in the context of cannabis consumption and said:

> [20] In our view, it is not substantially helpful for expert scientific evidence to be used to put forward a proposition about how people think and act that a jury could itself already comprehend and weigh. This Court had held for example that the extent memory is a matter of ordinary human experience, expert evidence about memory is not substantially helpful to a jury and so is inadmissible. A jury will know that cannabis

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24 *M v R (CA68/2015)*

25 *R v Taula* [2016] NZCA 194. The Court adopted a similar approach in the context of alcohol consumption in *Chetty v R* [2017] NZCA 586 and *Morya v R* [2016] NZCA 325.

> can affect sleep, that young people can have sexualised dreams, and that on occasions dreams can be confused with reality. This sort of evidence can be distinguished from counterintuitive evidence where a jury might naturally assume the opposite inference to the proposition put forward by the expert.

In relation to a proposed s 9 submission[26] about memory heard by the jury in a trial involving historical sexual violence allegations, the Court in *H v R* [27] expressed the view that jurors are unlikely to need expert evidence on the three stages of memory, but conversely a s 9 submission to explain the effects of time on memory may assist.[28] Such an agreed statement by defence and prosecution experts would likely be "uncontroversial." The Court of Appeal said;

> [36] The statement is not in dispute on appeal and we are not in a position to approve it as a template for other cases. We observe that it includes material, such as the three stages of memory, about which this Court has indicated that jurors are unlikely to need expert evidence. It does not address childhood memory.
> [37] However, we commend the practice of using agreed statement to put before the jury expert evidence about memory that the court finds substantially helpful and otherwise admissible. In an historic case such as the present, such a statement may assist the trial judges to explain the effects of time on memory in an uncontroversial way. [footnotes omitted]

Section 122 warning

Notwithstanding the opinion that memory lies within jurors' common knowledge, the courts have also noted the availability of the judicial direction available in s 122(2)(e). In *CT v R* [29] and *Oquist v R* [30] the Courts had regard to the availability of judicial direction pursuant to s 122(2)(e) of the Act in cases involving evidence about events that occurred more than 10 years previously. In *CT v R* the Court observed at [41] "Potential unreliability of evidence,

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26 This s 9 statement was in fact based almost verbatim on a statement prepared for Crown Law by two of the authors of this report (SB and FS). This proposed statement was peer reviewed by two Auckland University Professors with expertise in memory. It was envisaged that this could be used routinely rather than having the jury confused by differing evidence from expert witnesses for the Crown and defence. This has not occurred because of a continuing lack of agreement. The original statement did have a section on childhood amnesia.

27 *H (CA376/2017) v R* 18] NZCA 376.

28 At the time of writing this report there is one further case before the District Court where counsel for the defendant had proposed the admission of expert evidence on memory by way of a s 9 admission of fact document. The trial Judge had agreed to this approach but stated, having regard to the Crown's submissions on this proposed document, that the extent of the admission of fact document would be dependent on what transpired in terms of the complainant's evidence at trial and would be revisited in the course of the trial. The trial Judge raised with counsel *H v R* where at paragraph [35] the Court sets out a statement about memory which was tendered to the jury in that case and accepted by both sides as authoritative. While the Court of Appeal did not go as far as to specifically endorse what was in the memorandum, they did point out that where this sort of evidence is admissible, it is preferable that it is done in statement form rather than through a live witness.

29 *CT (SC88/13) v R* [2014] NZSC 155, [2015] 1 NZLR 465

30 *Oquist v R* CA215/2014 [2015] NZCA 310 [17 July 2015]

including the passage of time, is treated by s 122 of the Evidence Act as something which the judge should identify and address by a warning to the jury."[31]

Section 122(2)(e) constitutes legislative recognition that evidence about the conduct of a defendant may be unreliable where the conduct in issue occurred more than 10 years before the trial. If of the opinion that the evidence, although admissible, may be unreliable, the judge is required to consider warning the jury of the need for caution both in accepting the evidence and deciding what weight it is to be given.

Memory as a developing science

As noted in *M v R,*[32] the Court considered one reason for caution about the admissibility of expert evidence on memory is that "Memory is a developing science, which may increase the risk of error inherent in expert evidence." As the Courts have accepted that memory is a developing science a general judicial direction has not received the endorsement of the appellate Courts. The Supreme Court expressed caution about a general judicial direction in *DH v R* [2015] NZSC 35, [2015] 1 NZLR 625 at [126] – [128].[33]

> [126] We accept that the direction did not capture all the subtleties of recent memory research and did, in places, appear to be discussing matters of scientific fact, such as the reference to the three stages of memory. However, the focus of the defence in the present case was not on the accuracy of the memory of the complainant, but rather on whether she had fabricated the allegations. It was not suggested that she had made an error of memory but rather that she had lied. Mr Pyke did not point to any particular way that the direction could have affected the trial or the way the jury approached its task. His complaints were generalised.
> [127] In light of those factors, we do not think it was helpful for the Judge to give directions on the issue of memory. We accept that it may be helpful in some cases to give guidance to a jury about memory, but we do not think this was such a case. However, we do not consider the direction given by the Judge had a material impact on the present case for the reason given above.
> [128] We do not comment on the appropriateness of giving directions along the lines of those given by the Judge in a case where the accuracy of a witness' memory is in issue because of the developing science in the field and the fact that we did not have detailed submissions on the issue. We can see that a general direction on memory could assist a jury if a statement that does not involve divided scientific opinions can be identified. That is a topic which could be considered by the authors of the New Zealand jury trials bench book."

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31 *CT (SC88/13) v R* [2014] Supra note 29
32 *M v R (CA68/2015)*
33 *DH v R* [2015] NZSC 35, [2015] 1 NZLR 625 at [126] – [128

Cost and delay of litigation

The Act states at s 8(1)(b) that a Judge must exclude evidence if its probative value is outweighed by the risk of needlessly prolonging the proceeding. As described above, in *T v R*[34] the Court of Appeal determined the proposed memory evidence was inadmissible, in part because it was within "ordinary human experience". Another reason why that was the case was also enunciated by the Court in paragraph [23] of the decision: "If expert evidence can be called in relation to these sorts of workings of the mind it will likely add to the cost and delay of litigation. The Crown could be expected to start calling rebuttal evidence and much time could be spent on the issue without the jury in the end being better informed."

Compliance with the Code: Relevant witness expertise

Courts have also explicitly given consideration to the Code of Conduct in deciding whether expert evidence should be admitted. The court must be satisfied that the witness rests his or her opinion on relevant specialised knowledge or skill. In *M (CA68/2015)* cited previously, one reason for caution in admitting memory evidence was given as follows: "(d) Care may be needed to ensure that the witness's opinion complies with the Code of Conduct for Expert Witnesses, which requires transparency of qualifications, reasons and sources."

Compliance with the Code: Cogency and relevance

Two recent decisions of the Court of Appeal, in *B v R* [35] and *Ieremia v R,*[36] illustrate the importance of experts addressing issues that are relevant, and doing so in an impartial manner, consistent with the expert Code of Conduct. Both were appeals against conviction for historical sexual offending where the appellants sought to call "fresh" evidence about memory, from the same expert witness, and the appeals were heard together by the Permanent Court of Appeal.

In *B v R* [37] the Court acknowledged that further evidence can in rare cases be admitted on appeal, notwithstanding a lack of freshness and the absence of trial counsel error.[38] The Court held however that the evidence must be cogent and in its view at [20] the appellant's evidence was not, for several reasons:[39]

> The first is that unfortunately significant aspects of [the expert's] evidence are speculative and lack the neutrality one would ordinarily expect of an expert witness. The report focuses selectively on the negative aspects of memory without acknowledging the research on memory accuracy and the preservation of memory over

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34 *R v Taula* [2016] NZCA 194

35 *B (CA 463/2018) v R* [2020] NZCA 18

36 *Ieremia v R* [2020] NZCA 17

37 *B (CA 463/2018) v R* [2020] NZCA 18

38 *Fairburn v R* [2010] NZSC 159 [2011] 2 NZLR 63 at [25]; *R v Bain* [2004] 1 NZLR 638 (CA) at [22-27]; and *Lundy v R* [203] UKPC 28, [2014] 2 NZLR 273 at [120].

39 At [21]

> long periods of time. It also ventures opinions that are not based on proven facts, for example suggesting that the complainants might be suffering from post-traumatic stress disorder, that they may have taken drugs that rendered them susceptible to false memories, and that when S wrote a letter about her abuse this may have been an exercise in imagination. Opinions favourable to B, are advanced without identifying other possibilities that support the verdicts, including a partisan response to B's admission [of a sexual offence].[40]

The Court said there was a second and "more fundamental" objection: that the trial, properly analysed, did not raise the special memory issues claimed. The defence at trial was not predicated on false or recovered memories, but suggested the complaints were malicious. There was no error in this approach. Thirdly, the Court reiterated that the effect of delay on memory is a matter of common experience and "well within the understanding of a jury without the need for expert evidence."[41]

The judgment of the Court in *B* does not signal that the Court cannot countenance the admissibility of expert evidence on memory in the context of a sexual assault trial but rather the approach remains that it must be considered on a case by case basis.

In *Ieremia v R* [42] there were four complainants and the defence at trial was squarely that they had colluded to bring false accusations for financial gain. The Court declined to receive the proposed fresh evidence on similar grounds to B.

Cogency and relevance were also considered in another recent appeal. In *R v A* (CA 94/2019)[43] the Court of Appeal considered an appeal against a pre-trial ruling allowing the defence to adduce expert opinion evidence about interviewing techniques and children's memory. The Court considered the particular context of the case that the complainant was recalling events that were some 2-4 years before, when she was aged 4 to 6 years old. The Court noted at [68] that counsel for the appellant described the memory expert witness as being of the opinion that "overall children's memory reports tend to be less complete and less accurate than those of adults" saying it would be unfair if this evidence were not before the jury. However, the expert's comment was made in the context of eyewitness ability, which was not in issue in the case. The Court commented "[t]his misunderstanding perhaps demonstrates the potential for expert opinion evidence of this kind to be misunderstood and misused".[44] The Court held at [70] that the proposed evidence fell within the jury's sphere of competence and does not provide substantial help in ascertaining any fact of consequence. The

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40 *B (CA 463/2018) v R* [2020] NZCA 18

41 Footnote 7 of judgment *D (CA95/2014) v R* [2015] NZCA 171 at [28]; and *M (CA68/2015) v R* [2017] NZCA 333 at [27-28]

42 *Ieremia v R* [2020] NZCA 17

43 *R v A* (CA 94/2019) [2019] NZCA 151

44 Evidence Regulations 2007, reg 49(b)

Court considered the potential suggestibility of a six year old child was self-evident and, the proposed expert opinion evidence fell short of the substantial helpfulness test.[45]

Issues where expert evidence has been regarded as substantially helpful

As already discussed, the courts have held that for memory evidence to be admissible the facts and issues must be those that lie outside the experience and understanding of jurors. In *M (CA68/2015) v R* the Court suggested that such issues may include "infantile amnesia, retention of childhood memories into adulthood, retention of memory for trauma, and recovered memories." It was considered that these were all phenomena with which jurors may not be familiar and which expert evidence may help them to understand.

The Court in *D (CA95/2014) v R* gave examples of where expert evidence on memory may be substantially helpful:

> [29] Courts have admitted expert evidence: by way of example, where it was suggested that inappropriate interviewing techniques and adult interference altered the memories of children; that an accident victim had suffered impaired memory in the immediate aftermath of a traumatic event; that memories of abuse had been repressed; and that children may recall abuse and retain memory into adulthood. [footnotes omitted but summarised below][46]

In *D v R* the Court observed some aspects of the proposed defence memory evidence would have been admissible but would have entitled the Crown to call its own expert evidence responding to it.

Areas of admission of expert evidence on memory

Expert evidence on memory on issues of the phenomenon of confabulation in relation to the impact of drug use and of sleep has been considered admissible in *Bruce v R* [47] and *P v R.*[48] However, expert evidence on this was deemed inadmissible in *Chetty v R* [49] due to lack of substantial helpfulness. Expert evidence has also been admitted in respect of memory impairment following the immediate aftermath of a traumatic event.[50]

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45 Compare *R v Taula* [2016] NZCA 194 at [21].

46 Interviewing techniques *R v Ellis* [2000] 1 NZLR 513 (CA), although we note that this was a prerogative case (Ministerial Inquiry); see also *CT (SC88/2013) v R* [2014] NZSC 155 at [68]. Accident victim impaired memory; *Lockhart v R* [2013] NZCA 549. "Repressed memory" *R v R* (1994) 11 CRNZ 402 (HC) per Tipping J; and *R v KG* HC Gisborne CRI-2008-016001131, 7 April 2009 per Courtney J. That children may recall abuse and retain memory into childhood; *J v J* [2013] NZHC 1512 at [91] and [92]. This was a civil proceeding.

47 *Bruce v R* [2015] NZCA 332, (2015) 28 CRNZ 150

48 *P (CA130/16) v R* [2016] NZCA 457

49 *Chetty v R* [2017] NZCA 586

50 *Lockhart v R* [2013] NZCA 549

Interviewing techniques and children's memory

In *P (CA354/2017) v R* [51] the Court reiterated its comments in *M v R (CA68/2015)* as to the cautious and case by case approach to be taken to the admission of memory evidence as juries generally can be taken to understand the process of acquisition, retention and recall and can evaluate the possibility of contamination. In *P(CA354/2017*) the Court considered that there was nothing in the factual background or the proposed expert evidence, that would suggest the young complainant's reliability would be outside the types of cases juries are routinely asked to assess. This included the possibility of a young witness not disclosing all the details she recalled at her original interview and giving more details in evidence or remembering more details in response to different questions at a later date (incremental disclosure) and being influenced in her recollection by other parties. Nevertheless at [26] the Court acknowledged that there may be cases in which expert evidence about childhood memory would be of assistance and admissible.

Issues where expert evidence has been deemed not substantially helpful

'Transference'

In *D v R* [52] the complainant alleged sexual abuse by his uncle D when he was 7 to 9 years old (between 1967 to 1970). The complainant disclosed to Police in 2012. The defence applied under s 44(1) of the Evidence Act to question B about sexual abuse by a former teacher. The defence said this was relevant to the allegations against D on the basis of transference. That is to say, the defence wanted to run an argument that B was incorrectly recalling the identity of his abuser, confusing D with the teacher. In support of the application, the defence filed a report from a memory expert witness. In declining the application, the District Court held that the evidence against the teacher was not of such direct relevance to the facts in issue that its exclusion would constitute a miscarriage. The decision was upheld by the Court of Appeal noting that the memory expert witness' report was entirely equivocal as to whether transference was likely on the facts of the case.[53] In dismissing the appeal, the Court held at [21] that the trial Judge gave an extensive reliability warning under s 122(2)(e) of the Act in accordance with the Supreme Court decision of *CT v R.*[54]

The appeal hearing for *Oquist v R* [55] was heard immediately after the Court delivered its judgment in *D v R* and bore a number of similarities. *Oquist* involved four complainants, one of whom, GC alleged offending from 2005, when she was about five, to 2011, when she was about 12 years. She complained in 2012. As in *D v R*, the Court in *Oquist* rejected the contention that

51 *P(CA354/2017) v R [*2018] NZCA 361

52 *D (CA 368/2017) v R* [2017] NZCA 464

53 As we will discuss in a later chapter of this report, the issue of 'transference' is irrelevant to the significant majority of sexual violence trials in that the defendant is usually well known to the complainant and, therefore, the probability of falsely identifying someone, as might occur in eyewitness identification of strangers is extremely low.

54 *CT (SC88/13) v R* [2014] NZSC 155, [2015] 1 NZLR 465

55 *Oquist v R* [2015] NZCA 310

expert memory evidence should have been called at trial in respect of the complainant's evidence. In *Oquist v R* the Court at [40] did not consider that expert opinion evidence on information transfer risks and the interviewing process would be substantially helpful given it was no more than expressions of common knowledge. The Court noted that at [41] that GC had lived with the offending for most of her young life and that there was no scope for advancing a defence based on post-event memory distortion.

In *R v A*,[56] A faced charges of sexual offending against his friend's daughter, when she was aged between of four and six. The trial took place when she was eight. Prior to trial, A applied for and was granted, leave pursuant to s 44 of the Act to call evidence of an incident when she was aged 3 years when a 12 year old boy was seen by his mother lying on top of her. The District Court granted permission for that evidence to be given because there was expert evidence from a memory expert witness that at least part of the complainant's reports was false because she had misattributed the previous abuse (by another party) to A. The Court, in considering the Crown appeal, determined the differences in circumstances in which the offending took place, meant it was unlikely the that the complainant has transferred the earlier incident to that with A. The earlier incident was a one-off occasion whereas the allegations against the defendant were wide ranging and prolonged and on a number of occasions. The Court of Appeal held at [30-32] that the evidence of the earlier incident be excluded as there was actual corroboration in respect of the charge that the earlier incident was said to be relevant to. Further as was the case in *D v R*,[57] we note that the expert evidence (while unchallenged for the purposes of the appeal) is equivocal as to whether there has been transference. The memory expert witness did not suggest that it was a "reasonable possibility" that transference had occurred; only she indicated that it was a possibility.

Recovered memories

The lack of recent case law regarding the phenomenon of recovered memories is likely due to concerns held about the hypnotic techniques administered and the resulting recovered memories.[58] Lack of recent case law may also be due to use of such techniques being uncommon in this country, particularly in recent times. In several older cases complainants' evidence was ruled inadmissible due to concerns relating to the reliability of the process leading to these recovered memories and the risk of what has sometimes been referred to as 'false memory syndrome'.[59] This approach in Aotearoa New Zealand has mirrored the judicial approach to the admissibility of such evidence in commonwealth jurisdictions.

56 *R v A (CA 336/2018)* [2018] NZCA 421
57 *D (CA368/2017) v R*
58 *R v G* [1996] 1 NZLR 615, (1995) 13 CRNZ 364(HC)
59 The reality of the existence of False Memory Syndrome will be discussed in a subsequent chapter of this report

Conclusion about New Zealand case law

The cases currently reflect the both the trial and appellate courts' stance that a cautious approach be adopted in admitting expert evidence on memory on the basis that juries generally can be taken to understand the processes of acquisition, retention and recall and can evaluate the possibility of contamination and apply these when assessing the credibility and reliability of a complainant's evidence. However as is noted recently in *H v R* [60] the Court has acknowledged that there may be misconceptions held by jurors about memory and the recall of events. The Court has stated that there may be cases in which expert evidence about memory would be substantially helpful and therefore admissible. As repeatedly expressed by the Court, each case will turn on its own particular facts.

Commonwealth Jurisdictions and Approach to Expert Evidence on Memory Admissibility in the Context of Sexual Violence Trials

England

The English case law demonstrates that expert memory evidence is not normally admissible. As in New Zealand courts, whether memory expert evidence is admitted is determined on a case by case basis. Where such evidence has been admitted it has been in the context of recovered memory and regarding infantile or childhood amnesia.

In England, the law draws distinctions between recovered memories and continuous memories. In *R v Bernard V* [61] the defendant obtained an expert report about the development of false memories in therapy. However, the Court of Appeal held that this was not a case of recovered memory but a case of continuous memory and recollection. As such, any expert review of the evidence in the report was inadmissible as this trespassed upon the remit of the jury.

In *R v JH; and R v TG (deceased)*[62] the cases were referred together to the Court of Appeal by the Criminal Cases Review Commission to consider an application to introduce the evidence of a memory expert witness as fresh evidence on appeal. H's daughter, then an adult, gave a detailed account of alleged sexual abuse which began before she was three years old and continued thereafter. The evidence of the memory expert witness was admitted as it provided information likely to be outside "the knowledge and experience of the jury". However, where the expert expressed the view that some parts of the complainant's evidence were "unreliable", the evidence was inadmissible because it sought to usurp the responsibilities of the jury in so far as determinations in respect of the credibility and reliability of the complainant. In essence, the expert suggested that adults do not remember events of their very

60 *H (CA209/2018) v R* [2019] NZCA 316
61 *R v Bernard V* [2003] EWCA Crim 3917
62 *R v JH; R v TG (deceased)* [2006] 1 Cr App R 195; [2005] EWCA Crim 1828

early childhood in such a way that they can give a coherent narrative account of events. Their recall of this part of their lives is usually "fragmentary, disjointed and idiosyncratic". In the judgment of the court, the case was "exceptional" in that the adult complainant provided "quite remarkably detailed accounts of events" which had taken place when she was aged three, four and five years. Although the evidence on this topic would be admitted, the Court emphasised at [47] that it, "…would be relevant only in those rare cases in which the complainant provides a description of very early events which appears to contain an unrealistic amount of detail".

In *R v JCWS; R v MW* [63] counsel sought again to adduce a memory expert witness's evidence. The expert gave evidence about what in his view was the unreliability of the memory of C, the complainant in *JCWS*. C gave evidence at the age of 20 about abuse said to have occurred at the ages of 6 to 8 years. In *MW* the complainant, S, now an adult, gave evidence about alleged abuse between the ages of 3 to 11 years. Of concern was that the expert's written statement could be read to indicate his view of the accuracy and truthfulness, or otherwise, of the allegations made by them. The Court considered that, the jury must decide whether any witness, and in particular the complainant, is truthful and accurate. The evidence of the memory expert witness was not admitted.

The admissibility of the proposed evidence of the same memory expert witness was further considered in *R v E*.[64] The Court referred to *R v JH; R v TG* and repeated and endorsed the Court pronouncements on the strict limits of admissible expert evidence based on memory research.

This approach was again confirmed in n *H, R. v R* [65] where the Court found that the complainant did not remember early matters in any greater detail than would otherwise be anticipated. The Court considered a number of authorities including *R v. Turner*, *R v. Snell and Wilson*, *R v. Nigel Clark*, *R v. Richard W* and *R v. Bernard V*.[66] Having reviewed the authorities, the Court concluded that the principles which emerged were:

> [1] The defence were not permitted to call an expert to examine the detail of a complainant's statement/evidence, and other relevant evidence such as medical or counselling notes, and then pass judgement or adverse comment on whether the witness was a credible or reliable witness. To do so would be to usurp the jury's function. [2] The defence were entitled, in an appropriate case, to call expert evidence on a specific subject which would be outside the knowledge and experience of the jury and which might assist them in their task of assessing the credibility and reliability of allegations of historic sexual abuse. [3] False Memory Syndrome, or Recovered Memory Syndrome, was just such a subject where defence expert evidence was potentially admissible.

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63 *R v JCWS; R v MW* [2006] EWCA 1404

64 *R v E* [2009] EWCA Crim 1370

65 *H, R. v R* [2011] EWCA Crim 2344 (25 October 2011

66 *R v. Turner* [1974] 60 Cr.App.R. (S) 80, *R v. Snell and Wilson* [2006] EWCA Crim 1404, *R v. Nigel Clark* [2006] EWCA Crim 231, *R v. Richard W* [2003] EWCA Crim 3490 and *R v. Bernard V* [2003] EWCA Crim 3917.

Canada

In Canada, the defence has sought to call memory experts to provide testimony on the frailties of human memory and the susceptibility of memory to distortion through suggestive interactions, source confusion and imagination inflation. For the most part, courts have concluded that such expert evidence is not admissible because it does not meet the "necessity" step of the four criteria from *R v Mohan* (which was that the evidence was necessary to assist the trier of facts in their determinations).[67] These courts have concluded that such information regarding the limitations of human memory are well within the experience of judges and all triers of fact.

The Court noted in *R v Abbey* [68] at paragraph [76]:

> The four preconditions established by *Mohan* for admitting expert evidence are: (i) relevance, (ii) necessity in assisting the trier of fact, (iii) absence of an exclusionary rule (other than the opinion rule), and (iv) a properly qualified expert. Provided the applicant satisfies the court as to the existence of the four *Mohan* criteria, the court will go on to consider whether the proposed opinion evidence is sufficiently beneficial to the trial process to warrant admission, despite the "potential harm to the trial process that may flow from the admission of the expert evidence.

A recent such example is the case of *R v BWW,*[69] wherein Fairburn J. summarized the memory expert witness' proposed opinion evidence regarding imagination inflation and source confusion and the possibility that people, often children, will confuse actual events with ones they have overheard or imagined. In dismissing the application to call the expert, Fairburn J. did not question the witness's qualifications as an expert in psychology, but concluded (at para. 23) that the expert witness's evidence failed on the necessity requirement. Fairburn J. was concerned that the expert's evidence touched on an exclusionary rule because it purported to comment on the credibility of the witness' evidence even though he did not express an opinion on the truth or falsity of that evidence.

'*Flashback' evidence*

In *R v PNC* 2005 NLTD 7 [70] Fowler J was of the opinion "that flashback recall, if I may refer to it as that, is not as clear, nor is reference made to the concept of flashbacks on such a regular basis in our daily lives as to lend itself to a clear understanding or definition" (para. 21). He concluded that ordinary people do not need to have an expert define memory, but without some proper explanation given to the jury as to the nature of a flashback he was convinced the jury would be asking the Court to explain the difference between memory and

67 *R. v. Mohan*, 1994 CanLII 80 (SCC),[1994] 2 S.C.R 9.
68 *R. v. Abbey*, 2009 ONCA 624 (CanLII), at para. 76.
69 *R. v. B.W.W.*, 2017 ONSC 985 (CanLII).
70 *R. v. P.N.C.*, 2005 NLTD 7 (CanLII)

flashback and he would be unable to do so without some expert evidence (paras. 23 and 24). He admitted the expert evidence.

While this type of evidence is not mandatory, it has been held to be of valuable assistance to the Court. The Nunavut Court of Justice in *R v DeJaeger*,[71] at paragraphs 31 and 32 found this to be the case and went on to rely on decisions of the Ontario Court of Appeal for the proposition that expert testimony in cases involving recovered memory are helpful in several respects: 1) the role that therapy can play in the retrieval of memory; 2) "flashback" memories and the means of evaluating the reliability of these memories; and 3) the nature of memory that is repressed by reason of Post-Traumatic Stress Disorder (PTSD) (paragraphs. 31 and 32).[72]

Children's memory

Canadian courts have considered that expert evidence about children's memory is admissible in certain circumstances. The Supreme Court of Canada addressed evidence regarding some aspects of memory in *R v R (D)*,[73] and concluded that the trial judge erred in refusing to admit certain evidence from a clinical psychologist concerning the nature of childhood memory. Major J.,[74] applied the reasoning of McLachlin J. in *R v Marquard* and stated, ". . . there is a growing consensus that while expert evidence on the ultimate credibility of a witness is not admissible, expert evidence on human conduct and the psychological and physical factors which may lead to certain behaviour relevant to credibility, is admissible, provided the testimony goes beyond the ordinary experience of the trier of fact."

Australia

A properly qualified expert may be permitted to give evidence of his or her opinion about a matter, at least where the jury would be unlikely to form a correct judgment of that matter without such assistance.[75] Thus, in order for expert evidence to be admissible, the subject matter must be beyond the scope of common knowledge, it must form part of a recognised body of knowledge, and that body of knowledge must be capable of assisting the jury in their fact-ascertainment task. Where expert evidence is admitted, the witness should state the factual basis for any conclusions drawn, and how those conclusions have been reached. Furthermore, since the behaviour of ordinary people, and the process of assessing a witness's credibility, are

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71 *R. v. DeJaeger*, 2014 NUCJ 21 (CanLII)

72 *M.(K.) v. M.(H.)*(1992), ,96 D.L.R. (4th) 289, [1992] 3 S.C.R. 6, 14 C.C.L.T. (2d) 1; *R. v. L.(W.K.)* (1991),1991 CanLII 54 (SCC),64 C.C.C. (3d) 321, [1991] 1 S.C.R. 1091,6 C.R. (4th) 1 (S.C.C.); *R. v. C.(R.A.)*(1990), , 57 C.C.C. (3d) 522,78 C.R. (3d) 390,10 W.C.B. (2d) 280 (B.C.C.A.). Francois v. The Queen, 1994 CanLII 52 (SCC) [1994] 2 S.C.R. 827. (e.g. R. v. Francois, 1994 CanLII 52 (SCC), [1994] 2 S.C.R. 827; S.(T.K.) v. S.(E.B.) (1995),1995 CanLII 8907 (BC CA), 9 B.C.L.R. (3d) 201 (C.A.);R. v. Norman (1993), 1993 CanLII 3387 (ON CA),87 C.C.C. (3d) 153 (Ont. C.A.)).

73 *R. v. R. (D.)*,1996 CanLII 207 (SCC),[1996] 2 S.C.R. 291,107 C.C.C. (3d) 289

74 At pp. 311-12 S.C.R., pp. 303-04 C.C.C.,

75 *Clark v Ryan* (1960) 103 CLR 486; *R v Darrington & McGauley* [1980] VR 353 and *R v Smith* [1987] VR 907.

matters typically within a jury's common knowledge, expert evidence may not normally be led as to whether a witness's testimony is accurate or otherwise credible.[76]

As with other jurisdictions, the Australian courts have considered the admissibility of expert evidence regarding recovered memory or repressed memory. In *Bartlett v R* [77] and *Thorne v R* [78] summarised the common factors between the complainants: (1) some level of therapeutic intervention/attempts at self-discovery regarding abuse; (2) that intervention triggered or revived 'memories'; and (3) some of the memories were 'new' in that they had not previously remembered them. On this basis expert evidence was allowed.[79]

The Australian courts have also considered expert evidence regarding childhood amnesia. In *R v BDX* [80] the appellant had been convicted of sexual offences against his stepdaughter when she was aged between 7 and 8 years old. The complainant had previously given a detailed account of offending against her by the appellant when she was 3 years of age. The trial Judge had declined to admit the proposed evidence of the expert about infantile amnesia. In allowing the appeal the Court determined that childhood amnesia exists as a recognised scientific phenomenon and is not within the ordinary scope of knowledge of a juror and that expert evidence on this matter was admissible.

In a recent case, experts were called by both prosecution and defence regarding issues of delayed reporting and ongoing contact (prosecution), and suggestibility and infantile (childhood) amnesia (defence). In *Martin (a Pseudonym) v The Queen*[81] the appellant appealed against his convictions for sexual offending against his daughter that had been alleged to have taken place when she was aged between 4 and 11 years. The defence expert applicant gave evidence about how memories can be corrupted and how 'pseudo-memory' can be produced. He said pseudo-memory could be caused by repeated questioning or the asking of closed questions rather than open-ended questions and stated that it was possible that counselling could effect changes in memory. He also gave evidence about 'infantile amnesia'. In this appeal no issue was raised as to the evidence given by the experts at trial.

Conclusions regarding Commonwealth Jurisdictions

Consistent with case law in Aotearoa New Zealand, Commonwealth jurisdictions take a cautious approach to the admissibility of expert memory on the general assumption that deciders of fact, whether jurors or judges, already have experience and understanding of memory. Applications to admit expert memory evidence is considered on a case by case basis. The criteria applied to deciding admissibility have much in common across jurisdictions.

76 *R v Turner* [1975] QB 834 and *R v O'Callaghan* [1976] VR 441.
77 *Bartlett v R* [1996] VicRp 96; [1996] 2 VR 687 (26 June 1995).
78 *R v Thorne* (unreported, Court of Criminal Appeal, 19 June 1995).
79 Expert evidence was not allowed in *R v JMS* [1998] VSCA 19 as the complainant's memories were not recovered memories and she had not undergone therapeutic or other interventions regarding the events, or in order to uncover the events.
80 *R v BDX* [2009] VSCA 28
81 *Martin (a Pseudonym) v The Queen* [No 2] [2019] VSCA 60 (20 March 2019)

Expert evidence has been admitted on the basis that the proposed evidence was considered by the Court to be outside the common knowledge of the deciders of fact. Where expert memory evidence is admitted, then it must not include opinion about the credibility of the complainant or the accused.

CHAPTER TWO

GUIDELINES FOR EXPERTS GIVING EVIDENCE TO NEW ZEALAND COURTS

In this chapter we discuss the admissibility of expert evidence and the conduct expected of experts in giving their evidence. The provisions for the admissibility of expert evidence are contained in the Evidence Act 2006 (the Act). Expectations of experts' conduct are contained in the High Court Rules; Schedule 4 Code of Conduct for Expert Witnesses. For those experts who belong to a profession, the code of ethics of that group is also relevant. We describe the provisions and guidelines for experts that apply to all expert evidence, then we consider the implications of this for those who give evidence about memory.

Expert witnesses come from all disciplines. In Aotearoa New Zealand, in sexual violence trials, expert evidence is given by registered medical practitioners, registered clinical psychologist practitioners and by academics or "cognitive scientists" (who, in some cases, may also be a registered clinical psychologist). We do not consider the evidence of medical practitioners in this chapter. Briefs of evidence prepared by medical practitioners typically relate to their physical examination of the complainant. These are usually brief, noting the expert's credentials and clinical findings with the usual comment that findings neither prove nor refute that sexual offending has occurred in that case. They do not usually contain more than passing references to the relevant research literature, if at all. This evidence is often used to dispel the misconception held by some jurors that there will always be evidence of penetration if vaginal or anal violation had occurred.[82]

Briefs of evidence prepared by clinical psychologists have been offered for pre-trial hearings, for jury trials and for appellate courts. In relation to pre-trial hearings, these experts' focus is on material that is not necessarily intended to be presented in the trial, but rather as advice to counsel. For example, advice regarding the adequacy of the methodology of an evidential interview, or advice about childhood amnesia when a complaint involves a memory report from when the now adult complainant was younger than three or four years. The authors (SB and FS) have provided file reviews for prosecutors and briefs of evidence for defence counsel in this regard. There has also been preparation of rebuttal of memory briefs of evidence for use at pre-trial hearings. These are clearly signposted as being for pre-trial use only, but with a proviso that a jury friendly and admissible report could be prepared for use in the subsequent trial if required. The reports written by clinical psychologists in respect of counterintuitive evidence about sexual violence for use in trials or appeals are longer. The first section of such reports provides the credentials and experience of the expert witness, confined to those relevant to sexual violence. This section is for the jury. The second section which contains the referral details, list of documents read, and the narrative of the case, is not for the jury and is clearly signposted as such. The requirement for the narrative has been occasioned

82 Blackwell, S.J.Y. (2007). *Child sexual abuse on trial*. Doctoral thesis. University of Auckland, New Zealand.

by the basis rule and the Court of Appeal pretrial ruling in *R v S*[83] that a narrative of the relevant facts was required. The third section is the proposed evidence for the jury and is again signposted as such. This is presented in as plain language as possible without compromising the material from which it derives. Footnotes specify the literature cited, for the benefit of counsel and the Court. The jury is not regaled with names of the researchers and titles of the studies. The evidence for the jury is educative and does not make reference to the specific case (as mandated by appellate court rulings). There are caveats throughout that indicate that the evidence neither proves nor disproves that the offending as alleged has occurred.

Similarly, reports written by the memory expert witnesses have been presented pretrial, for the jury trial or for appellate courts. Most of these reports have been standalone though there have also been reports that critique an existing counterintuitive report, typically that from a clinical psychologist. However, reports from memory expert witnesses have differed from clinical psychologists' counterintuitive evidence in several important regards. The format of reports, whether for pretrial or trial, standalone or rebuttal, follows a similar format regardless of the context for the report. Typically, these reports cover a wide range of information about memory irrespective of whether these aspects are in the evidence before the court. Unlike counterintuitive evidence provided by clinical psychologists, memory expert witnesses have also made comments on the credibility of the complainants, usually in response to defence counsel referral questions.[84] Examples of comments on the credibility of complainants include that they may have misidentified the defendant (citing transference), imagined the offending (the imagination effect) or had a false memory about the offending (memory implantation studies). Examples of these will be provided in later chapters of this report.

Provisions for Admissibility of Evidence and the Conduct of Expert Witnesses

Evidence Act 2006

The general rule in the courts is that a witness must limit his or her evidence to facts personally observed and must not offer opinion or belief as to the meaning of those facts, this function being for finders of fact: that is, judges or jurors. Expert evidence, as provided for in the Act, is an exception to this general rule. In expert evidence, the witness may express an opinion in situations where interpretation of the facts requires special skill and knowledge. On occasions, expert opinion may also include evidence of fact (e.g., what the expert saw or heard in the context of their professional examination of a person, or what they did in terms of assessment or therapeutic methodology). For example, a clinical psychologist may give evidence of fact (e.g., the behaviour and clinical functioning of a nominated person) and, in addition, give opinion evidence (e.g., their interpretation of the behaviour and functioning of

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83 *R v S* (CA181/2009) CA CA181/2009 [21 May 2009]

84 Expert witness comment on matters of credibility may usurp the function of fact finders including a jury. Expert opinion on the ultimate issue in a criminal trial, whether the defendant is guilty or not, is likely to be inadmissible. While the previous "ultimate issue rule" is no longer in law, having been repealed in the Evidence Act 2006, it remains unlikely (and undesirable) that the court would permit expert witnesses to give evidence that related to their opinion of the credibility of any particular witness, or the guilt or innocence of a defendant, or whether an allegation is likely to be true or false.

that person based on their expert professional knowledge as it relates to the issue before the court). Since most memory expert evidence to date has been given by experts whose qualification is as a cognitive scientist rather than practitioner, their evidence has been confined to opinion evidence based on documentation.

Expert evidence must pass the threshold of relevance and probity required by sections 7 and 8 of the Act to be admissible at trial. These are as follows:

7 Fundamental principle that relevant evidence admissible

(1) All relevant evidence is admissible in a proceeding except evidence that is—

(a) inadmissible under this Act or any other Act; or

(b) excluded under this Act or any other Act.

(2) Evidence that is not relevant is not admissible in a proceeding.

(3) Evidence is relevant in a proceeding if it has a tendency to prove or disprove anything that is of consequence to the determination of the proceeding.

8 General exclusion

(1) In any proceeding, the Judge must exclude evidence if its probative value is outweighed by the risk that the evidence will—

(a) have an unfairly prejudicial effect on the proceeding; or

(b) needlessly prolong the proceeding.

(2) In determining whether the probative value of evidence is outweighed by the risk that the evidence will have an unfairly prejudicial effect on a criminal proceeding, the Judge must take into account the right of the defendant to offer an effective defence.

The test for the admission of expert evidence is set out in s 25 of the Act, and in particular, ss 1-3. This makes clear that the question for the Court is whether the evidence will be substantially helpful to the fact finders or finder, whether it be jurors or a judge in a Judge Alone trial. It is for the Court to determine whether the proposed evidence will be substantially helpful having regard to the particular issues of the trial.

25 Admissibility of expert opinion evidence

(1) An opinion by an expert that is part of expert evidence offered in a proceeding is admissible if the fact-finder is likely to obtain substantial help from the opinion in understanding other evidence in the proceeding or in ascertaining any fact that is of consequence to the determination of the proceeding.

(2) An opinion by an expert is not inadmissible simply because it is about—

(a) an ultimate issue to be determined in a proceeding; or

(b) a matter of common knowledge.

(3) If an opinion by an expert is based on a fact that is outside the general body of knowledge that makes up the expertise of the expert, the opinion may be relied on by the fact-finder only if that fact is or will be proved or judicially noticed in the proceeding.

The definition of an expert is provided in s 4 of the Act as follows:

> Expert means a person who has specialised knowledge or skill based on training, study, or experience. Expert evidence means the evidence of an expert based on the specialised knowledge or skill of that expert and includes evidence given in the form of an opinion.

Whether or not any particular person is deemed an expert is determined by the presiding judge at the trial. In practice, an expert is someone who, as the result of academic and/or professional education, training, aptitude and experience, has expertise and specialised knowledge beyond that of the average person, to the threshold that this may be relied upon by finders of fact; judges and juries. General knowledge or mere familiarity with the literature will not, of itself, translate into expertise. In *R v Aryan* [85] the defence proposed to call a medical practitioner to give rebuttal expert psychological evidence in a criminal trial involving alleged child sexual abuse. This was on the basis that the proposed expert was reportedly conversant with the relevant research literature. The court ruled at [34] that while "Knowledge of the literature is part and parcel of the expertise that might support an expert opinion, but it is not in my view, sufficient simply to rely on a reading of the literature alone." The court also noted that the proposed defence expert did not practise in the area of psychology and had no qualifications on the topic, and, for these reasons, the court declined to permit the medical practitioner to give the proposed evidence. Similarly, in *Platt v The Queen* [86] the court noted at [44] "The fundamental principle is that an expert can only give evidence on matters on which he or she is an expert." The court noted that the proposed expert had stated "I have considerable academic skills in searching and critically appraising medical literature." However, the court found that the proposed expert had, "resorted to medical literature by persons who are experts and endeavoured to apply it to this case, from a distance as it were, but without going through the full recommendations of those experts."

Since the passing into law of the Act, expert evidence from psychologists and memory expert witnesses in sexual violence trials has come to be referred to as counterintuitive evidence. As the Law Commission noted in relation to counterintuitive evidence at [C110], "The purpose of such evidence is not diagnostic but rather educative; to impart specialised knowledge the jury may not otherwise have, in order to help the jury to understand the evidence of and about the complainant, and therefore be better able to evaluate it." The Law Commission continued at [C111]:

> Part of that purpose is to correct erroneous beliefs that juries otherwise hold intuitively. That is why such evidence is sometimes called 'counter-intuitive' evidence: it is offered to show that behaviour a jury may think is inconsistent with claims of sexual abuse is not or may not be so; that children who have been sexually abused have behaved in ways similar to that described of the complainant; and that therefore the complainant's behaviour **neither proves or disproves** that he or she has been sexually abused. The

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85 *R v Aryan* HC AK CRI 2007-004-25057 [1 April 2009]

86 *Platt v The Queen* (CA293/2009 [2010] NZCA 43.

> purpose of such evidence is to restore a complainant's credibility from a debit balance because of jury misapprehension, back to a zero or neutral balance. This is similar to the use of expert evidence to dispel myths and misconceptions about the behaviour of battered women.[87]

Counterintuitive expert evidence given in sexual violence trials has typically been used to counter some of the misconceptions commonly utilised as the platform for their case by some defence counsel in such trials (Blackwell, 2007;[88] Davies et al., 1997;[89] Davies & Seymour, 1998 [90]). Salient issues in sexual violence trials where expert evidence has been given include misconceptions associated with non-reporting, delayed reporting of sexual abuse, and retraction of allegations and the reasons for these, initial non-reporting when formally interviewed, or incremental reporting, continued contact and/or affection of the child complainant for an accused, and physical proximity of others during offending.[91] Such evidence has been admitted on the basis that it is likely to be substantially helpful to judges and juries who otherwise may be misinformed in this area (e.g., *R v DT*; [92] *R v Aryan*;[93] *R v Linton.*[94]). Appellate courts have upheld the admissibility of such evidence (*M v R;* [95] *W v R*; [96] *DH v R;* [97]; *Kohai v R* [98]). Similarly, expert evidence about memory, when it has been admitted, has been regarded as counterintuitive evidence.

High Court Rules; Schedule 4 Code of Conduct for Expert Witnesses

The Code of Conduct for Expert Witnesses (the Code) was originally introduced for civil proceedings but has also been adopted in practice by the criminal courts. Section 26 of the Act only requires expert witnesses in civil proceedings to comply with the Code. The Law Commission has recently recommended that s 26 be amended so that expert witnesses in both civil and criminal proceedings are required to comply with any applicable rules of court relating to the conduct of experts.[99] Our perusal of expert briefs of evidence and our own work (FS and SB) indicates that it has been common practice for experts in criminal trials to refer to and comply with the Code since 2006.

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87 Law Commission. (1999). Evidence, Report 55, Volume 2, Evidence code and commentary. At page 67

88 Blackwell, S.J.Y. (2007). *Child sexual abuse on trial*. Doctoral thesis. University of Auckland, New Zealand.

89 Davies, E., Henderson, E., & Seymour, F. (1997). In the interests of Justice? The cross examination of child complainants of sexual abuse in criminal proceedings. *Psychiatry, Psychology and Law, 4,* 217-229.

90 Davies, E., & Seymour, F. (1998). Questioning child complainants in sexual abuse cases in New Zealand: Analysis of criminal court transcripts. *Psychiatry, Psychology and Law, 5*, 47-61.

91 Seymour, F., Blackwell, S., Calvert, S., & McLean, B. (2014). Counterintuitive expert psychological evidence in child sexual abuse trials in New Zealand. *Psychiatry, Psychology and Law, 21,*511-522.

92 *R v DT* (HC Auckland. CRI 2007-090-5246 30 May 2008.

93 *R v Aryan* HC AK CRI 2007-004-25057 [1 April 2009]

94 *R v Linton* (HC Palmerston North CRI 2010-009-13358, 21 February 2014)

95 *M (CA23/2009) v R* CA23/2009 [18 May 2011]

96 *W (CA51/2009)* v R CA23/2009 [18 May 2011]

97 *DH* (SC 9/2014) v R [2015] NZSC 35 16 April 2015]

98 *Kohai v R [*2015] NZSC 36 [16 April 2015]

99 Law Commission (2019). *The Second Review of the Evidence Act 2006* (NZLC R142, 2019) at 54.

At the centre of the Code is the requirement that expert evidence is given impartially rather than given in the interests of advocacy for one of the parties to proceedings:

Duty to the court

1. An expert witness has an overriding duty to assist the court impartially on relevant matters within the expert's area of expertise.
2. An expert witness is not an advocate for the party who engages the witness.

In this regard, the role of the expert aligns with practice within some of our other courts, such as the Family Court and Youth Court, where experts are appointed by the Court for the explicit purpose of providing independent advice to the Court. Compliance with the Code in criminal matters where the expert is engaged by a party leaves no less a duty to serve the Court.

An obvious implication of impartiality is that the expert must represent their evidence in a balanced manner. The Code states at s 5: "If an expert witness believes that his or her evidence or any part of it may be incomplete or inaccurate without some qualification, that qualification must be stated in his or her evidence." Furthermore, if the expert witness believes that their opinion does not have consensus within the literature, this must be stated. This is expressed at s 6 as follows: "If an expert witness believes that his or her opinion is not a concluded opinion because of insufficient research or data or for any other reason, this must be stated in his or her evidence."

Thus, in discussing research evidence concerning an issue where there is contradictory evidence or lack of a conclusion because of methodological issues, then the Code requires this to be made explicit in the opinion submitted by the expert. Expert evidence should be comprehensive and balanced rather than selective and/or biased. Bias may arise not only from expectations for a favourable opinion by the party that has engaged them, but also from strongly held independent views as a scientist and/or practitioner regarding the issue at hand that may not be representative of the field.

Opinion of an expert is admissible only where the facts upon which the opinion is based are expressly stated and present in admissible evidence; usually the statements of witnesses and transcripts of forensic interviews. This requirement is often referred to as the "basis rule". For example, in a child sexual assault trial, an expert would be permitted to give evidence in relation to a topic such as sexualised behaviour in preschool children only if the complainant child was of preschool age and there had been, or was to be given, evidence by another witness that the child had indeed exhibited the types of sexualised behaviour that was the subject of the proposed expert evidence. This rule is expressed at s 3(c): "In any evidence given by an expert witness, the expert witness must state the issues the evidence of the expert witness addresses ...." Accordingly, as already noted, the practice in counterintuitive evidence is that the basis for opinions is expressed in a separate section of the report, for the benefit of counsel and the presiding judge.

Section 6 of the Code requires that "[a]n expert witness must comply with any direction of the court to (a) confer with another expert witness, (b) try to reach agreement with the other expert witness on matters within the field of expertise of the expert witnesses, (c) prepare and sign a joint witness statement stating the matters on which the expert witnesses agree and the matters on which they do not agree, including the reasons for their disagreement." Furthermore, at s 7 the rule is stated that "[i]n conferring with another expert witness, the expert witness must exercise independent and professional judgment, and must not act on the instructions or directions of any person to withhold or avoid agreement." To our knowledge this provision of the Code has rarely been used in sexual violence trials in relation to counterintuitive expert evidence, and not successfully used at all in relation to memory evidence.

Code of Ethics

For those expert witnesses who hold membership of a professional body or learned society, there is also an obligation to practice in accord with their code of ethics. The Health Practitioners Competence Assurance Act 2003 (HPCA Act) provides a common legislative framework for allied health professions and a single disciplinary tribunal for consumer complaints. Amongst the requirements of that legislation is that professional groups covered by the HPCA Act must have a code of ethics. For psychologists who provide opinion evidence the relevant document is the Code of Ethics for Psychologists Working in Aotearoa/New Zealand (Ethics Code).[100] It is not known whether memory expert witnesses who are behavioural scientists belong to bodies that require adherence to a code of ethics (and/or an associated disciplinary provision) as this is not addressed in their briefs of evidence.

Codes of ethics serve multiple purposes.[101] The first is educative in that psychologists use the code to develop their understanding of the ethical dimensions of their practice. Education in ethics is essential to the early training of psychologists but continues to be relevant throughout a practitioner's career. A second purpose is to provide a working tool for use in ethical decision making in practice settings. A third purpose is to provide a basis for regulatory bodies to consider complaints about a practitioner's practice. A code of ethics becomes a reference point for monitoring the competence of practitioners and can be used in disciplinary procedures following complaints about an individual. Finally, the fourth purpose is to provide a public document. Codes are typically made available to the public so that they can assess the conduct of a practitioner against explicit standards.

We do not review in detail the Ethics Code in this report, but list in the following those "Value Statements" and "Practice Implications" that have particular relevance to expert

100 Code of Ethics for Psychologists Working in Aotearoa/New Zealand http://www.psychologistsboard.org.nz/resources/resources#BPG

101 Seymour, F. (2016). Ethics: The foundation for practice. In W. Waitoki, J. Feather, N. Robertson, & J.J. Rucklidge. (Eds.), *Professional practice of psychology in Aotearoa New Zealand*. (pp. 5-13). Wellington: New Zealand Psychological Society.

witnesses. The first conveys an expectation about appropriate conduct with respect to those with whom an expert interacts. The others listed here convey expectations regarding psychologists' reports.

1.1.1 Psychologists respect the dignity of persons and peoples with whom they relate in their work and are sensitive to their welfare and rights.

3.1.3 Psychologists ensure that claims or conclusions can be supported by a standard of evidence acceptable to the profession. Statements of opinion are clearly identified as such.

3.1.6 Psychologists are accurate, complete and clear in reporting assessments, evaluation and research findings and do so in a way that encourages responsible discussion.

4.4 Psychologists strive to ensure the appropriate and relevant use of psychological knowledge, practices and structures, and to avoid their misuse.

Discussion

As described above, the primary documents for the provision of expert evidence are the Evidence Act 2006 (the Act) and the High Court Rules; Schedule 4 Code of Conduct for Expert Witnesses. Codes of ethics of any professional body to which an expert belongs may also be relevant for some witnesses. In the following we discuss the implications of these documents for expert evidence on memory in the context of sexual violence trials.

Who is an expert?

Expert evidence relating to memory and sexual violence has been given in Aotearoa New Zealand courts by memory expert witnesses in the form of pre-trial briefs and briefs for judge alone and jury trials and for the appellate courts. Evidence has also been given by clinical psychologists whose primary qualifications arise from their experience as practitioners (they may also be researchers). The evidence of clinical psychologists about memory has to date predominantly been in the form of rebuttal evidence. So far as we are aware there have been no cases where the proposed evidence of either memory expert witnesses or clinical psychologist practitioner/scientists has been found inadmissible on the basis of expertise, or lack thereof. Where proposed memory evidence has been found inadmissible, this has usually been for reasons of failing to meet the substantial helpfulness test.

As already noted, in Aotearoa New Zealand whether a proposed witness is deemed an expert is determined by the presiding judge at the trial. In some overseas jurisdictions external advice has been provided. For example, the British Psychological Society (BPS) has over recent years published "Guidelines on Memory and Law" which includes advice as to who they consider qualified to give such advice to the courts. This document in its various iterations has been employed locally by some memory expert witnesses in describing their expertise – specifically to state that their qualifications and experience meet the BPS standards, and sometimes to argue in rebuttal evidence that other witness does not meet this standard. In these

briefs, reference has been made to the version of the Guidelines published in 2008.[102] This version refers to requirements of academic published memory research. It states that a memory expert witness should be an active memory researcher widely recognised in the memory research community as a memory expert. However, these highly restricted and exclusive criteria for expertise were met with considerable criticism in the UK and the guidelines were withdrawn and reissued in 2010[103] with wider criteria applied. Further guidance in 2017[104] makes it clear that memory expertise encompasses relevant clinical experience and specialist knowledge.

There are strengths and weaknesses in both memory expert testimony and in testimony of practitioners. If memory testimony is to be admitted to court proceedings on the basis that it is substantially helpful (albeit recognising that this is likely to be determined case by case), exclusive reliance on one or other bodies of knowledge may be detrimental to the purposes of such evidence. The strength in scientific studies is the ability to examine systematically the effects of different variables on memory reports. However, as will be discussed in later Chapters of this report, there is substantial reason to question the application of experimental laboratory research to understanding memory for sexual violence - with adults and in childhood sexual abuse – because of a lack of ecological validity. Ecological validity refers to the extent that knowledge based on scientific research, with selected populations and highly controlled experimental conditions, can be applied to individuals who have experienced sexual violence. Alternatively, there is risk in relying exclusively on practitioners' evidence because clinical experience is typically limited by the number and range of clients to which the practitioner has been exposed. However, clinical experience can be immensely valuable in understanding the real-world effects of sexual violence on memory reports, through the accumulation of individual case studies. Clinical practice can also expose the practitioner to the exceptional and unusual in sexual violence and child abuse and corrects for adoption of overly restrictive assumptions that may arise if relying exclusively on reading published research. Practitioners also gain at first-hand understanding of the dynamics of sexual violence: how it plays out in the life of children, adults and their families, and the variation it takes in form and effects.

All of this highlights the importance of combining the different and potentially complementary bodies of knowledge. A practitioner who qualifies as an expert witness must also be familiar with the scientific literature. This will be in the first place from their original training as a clinical psychologist, but subsequently from ongoing education through reading, conference and seminar attendance, and clinical supervision. Ongoing education and clinical

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102 British Psychological Society (2008). *Guidelines on memory and the law.* https://www.judcom.nsw.gov.au/publications/benchbks/sexual_assault/abstract_british-guidelines_on_memory_and_the_law.html

103 British Psychological Society (2010). *Guidelines on memory and the law.* https://www.academia.edu/2326108/Guidelines_On_Memory_And_The_Law_Recommendations_From_The_Scientific_Study_Of_Human_Memory

104 British Psychological Society 4th edition (revised 2017) Psychologists as Expert Witnesses: Guidelines and Procedure https://www.bps.org.uk/sites/www.bps.org.uk/files/Policy/Policy%20%20Files/Psychologists%20As%20Expert%20Witnesses%20%20Guidelines%20and%20Procedures%20for%20England%2C%20Wales%2C%20and%20Northern%20Ireland.PDF

supervision are requirements for registration with their regulatory body, the Psychologists Board. Some memory expert witnesses are also registered clinical psychologists and may maintain a clinical practice in which they work with clients exposed to sexual violence. Other memory expert witnesses will not have exposure to members of the public who have experienced sexual violence and, consequently, see the real world of sexual violence from some distance.

The Basis Rule

Admissibility of expert testimony relies on it being considered substantially helpful to the deciders of fact. To this end, any evidence given must be more than common sense. In addition, admissibility relies on the evidence being relevant to the facts of the case. This is the basis rule. In counterintuitive evidence about sexual violence, relevance is demonstrated by first reporting the facts of the case, highlighting the issues for which specific expert testimony will be provided. In providing research evidence relating to memory, the basis rule dictates that expert evidence, including that based on research, is relevant to the facts of the case.[105] Research evidence may be presented concerned with memory for specific experiences, such as a memory report of very early child abuse (therefore research relating to childhood amnesia is relevant), or assault by a stranger (in which eyewitness memory research may be relevant). Or research evidence may be presented regarding particular variables that may impact memory post-event, such as where there been strong suggestions made of abuse by a parent to a young child (therefore research on suggestibility is relevant).

In contrast to this practice, most of the briefs of evidence from memory expert witnesses have the same or similar format and cover the same wide range of information about memory with little apparent regard for the specific aspects of the case. For example, research is commonly cited that includes eyewitness misidentification, which may be relevant to police lineups but is irrelevant to sexual violence trials where the defendant and complainant are well known to one another; as is most common in sexual violence. Similarly, with dubious connection between facts of the case and the research presented is memory expert evidence about misidentification of the defendant when the defendant is well known to the complainant (citing transference research), imagined the offending (the imagination effect), or false memory about the offending due to suggestibility where there is no evidence that suggestions were made (memory implantation studies).

In this regard the research evidence becomes speculative, as noted by the court in *B v R* and *Ieremia v R* (2020).[106] The risk is that in presenting studies and associated arguments that are not connected to the facts of the case, there is undue influence on jurors potentially leading to an incorrect view of memory fallibility and thus a miscarriage of justice. It is inappropriate

105 *M (CA68/2015) v R* [2017] NZCA 333 [2 August 2017] at [28] "In practice courts are cautious about expert evidence on memory and do not facilitate it as they do counter-intuitive evidence about victims' behaviour. Rather, they assess it on a case by case basis for substantial helpfulness, which is an amalgam of relevance, reliability and probative value."

106 *B (CA 463/2018) v R* [2020] NZCA 18 and *Ieremia v R [*2020] NZCA 17

for expert witnesses to provide a general treatise on memory deficiencies regardless of the facts of the case. It is especially inappropriate if expert evidence on memory does not give adequate explanation of the limitations of particular studies, such as warnings about ecological validity, and/or omits to present research that bears on the general accuracy of memory, particularly that of distinctive events. It is highly likely that incidents of sexual violence will be considered distinctive by victims.

Impartiality and the Duty to the Court

As described already, expert witnesses have a primary duty to the court regardless of who engages them. They must be impartial, and the evidence they give must be balanced. This is embedded in sections 5 and 6 of the Code. Thus, in presenting research evidence concerning an issue where there is contradictory evidence or lack of conclusion because of methodological issues, this must be stated. Expert evidence should be comprehensive and balanced rather than selective and/or biased. In our view the briefs of memory expert witnesses' we have reviewed appear partisan.[107] As the Court noted in *B v R* at [15] the evidence "focused selectively on the negative aspects of memory without acknowledging the research on memory accuracy and the preservation of memory over long periods of time."[108] This may be a result of obliging the party that employed them, bias arising from an individual's commitment to a particular position in relation to memory (e.g., that false memories are easily implanted, that young children are particularly suggestible), and/or in some cases perhaps from a lack of engagement with real people who have been subject to sexual violence.

A lack of balance in any expert's evidence may be discerned by examination of the literature selected (and/or excluded) to support their opinion. In this regard, are the studies cited a fair and comprehensive review of the field? Are any studies presented that contradict the results of the favoured study? In citing a study, are any limitations of that study provided? Is commentary provided regarding methodological weaknesses in the research area?

Conclusion

For expert evidence to be deemed admissible in our courts it must meet the test of being substantiality helpful. The Act and the Code of Conduct also require that expert evidence is impartial and balanced. Evidence must be relevant - specific topics addressed by the expert must be in evidence at trial. The Code further requires that experts must provide qualification to opinion where evidence is incomplete due to uncertainty arising from inconclusive or contradictory research results, or their being insufficient research or data to establish a conclusion.

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107 This has also been noted by the Court in *B (CA 463/2018) v R* [2020] NZCA 18 and *R v Linton* (HC Palmerston North CRI 2010-009-13358, 21 February 2014

108 *B (CA 463/2018) v R* [2020] NZCA 18.

Expert evidence about memory in our courts has almost exclusively been offered in relation to trials and appeals concerning sexual violence, predominantly against children. These sexual violence trials have predominantly involved allegations of sexual offending by those well known to the victim(s) and the offending is usually repeated over a protracted period of time, often years. In our opinion, memory evidence in respect of sexual violence trials has often fallen short of the expectations contained in the Act and the Code. Ultimately, whether the evidence of memory expert witnesses meets the threshold required of legislation and associated guidelines is a matter for the courts to determine. In this regard, the Court has recently stated in *M v R*, "In practice courts are cautious about expert evidence on memory and do not facilitate it as they do counter-intuitive evidence about victims' behaviour. Rather, they assess it on a case by case basis for substantial helpfulness, which is an amalgam of relevance, reliability and probative value."[109]

[109] *M (CA68/2015) v R* [2017] NZCA 333 [2 August 2017] at [28]

PART TWO:

PSYCHOLOGICAL RESEARCH AND MEMORY EXPERT EVIDENCE

This section of our report focuses on the expert evidence about memory that has been offered for admissibility in sexual violence trials and to appellate courts determining appeals in sexual violence cases in New Zealand over the last 18 to 20 years. The briefs of evidence considered are confined to those given by memory expert witnesses. Expert memory evidence has been almost exclusively in the area of sexual violence. We examine the research literature cited and report the details of that for the benefit of the readers.

In the preparation of this paper we have utilised the briefs of evidence available to us in our roles of critiquing the opinion evidence of the defence memory expert witnesses or responding to their critiques of our opinion evidence. Our focus is the references or sources cited by experts in support of opinion advanced in their briefs. We do not identify complainants, defendants, other witnesses and any other identifying factors of the trials concerned. Nor do we identify memory expert witnesses. In places, in both Part One and Part Two, we have quoted the judgments of the court, but in this we do not identify witnesses or provide the name of the memory expert witness even where this has been reported in the judgment. Anonymity is maintained to respect the privacy of participants but also because this report is not about individuals but rather an evaluation of the expert evidence about memory and its relevance to sexual violence cases.

We summarise the opinions commonly given by memory expert witnesses in our courts, then in relation to each topic, we describe the studies that they cite in support. In the first chapter we consider the literature that has been cited by memory expert witnesses in support of the assertion that jurors need expert evidence to correct misconceptions commonly held about memory. Then in subsequent chapters, we examine each of the specific memory topics that have been addressed by memory expert witnesses, including eyewitness identification and transference, false memories from post-event information ('the misinformation effect'), imagination inflation, false memory implantation studies, memory fallibility in personally experienced traumatic events, recovered memory, and children's memory reports and suggestibility.

In identifying the opinions expressed by memory expert witnesses we have not quoted them directly but rather have reported their comments in our words, albeit relying heavily on their direct statements. We have checked carefully that we have not misrepresented them, but of course have the briefs of evidence if challenged on our interpretation.

Some general comments about the briefs of evidence we have examined are in order. Firstly, the content of reports is similar in many ways across reports by the same expert and between experts in several cases, which suggests a sharing of resources. Briefs of evidence

available to us represent the work of New Zealand based memory expert witnesses and several from overseas but engaged to give evidence in our courts. We are not critical of this practice. We (SB and FS) do the same with respect to counterintuitive evidence that we provide. Sharing reports can be another way of achieving peer review as well as making better informed choices about content. However, similarities in memory expert witnesses' briefs also arise because they usually cover the same content, across a wide number of topics, regardless of the matters at issue in the trial. We have commented on this elsewhere in this report in terms of such practice being inconsistent with the basis rule for expert witnesses (see Chapter Two on this issue).

A second issue is that opinion statements are made with accompanying citations, but the studies cited are rarely described. These are typically found in academic journal publications, not readily available to others outside academia. The significance or relevance of the study to the point being made is not described by the author, or able to be discerned by the reader of the brief. The citation gives authority to the opinion but protects the witness from scrutiny.

Thirdly, where there are caveats given by the authors of the individual research papers with respect to the study itself, and/or to its relevance or generalisability to the real-life circumstances of sexual violence, these have not been reported in the briefs of evidence available to us.

Finally, nor do the memory expert witnesses offer their own caveats or cite studies where there are contradictory findings. This suggests selectivity in both the choice of citations and the study authors own conclusions.

It is for these reasons that we have approached the present report in the way we have: first, we state the opinion expressed by the memory expert witness in their brief; second we describe the studies they cite that the reader may reasonably presume supports the expert opinion; third, we comment on the studies' relevance to the opinion expressed; and finally we report any caveats offered by the studies' authors.

It is most notable that the memory expert witness reports rarely comment on memory accuracy, and the conditions that are associated with reliable recall. Rather they have an almost exclusive focus on memory fallibility. In this regard we make the general observation that all humans have experience of memory, and we mostly trust our memory in respect of the significant aspects of our lives. Indeed, as Schacter (1996)[110] has pointed out, we would not have survived or evolved as a species without memory.

We also know that memory can be imperfect, and most humans will attest to their own experiences in relation to this. As Brewin and Andrews (2019)[111] have stated, *"Memory error*

[110] Schacter, D. L. (1996). *Searching for memory: The brain, the mind and the past*. New York: Basic Books. (p. 308)

[111] Brewin, C., & Andrews, B. (2019). Memory accused: Research on memory error and its relevance for the courtroom. *Criminal Law Review, 9, 748-763.*

has become a central topic of research in psychology. This appears to have led to a neglect of the previous consensus about memory being essentially accurate, toward a more exclusive emphasis on the fallibility and malleability of memory." In their paper they discuss the evidence for memory error versus accuracy and conclude *"that little has changed to alter views about the fundamental nature of memory which, within its limits and under normal circumstances, operates with a reasonably high degree of accuracy."* They warn that by overemphasising memory fallibility this could have adverse implications for criminal justice systems.

It is also pertinent to add another general caveat about memory. Roediger (2008)[112] has observed that there are no special 'laws' of memory that are universally applicable because, as it all depends on the circumstances and context. Roediger, in a paper entitled "Relativity of remembering: Why the laws of memory vanished" reviewed 120 years of academic literature during which cognitive psychologists have sought general laws of learning and memory. He concluded that none have stood the test of time noting that the fact that simple laws do not hold, reveals the complex, interactive nature of memory phenomena. He noted the robust replicability of memory research under the same conditions as originally used, but also noted that when other variables are manipulated, these effects may disappear or reverse. Roediger concluded, *"The most fundamental principle of learning and memory, perhaps its only sort of general law, is that in making any generalization about memory one must add that 'it depends'."* (p. 247)

A further general caveat is the inherent difficulty distinguishing a true memory from a report of memory. Scoboria et al. (2017)[113] pointed to the difficulties in objectively determining when someone is recollecting the past, versus reporting other forms of knowledge or belief or describing mental representations that have originated in other sources of experience. They opined that, *"…even under highly controlled laboratory conditions, memory researchers struggle to define and observe memory."* (p. 59). They indicated that one of their important findings is that a memory report can look like a genuine memory to observers, even if the person does not explicitly report remembering the event. This highlights the difference between a report and a memory which may not be the same thing.

In the following chapters we unpack some of the research literature that is proffered to support various assertions about memory in sexual violence trials. As already noted, we believe it is important that trial lawyers and trial judges and judges of the appellate courts are aware of the details of the research cited by experts. This is so that they can make their own determinations as to the relevance and validity of the research cited to the real-world situations faced by the Courts and by fact finders in sexual violence cases.

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112 Roediger, H. L. (2008). Relativity of remembering: Why the laws of memory vanished. *Annual Review of Psychology*, 59, 225-254.

113 Scoboria, A., Wade, K.A., Lindsay, D. S., Azad, T., Strange, D., Ost, J., & Hyman, I.E. (2017). A mega-analysis of memory reports from eight peer-reviewed false memory implantation studies, *Memory*, 25:2, 146-163, at page 159.

CHAPTER THREE

DO JURORS REQUIRE EXPERT EVIDENCE ABOUT MEMORY?

As has been noted in Chapter One on case law, while indicating that admissibility of expert evidence about memory should be determined on a case by case basis, the New Zealand courts have, for the most part, considered that memory lies within the general common knowledge of jurors. Accordingly, they have ruled that expert evidence about memory is not substantially helpful as required by s 25(1). Nonetheless, briefs of expert evidence about memory are regularly proffered by defence counsel in jury trials and also for consideration in the appellate courts.

Some memory expert witnesses proffering evidence for the defence or appellant have cited a number of studies attesting to the need to educate jurors about memory on the basis that jurors hold misconceptions about memory. They have argued that it is "imperative" and "vitally important" that jurors receive such assistance because the lay public hold beliefs that are often inconsistent with empirical finding or are controversial. They also state that such assistance should be from a memory expert.

Studies cited as authorities on the need to educate jurors about memory

Memory expert witnesses have variously cited the following published papers in support of the need to educate jurors about memory: Akhtar et al. (2018); Benton et al. (2006); Conway (2013); Desmarais and Read (2011); Howe (2013); Howe and Knott (2015); Magnussen et al. (2010); Ost et al. (2017); Otgaar et al. (2017); Patihis et al. (2018); Patihis et al. (2014); Simons and Chabris (2011); Wake et al. (2020); and Zajac et al. (2013). In the following, we give a brief description of these papers and comment on their relevance to the matter of common knowledge about memory.

In citing these papers, the memory expert witnesses appear to be adding further weight to their own assertion that jurors would benefit from expert evidence on memory. A reader may reasonably assume that these papers offer empirical evidence of poor common knowledge about memory. However, many of the papers do not report empirical research but either give commentaries that align with the memory expert witness' opinion and/or report their own experience of giving expert evidence on memory. For example, Conway (2013), [114] Howe (2013)[115] and Otgaar et al. (2017)[116] provide case studies of their experiences as expert

[114] Conway, M. A. (2013). On being a memory expert witness: Three cases. *Memory*, *21*(5), 566-575.

[115] Howe, M. L. (2013). Memory lessons from the courtroom: Reflections on being a memory expert on the witness stand. *Memory, 21*(5), 576-583.

[116] Otgaar, H., de Ruiter, C., Howe, M. L., Hoetmer, L., & van Reekum, P. (2017). A case concerning children's false memories of abuse: Recommendations regarding expert witness work. *Psychiatry, Psychology and Law, 24*(3), 365-378.

witnesses. Howe and Knott (2014) provide a commentary paper.[117] Zajac et al. (2013) [118] also provide commentary where the thrust of the paper was that counterintuitive evidence about child sexual abuse given in New Zealand courts (e.g., concerning delay in reporting or ongoing contact with the offender) was not needed because jurors already have common knowledge of these issues. The authors then assert that in contrast, jurors' knowledge of memory is likely to be deficient, so this issue does need to be addressed through expert evidence.

The remaining papers cited by memory expert witnesses do report original research, in the form of surveys where participants are asked about aspects of memory where the authors consider there is scientific consensus. The studies reveal varying levels of misconceptions between studies according to the questions asked, the contexts in which the questions are set, differences in the populations surveyed and other methodological issues. Some questions concern memory issues that do not arise in criminal trials of historical sexual abuse and sexual violence.

Benton et al. (2006)[119] examined knowledge of factors affecting eyewitness accuracy in a sample of jurors, judges and law enforcement professionals. Participants completed a

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117 Howe, M. L., & Knott, L. M. (2015). The fallibility of memory in judicial processes: Lessons from the past and their modern consequences. *Memory*, *23*(5), 633-656.

118 Zajac, R., Garry, M., London, K., Goodyear-Smith, F., & Hayne, H. (2013). Misconceptions about childhood sexual abuse and child witnesses: Implications for psychological experts in the courtroom. *Memory, 21*(5), 608-617.

119 Benton, T. R., Ross, D. F., Bradshaw, E., Thomas, W. N., & Bradshaw, G. S. (2006). Eyewitness memory is still not common sense: Comparing jurors, judges and law enforcement to eyewitness experts. *Applied Cognitive Psychology, 20*, 115–129. The questions were replicated from Kassin, S. M., Tubb, V. A., Hosch, H. M., & Memon, A. (2001). On the 'general acceptance' of eyewitness testimony research: a new survey of the experts. *American Psychologist,* 50, 405–416. The questions are as follows: **Eyewitness topics and statements**: Stress: 1. Very high levels of stress impair the accuracy of eyewitness testimony. **Weapon Focus**: 2. The presence of a weapon impairs an eyewitness's ability to accurately identify the perpetrator's face. **Show Ups**: 3. The use of a one-person show-up instead of a full lineup increases the risk of misidentification. **Lineup Fairness**: 4. The more members of a lineup resemble the suspect, the higher is the likelihood that identification of the suspect is accurate. **Lineup Instructions**: 5. Police instructions can affect an eyewitness's willingness to make an identification**. Exposure Time:** 6. The less time an eyewitness has to observe an event, the less well he or she will remember it. **Forgetting Curve**: 7. The rate of memory loss for an event is greatest right after the event and then levels off over time. **Accuracy and Confidence**: 8. An eyewitness's confidence is not a good predictor of his or her identification accuracy. **Post Event Information:** 9. Eyewitness testimony about an event often reflects not only what they actually saw but also information they obtained later on. **Color Perception**: 10. Judgements of colour made under monochromatic light (e.g. an orange street light) are highly unreliable. **Wording of Questions**: 11. An eyewitness's testimony about an event can be affected by how the questions put to that witness are worded. **Unconscious Transference:** 12. Eyewitnesses sometimes identify as a culprit someone they have seen in another situation or context. **Trained Observers**: 13. Police officers and other trained observers are no more accurate as eyewitnesses than is the average person. **Hypnotic Accuracy**: 14. Hypnosis increases the accuracy of an eyewitness's reported memory. **Hypnotic Suggestibility**: 15. Hypnosis increases suggestibility to leading and misleading questions**. Attitudes and Expectations**: 16. An eyewitness's perception and memory for an event may be affected by his or her attitudes and expectations. **Event Violence**: 17. Eyewitnesses have more difficulty remembering violent than nonviolent events. **Cross-Race Bias**: 18. Eyewitnesses are more accurate when identifying members of their own race than members of other races**. Confidence Malleability**: 19. An eyewitness's confidence can be influenced by factors that are unrelated to identification accuracy. **Alcoholic Intoxication**: 20. Alcoholic intoxication impairs an eyewitness's later ability to recall persons and events. **Mug Shot-Induced Bias:** 21. Exposure to mug shots

survey in which they were asked to agree or disagree with 30 statements about eyewitness issues, and their responses were compared to a sample of eyewitness experts who completed the same survey. The authors concluded that the findings *"show a large deficiency in knowledge of eyewitness memory amongst jurors, judges and law enforcement personnel, indicating that the legal system may benefit from expert assistance in the evaluation of eyewitness evidence."* (p.115).

Similarly, Magnussen et al. (2010) used 30 questions that focused on eyewitness identification.[120] While most of the questions across both studies are specific to eyewitness identification in police lineups - a situation quite unlike sexual violence where the memory is

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of a suspect increases the likelihood that the witness will later choose that suspect in a lineup. **Long Term Repression**: 22. Traumatic experiences can be repressed for many years and then recovered. **False Childhood Memories**: 23. Memories people recover from their own childhood are often false or distorted in some way. **Discriminability:** 24. It is possible to reliably differentiate between true and false memories. **Child Witness Accuracy**: 25. Young children are less accurate as witnesses than are adults. **Child Suggestibility**: 26. Young children are more vulnerable than adults to interviewer suggestion, peer pressures and other social influences. **Description Matching**: 27. The more members of a lineup resemble a witness's description of the culprit, the more accurate an identification of the suspect is likely to be**. Presentation Format**: 28. Witnesses are more likely to misidentify someone by making a relative judgement when presented with a simultaneous (as opposed to sequential) lineup. (A simultaneous lineup is one where all members in the lineup are presented to the witness at the same time, and the witness is asked whether the culprit/suspect is in the lineup. In a sequential lineup, the witness is presented each member in the lineup one at a time and the witness is asked whether that person is the culprit/suspect). **Elderly Witness**: 29. Elderly eyewitnesses are less accurate than are younger adults. **Identification Speed**: 30. The more quickly a witness makes an identification upon seeing the lineup, the more accurate he or she is likely to be.

120 Magnussen, S., Melinder, A., Stridbeck, U., & Raja, A. Q. (2010. Beliefs about factors affecting the reliability of eyewitness testimony: A comparison of judges, jurors and the general public. *Applied Cognitive Psychology*, *24*, 122–133. The 16 questions used were as follows 1. **Effects of a hat:** It is significantly harder for a witness of a crime to recognize a perpetrator who is wearing a hat during the commission of a crime than a perpetrator who is not wearing a hat. 2. **Minor details:** A witness's ability to recall minor details about a crime is a good indicator of the accuracy of the witness's identification of the perpetrator of the crime. 3. **Attitudes and expectations**: An eyewitness's perception and memory for an event may be affected by his or her attitudes and expectations. 4**. Conducting lineups:** A police officer who knows which member of the lineup or photo array is the suspect should not conduct the lineup or photo array. 5. **Effects of post-event information:** Eyewitness testimony about an event often reflects not only what a witness actually saw but information obtained later on from other witnesses, the police, the media, etc. 6. **Confidence-accuracy:** At trial, an eyewitness's confidence is a good predictor of his or her accuracy in identifying the defendant as the perpetrator of the crime. 7. **Confidence malleability**: An eyewitness's confidence can be influenced by factors that are unrelated to identification accuracy. 8. **Weapon focus:** The presence of a weapon can impair an eyewitness's ability to accurately identify the perpetrator's face. 9. **Mug-shot-induced bias**: Exposure to mug-shots of a suspect increases the likelihood that the witness will later choose that suspect from a lineup. 10. **Lineup presentation format**: Witnesses are more likely to misidentify someone in a culprit absent lineup when it is presented in a simultaneous (members of a lineup are present at the same time) as opposed to a sequential procedure (members of a lineup are presented individually). 11. **Forgetting curve**: The rate of memory loss for an event is greatest right after the event and then levels off over time. 12. **Attorneys' knowledge**: Attorneys know how most eyewitness factors affect eyewitness accuracy. 13**. Jurors' knowledge**: Jurors know how most eyewitness factors affect eyewitness accuracy. 14. **Jurors distinguish eyewitnesses**: Jurors can distinguish between accurate and inaccurate eyewitnesses. 15. **Impact of stress**: Very high stress at the time of observation has a negative effect on the accuracy of testimony. 16. **Conviction solely on eyewitnesses' statement:** Only in exceptional circumstances should a defendant be convicted of a crime solely on the basis of eyewitness.

for (typically) repeated events, with persons well known to the witness,[121] [122] [123] [124] some of the questions are more general in nature and, therefore, arguably applicable to memory for sexual violence. Those questions with wider applicability asked about memory loss over time, the impact of stress on memory, memory for detail as being an indicator of accuracy of a memory and effects of post event information. However, it is possible that the context in which these questions are asked, being concerned with eyewitness issues, have an influence on responses.

Ost et al. (2017) reported a survey of Chartered Clinical Psychologists, hypnotherapists and first year undergraduate psychology students. Participants completed a questionnaire that assessed their knowledge of 10 memory phenomena about which the authors claim there is broad scientific consensus.[125] The psychologists' composite scores were more in line with the scientific consensus than either the students or the hypnotherapists who scored most poorly. Many of these questions concern memory issues that are directly relevant to issues that arise in sexual violence trials.

Simons and Chabris (2011) reported the results of a telephone survey conducted for the researchers by a polling company.[126] Participants were given six statements and asked to indicate their agreement or disagreement on a five-point Likert scale. The relevance of some of these items to sexual violence and sexual violence trials in general is tenuous.

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121 Hershkowitz, I., Horowitz, D., & Lamb, M. E. (2005). Trends in children's disclosure of abuse in Israel: A national study. *Child Abuse & Neglect, 29*, 1203-1214.

122 Peleikis, D. E., Mykletun, A., & Dahl, A. A. (2004). The relative influence of childhood sexual abuse and other family background risk factors on adult adversities in female outpatients treated for anxiety and depression. *Child Abuse & Neglect, 28*, 61-76.

123 Anderson, J., Martin, J., Mullen, P., Romans, S., & Herbison, P. (1993). Prevalence of childhood sexual abuse experiences in a community sample of women. *Journal of the American Academy of Child and Adolescent Psychiatry, 32*(5), 911-919.

124 Fanslow, J. L., Robinson, E. L., Crengle, S., & Perese, L. (2007). Prevalence of child sexual abuse reported by a cross-sectional sample of New Zealand women. *Child Abuse & Neglect, 31*, 935–945.

125 Ost, J., Easton, S., Hope, L., French, C. C., & Wright, D. B. (2017). Latent variables underlying the memory beliefs of Chartered Clinical Psychologists, Hypnotherapists and undergraduate students. *Memory, 25*(1), 57-68. Questions posed by Ost et al. 1. The mind is capable of unconsciously "blocking out" memories of traumatic events. 2. Memory is like a computer, accurately recording events as they actually occurred. 3. It is possible for an individual to develop "false" memories of non-traumatic events. 4. Very vivid memories are more likely to be accurate than vague memories. 5. A poor memory for childhood events is indicative of a traumatic childhood. 6. The more confidence with which a memory is reported, the more likely it is to be accurate. 7. Early memories, from the first year of life, are accurately stored and retrievable. 8. Memory is not influenced by suggestion. 9. It is possible for an individual to distinguish between "true" and "false" memories. 10. The more emotion with which a memory is reported, the more likely it is to be accurate.

126 Simons, D. J., & Chabris, C. F. (2011). What people believe about how memory works: A representative survey of the U.S. population. Plos ONE, 6, e22757. The items were as follows. 1. **Amnesia:** People suffering from amnesia typically cannot recall their own name or identity. 2. **Confident testimony**: In my opinion, the testimony of one confident eyewitness should be enough evidence to convict a defendant of a crime. 3. **Video memory**: Human memory works like a video camera, accurately recording the events we see and hear so that we can review and inspect them later. 4. **Hypnosis:** Hypnosis is useful in helping witnesses accurately recall details of crimes. 5. **Unexpected events**: People generally notice when something unexpected enters their field of view, even when they're paying attention to something else. 6. **Permanent memory:** Once you have experienced an event and formed a memory of it, that memory does not change.

Patihis et al. (2014) asked undergraduate students, psychologists and members of the general public about memory and, as the title of the paper suggests, the main area of interest was "repressed memory".[127] The aim of this study was to examine knowledge about this specific construct rather than general knowledge about memory. It is of note that the concept of "repressed memory" is rarely in evidence in contemporary New Zealand trials. The authors report less belief in "repressed memory" among mainstream clinicians in 2014 compared with the 1990s and that research-oriented psychologists and memory experts expressed more scepticism about the validity of "repressed memories" relative to clinicians, undergraduates and the general public. In a follow-up paper, Patihis et al. (2018) [128] focused only on memory experts' beliefs about "repressed memory". Their findings supported their earlier observation that the memory experts were largely sceptical of repressed memories and of memory reliability in general.

Demarais and Read (2011) presented a meta-analysis of studies that had been completed prior to 2010.[129] The meta-analysis included unpublished material and conference papers as well as peer reviewed journal articles. Memory expert witnesses have sometimes cited this review as evidence for the need for expert advice on memory, but rarely cite or describe any of the individual studies of which it consists. The results of the meta-analysis showed knowledge varied across the different areas concerning memory, format of questions, and over time. A majority of lay participants achieved "correct" consensus for 11 of the 16 items included in this review.

Akhtar et al. (2018) have also more recently been cited by memory expert witnesses in briefs of evidence. In this study, memory experts, the police and members of the public completed a questionnaire containing a series of statements about autobiographical memory. The statements cover issues such as the nature of memory, determinants of accuracy and the relation of emotion and trauma to memory.[130] Participants indicated their agreement/

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127 Patihis, L., Ho, L. Y., Tingen, I. W., Lilienfeld, S. O., & Loftus, E. F. (2014). Are the "memory wars" over? A scientist-practitioner gap in beliefs about repressed memory. *Psychological Science*, 25, 519–530. Questions were as follows: 1. Traumatic memories are often repressed. 2. Repressed memories can be retrieved in therapy accurately. 3. Memory can be unreliable. 4. Hypnosis can accurately retrieve memories that previously were not known to the person. 5. Memory is constantly being reconstructed and changed every time we remember something. 6. Memory of everything experienced is stored permanently in brain, even if we can't access all of it; (7) Some people have true "photographic memories". 8. With effort, we can remember events back to birth.

128 Patihis, L., Ho, L. Y., Loftus, E. F. & Herrera, M. E. (2018). Memory experts' beliefs about repressed memory, *Memory*, DOI: 10.1080/09658211.2018.1532521

129 Desmarais, S.L. & Read, J. D. (2011). After 30 years, what do we know about what jurors know? A meta-analytic review of lay knowledge regarding eyewitness factors. *Law and Human Behavior, 35*, 200-210. The questions included across the various studies are too numerous to list here, but covered the areas of confidence malleability, lineup instructions, mugshot-induced bias, presentation format, question wording, accuracy and confidence, alcohol intoxication, attitudes and expectation, child suggestibility, cross-race bias, exposure time, forgetting curve, hypnotic suggestibility, post event information and unconscious transference.

130 Akhtar, S., Justice, L.V., Knott, L., Kibowski, F., & Conway, M.A. (2018). The 'common sense' memory belief system and its implications. *International Journal of Evidence & Proof, 22*(3), 289-304.Questions were as follows: **Memory is generally accurate:** 1. People often accurately remember emotions and feelings. 2. People generally remember what happened even though some details may be forgotten and some remembered inaccurately. 3. People often remember the thoughts they had during a specific

disagreement with each of the statements. Results indicated that the police and public shared what the researchers called a 'common sense' memory belief system (CSMBS) in which memories were like videos/photographs, and accuracy was determined by the number of details recalled and by their vividness. In contrast, what the researchers called the scientific memory belief system (SMBS) was held by memory researchers, largely based on scientific evidence, and included that memories are fragmentary, the number of details and their nature do not predict accuracy, and memories and their details can be in error and even false.

Another paper recently cited by memory expert witnesses is that by Wake et al. (2020).[131] The Beliefs about Memory Survey (BAMS) was used to explore laypeople's knowledge and beliefs about memory. The authors concluded that, although participants were aware that memory can be inaccurate, they still held some misconceptions — particularly regarding memory for traumatic events. Data were compared with other 25-year-old data. The conclusion was that potential jurors are increasingly aware of the ways in which memory can be unreliable.

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experience. 4. Despite some forgetting and occasional errors memory is generally accurate. **The more memory details, the more accurate the memory:** 5. The details in memories of specific events are usually accurate. 6. A memory that has few details is likely to be inaccurate. 7. A memory that is recalled fluently is likely to be accurate. 8. A memory that is recalled with a lot of vivid and specific details is highly likely to be accurate. 9. Highly specific details are more likely to be accurate than details that are less specific. 10. A memory that is recalled hesitantly, with lots of going back and double takes, is likely to be inaccurate. 11. The more detailed the description of a memory the more accurate the recollection. 12. Memories containing peripheral information, e.g., surroundings and background details, are more likely to be accurate. **Memories can be false:** 13. People can come to remember events that never occurred. 14. Over time memories deteriorate and can become less accurate. 15. Memories of traumatic experiences may contain details that are false. 16. It is possible for a highly vivid, very specific, detail in an account of a memory to be wholly false. **Memory is like a video:** 17. Memories are like photographs or videos; 18. Memory is like a movie of one's experiences. 19. Memory is like a filing cabinet in which each document records a specific memory. **Emotional intensity and accuracy:** 20. Experiences that feature very strong emotions are more accurately remembered than experiences in which emotions were moderate or weak. 21. Memories of emotionally negative experiences are more accurately remembered than memories of neutral and positive experiences. **Trauma and memory**: 22. Traumatic experiences can be repressed for many years and then recovered. 23. When someone recalls a memory of childhood sexual abuse, or perhaps a series of such memories, it will usually be the case that there is at least some truth to their recall. 24. Memories can be forgotten over many years, even decades, but later remembered again. 25. Memories of traumatic experiences can be kept out of mind. 26. When a number of people all recall being abused by an individual or group, the likelihood that the abuse occurred is greatly increased. **Childhood memory:** 27. Memories from childhood are as accurate as memories from other ages. 28. Children's memories are less accurate than adult's memories **Durability and reliving trauma:** 29. Memories of intense emotional experiences are 'burnt in the brain' and are therefore remembered in detail for long periods of time. 30. Traumatic memories come to mind in the form of 'flashbacks'**.** 31. A 'flashback' of a traumatic memory causes a re-living of the remembered event.

131 Wake, K. A., Green, J., & Zajac, R. (2020). Laypeople's beliefs about memory: disentangling the effects of age and time. *Memory*, published online, 07 May 2020. The questions were: **Memory is permanent:** 1. Memories that are recalled under hypnosis are more accurate than memories recalled without it. 2. Precise records of all our experiences are permanently stored in the brain. **Memory is malleable:** 3. Things we see on television can blend with our memories of truly experienced events. 4. Things we read about can accidentally get confused with truly experienced events. 5. Things we dream about can accidentally get confused with truly experienced events. **Traumatic memories can be repressed:** 6. Memories for painful experiences are sometimes pushed into the unconscious. 7. Very traumatic events can sometimes be pushed out of a person's awareness.

Discussion

Many of the studies cited by New Zealand expert memory witnesses in support of their argument that jurors require expert evidence about memory are either commentaries or case studies of the writers' experience in giving such evidence. Other studies cited are of empirical research involving questionnaires in which the responses of jurors or the general public and judges, police, lawyers, and mental health professional are compared with each other and/or with "memory experts."

Others have targeted the general public without comparison with other groups.[132] All these studies reveal the existence of some level of misconceptions about memory issues amongst those surveyed, with the exception of memory experts. However, some of the studies may be irrelevant to trials involving sexual violence against children and adults– notably the studies that examined beliefs about "repressed memories" and those studies where the context was eyewitness memory in relation to police lineups. Some of the other studies also include questions that are unlikely to be in evidence in sexual violence trials; specific issues such as amnesia and hypnosis. In the research that focused on eyewitness accuracy some general questions were included that are relevant to sexual violence trials, but it is possible that the context influenced responding.

In addition to the issue of relevance to memories for sexual violence, there are also methodological issues. According to Brewin et al. (2019),[133] a common concern in survey item design is that questions can often be understood differently by participants according to

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132 Simons, D. J., & Chabris, C. F. (2011). What people believe about how memory works: A representative survey of the U.S. population. Plos ONE, 6, e22757.

133 Brewin, C. R., Li, H., Ntarantana, V, Unsworth, C. & McNeilis, J. (2019). Is the public understanding of memory prone to widespread "myths"? *Journal of Experimental Psychology: General, 148*(12), 2245–2257. We summarise the relevant aspects of the Brewin et al. study. The statement about memory being like a video camera was administered using the scale in Simons and Chabris (2011), ranging from 1 (strongly disagree) to 5 (do not know). Participants finished by answering three versions of the video camera statement. The first two versions were alternative statements that simultaneously manipulated the wording of the statement (using more tentative and negative versions) and made the assumptions inferred by previous researchers more explicit. These statements were "Human memory works partly like a video camera, accurately recording some of the events we see and hear so that we can review a simplified version later" and "Human memory is not like a video camera because we cannot play back events exactly as they happened." These were followed by a second presentation of the original video camera statement. Participants were asked to read through all three versions prior to rating them all on the same scale as before. Overall agreement with the original statement when it was first presented was 32.6%. Agreement with the alternative stating why memory was partly like a video camera was 50.0% and with the alternative stating why memory was not like a video camera was 70.9%. When retested, agreement with the original statement was 38.9%. Given the chance to choose between statements, respondents clearly preferred alternatives that recognized memory is selective, rejecting the video camera analogy significantly more often than endorsing it when it was explicitly linked to the assumption that events could be played back exactly as they happened. Over 70% of participants agreed with an item proposing that memory was not like a video camera. This finding contradicts interpretations that have previously been made concerning responses to the video camera statement but supports research on the importance of question wording (Kamoen et al., 2011). Brewin et al. variously concluded that "Our data caution lawyers and experts alike not to make premature assumptions about what jurors believe and to take into consideration the various ways in which memory can be subjectively experienced."

the context presented.[134] Furthermore, the wording of questions or survey items (whether they are worded positively or negatively) may also have a significant influence on participants' responses in surveys.[135] [136] Depending on how the questions are worded, participants may assume that the questions had been written by experts, and may also assume that such experts would not ask deceptive questions and, therefore, state agreement despite their own doubts.[137]

Further to the methodological issues already mentioned, there are other problems with the memory knowledge research. There is no evidence that any of the items used in the surveys cited by the memory expert witnesses have been tested for comprehension issues. Some terms have different meanings even within the research community. For example, in relation to "repressed memory" repression is an ambiguous term, sometimes used to refer to an unconscious process and at other times to the deliberate suppression of unwanted memories. Brewin and Andrews (2014)[138] have suggested, one reason for the apparent endorsement of "repression" in some of the surveys cited might be participants' belief in deliberate suppression, which does have empirical support. In other words, participants might be aware that many people will deliberately avoid thinking or talking about past traumatic events because of the concomitant emotional distress such thoughts or actions induce.

In addition, for some survey questions there are conflicting views within the scientific community as to the assumed "correct" answer. For example, "An eyewitness's confidence is not a good predictor of his or her identification accuracy"[139] [140] or "Some people have true photographic memories",[141] or "Very high levels of stress impair the accuracy of eyewitness testimony."[142] We address this issue of confidence versus accuracy later in this report.

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134 Belli, R. F., Conrad, F. G., & Wright, D. B. (2007). Cognitive psychology and survey methodology: Nurturing the continuing dialogue between disciplines. *Applied Cognitive Psychology*, *21*, 141–144.

135 Chessa, A. G., & Holleman, B. C. (2007). Answering attitudinal questions: Modelling the response process underlying contrastive questions. *Applied Cognitive Psychology*, *21*, 203–225.

136 Kamoen, N., Holleman, B., Mak, P., Sanders, T., & van den Bergh, H. (2011). Agree or disagree? Cognitive processes in answering contrastive survey questions. *Discourse Processes*, *48*, 355–385.

137 *Supra*, note 133, Brewin et al. (2019).

138 Brewin, C. R., & Andrews, B. (2014). Why it is scientifically respectable to believe in repression: A response to Patihis, Ho, Tingen, Lilienfeld, and Loftus (2014). *Psychological Science*, 25, 1964–1966.

139 Brewin, C. R., Andrews, B., & Mickes, L. (2020). Regaining Consensus on the Reliability of Memory. *Current Directions in Psychological Science.* https://doi.org/10.1177/0963721419898122

140 Wixted, J. T., & Wells, G. L. (2017). The relationship between eyewitness confidence and identification accuracy: A new synthesis. *Psychological Science in the Public Interest*, *18*(1), 10-65. Wixted and Wells conclude that "According to the available data, the relationship between confidence and accuracy for an initial ID from an appropriately administered lineup is sufficiently impressive that it calls into question the very notion that eyewitness memory is generally unreliable." "Thus, instead of disregarding eyewitness confidence altogether, the legal system should draw a distinction between initial confidence that was obtained using pristine testing procedures and confidence obtained later or under conditions known to compromise the confidence-accuracy relationship." (p.55)

141 McGaugh, J.L. (2013). Making lasting memories: Remembering the significant. *Proceedings of the National Academy of Sciences of the United States of America*, *110*(2), 10402-10407. This paper presents evidence of people with exceptional autobiographical recall.

142 Accuracy can mean different things here – is what the person can spontaneously recall likely to be correct or will the person recall a high proportion of the total information available.

Any assertion that jurors need information about memory issues should rely on surveys that are methodologically sound, and they should pose questions directly relevant to sexual violence trials. This is in the context that in New Zealand virtually all expert evidence about memory proffered by defence memory experts has, over the last 20 years, arisen in the context of sexual violence trials. Obviously, reliance should be placed on surveys that target participants who are jury eligible and represent a cross section of society (rather than solely professional groups or undergraduate students). Furthermore, since judges routinely direct jurors to use their common sense and their own experience of life when considering the evidence before them, survey questions might be posed that target participants' subjective actual experience of memory. They might be prompted to answer questions using "common sense" and/or their personal experience of their own memory. To this end we are associated with colleagues at the University of Auckland in conducting such a study, the results of which should be available by the end of 2020.

It is also important that if expert memory evidence is to be provided in trials, it must reflect the independence required of the expert under the High Court Rules for Expert Witnesses and the expectation therein that evidence fairly and accurately represents the relevant research. Memory witnesses in New Zealand have exclusively provided evidence for the defence. In all cases, their evidence has carried the argument that juror lack of knowledge about memory increases the risk of wrongful conviction, or "false positives". Their specific evidence will be described later this report but covers such issues as loss of memory over time, post event influences on memory accuracy, and false memories. We were unable to identify any instances where evidence given by memory expert witnesses in New Zealand courts presented the possibility of wrongful not guilty outcomes, or "false negatives". This is despite this implication of memory knowledge being brought to our attention by some researchers.

For example, the possibility of misconceptions about memory leading to false negatives was discussed by Akhtar et al. (2018). The authors stated that the 'common sense' memory belief system which they considered was "pervasive in society", was instrumental in raising the probability of flawed judgments of memory evidence that is reflected in the (very high) attrition rate in complaints of rape in UK. In this regard, Akhtar et al. reported that in the UK the attrition rate is *"astonishingly high and 93% of complaints of rape reported to the police do not result in a conviction and 82% do not even go to court."* (p. 302) [143]

While they acknowledged that there may be a number of reasons for this, they opined that *"a major and completely overlooked reason is that the various agencies, e.g. police, Crown Prosecution Service (CPS), etc. use the CSMBS to judge allegations of rape—complaints that are always based on the complainant's memory of the alleged assault and that according to the common beliefs memories that are accurate should have video-like qualities with many specific and some vivid details and should be presented in a fluent and*

[143] Akhtar, S., Justice, L.V., Knott, L., Kibowski, F., & Conway, M.A. (2018). The 'common sense' memory belief system and its implications. *International Journal of Evidence & Proof, 22*(3), 289-304.

complete way."[144] They contrasted this with the usually encountered rape complaints that tend to be fragmentary, contain amnesic gaps, and miss 'important' details, concluding that complaints such as these are triaged out of the prosecution process as unreliable. Similarly, Hohl and Conway (2017) in discussing the high attrition rate for adult complainants of rape in the UK noted that it might be misconceptions about human memory that motivate police officers, prosecutors and juries to seek highly consistent, highly detailed and error-free witness testimony from a complainant.[145]

At this juncture, given the issues raised in this chapter, it is at best uncertain that New Zealand jurors in criminal trials involving sexual violence against children and adults require expert evidence about memory. This is because the available research does not make a convincing case about whether the public have significant misconceptions about memory or identify precisely which misconceptions are of concern. Presently, the courts have determined that, in general, jurors know about the basics of memory and the impact of delay on memory - although, jurors are given a judicial direction about the impact of delay on memory.

The available research does not present a compelling argument to contradict the position adopted by the courts. It is, however, possible that jurors may require expert evidence about some memory issues that may arise in specific trials where common knowledge cannot be assumed. For example, issues such as childhood amnesia and perhaps so-called "recovered memories". However, we are of the view that education of prosecutors about these issues would be preferable, so that they are not seeking to lay and prosecute charges based on events that are said to have occurred when the complainant(s) was aged younger than three or four years in the context the complainant is now a late teenager or adult. Similarly, the issue of how and when memories arose that might be regarded as "recovered" should be evaluated by prosecutors prior to trial. At appendices one and two we provide some guidance for prosecutors and defence counsel in this regard.

144 *Ibid*, at page 302

145 Hohl, K. & Conway, M. A. (2017). Memory as evidence: How normal features of victim memory lead to the attrition of rape complaints. *Criminology and Criminal Justice*, *17*(30), 248-265.

CHAPTER FOUR

EYEWITNESS IDENTIFICATION AND TRANSFERENCE

Frequently referred to by memory expert witnesses is the fallibility of eyewitness identification. They refer to the real-life phenomena of people being convicted on the basis of eyewitness identifications then later exonerated on the basis of DNA evidence. They state that laboratory research over the last 40 years has demonstrated that eyewitnesses frequently misremember what they saw and furthermore, that are often confident their inaccurate memories are accurate.

As will be discussed, the laboratory studies cited in relation to eyewitness identification involve strangers, often in simulated police lineups. There is a clear distinction to be drawn between memory for eyewitness identification of strangers and memory for events personally experienced in which the defendant was a close or familiar person. This distinction is especially important because in sexual violence trials a complainant or victim of sexual assault is not watching an event as a by-stander witness (as is presented in most of the laboratory studies) but rather they have experienced the event as a participant. Furthermore, most commonly the events in sexual violence would be experienced as distinctive, in contrast to the mundane events often used in laboratory eyewitness studies. In the following we cite and describe the eyewitness research literature upon which the memory expert witnesses rely in their briefs of evidence.

Despite these crucial differences, the opinions offered by memory expert witnesses routinely include research on eyewitness identification in which the participant was an onlooker in low stakes events depicted in slides or videos, regardless of whether mistaken identity is at issue or not. However, there have been a number of cases where the defence at trial has argued that the complainant has been confused about the identity of the accused. This phenomenon has been referred to as ‘transference’. Later in this chapter we describe this phenomenon and the research cited by memory expert witnesses in relation to this topic. Firstly however, we comment on literature cited about wrongful convictions.

Wrongful convictions

Some memory expert witnesses have assigned weight to eyewitness misidentification by referring to literature about wrongful convictions. They have stated that estimates of the rate of eyewitness error in erroneous conviction cases ranges from 50% (Rattner, 1988) to 84% (Scheck, Dwyer, Neufeld, & Boatman, 2000; see also Borchard, 1932; Brandon & Davies, 1973; Garrett, 2008; Huff, 1987; Huff, Rattner, Sagarin, & MacNamara, 1986).

However, the use made of this literature is misleading as it is not specific to eyewitness misidentification, thus the statement exaggerates its possible impact. This is an aside to the greater issue of the relevance of eyewitness identification research. Nevertheless, we briefly review this literature for what it does (or doesn’t) say.

The paper by Rattner (1988)[146] surveys legal literature from the beginning of the 20th century, as well as more recent studies, and give accounts of cases of men and women who were tried and wrongfully convicted of serious crimes throughout the United States. This paper describes these wrongful convictions by the distribution of offences, of sentences, of actual punishment inflicted, and types of error contributing to the wrongful conviction. Scheck et al. (2000) [147] also report wrongful convictions some proven by DNA evidence. Neither paper is specific to eyewitness misidentification.

Borchard (1932)[148] has been cited in relation to eyewitness identification error. This is confusing as the paper begins, *"The recent governmental policy of withholding recognition from foreign governments long and firmly established, because they are disapproved, has caused confusion in the conduct of international affairs and in the administration of justice in the courts. In late years this has been particularly exemplified in the relations of the United States with the Soviet Government of Russia, but it has had illustrations on earlier occasions in connection with Mexico and other countries, when a desire to express disapproval of certain foreign governments or their policies has induced, through the purported privilege of withholding recognition, the concomitant policy of intervention, reprisals, and non-intercourse."* We were unable to identify mention of eyewitness memory, innocence or wrongful convictions.

Brandon and Davies (1973)[149] present an analysis of why wrongful imprisonment occurs through the use of actual case studies focused primarily on the English system, although comparisons are made with the Scottish, French, and American systems of justice. The authors identify areas of systemic fault, describe the difficulties an innocent person faces when he is suspected of a crime, and point out the numerous obstacles encountered by a wrongfully imprisoned person seeking to establish his innocence and release. There is no specific analysis of eyewitness misidentification. Garrett (2008)[150] presents an empirical study examining how the criminal system in the United States handled the cases of people who were subsequently found to be innocent through postconviction DNA testing. The Huff (1987)[151] paper also focuses on wrongful convictions opining that, "*it is likely that thousands of innocent persons are convicted of serious crimes each year, with many of those innocent citizens subsequently being deprived of their liberty and forced to serve time in prison before the error is discovered—if they are fortunate enough to have the error discovered."* Similarly, Huff and colleagues,[152] drawing on their own database of nearly 500 cases of wrongful conviction, their

146 Rattner, A. (1988). Convicted but innocent. *Law and human behavior, 12*, 283-293.

147 Scheck, B., Dwyer, J., Neufeld, P. J., & Boatman, M. (2000). *Actual innocence: Five days to execution, and other dispatches from the wrongly convicted*. New York: Doubleday.

148 Borchard, E. M. (1932). The unrecognized government in American courts. *American Journal of International Law, 26*, 261-271.

149 Brandon, R., & Davies, C. (1973). *Wrongful imprisonment: Mistaken convictions and their consequences.* London: Allen and Unwin.

150 Garrett, B. L. (2008). Judging innocence. *Columbia Law Review, 108*, 101-190.

151 Huff, C. R. (1987). Wrongful conviction: Societal tolerance of injustice. *Research in Social Problems and Public Policy, 4*, 99-115.

152 Huff, C. R., Rattner, A., Sagarin, E., & MacNamara, D. E. (1986). Guilty until proved innocent: Wrongful conviction and public policy. *Crime & Delinquency, 32*, 518-544.

own survey of criminal justice officials, and their review of extant literature on the subject, address three major questions: (1) How frequent is wrongful conviction? (2) What are its major causes? and (3) What policy implications may be derived from this study?

As noted, the literature cited by memory expert witnesses is not specific to eyewitness misidentification but rather includes all causes of wrongful conviction. In ignoring this, the memory expert witnesses may be seen to mislead and exaggerate the role of eyewitness misidentification. There is no dispute that there have been wrongful convictions based on erroneous eyewitness identification, poor police and prosecution practices, incompetent defence counsel, and false confessions. However, the relevance of this literature about erroneous eyewitness identification to sexual violence trials involving non-strangers is not readily apparent.

Familiarity as a factor in eyewitness identification

As we have stated, there is a clear distinction to be drawn between memory for eyewitness identification of strangers and memory for events personally experienced in which the defendant was a close or familiar person. Eyewitness identification research typically uses perpetrators who are strangers to the witness. However, one memory expert witness has asserted that there are many real-world cases involving eyewitnesses who are familiar with the defendant, giving as an example, Flowe et al. (2011).[153] It is important to note that this paper was an archival study of prosecutions where the 'familiarity' or 'acquaintance', as discussed in that study was that the person had for example, *"lived in the same neighborhood, went to the same high school, lived in the same building…"* This is significantly different to a situation where a person is familiar because they are a close family member with whom there has been frequent and regular contact.

It has also been asserted by the memory expert witnesses that eyewitnesses who are acquainted with a defendant may be perceived as more credible and accurate in their identification but even in these circumstances, eyewitnesses can still be mistaken. To support this opinion, they have cited a study by Sheahan et al. (2018).[154] This study was related to mock jurors' perceptions after reading an account of an alleged car theft. Being 'familiar' with a face is well short of knowing a person who is a close family member or someone with whom there has been frequent interaction. It is difficult to see how this is relevant to familiarity between defendants and complainants in sexual violence trials.

In the same brief of evidence, the memory expert witness cited other studies apparently to support an opinion that the complainants could have misidentified the defendant despite the fact that he was a very close family member. In the brief it was asserted that research has

153 Flowe, H. D., Mehta, A., & Ebbesen, E. B. (2011). The role of eyewitness identification evidence in felony case dispositions. *Psychology, Public Policy, and Law*, *17*, 140-159 at page 144

154 Sheahan, C. L., Pozzulo, J. D., Reed, J. E., & Pica, E. (2018). The role of familiarity with the defendant, type of descriptor discrepancy, and eyewitness age on mock jurors' perceptions of eyewitness testimony. *Journal of Police and Criminal Psychology*, *33*(1), 35–44.

shown that people are not always able to accurately identify that a non-stranger face is familiar, citing a study by Pezdek and Stolzenberg (2014), or that people can accurately select a familiar person from a lineup, citing Steblay et al. (2011).

In the Pezdek and Stolzenberg study researchers showed participants student yearbooks and had them indicate whether the faces were familiar or not.[155] The authors themselves noted the caveats to their results in relation to their applicability to the 'real world'. In the first instance, judgments of familiarity were made from a 10 second look at a photograph of each target individual. The authors noted that in the real world, an eyewitness may have a better opportunity to observe a suspect before determining that they are familiar. Secondly, they indicated that it is difficult to estimate the guessing rate in the task used in this study and thus what might be the probability of being correct with a 'familiar' judgment in the real world. The authors indicated that the findings might not precisely apply to real eyewitness memory. Next, the authors noted that "*casual familiarity is clearly not one thing, and the level of familiarity among schoolmates would not be the same as the level of familiarity among all other overlapping cohorts*." A further caveat was that although the two schools used in this study were 31 miles apart in different cities within the densely populated Los Angeles Metropolitan area, there was no way of guaranteeing that in fact all 'unfamiliar' faces had never been seen before. Finally, they noted that in their study, familiarity was a dichotomous independent variable and suggested that a topic of future research is how these results are affected by the amount and type of exposure to an individual.[156]

As will be obvious, there is a significant difference between assessing familiarity (as opposed to identity) after a 10 second look at a photograph of persons previously attending the same school (there were 750 girls at each school and there was a three year test delay and a three year class gap between the participants and the persons in the target photos) and identifying a person who was a family member or other well-known person, with whom there had been frequent and regular contact. However, these caveats were not reported by the memory expert witness.

This same memory expert witness also cited Steblay et al. (2011)[157] as have others, to indicate that persons may not accurately select a familiar person from a line-up. This experiment was conducted using a laptop computer. A video clip of a 30-second purse snatching incident served as the stimulus crime incident. The event was filmed in colour with audio and shot from the victim's perspective. The face of the perpetrator was visible at close range for 10 seconds. The actor who played the perpetrator in the video was a recent graduate of the college at which the study was conducted, a fact that reportedly allowed assessment of familiarity between witness and offender. The level of familiarity was not explored. Therefore, this was an eyewitness identification of an event witnessed on videotape but not

155 Pezdek, K., & Stolzenberg, S. (2014). Are individuals' familiarity judgments diagnostic of prior contact? *Psychology, Crime & Law, 20*, 302-314.

156 Pezdek, K., & Stolzenberg, Ibid at page 311

157 Steblay, N. K., Dietrich, H. L., Ryan, S. L., Raczynski, J. L., & James, K. A. (2011). Sequential lineup laps and eyewitness accuracy. *Law and Human Behavior*, *35*(4), 262- 274.

personally experienced. While the actor in the experiment may have been 'familiar' to some of the participants, familiarity is not the same as having a close familial relationship with frequent and regular contact. It was also a police line-up situation. Again, it is difficult to see the relevance or validity of this study to sexual violence trials where the alleged offender is a person very well known to the complainant(s), and the alleged events are personally experienced, and perhaps repeated over time (as was the situation in the case at point).

Transference

Some memory expert witnesses have given evidence about what has been termed 'transference',[158] and in this context have cited eyewitness identification research in support. This phenomenon, as it is sometimes raised in sexual violence trials, is that the complainant (who has a confirmed or alleged prior history as a victim of sexual violence) has been confused and has misidentified the defendant blaming them for sexual offending previously committed by another person. This phenomenon has variously been termed 'transference' 'unconscious transference' 'transferred attribution' or 'mistaken attribution'. This 'transference' or 'transferred attribution' has sometimes been regarded as being "conscious or unconscious." In 1999, The New Zealand Law Commission[159] referred to "unconscious transference" as misidentification of an innocent person (bystander) who had been previously seen by the witness to the crime in a different context from the crime itself.[160]

As explained by Gilligan et al. (1996)[161] the theory of transference is the classic case of the ticket agent who worked at a railroad station. The ticket agent was the victim of an armed robbery. After the crime was committed, he attended a lineup arranged by the police. At the lineup, he picked out a sailor as the robber. However, further police investigation revealed that the sailor had 'an ironclad alibi'. Following this, the agent was asked why he had picked the sailor out of the lineup and he responded that the sailor's "face looked familiar." It transpired

158 This concept of "transference" has found its way into New Zealand case law. In this regard we do not refer to the concept of transference as used in cases related to forensic evidence in which it might be claimed that in the process of analysing DNA, blood or semen samples there has been a transfer of that material. For example, *Herbert v R* [2019] NZCA 640 [12 December 2019]; *Mark Edward Lundy v R* [2019] NZSC 152 [20 December 2019]; *E (CA799/2012) v R* CA799/2012 [2013] NZCA 678 [19 December 2013]; *Glassie v R* [2018] NZCA 308 [14 August 2018]. *Haward v R* [2018] NZCA 506 [16 November 2018]; *R v Gwaze* [2009] NZCA 430; [2010] 1 NZLR 646; (2009) 24 CRNZ 348 (24 September 2009). We also note that in psychology, the term 'transference' refers to redirection of a client's feelings from a significant person to the therapist. Transference was first described by Sigmund Freud, who acknowledged its importance for better understanding of the client's feelings. In this way, the client may exhibit feelings towards a therapist such as anger that may be historically and unconsciously felt towards a parent.

159 Law Commission. (1999). Total recall? The reliability of witness testimony. Evidence. Miscellaneous paper 13. Wellington, New Zealand: Law Commission. Pp. 23-24.

160 Penrod, S., Loftus, E., & Winkler, J. (1982). The reliability of eye-witness testimony: A psychological perspective. In N. L. Kerr & R. Bray (Eds.), *The psychology of the courtroom* (pp. 119-168). New York: Academic Press.

161 Gilligan, F. A., Imwinkelried, E. J., & Loftus, E. F. (1996). Theory of unconscious transference: The latest threat to the shield laws protecting the privacy of victims of sex offenses. *The Boston College Law Review, 38*, 107-144.

that on three prior occasions, the agent had sold the sailor train tickets. To explain the mistaken identification, the term "unconscious transference" was coined.[162]

One memory expert witness has stated that research on 'unconscious transference' suggests that indicates that people may sometimes be confused about the circumstances under which they viewed a person and incorrectly remember seeing a person from one situation as a person from another situation. That is, they transfer of one person's identity to that of another person from a different setting, time, or context. In relation to this they cited a study by Read et al., (1990), and also referred to Gilligan et al. (1996) and Deffenbacher et al. (2006).

The Read et al. definition of transference as cited above is correct: "*the transfer of one person's identity to that of another person from a different time, setting, or context"*,[163] but this was not the conclusion that they drew from their study. In fact, the opposite was the case. Read et al. conducted a study of line up identification involving a series of five field studies involving 330 retail store clerks and 340 students, five retention intervals from 2 hours to 2 weeks, seven bystander-perpetrator intervals from 2 minutes to 2 weeks, three line-up types, two levels of line-up similarity, four different bystanders and four different targets. They reported that *"**with one exception no evidence was obtained that could be interpreted to demonstrate the phenomenon of unconscious transference**. That is, the results repeatedly failed to reveal more misidentifications of an innocent bystander by witnesses who had been previously exposed to the bystander than by control eyewitnesses who had not"*[164]

They reported that, specifically, the one exception where unconscious transference was obtained was, "*when an event was chosen that did not involve personal interactions between two highly similar people; an event was not particularly memorable or unusual; and the event was followed by an identification test two weeks later for which the photographic lineup was not considered to be ideal."*[165] They noted, "***If our results prove to be general ones, we would argue that the characteristics of events which led to bystander misidentifications are not likely to be shared by events in the real world for which misidentification would generally be of concern."*** [166]

The paper by Deffenbacher et al. (2004)[167] was a meta-analytic review of eyewitness identification studies as related to line-up situations. They first sought to determine the overall status of the hypothesis that heightened stress debilitates eyewitness memory for faces. Again, this was about facial identification in the police lineup situation and has, therefore, limited

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162 Williams G. (1963). *The proof of guilt: A study of the English criminal trial,* 115 (311 Ed. 1963).

163 Read, J. D., Tollestrup, P., Hammersley, E., McFadzen, E., & Christensen, A. (1990). The unconscious transference effect: Are innocent bystanders ever misidentified? *Applied Cognitive Psychology, 4,* 3-31 at p. 3

164 Read, et al at page 3 Emphasis added

165 Read, et al at page 26

166 Read, et al. at page 26 Emphasis added

167 Deffenbacher, K. A., Bornstein, B. H., Penrod, S. D., & McGorty, E. K. (2004). A meta-analytic review of the effects of high stress on eyewitness memory. *Law and Human Behavior, 28,* 687-706.

relevance to sexual violence trials where the alleged perpetrator(s) is well known to the complainant. The study by Gilligan et al. (1996)[168] was a commentary on legal aspects of the defence of "unconscious transference" in the American context.

One memory expert witness asserted that, even under the ideal viewing conditions characteristic of laboratory settings, witnesses may implicate a familiar person as the perpetrator when in fact that person is innocent, and cited a study by Cutler and Kovera (2010) [169] as demonstrating this. The memory expert witness did not specify which part of this book was relevant to this statement. However, the main thrust of the book is about eyewitness identification noting that, *"witnesses and victims of crimes are often called by prosecutors to the witness stand and, under oath, identify the defendant as the perpetrator of the crime. Such testimony carries significant weight for members of the jury and may be a major factor in contributing to a finding of guilt."* Again, this was about eyewitness identification of strangers.

Memory expert witnesses have also cited Ross et al. (1994)[170] as suggesting unconscious transference in sexual violence cases where the defendant and the complainant are well known to each other. However as before, this paper dealt with bystander witness misidentification in police lineup situations.

Even though the literature about "unconscious transference" is entirely related to misidentification of persons not well known to the witness, memory expert witnesses have extrapolated this research to sexual violence cases wherein the defendant and complainant(s) are well known to each other. This defence has for example been used for young children,[171] and for adolescents[172] as well as adults, in situations where the defendant and the alleged prior abuser were both well known to them. Children and adults are not usually confused about the identity of the person(s) who commit sexual offences against them. This is because, as already noted, sexual offending against children, adolescents and adults is usually committed by persons well known to them.[173] [174] [175] There are two cases known to us where transference was

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168 Gilligan, F. A., Imwinkelried, E. J., & Loftus, E. F. (1996). Theory of unconscious transference: The latest threat to the shield laws protecting the privacy of victims of sex offenses. *The Boston College Law Review, 38*, 107-144.

169 Cutler, B. L., & Kovera, M. B. (2010). *Evaluating eyewitness identification*. New York: Oxford University Press.

170 Ross, D. F., Ceci, S. J., Dunning, D., & Toglia, M. P. (1994). Unconscious transference and mistaken identity: When a witness misidentifies a familiar but innocent person. *Journal of Applied Psychology, 79,* 918-930.

171 *R v Morrice* [2008] NZCA 261.

172 *TPN v R* [2010] NZCA 29.

173 Anderson, J., Martin, J., Mullen, P., Romans, S., & Herbison, P. (1993) Prevalence of childhood sexual abuse experiences in a community sample of women. *Journal of the American Academy of Child and Adolescent Psychiatry*, *32*(5), 911-919.

174 Peleikis, D. E., Mykletun, A., & Dahl, A. A. (2004). The relative influence of childhood sexual abuse and other family background risk factors on adult adversities in female outpatients treated for anxiety and depression. *Child Abuse & Neglect*, *28,* 61-76.

175 Fanslow, J. L., Robinson, E. L., Crengle, S., & Perese, L. (2007). Prevalence of child sexual abuse reported by a cross-sectional sample of New Zealand women. *Child Abuse & Neglect, 31,* 935–945.

raised as a stranger eyewitness misidentification defence.[176] [177] One of these was a sexual violence case. In neither case was expert evidence about memory led.

Counsel offering a defence of "unconscious transference" appear to have not understood the definition and specific context of this phenomenon and have continued to raise the "unconscious transference" defence in sexual violence cases, where almost invariably the defendant and complainant are well known to each other. This situation is exacerbated when, despite the fact that the literature about "unconscious transference" is entirely related to misidentification of persons not well known to the witness, memory expert witnesses have extrapolated this research to sexual violence cases wherein the complainant was familiar with both the defendant and the prior abuser. The Court has ruled that generally any contention of transference would need to be supported by expert psychiatric or psychological evidence.[178]

This confusion about transference in sexual abuse cases was borne out by the results of a 2006 survey of 137 sexual violence trials in New Zealand,[179] in which prosecutors reported that in 10% of the trials with complainants aged younger than 17 years "unconscious transference" was suggested and this was the case for 17% of trials where the complainant was aged over 17 years with a total of over 14% for the total sample.[180] Whilst this issue of "transference" is commonly raised by defence counsel, there is no validation for the existence of any "transference" in the child sexual abuse literature and the belief in the so called "transference syndrome" according to Davies (1999), *"....appears to have arisen entirely in the collective imagination of the bar."*[181] (For a review of case law pertaining to "transference' see Appendix Three of this report).

However, "transference" or misattribution may indeed occur but in relation to identification of persons not well known or familiar to the witness. A well-publicised Australian instance of 'transference' was illustrated by the case of Dr Donald Thomson, a psychologist, who was informed by police that he was a suspect in a rape case. His appearance was very similar to the description provided by the adult rape victim. Fortunately for Dr Thomson, he had a 'cast iron alibi' because at the time that the rape occurred, he was taking part in a live television interview. The complainant had been watching Dr Thomson's interview prior to the rape and had confused her memory of him with that of her attacker. Dr Thomson's watertight alibi meant that he was immediately cleared. In that case, the rape victim did not realise that the person she was implicating was someone she had seen before (albeit on

176 *R v Levy* [2009] NZCA 126 (7 April 2009)

177 *The Queen v Ernest Timmy Kiro* [1999] NZCA 100 (31 May 1999)

178 *R v T* CA11/07 18 July 2007 at [24]

179 Approximately 91% of available sexual violence trials over a six-month period, including trials averted by last minute guilty pleas.

180 Blackwell, S.J.Y. (2007). *Child sexual abuse on trial:* Unpublished doctoral thesis. The University of Auckland at page 245

181 Davies, E. (1999). *Sexual abuse investigation and criminal court processes: Doing justice to the child?* Doctoral dissertation, The University of Auckland, Auckland, New Zealand. (at p. 200)

television). As will be evident, the victim did not know the person who raped her and did not know Dr Thomson. His face was familiar only because she had seen him on television.[182]

Conclusion

The practice of memory expert witnesses citing research on eyewitness misidentification and transference in the context of sexual violence trials in which the defendant is well known to the complainant is, in our view, a misuse of the empirical research. In the context of sexual violence by a family member or other person well known it is, in our view, misleading and plainly wrong.

[182] Personal Communication of SB with Dr Thomson March 31st 2017.

CHAPTER FIVE

POST-EVENT INFORMATION (THE MISINFORMATION EFFECT)

Routinely included in the expert witness briefs of evidence is material on post-event information. This is sometimes referred to as the 'post-event (mis)information effect', which refers to the deliberate misinformation given to participants in laboratory studies and the impact it has on their subsequent reports.

The statement is typically made that hundreds of scientific studies from around the world show that people will adopt post-event information and that this impairs their memory by adding to memories, changing memories or even lead to entire memories for events that never occurred.

In the research studies on post-event misinformation cited by memory expert witnesses, typically participants read narratives or view slides or videotapes of crimes or accidents or benign events and are then exposed to some misinformation about the events. Certain details are changed, for example a white candle may become a yellow candle,[183] brown eyes might become blue eyes[184] or a screwdriver might become a hammer.[185] Later, when asked about the original event, people exposed to such misinformation often remember the changed detail as having been part of the original event. In other words, people remember certain details of the original event inaccurately. The misinformation effect is robust in this regard.

However, as Putnam et al. (2017)[186] have observed, the misinformation effect demonstrated in these experiments is mostly for witnessed events that are not particularly memorable and the change made is subtle, being about an unimportant detail. They refute the notion that the misinformation effect occurs in all people nearly all the time and for all events for which misinformation is provided. They conclude that misinformation effects may occur only when people have poor memory for the original event or when the change is about an unimportant detail.

Similarly, in an early review by Loftus (1979),[187] she concluded that "*Not all subsequent information will be accepted, and many factors contribute to the chances of misleading or false information being rejected. A person with a strong recollection of some detail is likely to reject*

183 Assefi, S., L., & Garry, M. (2003). Absolut® memory distortions: Alcohol placebos influence the misinformation effect. *Psychological Science, 14*, 77-80.

184 Zajac, R., & Henderson, N. (2009). Don't it make my brown eyes blue: Co-witness misinformation about a target's appearance can impair target-absent line-up performance. *Memory, 17*, 266-278.

185 Belli, R. F. (1989). Influences of misleading postevent information: Misinformation interference and acceptance. *Journal of Experimental Psychology: General, 118*, 72-85.

186 Putnam, A.L., Sungkhasettee, V. W., &. Roediger, H.W. (2017). When misinformation improves memory: The effects of recollecting change. *Psychological Science, 28*(1), 36-46.

187 Loftus, E. F. (1979). The malleability of human memory. *American Scientist, 67*(3), 312–320.

any new conflicting information. Persons who are asked to make a decision or commitment about a particular detail become harder to mislead later on, and if people are presented with information that contradicts a detail known to be in memory, the false information is rejected. If a person has no original recollection of a detail, new information has a good chance of being accepted by the witness, especially if it is plausible or delayed sometime after the event." The memory expert witnesses do not mention this caveat in their evidence, despite this review often being cited by them.

In addition to the review by Loftus (1979), memory expert witnesses usually cite reviews by Frenda et al. (2011)[188] and Schacter and Loftus (2013)[189] in support of the statement about the impact of post-event information on memory. Both these reviews focus on eyewitness memory, specifically eyewitness identification, and the impact of misinformation on this. The Schacter and Loftus review opens with a case featuring eyewitness identification of a stranger crime. It discusses court directions that inform jurors about memory. These directions are, in essence, similar to those embodied in s 126(2) and s 122(2)(e) of the Evidence Act 2006.

Other research papers cited by the memory expert witnesses are as follows: Assefi and Garry (2003), Belli (1989), Cole and Loftus (1979), Frost (2000), Highhouse and Bottrill (1995), Hoffman et al. (1992; a book), Jack et al. (2014), Lindsay (1990), Lindsay and Johnson (1989), Loftus (1975), Loftus et al. (1978), Loftus et al. (1992; a book), Schooler et al. (1986), Schreiber and Sergent (1998), Vornik et al. (2003), Wright and Loftus (1998), Zajac and Henderson (2009), Zaragoza et al. (1987), Zaragoza and McCloskey (1989). The paper by Wright and Loftus[190] reviews experimental studies and discusses the different theories to account for the post-event information effect. We could not access the book with the Hoffman et al. chapter. In the following we describe the experimental studies cited by memory expert witnesses.

Assefi and Garry (2003)[191] had participants watch an action movie, drink alcoholic drinks over 13 minutes, and then watch the movie for an additional six minutes. At the end of the 19 minutes, participants viewed a slide sequence of a man shoplifting items in a bookstore. There were eight critical items: a candle, notebook, stapler, textbook, sweatshirt, magazine, elevator, and towel. There were two versions of the slide sequence that showed the same critical items but with different characteristics (e.g., white candle vs. yellow candle). Each slide was presented for 2.5 seconds. After working on filler-task puzzles for 12 minutes, participants read a 541-word narrative, which contained misinformation about four of the critical items and neutral information about the other four. There were four narratives that

188 Frenda, S. J., Nichols, R. M., & Loftus, E. F. (2011). Current issues and advances in misinformation research. *Current Directions in Psychological Science*, *20*(1), 20–23.

189 Schacter, D.L. & Loftus, E.F. (2013). Memory and law: What can cognitive neuroscience contribute? *Nature Neuroscience*, *16*, 119-123.

190 Wright, D. B., & Loftus, E. F. (1998). How misinformation alters memories. *Journal of Experimental Child Psychology*, *71*, 155-164.

191 Assefi, S., L., & Garry, M. (2003). Absolut® memory distortions: Alcohol placebos influence the misinformation effect. *Psychological Science*, *14*, 77-80.

differed in their descriptions of the critical items, and slide and narrative combinations were counterbalanced across participants (e.g., a participant who saw a white candle read about either a "yellow candle" or a "candle," depending on the condition that participant was in, and a participant who saw a yellow candle read about either a "white candle" or a "candle"*)*. Finally, after working on puzzles for another three minutes, participants took a 19-item forced-choice test in which they indicated the details they remembered seeing in the slide sequence. For each item they chose between the correct event detail and the suggested detail.

It will be apparent that this study involved non-distinctive events in which the participant was not personally involved, and it involved fleeting images (2.5 seconds per slide: the number of slides is not specified). Furthermore, this paper is cited in child sexual abuse cases where typically there is no suggestion that the child victim ingested alcohol at the time of the alleged sexual offending.

The study by Belli (1989)[192] involved participants being shown a film and then given misinformation, for example, as to whether the person depicted was carrying a hammer or a screwdriver. As with the previous study, and the ones that follow, this was a bystander eyewitness situation rather than personally experienced and related to what some might regard as a peripheral detail rather than a distinctive or salient event.

The study by Cole and Loftus (1979)[193] involved presentation of a series of 62 slides (32 later to be used in testing) to 48 participants. Upon viewing the slides each participant was given 24 cards containing eight consistent questions, eight inconsistent questions and eight uninformative questions about the 32 test slides. The participants were asked whether or not a specific object had been present in the slide and then to respond on a 6-point scale about how confident they were in their answer. The results of this experiment indicated that questions containing consistent information increased accuracy in recall while inconsistent questions reduced accuracy.

In Frost's (2000)[194] study, the participants watched slides depicting a crime, then read a narrative containing misinformation and finally answered questions about the event.

Another study frequently cited is by Highhouse and Bottrill (1995).[195] In the initial study, 70 participants viewed an 18-minute simulated employment interview, evaluated the interviewee, and then provided group ratings using their own evaluations and two other evaluations containing misinformation (misled group) or no misinformation (control group). Again, the relevance of this to sexual violence cases of child sexual abuse seems uncertain

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192 Belli, R. F. (1989). Influences of misleading postevent information: Misinformation interference and acceptance. *Journal of Experimental Psychology: General, 118,* 72-85.

193 Cole, W., & Loftus, E. (1979). Incorporating new information into memory. *American Journal of Psychology, 92*, 413-425.

194 Frost, P. (2000). The quality of false memory over time: Is memory for misinformation "remembered" or "known"? *Psychonomic Bulletin & Review, 7*, 531-536.

195 Highhouse, S., & Bottrill, K. V. (1995). The influence of social (mis)information on memory for behavior in an employment interview. *Organizational Behavior & Human Decision Processes, 62*, 220-222.

because it involved watching a non-traumatic low stakes event in which they themselves were not participants. However, of interest was an added issue that when participants were alerted to the fact that they had received some misinformation, *"they exhibited the same degree of accuracy as the control group, suggesting that the misinformation effects observed for the original misled group were due to social influence, rather than memory interference or source-attribution errors."* (p. 20). Memory expert witnesses have cited this study without referring to the authors' significant caveat to the main effects observed.

In the study by Jack et al. (2014)[196] participants were recruited in pre-acquainted pairs through the local student employment agency and shown a six-minute film depicting a young man going to a party. There were two versions of the movie, these differing on eight critical details (e.g., in one version there is a ''Happy Birthday'' banner hanging above a door, in the other version there is tinsel instead). The experiment involved two paper questionnaires and a list of interview questions that the experimenter asked orally. The first paper questionnaire comprised 12 multiple-choice questions about the film, each with five response options. There were two versions of this questionnaire, each containing four questions about critical details (these questions differed between the two versions), interspersed with eight questions about other details (these questions were the same across the two versions). Again, this was also a laboratory study reliant on eyewitness memory for non-traumatic and low stakes events not personally experienced and relying on memory for peripheral rather than what might be considered distinctive details.

Lindsay and Johnson (1989)[197] examined the possibility that eyewitness suggestibility reflects failures of the processes by which people normally discriminate between memories derived from different sources. To test this hypothesis, misled and control participants were tested either with a yes/no recognition test or with a "source monitoring" test designed to orient participants to attend to information about the sources of their memories. In the first phase of the experiment, all participants studied the same slide, which depicted a complex office scene. In the second phase of the experiment, all participants read a detailed narrative description of the scene. For half of the participants (those in the control conditions), the narrative included only accurate information. For the remaining participants (those in the misled conditions), the narrative also mentioned eight objects that fit with the general theme of the scene but were not actually present in the picture.

Lindsay (1990)[198] showed participants a sequence of 79 colour slides depicting an incident in which a maintenance man steals some money and a calculator from an office.[199]

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196 Jack, F., Zydervelt, S., & Zajac, R. (2014). Are co-witnesses special? Comparing the influence of co-witness and interviewer misinformation on eyewitness reports. *Memory, 22*, 243-255.

197 Lindsay, S., & Johnson, M. (1989). The eyewitness suggestibility effect and memory for source. *Memory and Cognition, 17, 349-358.*

198 Lindsay, D. S. (1990). Misleading suggestions can impair eyewitnesses' ability to remember event details. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 16*(6), 1077–1083.

199 Following the set described in Zaragoza, McCloskey & Jamis, (1987). Misleading postevent information and recall of the original event: Further evidence against the memory impairment hypothesis. *Journal of Experimental Psychology, 13*, 36-44.

There were two versions of each of six critical slides: brand of coffee (Maxwell House or Folgers), brand of cigarettes (Winston or Marlboro), kind of magazine (Glamour or Vogue), letter on mug (R or M), brand of soda (Seven-Up or Sunkist Orange), and kind of tool (screwdriver or wrench). Half of the participants in each condition saw each version of the slide sequence. The test consisted of one cued recall question about each critical detail (three control and three misled items in a random order). Questions were of the following form: "The man had a pack of CIGARETTES. What BRAND of CIGARETTES was shown in the slides?"

Schooler et al. (1986)[200] have also been frequently cited in memory expert witnesses' briefs of evidence. They conducted five experiments in which participants (variously undergraduate and high school students) viewed a slide sequence depicting a traffic accident. In one condition, the sequence included a slide involving a yield sign (give way). In a second condition, participants did not see the sign but merely had its existence suggested. Results indicate that many participants in both groups later reported seeing the sign, and they provided verbal descriptions.

Schreiber and Sergent (1998)[201] conducted three experiments involving university students exploring conditions in which misleading post-event information interferes with people's ability to remember details about an event they witnessed. After viewing slides depicting a crime, participants in the experimental condition read a narrative that contained misinformation. Following the narrative, they completed a recognition test that induced them to select the misinformation. Assessment of memory for the slides using a final, modified recognition test indicated that performance in the misled-plus-commit condition was most frequently near chance, whereas performance in the control condition was far above chance.

Another paper commonly cited is that of Zajac and Henderson (2009).[202] In this study, adult pairs comprising one participant and one experimental confederate viewed a video clip of a staged theft. Half of the participants were then misinformed by the confederate that the thief's accomplice had blue eyes (in fact, they were brown). Next, individual participants described the accomplice and completed a target-absent photographic line-up task comprising blue-eyed members. Misinformed participants were several times more likely than controls to describe the accomplice as having blue eyes, and twice as likely to identify someone from the lineup. In a second experiment, when lineup members' eye colour was digitally altered from blue to brown, the lineup effect disappeared, suggesting that the increase in identifications in the first experiment was not a generalised increase in willingness to choose from the lineup. In a third experiment the authors discounted the possibility that discussion

200 Schooler, J. W., Gerhard, D., & Loftus, E. F. (1986). Qualities of the unreal. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 12*(2), 171–181.

201 Schreiber, T. A., & Sergent, S. D. (1998). The role of commitment in producing misinformation effects in eyewitness memory. *Psychonomic Bulletin & Review, 5*(3), 443–448.

202 Zajac, R., & Henderson, N. (2009). Don't it make my brown eyes blue: Co-witness misinformation about a target's appearance can impair target-absent line-up performance. *Memory, 17*, 266-278.

alone could account for the lineup misinformation effect by subjecting all participants to co-witness discussion.

Vornik et al. (2003)[203] showed participants a series of 61 slides of a young man shoplifting. After a 20-minute interval they were played a three-minute narrative describing the events, one in New Zealand English and the other in North American English. They were then given a 19 item two alternative forced choice test about the slides. The results appeared to be equivocal in relation to the effect of accent, but social attractiveness appeared to increase the misinformation effect.

Zaragoza et al.'s (1987)[204] participants viewed a sequence of slides depicting an event, (the identical set subsequently used by Lindsay as described above) and then read a post-event narrative that presented neutral or misleading information about critical details. Participants were then tested on their ability to recall the critical details. In two experiments no difference in recall performance between misled and control conditions was found. They reported that these results, in conjunction with the McCloskey's and Zaragoza's (1985)[205] finding that misleading information did not affect participants' ability to recognize original information, argue strongly against the memory impairment hypothesis. That is, this study actually that contradicted the hypothesis of post-event misinformation effect.

Memory expert witnesses also cite Zaragoza and McCloskey (1989)[206] who examined data from two other studies[207] [208] which had used a "Yes"/"No" recognition procedure to explore effects of misleading post-event information on memory for events. They concluded that neither study demonstrated that misleading post-event information impairs memory for the original event. The misinformation did not change the original memory and the misinformation effect was only noted in participants who did not remember the original detail in the first place and were therefore easily persuaded to adopt the false alternative. This finding contradicts the assertions of the memory expert witnesses suggesting strong and consistent post-event influence on memory. This contradiction is not mentioned in the memory expert briefs.

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203 Vornik, L.A. Sharman S.J. & Garry, M. (2003). The power of the spoken word: Sociolinguistic cues influence the misinformation effect, *Memory 11*, 101-109.

204 Zaragoza, M., McCloskey, M. & Jamis, M. (1987). Misleading postevent information and recall of the original event: Further evidence against the memory impairment hypothesis. *Journal of Experimental Psychology*, *13*, 36-44.

205 McCloskey, M., & Zaragoza, M. (l985). Postevent information and memory: Reply to Loftus, Schooler, and Wagenaar. *Journal of Experimental Psychology: General*, *114*, 381-387

206 Zaragoza, M., & McCloskey, M. (1989). Misleading postevent information and the memory impairment hypothesis: Comment on Belli and reply to Tversky and Tuchin. *Journal of Experimental Psychology*, *118*, 92 - 99.

207 Belli, R. F. (1989). Influences of misleading postevent information: Misinformation interference and acceptance. *Journal of Experimental Psychology: General*, *118*, 72-85.

208 Tversky, B., & Tuchin, M. (1989). A reconciliation of the evidence on eyewitness testimony: Comments on McCloskey and Zaragoza. *Journal of Experimental Psychology: General*, *118*, 86–91.

Loftus (1975)[209] reported an eyewitness study in which college students watched films depicting complex, fast-moving events, such as automobile accidents or classroom disruptions. They were then questioned containing true and false presuppositions (questions containing the existence of an object that was in the scene shown versus questions containing the existence of an object that was not in the scene). Loftus concluded that questions asked immediately after an event can introduce new but not necessarily correct information, *"which is then added to the memorial representation of the event, thereby causing its reconstruction or alteration."*

Loftus et al. (1978)[210] showed participants a series of 30 slides (for 3 seconds each slide) depicting a single auto-pedestrian accident. The purpose of these experiments was to investigate how information supplied after an event influences a witness's memory for that event. Participants were exposed to either consistent, misleading, or irrelevant information after the accident event. Misleading information produced less accurate responding on both a yes-no and a two-alternative forced-choice recognition test. The researchers concluded that *"the results suggest that information to which a witness is exposed after an event, whether that information is consistent or misleading, is integrated into the witness's memory of the event."*

In conclusion, these laboratory studies examine post-event influence in the context of information that is not particularly significant or important. It is uncertain whether these research findings can be extrapolated to real world events that are of a serious and/or traumatic nature. Thus, caution should be in evidence when making claims from laboratory research about how easily witnesses in court proceedings might be misled.

Notwithstanding this issue of relevance and the generalisability of laboratory studies to sexual violence, some studies contradict the common findings of post-event information effects, yet this contradictory evidence is not presented in memory expert witnesses' briefs of evidence. This raises the question as to whether there are other negative findings in this regard that are not cited?

In addition, most of these studies cited by the memory expert witnesses involve deception by actively misleading participants by such techniques as suggesting that they saw something similar to (but not the same as) what was presented. The study participants are usually unaware they are being deceived by the experimental procedures. Also, it is unlikely that the participants would seriously question the accuracy of what they recall given the nature of the context of experiments such as these. Contrast this with the gravity with which the forensic interview is conducted, including the standard introduction about the requirement to tell the truth.

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209 Loftus, E. F. (1975). Leading questions and the eyewitness report. *Cognitive Psychology*, *7*, 560-572.

210 Loftus, E. F., Miller, D. G., & Burns, H. J. (1978). Semantic integration of verbal information into visual memory. *Journal of Experimental Psychology*, *4*, 19-31.

The impact of other witnesses

In relation to the post-event information effect, in briefs prepared for sexual violence trials the memory expert witnesses offer opinion that discussions between witnesses can lead to post-event memory errors. Memory expert witnesses have also warned that exposure to information from another witness can be an "especially dangerous" form of post-event suggestion because it can lead to agreement between witnesses, which is then misconstrued as a sign of accuracy. That is, agreeing with another witness's version of events can increase a witness's confidence in their memory report.

Before describing the literature cited on the influence of other witnesses, we draw attention to a major issue concerning relevance. Citing research on the effects of discussion between people who have witnessed the same event ignores the reality that in sexual violence there is very rarely a witness to the event other than the victim. That is, such evidence on the impact of witnesses would in most cases seem inadmissible as it fails the basis rule for expert evidence (see Chapter Two).

In their statements about the impact of other witnesses, memory experts have cited Benton et al. (2006), Luus and Wells (1994), Ross (1997) and Undeutsch (1988). In the following we describe the content of the references cited. It is of note that two of them did not seem to be on point[211] [212] and the other involved participants as bystanders being subjected to misinformation by confederates in relation to identification in photo lineups.[213]

The book chapter by Undeutsch (1988)[214] was primarily about the development of the Statement Reality Analysis (SRA) technique. Undeutsch reported that *"the technique is employed to assess the credibility of witness evidence in criminal cases. An expert psychologist is appointed by the court in cases in which a child's evidence is central in criminal proceedings. The expert interviews the child, other principals in the event, reviews the forensic evidence, attends the trial and then renders an opinion to the court of the credibility of the child's evidence."* Statement Reality Analysis and similar checklists are not admissible as scientifically valid evidence in common law jurisdictions such as the Canada, UK, the US, and New Zealand.[215]

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211 For example, Undeutsch, U. (1988). The development of statement reality analysis. In C. Yuille (Ed.), *Credibility assessment* (pp. 101-120). Amsterdam: Kluwer.

212 Also, Benton, T. R., Ross, D. F., Bradshaw, E., Thomas, W. N., & Bradshaw, G. S. (2006). Eyewitness memory is still not common sense: Comparing jurors, judges and law enforcement to eyewitness experts. *Applied Cognitive Psychology, 20*, 115–129.

213 Luus, C. A. E., & Wells, G. L. (1994). The malleability of eyewitness confidence: Co-witness and perseverance effects. *Journal of Applied Psychology, 79*(5), 714–723.

214 Undeutsch, U. (1988). The development of statement reality analysis. In C. Yuille (Ed.), *Credibility assessment* (pp. 101-120). Amsterdam: Kluwer.

215 *AM v R* [2017] NZCA 345

Benton et al. (2006)[216] examined knowledge of factors affecting eyewitness accuracy in a sample of jurors, judges and law enforcement professionals. This study has already been discussed in Chapter Three of this report. Participants completed a survey in which they were asked to agree or disagree with 30 statements about eyewitness issues, and their responses were compared to a sample of eyewitness experts who completed the same survey. It is unclear as to why it was cited here because it was a survey of beliefs about memory.

The paper by Luus and Wells (1994)[217] involved a staged theft and a photo-lineup identification. Seventy of the pairs of eyewitnesses received one of nine types of information regarding the alleged identification decision of their co-witness. Witnesses who were told that their co-witness identified the same person whom they had identified showed an increase in the confidence they expressed to a confederate police officer. Confidence deflation occurred among witnesses who thought their co-witness either identified another person or had stated that the thief was not in the lineup.

The process of recounting to others

The credibility of complainants' evidence is also challenged by memory expert witnesses who assert that the process of recounting an event to others can alter a person's stories. Indeed, that even the simple act of repeating a statement increases belief in its truth. In support of this statement the following references are commonly cited: Arkes et al. (1991), Arkes et al. (1989) and Begg et al. (1992). These were experiments that involved reading statements or passages and being tested for judged validity of the statements. These three studies are discussed below.

Arkes et al. (1991)[218] presented participants with 40 statements during one session and repeating 20 of them amid 20 new ones either 1, 3, or 5 weeks later. In a second experiment, half of the participants heard sentences about China, whereas the other half of the participants heard control sentences. A week later one-third of the participants in each of these two groups read passages about the specific topics covered by the China sentences, one-third read about other topics dealing with China, and one-third read control passages having nothing to do with China. One week later all participants gave validity ratings to various sentences pertaining to China, including those seen during the first week. The results indicated that hearing any passage having to do with China during the second week caused participants to increase their judged validity of the China sentences originally seen during the first week. In a third experiment, some sentences were repeated each week over a six-week period.

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216 Benton, T. R., Ross, D. F., Bradshaw, E., Thomas, W. N., & Bradshaw, G. S. (2006). Eyewitness memory is still not common sense: Comparing jurors, judges and law enforcement to eyewitness experts. *Applied Cognitive Psychology, 20*, 115–129.

217 Luus, C. A. E., & Wells, G. L. (1994). The malleability of eyewitness confidence: Co-witness and perseverance effects. *Journal of Applied Psychology, 79*(5), 714–723.

218 Arkes, H. R., Boehm, L. E., & Xu, G. (1991). Determinants of judged validity. *Journal of Experimental Social Psychology*, *27*, 576–605.

Arkes et al. (1989) [219] exposed 136 undergraduate students to a 108-statement list and then a second list of the same length one week later. This second list comprised the statements seen earlier plus some statements seen for the first time. Results suggest that all types of repeated statements were rated as more valid than their non-repeated counterparts. A further experiment with 63 undergraduates demonstrated that the validity-enhancing effect of repetition did not occur in subject domains about which a person claims not to be knowledgeable. Thus, familiarity was a basis for the judged validity of statements.

Begg et al. (1992)[220] conducted several experiments with undergraduate psychology students being given statements such as "*Gail Logan says that house mice can run an average of 4 miles per hour."* These were tape-recorded at rates from 10 to 13 seconds per statement. There were 196 statements with a true version and a false version and participants were told that some were true and some were false. The use of names was a part of the experimental manipulation. Participants then rated the statements on a seven-point scale from certainly true to certainly false. The researchers concluded that rated truth is influenced independently by source recollection and statement familiarity.

The relevance of these studies to the statements made by complainants during forensic interviews or at trial is unclear.

The relevance of an audience

Memory expert witnesses have also advanced the opinion that people can tailor their report of an event to meet the goals of the specific situation they are in, and that this can have an impact on their ability to report the original story accurately in the future. For example, a person might want to ensure that their story is consistent with the listener's attitudes or with what they think the listener wants to hear. They may wish to obtain sympathy, to impress or entertain. As a result, they may 'play up' some aspects of our stories and 'play down' others or even add or omit details. Although a person may sometimes be aware that they are making these modifications, they may not see them as inaccuracies. The argument continues that when a person alters their stories to connect with an audience, their ability to report the original story accurately in the future is impaired. That is, once a distorting conversation has taken place, subsequent memory is biased in that direction—sometimes referred to as a 'saying is believing' effect. In support of this opinion memory expert witnesses have cited Echterhoff et al. (2005), Higgins (1981), Higgins et al. (1982), Higgins and Rholes (1978), Holtgraves (2002), Manis et al. (1974), Marsh and Tversky (2004) and Tversky and Marsh (2000).

Memory expert witnesses have also stated that the mere anticipation of recounting a specific audience can shape memory for the event to be reported; citing Adams et al. (2002)

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219 Arkes, H. R., Hackett, C., & Boehm, L. (1989). The generality of the relation between familiarity and judged validity. *Journal of Behavioral Decision Making*, *2*, 81–94.

220 Begg, I. M., Anas, A., & Farinacci, S. (1992). Dissociation of processes in belief: Source recollection, statement familiarity, and the illusion of truth. *Journal of Experimental Psychology: General*, *121*, 446–458.

and Schuurmans and Vandierendonck (1985). Furthermore, it is asserted that when a person is asked to answer questions that they cannot know the answer to, thus forcing them to fabricate details based on what they did see, a person often later remembers those fabricated details as fact; citing Ackil and Zaragoza (1998).

The meaning of these statements about the impact of an audience is that a victim's report of sexual abuse will be influenced by the person with whom they are in conversation. This idea is not controversial. A victim's decision as to whether to report abuse, and how much to report, is widely acknowledged as being affected by their perception and experience of the person with whom they are engaged. For a person to report sexual abuse they will usually require a trusted person to engage with them in a sensitive conversation about sexual abuse, and just how much detail they then report often depends on their expectations of the reaction of that person.

Perhaps controversial for the context of sexual violence is that in making modifications to their account - should this occur - a person may not see these as inaccuracies. Also, perhaps controversial is that in modifying, "distorting" or "fabricating" their account - should this occur - these changes may later be remembered as fact. We will describe the studies cited on these points and consider their validity in the context of sexual violence.

Echterhoff et al. (2005)[221] told participants in a 'referential communication study' that it would be the audience's task to identify a male target person on the basis of their description of the target. It was pointed out to participants that the audience knew the target and members of the audience had already developed their own impression of him. Thus, the audience apparently knew more about the target than the participants, creating an initial expectation that the audience could be a valid source of target-relevant information. Ten minutes after producing their (audience-congruent) message, participants were told that the audience either did or did not identify the target person on the basis of that message (communication feedback: success vs. failure). The manipulation was designed to affect the audience's perceived reliability as a source of information about the target person. The results were interpreted as suggesting that "*when communicators eschew a socially shared reality with their audience, they may display overt signs of taking the audience into account through their audience tuning but covertly reject the significance of their interaction with the audience by treating their tuned message as irrelevant."*

We were not able to source Higgins (1981)[222] but as the title suggests the "communication game" is said to have implications for social cognition and persuasion. It is uncertain as to how this relates to witnesses in sexual violence trials.

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221 Echterhoff, G., Higgins, E. T., & Groll, S. (2005). Audience-tuning effects on memory: The role of shared reality. *Journal of Personality and Social Psychology, 89*, 257-276

222 Higgins, E. T. (1981). The "communication game": Implications for social cognition and persuasion. In E. T. Higgins, C. T. Herman, & M. P. Zanna (Eds.). *Social Cognition: The Ontario symposium of personality and social psychology:* (1) 343-392). Hillsdale, NJ: Erlbaum.

Manis et al. (1974)[223] had 96 female undergraduates summarize the main points of a speech concerning the legalisation of marihuana. These summaries were addressed to discussion partners who seemingly favoured or opposed legalisation. Summaries addressed to pro-legalization partners were thought (by naive judges) to derive from messages that were more favourable to legalisation than were summaries addressed to antilegalization partners. This study confirms that variations in an account may be influenced by perceptions of the receiver. This is not controversial in the context in which it is examined, but its generalisation to whether a person would fabricate, then remember as fact, details about sexual violence is controversial.

March and Tversky (2004)[224] had participants read a story, write a biased letter about one of the story characters and later remember the original story. Participants described the original event as completely as possible. They classified events as social, academic, work-related, or other, and dated them as accurately as possible. Participants recorded their retellings nightly for four weeks. For each retelling, they filed a separate recording form describing both the original event and the retelling. Participants rated the event's emotional valence as positive, neutral, or negative, and its intensity as very intense, somewhat intense, or not at all intense. They provided an adjective to describe the emotional quality of the event. Participants then described the particular retelling being reported, beginning with its date and time. They categorised the retelling's audience as parent, teacher, coach, friend, significant other, acquaintance, sibling, or other. Purpose was categorized as to convey facts or pride, entertain, elicit sympathy, avoid conflict, or other. Participants estimated how frequently they had retold the story. The authors concluded that biased memory is a consequence of the reorganizing schema guiding the retelling perspective, in addition to the effects of rehearsing specific information in retelling.

Tversky and March (2000)[225] in investigating the hypothesis that when people retell events, they take different perspectives for different audiences and purposes. The authors had participants read stories with two characters. Then they were given a biased or Neutral perspective from which to retell some of the information from the story. In Experiments 1, 2, and 4, participants read about two roommates who did both prosocial and annoying things throughout the week. In biased condition retelling, they were asked to write about one roommate either to recommend that person to a social club or to request a release from living with that person. In Experiment 3, they read a murder story with two suspects who did both incriminating and exonerating things. Participants in the biased condition were later asked to write a summation for the prosecution about one of the suspects. The retellings conformed to instructions. In all four cases, the retellings included both story items and evaluations of the story information consistent with the perspective. The authors concluded that their findings

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223 Manis, M., Cornell, S. D., & Moore, J. C. (1974). Transmission of attitude relevant information through a communication chain. *Journal of Personality and Social Psychology, 30*(1), 81–94.

224 Marsh, E. J. & Tversky, B. (2004). Spinning the stories of our lives. *Applied Cognitive Psychology, 18,* 491 – 503.

225 Tversky, B., & Marsh, E. J. (2000). Biased retellings of events yield biased memories. *Cognitive Psychology, 40*, 1-38

added to previous research showing that people relate information differently to different audiences, depending on their beliefs about the audience's attitudes on instructions to be accurate or to entertain and on the social distance of their audience.

Higgins et al. (1982)[226] examined the consequences of following the rules and goals of social communication for the verbal encoding, representation, and recall of stimulus-person information. Participants were undergraduates who read an essay describing the behaviours of a person after having been assigned the communication role of either speaker or listener. Speakers' reproductions of the stimulus information became more accurate and complete after communicating it to a listener with supposedly different information about the person but became less accurate and complete after communicating it to a listener with supposedly the same information. As with the above studies, the relevance of this to complainants in sexual violence trials is not clear.

Another paper cited in this vein is by Higgins and Rholes (1978).[227] Their methodology involved having (as part of a study on "interpersonal perception and attraction,") 78 undergraduate students read an essay containing four evaluatively positive, four evaluatively negative, and four evaluatively ambiguous descriptions of a stimulus person. Participants were told that they would have to summarise the information contained in the essay for another person who either liked (Positive Message Recipient condition) or disliked (Negative Message Recipient condition) the stimulus person. After reading the essay, half of the participants actually wrote the summary (Message condition) and half were told that they would not have to prepare it after all (No Message condition). Then, either after a 15 to 20-min filler task (the Brief Delay condition) or 12- 15 days later (the long Delay condition), participants rated how much they liked the stimulus person, and attempted to reproduce exactly the original paragraph that they had read about the stimulus person. The applicability of this study to sexual violence trials seems tenuous.

The memory expert witnesses have also cited Holtgraves (2002).[228] The abstract notes that *"this book is an interdisciplinary review and synthesis of the social psychological aspects of language use. The text weaves together research from philosophy, linguistics, sociolinguistics, anthropology, social psychology, cognitive psychology, pragmatics, and artificial intelligence to provide an integrative and timely review of language as social action".*

As reported at the beginning of this section, memory expert witnesses have also asserted that the mere anticipation of recounting to a specific audience can shape memory for the event

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226 Higgins, E. T., McCann, C. D., & Fondacaro, R. (1982). The "communication game": Goal-directed encoding and cognitive consequences. *Social Cognition, 1*, 21-37.

227 Higgins, E. T., & Rholes, W. S. (1978). "Saying is believing": Effects of message modification on memory and liking for the person described. *Journal of Experimental Social Psychology, 14*, 363-378.

228 Holtgraves, T. M. (2002). *Language as social action: Social psychology and language use*. Mahwah, New Jersey: Lawrence Erlbaum.

to be reported and have cited Adams et al. (2002) and Schuurmans and Vandierendonck (1985) in support of this.

Adams et al. (2002)[229] reported that 48 older women (aged 63-73 years) and 47 younger women (aged 18-24 years) were asked to learn one of two stories with the goal to retell the story from memory either to an experimenter or to a young child. Although age-group differences in propositional recall favouring the younger women occurred when an experimenter was the listener, there were no age-group differences when a child was the listener. Across stories, the older tellers adjusted the complexity of their retellings to the age of their listeners more than did the younger tellers. It was stated that the critical finding in this study was that the propositional recall of older adults was facilitated with a child as listener, but not with an experimenter as listener. The authors indicated that this finding suggests that age differences in learning and remembering may well depend on social aspects of the memory context and that some social contexts provide more optimal remembering conditions for older adults than do others. Adams et al. reported that the results highlight the importance of considering the social context of remembering in memory-aging research.

Schuurmans and Vandierendonck (1985)[230] examined the effects of frame (abstract representations of a scene or episode) anticipation on the recall of 30 college students. After waiting 30 seconds in an office, participants were unexpectedly asked to recall everything in the office. They were either given standard instructions or instructions to recall so much that it would be comprehensible to a "Martian." It is uncertain whether this study does indeed demonstrate that the mere anticipation of recounting to a specific audience can shape memory for the event to be reported and, if so, whether this has ecological validity in relation to the testimony of witnesses in sexual violence trials.

The participants in the study by Ackil and Zaragoza (1998)[231] were 96 first-grade children (mostly 7 year olds) and 72 third- and fourth-grade children (mostly 9 year olds). Also, 102 undergraduates (average age 21 years) participated to fulfil a course requirement in General Psychology. The participants first watched a video that was a nine-minute excerpt from the Walt Disney movie “Looking for Miracles.” This movie depicts a young boy’s experience at a summer camp where his older brother is a camp counsellor. The video segment contained three distinct events: a birthday celebration in the camp dining hall, a boat trip where the passengers were surprised by the appearance of a snake, and a quarrel among three of the campers. Participants watched the video with another participant and with two experimenters present. Immediately following the video, all participants were instructed that they would be asked some questions about the events they had seen in the video. Those assigned to the forced condition were told to provide an answer to every question and to guess

229 Adams, C., Smith, M. C., Pasupathi, M., & Vitolo, L. (2002). Social context effects on story recall in older and younger women: Does the listener make a difference? *Journal of Gerontology: Psychological Sciences, 57B*, 28-40.

230 Schuurmans, E., & Vandierendonck, A. (1985). Recall as communication: Effects of frame anticipation. *Psychological Research*, *47,* 199–124.

231 Ackil, J. K. & Zaragoza, M. S. (1998). Memorial consequences of forced confabulation: Age differences in susceptibility to false memories. *Developmental Psychology*, *34*, 1358-1372.

if they did not know the answer. Participants assigned to the free condition were told to answer only those questions for which they were certain of the response and were instructed not to guess. The authors concluded that *"the results of the present study are the first to show that pressing children to fabricate information they would not have otherwise provided can lead to false memories for the confabulated incidents. Although much research remains to be done before the boundary conditions of this effect are clearly established, the results certainly suggest that the surest way to preserve the integrity of children's memories is to avoid pressuring them to discuss incidents that may not have transpired."* This is a worthy suggestion. However, what is not explored is whether the reports of the children reflected false memory or memory for what they actually said. We discuss the issue of whether children's reports in these experiments reflect memory or some other phenomenon in Chapter Ten on children's memory reports and suggestibility.

Communication between witnesses to the same event

Memory expert witnesses have sometimes stated that a strong potential source of memory contamination is communication between witnesses to the same event. The point of difference to the previous discussion is that in this case, the other person is a co-witness, not merely a person engaged in conversation. One memory exert witness explained that the effect of a co-witness is heightened when the witness in question has a social connection with the provider of the post-event information (citing French et al., 2008 and Hope et al., 2008), and when the witness believes that the provider of the post-event information has better memory for the event in question (citing Gabbert et al., 2007; Allan & Gabbert, 2008; Wright et al., 2000). Also cited by memory expert witnesses in support of this statement are Candel et al. (2007), Dalton and Daneman (2006), Gabbert et al. (2003), Gabbert et al. (2004), Gabbert et al. (2006), Garry et al. (2008), Jack et al. (2014), Mojtahedi et al. (2018), Paterson and Kemp (2006), Paterson et al. (2009), Roediger et al. (2001), Zajac et al. (2016) and Zajac and Henderson (2009).

As discussed earlier, the most obvious issue with this research being cited in the context of sexual violence is that it is rare for sexual violence to take place in the presence of any witnesses. The only people present are the perpetrator and the victim. It is difficult to see how this research applies to sexual violence. Furthermore, should the other person present – the perpetrator - exert post-event influence, this would be to tell the victim to not report what had occurred, or to tell them it did not take place. Thus, communication would be in the direction of denial rather than elaboration. In the absence of another witness, such memory evidence would seem to fail the basis rule as discussed in Chapter Two.

Notwithstanding this reservation, we discuss the studies cited in memory expert witnesses' briefs in the following. In most of these studies the participants *observed* the event with a witness – rather than *directly experiencing* the event. Also, the studies were not concerned with creating an entirely new memory, but rather with memory for details; details that were in most cases likely to have been of peripheral or unimportant interest.

The French et al. (2008) [232] paper cited compared participants' memories for an event after they discussed the event with either their romantic partner or a stranger. Thirty-two pairs of participants watched slightly different versions of a movie, and then discussed some details from the movie, but not others. They were better at remembering non-discussed details than discussed details. When remembering discussed details, they incorrectly reported information from their partner's version instead of their own. In addition, participants who discussed the event with their romantic partner (rather than with a stranger) were even more likely to report what the researchers termed false memories. As will be apparent, this was about memory details of a movie watched in a low-stakes situation.

The Hope et al. (2008)[233] paper is in similar vein. Here, 96 participants viewed an event and then discussed the witnessed event with a stranger, a romantic partner or a friend. The stimulus event depicted a girl entering an unoccupied university office to return a borrowed book. The film was shot from two different angles resulting in two video clips, each lasting one minute and 30 seconds. One member of each pair saw a theft take place during the witnessed event. Individual group participants did not discuss the witnessed event with anyone. Results indicate that all co-witness dyads produced less accurate recall accounts than participants who did not interact with another witness. However, witnesses who were previously acquainted with their co-witness (either in a friendship or romantic relationship) were significantly more likely to report information obtained from their co-witness that they had not seen themselves. Prior acquaintance also led to an increased number of incorrect attributions of both guilt and innocence.

Gabbert et al. (2006)[234] showed 66 psychology students four pictures of complex scenes containing a number of details regarding objects, descriptions etc. Two versions of each picture were created that were the same except for two contradicting details (Kitchen; two cups and a plate near the sink or two cups and a teapot near the sink; Tree visible through kitchen window or house visible through kitchen window); (Town centre; Man up ladder painting window frame or man up ladder washing window; Man walking his dog or woman walking her dog); (Living room rug visible in bottom left of picture or coffee table visible in bottom left of picture; Woman holding a cigarette or woman holding a glass of red wine); (Crossroad; grocers shop on street corner or florists on street corner; Yellow car with baby in the back or Green car with baby in the back). Each member of a dyad saw a different version of each of the four pictures. Thus, over four pictures, dyad members encountered eight critical items that contradicted a detail that his or her partner had seen. The two members of each pair encoded slightly different versions of complex scenes and discussed them prior to an individual free recall test. The discussions were audiotaped, transcribed, and analysed. The authors reported that the most striking finding was that the witness initiating the discussion

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232 French, L., Garry, M., & Mori, K. (2008). You say tomato? Collaborative remembering leads to more false memories for intimate couples than for strangers. *Memory, 16*, 262-273.

233 Hope, L., Ost, J., Gabbert, F., Healey, S., & Lenton, E. (2008). "With a little help from my friends…": The role of co-witness relationship in susceptibility to misinformation. *Acta Psychologica, 127*, 476-484.

234 Gabbert, F., Memon, A., & Wright, D. B. (2006). Memory conformity: Disentangling the steps toward influence during a discussion. *Psychonomic Bulletin & Review, 13*, 480-485.

was most likely to influence the other witness's memory report. Furthermore, witnesses were most likely to be influenced when an additional (previously unseen) item of information was encountered in the discussion.

Allan and Gabbert (2008)[235] showed 51 psychology students six images (each for two minutes) and provided 30 questions about each image (e.g., were the blinds open or closed). Half of the participants heard an experimental confederate make statements about the images. These misinformation utterances impacted the reported memories of participants. This study focused on details in images that were viewed for two minutes each.

Wright et al. (2000)[236] showed 40 students 100 pictures of cars taken from the magazine Autotrader for 3.5 seconds and later, in pairs, given an 'old'/'new' recognition test on these cars plus several lures. There was a small but reliable effect of memory conformity. In a second experiment they showed students a story book consisting of 21 coloured pictures on laminated paper for five seconds each picture. The pictures sequentially depicted a crime. Participants, in pairs, viewed an identical booklet except that half saw an accomplice with the thief and half did not. Initial memories were very accurate, but after discussing the crime with the other person in the pair (who saw a slightly different sequence), most pairs conformed. Parallels with eyewitness testimony in the Oklahoma bombing case and implications for police interviewing more generally were discussed. As will be evident, this was an eyewitness situation requiring identification of cars and a bystander view of a crime situation as represented by pictures.

The study by Gabbert et al. (2003)[237] investigated memory conformity effects between individuals who witness and then discuss a criminal event where each member of the dyad watched a different video of the same event. Each video contained unique items that were thus seen only by one witness. The event was a short film of a girl entering an unoccupied university office to return a borrowed book. Two video clips were filmed, each lasting one minute and 30 seconds. Both clips contained exactly the same sequence of events but were filmed from different angles so as to simulate different witness perspectives. This manipulation allowed different features of the event to be observed from each perspective. For example, from perspective 'A' (but not perspective B) it was possible to read the title of the book that the girl was carrying, and also observe that she threw a note into a dustbin when leaving the room. From perspective 'B' (but not perspective A) the girl was seen checking the time on her watch, as well as committing an opportunistic crime (sliding a £10 note out of a wallet and putting it into her own pocket). All other actions and events that occurred were common to both perspectives. The critical questions comprised two questions pertaining to information that was only visible from perspective 'A' (e.g. 'What was the title of the book

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235 Allan, K., & Gabbert, F. (2008). I still think it was a banana: memorable 'lies' and forgettable 'truths'. *Acta Psychologica*, *127*(2), 299-308.

236 Wright, D. B., Self, G., & Justice, C. (2000). Memory conformity: Exploring misinformation effects when presented by another person. *British Journal of Psychology, 91,* 189–202

237 Gabbert, F., Memon, A., & Allan, K. (2003). Memory conformity: Can eyewitnesses influence each other's memories for an event? *Applied Cognitive Psychology*, *17*, 533-543.

that the girl was carrying?') and two items that were only visible from perspective 'B' (e.g. 'What jewellery was the girl wearing?'). Dyads in one condition were encouraged to discuss the event before each witness (individually) performed a recall test, while in a control condition, dyads were not allowed to discuss the event prior to recall. A significant proportion (71%) of witnesses who had discussed the event went on to mistakenly recall items acquired during the discussion. Again, this was a bystander eyewitness situation about memory for details in a low-stakes situation.

Candel et al. (2007)[238] explored the memory conformity effect in children. Following the methodology of Gabbert et al. (2003) (discussed above), they filmed two silent versions of a girl entering an unoccupied university office. Both versions lasted 50 seconds and contained the same events in the same sequence. However, version A showed details not present in version B and vice versa. For example, in version A there was a glass filled with Coca-Cola and a Coca-Cola bottle on the desk. In version B, there was only a glass filled with Coca-Cola on the desk. There were four such discrepancies between the two versions. Younger (6–7 years; n = 60) and older (11–12 years; n = 62) children watched the video individually (individual witness condition) or in dyads (co-witness condition). The dyads believed that they were viewing the same video as the other member of the pair while in fact they saw different versions. Next, children in the individual witness condition answered questions, whereas children in the co-witness condition discussed the event on the video with each other. Finally, all children completed an individual free and cued recall task. In the co-witness condition, more than 60% of the children recalled at least one detail from the alternative video, whereas over 23% of the children in the individual witness condition reported such a detail. As before, this was a bystander eyewitness situation about memory for details in a low-stakes situation.

Dalton and Daneman (2006) [239] used a laboratory-based paradigm to investigate social influences on participants' susceptibility to misleading suggestions. Participants viewed a five-minute, edited clip from a 1987 feature film and were told that they would discuss it later in detail with the other member or members of their group. The clip consisted of an escape scene during which one character, a scientist, was chased through the grounds of an industrial laboratory by an assassin who was instructed to retrieve a syringe containing a substance that the scientist was trying to protect. The scientist escaped into a suburban neighbourhood and stole a bicycle to assist in his getaway, after which he rode onto a main street and into oncoming traffic to avoid being run over by the assassin in his car. The scientist rode into a parking lot, at which point he collided with a sports car, abandoned the bicycle, and ran into a busy shopping mall. The assassin caught up with the scientist at the mall and shot him, but the scientist was able to escape into an elevator and empty the contents of the stolen syringe into the body of an innocent bystander before he collapsed and died. Participants were then required to discuss the event with the co-witness or with the group of co-witnesses. During

238 Candel, I., Memon, A., Al-Harazi, F. (2007). Peer discussion affects children's memory reports. *Applied Cognitive Psychology*, *21*, 1191-1199.

239 Dalton, A. L., & Daneman, M. (2006). Social suggestibility to central and peripheral misinformation. *Memory, 14*, 486–501.

the discussion a confederate, posing as a peer, presented misinformation about central and peripheral features of the co-witnessed event. Results indicated that participants were more susceptible to misleading suggestions during one-on-one discussions than during group discussions. In addition, participants were susceptible to misleading suggestions about central features of the witnessed event, although to a lesser extent than they were susceptible to misleading suggestions about peripheral features. As before, this study involves a bystander eyewitness event depicted on film.

In the study by Garry et al. (2008)[240] pairs of psychology student participants simultaneously and unwittingly watched different versions of a movie, showing an electrician (Eric) who was repairing fixtures in a home while stealing a few items. Each version of the event was exactly the same except for certain crucial scenes. Two video projectors beamed two different versions of the movie onto the same screen. The images were polarised, so that one projector transmitted light waves on a vertical plane, while the other transmitted light on the horizontal plane. The participants, who were told they were taking part in an experiment on visual acuity, wore polarising glasses that looked like ordinary sunglasses, but blocked out one of the projected versions of the film. The two versions of the movie were identical except for eight critical items, which were digitally altered so that in one version of the event, the electrician tried on a black baseball cap, and in the other version he tries on a red baseball cap. The movie ran for six minutes 34 seconds, without audio. In the second phase of the experiment a set of 12 questions appeared on a screen, one at a time, and participants were asked to discuss and then answer the questions together. Each question asked about a detail of the movie and suggested five alternative answers. For example, *'Eric tried on a _____ cap: Blue; Black; Green; Red; Grey'*. Of the 12 questions, 4 targeted four of the eight critical details from the movie with both critical versions offered as answer alternatives, and the remaining eight targeted filler details. The other four critical items from the movie were not discussed, and thus served as controls at test. In the third phase participants completed a surprise 20-item two-alternative forced choice recognition test. The test instructions read "You will now be asked some questions about the video you saw. We are testing your memory for this video"; this instruction was written at the top of the test and reiterated by the experimenter. Of the 20 items, eight targeted memory for each of the eight critical items. The two alternatives were always structured so that participants chose between the detail from their version of the movie and from their partner's version, but these two choices were not labelled as such. The remaining 12 questions targeted new filler details, not those from the discussion.

It is notable that Garry et al. write in the opening to this study, "*Nearly every witness to a crime talks about it with another witness."* This is typically not the case in relation to child sexual abuse, because there are almost never any witnesses to the offending. The authors also provide a caveat to their findings, not reported in memory expert witnesses' briefs. The authors state in relation to an aspect of their findings, "***Whether they experience actual***

[240] Garry, M., French, L., Kinzett, T., & Mori, K. (2008). Eyewitness memory following discussion: Using the Mori technique with a Western sample. *Applied Cognitive Psychology, 22,* 431-439.

memory distortion, or simply believe their partner to be correct, *our study shows that people will incorporate elements of each other's memory reports into their own memory reports, even when that information contradicts what they personally saw, and even when there was no requirement that they agree to their partner's responses."* (Emphasis added).

Paterson and Kemp (2006)[241] compared the effects of co-witness information on memory with more widely studied methods of encountering post-event information. One hundred and five psychology student participants were shown a short video depicting a robbery extracted from a relatively unknown feature film. The scene is in a store and shows a woman arguing with the storeowner. Two Caucasian males then enter the shop and hold up the storekeeper. The two men steal some money and cigarettes, and then fire a gun at the storekeeper, narrowly missing him. The participants were then exposed to both correct and incorrect post-event information about the video through one of four methods: (1) leading questions, (2) media report, (3) indirect co-witness information, or (4) co-witness discussion. There was also a control condition in which participants did not receive any post-event information. The postevent information was as follows: *"(1) The thief that shot the gun was named 'Chuck' Misleading. His name was Hank. (2) The thief that shot the gun was wearing a red bandana. Misleading. The bandana was navy blue. (3) The thief who pointed the handgun at the lady kicked her to get her away from the counter. Misleading. He yells at her, but doesn't kick her. (4) The woman in the store was wearing a large brooch. Misleading. She was wearing a large necklace, but no brooch; (5) The name of the store was 'Chalet Liquor and Deli.' Correct (6) The woman in the store was wearing a peach-coloured floral coat. Correct; (7) The thief who pointed the handgun at the lady was wearing a white singlet. Correct; (8) The thief who pointed the handgun at the lady had blonde hair. Correct."* All participants were individually tested on their memories for the event one week later. Results suggest that co-witness information had a particularly strong influence on eyewitness memory, whether encountered through co-witness discussion or indirectly through a third party. That is, participants were more likely to report co-witness information than post-event information encountered through leading questions or a media report.

Paterson et al. (2009)[242] showed undergraduate psychology student participants two short crime videos, each less than minute in duration. Both videos depicted robberies: one of a store robbery and the other, of a street robbery. The store robbery scene was extracted from a relatively unknown feature film (as utilised by Paterson & Kemp, 2006 reported above). The street robbery scene was taken from a training video developed by the Metropolitan Police in London. Participants in the confederate-present condition were exposed to four items of misinformation about each video. The false post-event information for the store robbery was as in Paterson and Kemp (2006) as follows: (1) The thief that shot the gun was named 'Chuck' (His name was Hank.) (2 The thief that shot the gun was wearing a red bandana. (The bandana was navy blue). (3) The thief who pointed the handgun at the lady kicked her to get her away

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241 Paterson, H. M., & Kemp, R. I. (2006). Comparing methods of presenting post-event information: The power of co-witness suggestion. *Applied Cognitive Psychology, 20,* 1083–1099.

242 Paterson, H. M., Kemp, R. I., & Fogars, J. P. (2009). Co-witnesses, confederates, and conformity: Effects of discussion and delay on eyewitness memory. *Psychiatry, Psychology and Law, 16,* 112– 124.

from the counter. (He yells at her, but doesn't kick her). (4) The woman in the store was wearing a large brooch. (She was wearing a large necklace, but no brooch). The false postevent information for the street robbery was as follows; (1) The man who pushed the woman stole her bag. (His accomplice stole the bag); (2) The black man who pushed the woman tried to smash her car window. (He looked in her window, but didn't try to smash it); (3) The man who came to help the lady was wearing a dark green shirt. (He was wearing a royal blue shirt.); (4) The woman's car had two doors. (The car had four doors). Participants were then randomly assigned to one of three conditions: discussion in groups with an experimental confederate providing misinformation about the videos, discussion in groups with no confederate, or no discussion. Finally, all participants were given another copy of the recognition questionnaire to complete individually. Participants in the confederate discussion condition reported information supplied by the confederate, regardless of the information accuracy. The post-event misinformation had a particularly strong effect on memory accuracy when it was presented after a longer delay. There was no difference in memory accuracy between the groups without confederates and the no-discussion control condition, suggesting that discussion is neither harmful nor beneficial to memory accuracy when no misinformation is supplied.

This study's findings contradict those from other studies, in that it indicates that deception and misleading may be required to effect memory errors and that discussion per se does not result in memory errors. Yet the study is cited by the memory expert witnesses in support of post-event influence without mention of this contradictory conclusion.

Another study cited as demonstrating the effect of co-witness influence on memory was by Roediger et al. (2001)[243] who referred to this as *"the social contagion of memory."* There were 24 undergraduate student participants. A participant and experimental confederate together saw six common household scenes (e.g., a kitchen) containing many objects, for either 15 or 60 sec. Other household scenes included a tool chest, a bathroom, a kitchen, a bedroom, a closet, and a desk and they contained an average of 23.8 objects that were a mixture of high- and low- expectancy items. The participants were instructed to pay careful attention to the slides because they would later be tested on their memory for items present in the scenes. During a collaborative recall test, the two participants each recalled six items from the scenes, but the confederate occasionally made mistakes by reporting items not from the scene. Some intrusions were highly consistent with the scene schema (e.g., a toaster) while others were less so (e.g., oven mitts). After a brief delay, the individual participant tried to recall as many items as possible from the six scenes. Recall of the erroneous items suggested by the confederate was greater than in a control condition (with no suggestion). Further, this social contagion effect was greater when the scenes were presented for less time (15 sec) and when the intruded item was more schema consistent (e.g., the toaster).

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[243] Roediger, H. L. III, Meade, M. L., & Bergman, E. T. (2001). Social contagion of memory. *Psychonomic Bulletin & Review, 8*, 365–371.

Zajac et al. (2016)[244] is another paper commonly cited to illustrate the impact of misinformation from a co-witness. The authors used apparent co-witness intoxication as a way to examine the effect of source credibility on the acceptance of misinformation from a co-witness. Participants were 100 undergraduate students who took part in the experiment alongside an experimental confederate playing the role of a naïve participant. To facilitate participants' belief that the experiment was investigating the effects of alcohol, the bench surfaces in the testing room were wiped down with an alcohol solution prior to each session, creating a distinct alcohol smell. Alongside an experimental confederate, individual participants watched a clip involving two simulated thefts. The clip depicted a male and his female accomplice committing two thefts (the same clip as used in Zajac and Henderson, 2009 cited above). The confederate engaged the participant in a discussion of the video, during which she misled the participant on two aspects of the clip, chosen from a list of four: the accomplice's eye colour (blue rather than brown), the gender of the student(s) seen directly behind the thieves when they entered the library (one male student rather than one female student), the colour of the male thief's jeans (black rather than blue), and the first item that was stolen (MP3 player rather than phone). Immediately beforehand, half of the participants watched the confederate consume what appeared to be three alcoholic beverages. During a subsequent discussion with the participant, the confederate introduced two pieces of misinformation about the clip. In the absence of the confederate, participants were then interviewed before completing a target-absent lineup task. Misinformation impaired participants' verbal reports, and misinformation about appearance impaired lineup performance. Overall susceptibility to misinformation was not significantly related to the co-witness condition, or to participants' ratings of the confederate's intoxication or ability to accurately complete the tasks. As with the Paterson et al study described above, the contradictory elements of these findings are ignored in the briefs of memory expert witnesses.

Mojtahedi et al. (2018)[245] examined the effects of pre-existing relationships between co-witnesses on statement similarity, after a post-event discussion. Participants were 420 persons aged between 18-83 years (M=33) who responded to an advertisement which called for five-person groups of individuals with pre-existing relationships and also for individual volunteers (who would later be grouped with other unfamiliar participants). Participants in groups with pre-existing relationships were required to have known all other group members for a minimum of three months. The study recruited groups of individuals with both familial- and friendship-based relations for this condition. After being placed into groups of five, participants viewed video footage (duration one minute and 30 seconds without audio) of a bar fight and then discussed the event with group members before giving individual statements privately. An issue was who was at fault, such as may arise in a fight between two parties or a motor collision involving two drivers. The authors indicated that data supported the

244 Zajac, R., Dickson, J., Munn, R., & O'Neill, S. (2016). Trussht me, I know what I sshaw: Will eyewitnesses accept misinformation from an intoxicated co-witness? *Legal and Criminological Psychology*, *21*, 127-140.

245 Mojtahedi, D., Ioannou, M., & Hammond, L. (2018). The dangers of co-witness familiarity: Investigating the effects of co-witness relationships on blame conformity. *Journal of Police and Criminal Psychology*, *33*, 316-326.

proposition that the footage used within the experiment was ambiguous as to who had started the fight. Referring to research that suggests that eyewitnesses can be influenced by their co-witnesses when attempting to attribute blame to the correct suspect, a process referred to as blame conformity, the authors explored this. It was found that post-event discussion between co-witnesses increased the level of similarity in blame attribution within the eyewitness groups; however, this difference was only significant in groups where eyewitnesses shared a pre-existing relationship. In addition, the level of uncertainty was reduced when eyewitnesses took part in post-event discussions. However, the authors concluded that there was no evidence suggesting that post-event discussions led to an increase in false eyewitness statements**.**

As is clearly apparent, this was a bystander eyewitness situation rather than a personally experienced event. Notwithstanding the issue of the relevance of this study to sexual violence, this is another instance further to those indicated above, where a memory expert witness did not report the contradictory findings of the laboratory study in relation to their unqualified claim of post-event information influence. In this case the conclusion of the authors was that "*..there was no evidence suggesting that post-event discussions led to an increase in false eyewitness statements."* (p. 316).

Confidence versus accuracy

In studies cited in respect of several of the topics reviewed above the issue arises of the relationship between confidence about a memory and accuracy of that memory. The memory expert witnesses have stated in their briefs of evidence that a witness's confidence in a memory report is not indicative of accuracy. In this regard they have cited Penrod and Cutler (1995), Michael and Garry (2016), Luus and Wells (1994) and Benton et al. (2006).

Penrod and Cutler[246] reviewed the literature to 1995 in relation to jurors' perception of confidence and accuracy and also the relationship between accuracy and confidence. They state that a major source of juror unreliability is reliance on witness confidence, which they assert from their review of the available laboratory research is a dubious indicator of eyewitness accuracy.

Michael and Garry (2016)[247] investigated the impact of question order on evaluation of confidence and accuracy. The authors conducted six experiments. In the first, participants watched one of two similar videos of a tradesman who stole items from the unoccupied house in which he was working. After a 10 minute filler task participants took a surprise memory test consisting of 30 two-alternative forced choice questions about the video. For each question, subjects used a scale from 1 ("Not at all confident") to 5 ("Very confident") to report their confidence they had selected the correct answer. The fourth phase followed the test.

246 Penrod, S., & Cutler, B. (1995). Witness confidence and witness accuracy: Assessing their forensic relation. *Psychology, Public Policy, and Law, 1,* 817–845

247 Michael, R. B., & Garry, M. (2016). Ordered questions bias eyewitnesses and jurors. *Psychonomic Bulletin & Review, 23,* 601-608.

Participants answered two randomly ordered questions:[1] "The memory test about Eric the Electrician consisted of 30 questions. How many of those questions do you think you answered correctly?" Participants responded with a number between 0 and 30; [2] "Suppose that you were asked to testify as an eyewitness. How confident would you be in your memory of the events you saw in the video of Eric the Electrician?" Subjects responded on the 1-5 scale as described above. The following two experiments were similar. In the fourth experiment participants were asked to take on the role of a juror and answer questions about an eyewitness who had been in a previous study. They were told that the eyewitness had taken a memory test after watching the video of Eric the Electrician. The juror's task was not to watch the video but to carefully read the eyewitness's memory test and then answer some questions. The design and procedure of the next experiment was similar except for a variation in presentation of the questions. The next experiment was similar except for the materials used. Across six experiments, the authors found that the order in which eyewitnesses answered the 30 questions mattered in two key ways. Firstly, the order changed how eyewitnesses appraised themselves. When questions produced an initial experience of high confidence rather than low confidence, eyewitnesses believed that they were more accurate and were more confident about their memory. Secondly, the order changed how jurors appraised eyewitnesses. Jurors believed eyewitnesses who initially displayed high confidence were more accurate, and jurors were more confident about those eyewitnesses' memories. They concluded that, *"This collection of results paints a worrying picture of the malleability of beliefs about memory accuracy."* (p. 607).

As we have indicated earlier, the paper by Luus and Wells (1994)[248] involved a staged theft and a photo-lineup identification. Seventy of the pairs of eyewitnesses received one of nine types of information regarding the alleged identification decision of their co-witness. Witnesses who were told that their co-witness identified the same person whom they had identified, showed an increase in the confidence they expressed to a confederate police officer. Confidence deflation occurred among witnesses who thought their co-witness either identified another person or had stated that the thief was not in the lineup.

The study by Benton et al. (2006)[249] has also been described earlier in this chapter. They examined knowledge of factors affecting eyewitness accuracy in a sample of jurors, judges and law enforcement professionals. Participants completed a survey in which they were asked to agree or disagree with 30 statements about eyewitness issues, and their responses were compared to a sample of eyewitness experts who completed the same survey. One of the questions concerned confidence and perceptions of accuracy.

As will be apparent the studies by Michael and Garry and Luus et al. examine the confidence-accuracy relationship in the context of bystander eyewitness memory for events

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248 Luus, C. A. E., & Wells, G. L. (1994). The malleability of eyewitness confidence: Co-witness and perseverance effects. *Journal of Applied Psychology, 79*(5), 714–723.

249 Benton, T. R., Ross, D. F., Bradshaw, E., Thomas, W. N., & Bradshaw, G. S. (2006). Eyewitness memory is still not common sense: Comparing jurors, judges and law enforcement to eyewitness experts. *Applied Cognitive Psychology, 20*, 115–129.

involving strangers; that is, circumstances that bear little similarity to witness descriptions of sexual violence where usually the defendant and the complainant are well known to each other. The conclusion that jurors are more likely to believe that witnesses who initially display high confidence are more accurate has yet to be tested in conditions that more closely resemble the circumstances of sexual violence trials.

Taking this further, Brewin and colleagues examined claims about memory including that the confidence people have in their memory is weakly related to its accuracy. They note that the accuracy confidence question is not settled science, refuting the memory expert witnesses assertion that a witness's confidence in a memory report is not indicative of accuracy. The recent research indicates that initial memory for an event prior to any contaminating or misinformation influences is likely to be accurate and that a person's confidence is accordingly, realistically high. [250] [251] [252]

Conclusion

Memory expert witnesses routinely cite laboratory studies and reviews of such studies in their briefs of evidence. As shown in the above brief descriptions of these studies, the event-to-be-recalled is of a nature that bears little resemblance or equivalent importance to the circumstances of sexual violence. Participants are tested on their memory for details that are peripheral to the events portrayed. Deception is typically employed with regard to the intention of the experiment, and suggestibility or persuasion used in asking about the event details participants were to remember. Notwithstanding issues of relevance where there are caveats offered by the authors of some studies, or contradictory findings, these are not reported in the briefs of memory expert witnesses. As we have noted, experts have obligations to report any limitations to the basis for opinions, to provide balance by reporting contradictory findings, and to report any lack of consensus; these expectations being contained in the Code of Conduct for Expert Witnesses.

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250 Brewin, C., Andrews, B. & Mickes, L. (2020). Regaining consensus on the reliability of memory. *Current Directions in Psychological Science*, 1-5.

251 Koriat, A., Goldsmith, M., & Pansky, A. (2000). Toward a psychology of memory accuracy. *Annual Review of Psychology*, 51, 481–537.

252 Wixted, J. T., Mickes, L., & Fisher, R. P. (2018). Rethinking the reliability of eyewitness memory. *Perspectives on Psychological Science, 13,* 324–335.

CHAPTER SIX

IMAGINATION INFLATION

In sexual violence trials, memory expert witnesses have cited the "imagination inflation effect" research. This has been in the absence of any evidence that the complainant(s) has reported imaginings or that any other person has suggested that such "imagining" has occurred. In addition, there has been no evidence in any of the relevant trials that the complainant(s) has undergone any "guided visualisation therapy" or similar process. The rationale for the inclusion of this research in sexual violence trials is unclear except perhaps to suggest that the complainants might have imagined the sexual offending they have reported. In the absence of any evidence that imagining an event had either been encouraged or independently practiced, such evidence from memory expert witnesses would appear to not meet the basis rule as discussed in Chapter Two.

Memory expert witnesses have stated that imagining an event occurring can increase people's confidence that the event occurred and have termed this 'imagination inflation'. They have stated that that people may mistake the details they've imagined, alongside with the sense of familiarity associated with these details, for details of an actual experience. It is also suggested that a person may imagine childhood events – implying a whole event rather than details of an event - and subsequently report that the new imagined event had happened to them. It is claimed that the imagination inflation effect has been demonstrated numerous times in laboratory studies; citing Garry et al. (1996), Goff and Roediger (1998), Heaps and Nash (1999), Paddock et al. (1998), Paddock et al. (1999), Sharman et al. (2004), Sharman et al. (2005) and Sharman and Scoboria (2009). Furthermore, it is stated that imagining an event more than once strengthens the imagination inflation effect (citing Thomas & Loftus, 2002), as does drawing while imagining (citing Thomas et al., 2003). In addition, that a person can even come to form explicit memories for entire events that they have only imagined (citing Mazzoni & Memon, 2003) and hearing other witnesses talk about their experiences can even convince people that they were there (citing Pynoos & Nader, 1988). Also, that a person can have difficulty distinguishing what they inferred or imagined from what actually happened, what they saw from what was suggested to them, one person's actions from another's, what they heard from what they previously knew, and fiction from fact (citing Johnson, 1997; Lindsay, 2008). The implication of this is that false events can be suggestively planted in memory by spontaneously imagining them, or having a person encourage them to imagine them.

We will describe the studies cited. As a general observation most of the studies involve activities remote from sexual violence. It is acknowledged that for ethical reasons it is not possible to have participants imagine potentially traumatic events.

The Garry et al. (1996)[253] study appears to have been a response to the notion that therapists use imagination techniques as an aid in searching for presumably lost memories and that, therefore, if these are used, then people may imagine child sexual abuse and then become convinced it has in fact occurred. The study involved adult participants completing an inventory of childhood events (LEI) and reporting how confident they were that each event had happened to them. They were then asked to imagine some of the events happening, before completing the inventory a second time. Participants were more confident that the imagined events had happened to them, relative to non-imagined events. The items were, (1) Got in trouble for calling 911; (2) Had to go to the emergency room late at night; (3) Found a $10 bill in a parking lot; (4) Won a stuffed animal at a carnival game; (5) Gave someone a haircut; (6) Had a lifeguard pull you out of the water; (7) Got stuck in a tree and had to have someone help you down; (8) Broke a window with your hand. As a result of imagining the events, a small increase on the 8-point scale was noted in people's estimate of the likelihood that the event had actually happened. Imagining these items seems to be substantially removed from the situation of imagining being a victim of childhood sexual violence.

The study by Goff and Roediger (1998)[254] had as participants 40 university undergraduates. In two experiments, participants heard simple action statements (e.g., "Break the toothpick"), and, in some conditions, they also performed the action or imagined performing the action. In a second session that occurred at a later point (10 minutes, 24 hours, 1 week, or 2 weeks later), participants imagined performing actions one, three, or five times. Some imagined actions represented statements heard, imagined, or performed in the first session, whereas other statements were new in the second session. During a third (test) phase, they were instructed to recognize statements only if they had occurred during the first session and, if recognized, to tell whether the action statement had been carried out, imagined, or merely heard. The primary finding was that increasing the number of imaginings during the second session caused participants to remember later that they had performed an action during the first session when in fact they had not (imagination inflation). This outcome occurred both for statements that participants had heard but not performed during the first session and for statements that had never been heard during the first session.

Paddock et al. (1998)[255] sought to replicate the imagination inflation effect with a sample of 89 undergraduate students and 106 middle-aged factory workers. In the first phase, participants completed the inventory of childhood events (LEI) to report their confidence that various childhood events had or had not happened. In groups of five to 10, participants viewed a 15-minute guided visualization videotape made specifically for this study by a psychologist who asked them to vividly imagine, in turn, each of four different situations (critical item subsets A or B). Subset A consisted of the following items: Accidentally knocked a fragile

253 Garry, M., Manning, C., G., Loftus, E., F., & Sherman, S., J. (1996). Imagination inflation: Imagining a childhood event inflates confidence that it occurred. *Psychonomic Bulletin & Review, 3*, 208-214.

254 Goff, L., & Roediger, H. (1998). Imagination inflation for action events: Repeated imaginings lead to illusory recollections. *Memory and Cognition, 26*, 20-33.

255 Paddock, J. R., Joseph, A. L., Chan, F. M., Terranova, S., Loftus, E. F., & Manning, C. (1998). When guided visualization procedures may backfire: imagination inflation and predicting individual differences in suggestibility. *Applied Cognitive Psychology, 12*(Special Issue), S63-S75.

item off a table and broke it, Helped to light candles in your home during a power outage, Found a $10.00 bill in a parking lot, Got stuck climbing a tree and had to have someone help you down. Subset B contained the following items: Broke a window with your hand, Won a stuffed animal at a carnival game, Had your hand caught in a mousetrap, Had a babysitter let you stay up late to watch a TV show. The imagination inflation effect was found for the undergraduate sample in that after imagining as a group, they had increased confidence that the event that they had previously indicated had not happened, had happened. However, the imagination inflation effect was not found in the factory worker sample. The authors concluded that the results of these experiments suggest that there may be limits to the robustness of the imagination inflation phenomenon; that the imagination effect might only be apparent in tertiary student populations. We note that university students are the predominant participants across all memory studies. As in other examples cited above, the memory expert witnesses did not add a caveat to their opinion, in this case that the imagination inflation effect was noted in the undergraduate sample but not in the more normative sample.

Subsequently, Paddock and colleagues (1999)[256] found evidence for the imagination inflation effect using similar methodology with a sample of 94 engineering students.

In the Sharman et al. (2004) study[257] participants were 67 first-year psychology students. There were three phases to the experiment. In the first phase, participants completed the inventory of childhood events (LEI). In the next phase, they imagined and paraphrased complex fictitious events 0, 1, 3, or 5 times. These were the same as reported in the Garry et al. study reported above. Finally, they rated their confidence for the childhood events a second time. The authors reported that the participants became more confident that the fictitious events really did happen in childhood, regardless of whether they were imagined or paraphrased. There was no repetition effect beyond that of a single exposure. Taken together with the results of other research, the authors indicated that data suggest that the greater processing fluency associated with the target events drives imagination inflation and, therefore, that imagination inflation might be better thought of as "fluency inflation" in that any process that increases the fluency of an event can increase confidence for it. They concluded, *"On the practical side, our results suggest that simply putting a fictitious experience into new words may cause people to become more confident that the fictitious event was real."*

Subsequently, Sharman et al. (2005)[258] utilised similar methodology using as participants 149 undergraduate psychology students. However, in addition, participants received either no cues about the source of the imagined event, an additional source cue (an instruction to imagine the event from a first person or bystander perspective), an additional

256 Paddock, J. R., Noel, M., Terronova, S., Eber, H. W., Manning, C. G., & Loftus, E. F. (1999). Imagination inflation and the perils of guided visualization. *Journal of Psychology*, *133*, 581-595.

257 Sharman, S., J., Garry, M., & Beuke, C., J. (2004). Imagination or exposure causes imagination inflation. *American Journal of Psychology*, *117*, 157-168.

258 Sharman, S. J., Garry, M., & Hunt, M., J. (2005). Using source cues and familiarity cues to resist imagination inflation. *Acta Psychologica*, *120*, 227-242.

familiarity cue (a plausibility questionnaire; e.g., How plausible is it that a New Zealander your age had certain experiencers by the age of 10?), or both cues. Only participants who had both types of cues resisted imagination inflation. The authors noted that their results suggest that additional cues can sometimes safeguard people from becoming more confident that fictitious events were genuine experiences. They conclude that "*Although it is relatively easy to increase people's confidence that an event really happened, it is just as easy to prevent the increase from happening. When people have information about the source of an event's familiarity, they are less likely to misattribute that familiarity than people who do not have that information.*"[259] Notwithstanding the study's relevance this caveat has not been reported in memory expert witnesses' briefs.

Heaps and Nash (2001)[260] explored the imagination inflation effect with 55 psychology students. With one exception they did not use target items as described above in the imagination inflation studies. As well as administering the LEI, they also administered the Vividness of Visual Imagery Questionnaire (VVIQ) and the Gudjonsson Suggestibility Scale (GSS). The authors replicated the imagination inflation effect.

Thomas and Loftus (2002)[261] explored memory for familiar or usual actions (e.g., flip the coin) and bizarre or unusual actions (e.g., sit on the dice). In Session One, action statements were presented to 210 undergraduate student participants, who had to either perform or imagine those actions. In Session Two, 24 hours later, participants imagined performing various actions, some presented in the first session and others totally new. Finally, in Session Three, two weeks later, participants were tested on their memory for the original actions. The authors found that as the number of imaginings increased in Session Two, so did the proportion of "did" responses to actions that were only imagined or not even presented. They reported that this pattern was present for both bizarre and familiar actions.

Thomas et al. (2003)[262] used similar but not totally identical materials and methodology to the Thomas and Loftus study described above. In the first experiment, the 145 undergraduate psychology student participants were informed that they would hear action statements that involved simple requests. Actions ranged from familiar to bizarre, as determined by an independent group of participants who rated the action statements on a scale of 1 (not bizarre at all) to 7 (extremely bizarre; e.g., Kiss the frog v Imagine kissing the frog, imagine the colour of the frog, imagine the feel of the frog against your lips). For some statements, the participants would be asked to perform the actions, and for others they would be asked to imagine them. They were told that, if instructed to imagine, they were to imagine themselves performing the action. They were told to use the materials on the table in front of them when performing actions, but not to interact with the materials when engaged in

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259 Ibid at 240 Sharman et al (2005)

260 Heaps, C. M., & Nash, M. (2001). Comparing recollective experience in true and false autobiographical memories. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 27,* 920-930

261 Thomas, A. K., & Loftus, E. F. (2002). Creating bizarre false memories through imagination. *Memory & Cognition, 30,* 423-431.

262 Thomas, A., K., Bulevich, J., B., & Loftus, E., F. (2003). Exploring the role of repetition and sensory elaboration in the imagination inflation effect. *Memory & Cognition, 31*, 630-640.

imagining. The 48 action statements (24 performed and 24 imagined) were read aloud by the experimenter. The participants were given 15 seconds to either imagine or perform each action and were instructed to use the full 15-sec interval. After the 48 action statements had been presented, the participants were reminded of the second session and then dismissed. The participants returned 24 hours later for the second session. In this session, all action statements presented were imagined. The participants were not exposed to any objects from Session 1. Fifteen seconds were given for each imagining. Of the 72 critical action statements, 24 were not imagined at all, 24 were imagined one time, and 24 were imagined five times. Of the 24 actions performed in Session 1, eight were not imagined, 8 were imagined one time, and 8 were imagined five times. The same was true for actions imagined in Session 1 and for actions not presented in Session 1. The participants imagined a total of 144 actions. Two weeks later, the participants returned and were given several measures designed to assess memory for the Session 1 activity. A second experiment was also conducted.

Mazzoni and Memon (2003)[263] administered 82 British student participants three versions of the LEI. In each, participants were asked to rate the likelihood that they had experienced each of 20 events before age six. Each version contained a different set of events, but the two critical events and three control events were included in all three versions. One of the critical events was relatively frequent and common (Having a milk tooth extracted by a dentist); the other was an event that does not happen in the United Kingdom (Having a nurse remove a skin sample from my little finger). The three control events were, Found a £10 note in a car park, Got sick and had to go to casualty late at night, and Felt an earthquake. One group imagined the frequent (tooth) event and read a one-page passage and answered four questions about the non-occurring (skin) event. The other group imagined the skin event and read a passage and answered questions about the tooth event. In each group, the order of activities (imagine or read) was counterbalanced. One week immediately after the manipulation, participants rated the likelihood that they had experienced each of the two critical events and a series of noncritical events, using the LEI. During the last phase, participants were also asked to describe any memories they had for the events. For both events, imagination increased the number of memories reported, as well as beliefs about experiencing the event. The design of this experiment ruled out that any increase in participants' confidence that the 'impossible' event had occurred could not be attributed to a true memory. However, it is noted that while participants' confidence increased for both events, the magnitude of the increase obtained for the 'impossible' event was very slight, less than half a scale point.

Sharman and Scoboria (2009) [264] used similar methodology to the earlier described Sharman et al. studies to represent a range of plausibility. The events were: losing a toy (Toy), choking on a small object (Choke), getting lost in a shopping mall (Lost), having a tooth extracted (Tooth), seeing parents naked together (Naked), having a skin sample taken by a school nurse (Skin), receiving a rectal enema (Enema), having a bone density screening

263 Mazzoni, G., & Memon, A. (2003). Imagination can create false autobiographical memories. *Psychological Science, 14*, 186-188.

264 Sharman, S. J., & Scoboria, A. (2009). Imagination equally influences false memories of high and low plausibility events. *Applied Cognitive Psychology, 23*, 813-827.

(Density), witnessing a demonic possession (Demon) and seeing or hearing a real ghost (Ghost). Six events were target events (Choke, Lost, Tooth, Enema, Demon, Ghost); the other four events were (Toy, Naked, Skin, Density). Half of the participants imagined Group 1 events (Choke, Enema, Ghost), the other half imagined Group 2 events. All participants believed the cover story which was about investigating people's abilities to visualise childhood events, and they expressed surprise at the true purpose of the experiment. It was reported that participants showed imagination inflation regardless of event plausibility and their confidence increased more for the imagined events than not imagined events.

The Johnson (1997)[265] paper was about source monitoring; it was not an empirical study. The paper stated, *"Memory distortions can happen in many contexts and forms, but most memory distortion involves failures in monitoring the source of information." "For example, people sometimes confuse what they inferred or imagined and what actually happened, what they saw and what was suggested to them, one person's actions and another's, what they heard and what they previously knew, and fiction and fact."* Some examples given are "*You may decide when an event occurred because you can relate it to another event memory that contains more definitive time information; or you may decide you read something in the newspaper rather than saw it on TV news because you remember thinking it was consistent with the newspaper's position…"*

Conclusions about imagination inflation studies

There is no research that reliably tells us that people of their own volition, imagine traumatic highly distressing events and become convinced that these have occurred. Neither does our clinical practice (SB and FS) support this. It is common experience that people will imagine some low-stakes events and everyday routine events and think they occurred. For example, they may intend to collect the mail, then think they did this only to find they did not, and that their confusion arose from thinking about doing so. The situation may be similar in relation to taking medication, which is one reason pharmacists package the medication of elderly people in daily doses.

Brewin and Andrews (2017) in reviewing this research have concluded that the imagination inflation studies were by and large only intended to assess autobiographical belief (i.e., the extent to which a person believes their recollection is true), so that the extent to which these procedures produce full autobiographical memories (i.e., a completely new memory) is unknown.[266] Brewin and Andrews summarise, "*The imagination condition reliably leads to a small average increase of around one scale point in belief but affects a minority of participants. The effect is more accurately characterised as reducing the belief that the event did not happen rather than increasing the belief that it did happen and there is little evidence of an actual memory being created... Imagination inflation and false feedback studies increase*

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265 Johnson, M. K. (1997). Source monitoring and memory distortion. *Transactions of the Royal Society: Biological Sciences, 352*, 1733-1745.

266 Brewin, C. R., & Andrews, B. (2017). Creating memories for false autobiographical events in childhood: A systematic review. *Applied Cognitive Psychology, 31*, 2–23.

the belief that a suggested event occurred by a small amount such that events are still thought unlikely to have happened." (p. 2).

In our many years as clinical psychologists (SB and FS) treating people who report child sexual abuse histories, our experience is that people do not tend to imagine or conjure up thoughts of having been sexually abused. Rather, they make significant efforts to avoid thinking about sexual victimisation, are distressed by thoughts and other re-experiencing phenomena and they seek therapy so that they can have skills to manage and control such posttraumatic symptoms. Our clinical experience is that they would prefer to imagine that their sexual victimisation had not occurred.

CHAPTER SEVEN

FALSE MEMORY IMPLANTATION STUDIES

The false memory implantation studies typically use a combination of misinformation and imagination procedures. In this way participants are said to develop memories for events that never occurred. Memory expert witness have stated that this phenomenon, in which people can come to believe experiences that never really happened, has been demonstrated over 20 years of research, with a wide range of experiences. In some briefs the caveat has been stated that for ethical reasons the range of experiences does not include implantation of false memories of sexual violence. However, they state that rigorous laboratory research has demonstrated that it is possible and indeed, "relatively easy" to implant memories of false, even highly implausible events of significance. In this regard they list events such as an infant in a crib and watching a mobile over the bed, being bullied, witnessing a demonic possession, being the victim of a vicious animal attack, riding in a hot air balloon, and assaulting another person. They have cited a review by Lynn et al. (2014) in this regard.

The Lynn et al. review [267] was not about false memory per se but, as the title of the paper suggests, it was about trauma and dissociation. One memory expert witness has quoted Lynn et al. giving an almost exact replication of the statement in the Lynn et al. paper that *"researchers have shown that it is possible to implant memories of false or highly implausible events*. However, in the memory expert witness's rendition, the words "*it is possible"* is replaced by the words "*relatively easy".*

Other studies cited include those by Braun et al. (2002), Heaps and Nash, (2001), Hyman et al. (1995), Lindsay et al. (2004), Loftus and Pickrell (1995), Pezdek et al. (1997), Porter et al. (1999), Shaw and Porter (2015), Wade et al. (2002). The Heaps and Nash [268] study was described earlier in this section in relation to the imagination inflation effect. We discuss the study by Loftus and Pickrell first as this has been described by one memory expert witness as the "the seminal study" in the area of creating false memories for events that did not occur. The "seminal study" has become known in the literature as "The Lost in the Mall" study.

Loftus and Pickrell (1995)[269] had 24 volunteers suggest to offspring or younger siblings that they had been lost in a shopping mall when they were about five years old. The participants were three males and 21 females aged between 18 and 53 years. The participants were mailed a booklet containing four single paragraph stories about their childhood obtained from their older relatives. Three of the stories were true and one "being lost in the mall" was

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267 Lynn, S.J., Lilienfeld, S.O., Merckelbach, H., Giesbrecht, T., McNally, R.J., Loftus, E.F., Bruck, M., Garry, M. & Malaktaris, A. (2014). The trauma model of dissociation: Inconvenient truths and stubborn fictions: Reply to Dalenberg et al. (2012), *Psychological Bulletin. 140,* 896-910.

268 Heaps, C. M., & Nash, M. (2001). Comparing recollective experience in true and false autobiographical memories. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *27*, 920-930

269 Loftus, E. F., & Pickrell, J. E. (1995). The formation of false memories. *Psychiatric Annals*, *25*(12), 720–725.

the false event. The true stories had in fact been obtained from the older relatives. These stories related to the period when the participant was aged between four and six years. The false mall event always contained the following elements, (1) lost for an extended period of time; (2) crying; (3) lost in a mall or large department store at about the age of five; (4) found and aided by an elderly woman; (5) reunited with family. At the first of two interviews, participants were asked to recall as much as they could about the four events and asked to rate clarity of the memory (1-10 not at all clear to very clear) and confidence that they would be able to recall more if given more time to think (1-5 not at all confident to very confident). They were encouraged to think more and try to remember more. They were similarly rated at the second interview, after which they were debriefed about the experiment. Of the 24 subjects, six reported partial or full memories of the false event. The clarity ratings for those who recalled the false event (2.8 and 3.6 out of 10) were lower than for the true events (6.3 for both interviews). The confidence ratings were low and lower for the false event. The authors reported that *"These findings reveal that people can be led to believe that entire events happened to them after suggestions to that effect."* (p. 723). However, Loftus reported the final mall study results to the Human Subjects Review Committee as follows: *"24 subjects have been run. About 8–9% have formed false positive memories. Another 10–15% formed partial false memories. The memories appear to be less clear and vivid than true memories"* (Human Subjects Review Committee, 1994).[270]

According to Blizard and Shaw (2019)[271] the lost-in-the-mall study *"has been highly influential in false memory research that has been used to discount children's disclosures regarding abuse, especially in child custody cases."* They refer to *"numerous scientific errors"* including *"dropped subjects, failure to report negative results, the lack of evidence for any full false memories, and the authors' admission that the study did not apply to anyone beyond the 24 subjects has not prevented the mall study from being very widely cited as evidence of the supposed ease of suggestibility of children in child abuse and child custody cases."* (p. 23). Crook and McEwen (2019)[272] similarly concluded that *"...the mall study continues to appear in Loftus' speeches, news articles, and professional journals today, over 20 years later, although we argue that the study fails to support false and implanted memory claims as she asserts."*

In essence, the study rests on the results obtained from six participants, but more specifically on only two participants. Loftus, as reported above, has stated that two participants (8-9%) of the 24 formed false positive memories (although the extent to which these have been full has been debated) and four (10-15%) formed partial false memories. This notwithstanding, in her book which has been repeatedly cited by the memory expert witnesses,

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270 Human Subjects Review Committee. (1994). Status Report Application #23-332-C (June 1, 1994). Review of experiment involving human subjects, University of Washington. Cited by Crook, L. S., & McEwen, L. E. (2019). Deconstructing the lost in the mall study. *Journal of Child Custody, 16*(1), 7-19.

271 Blizard, R. A., & Shaw, M. (2019) Lost-in-the-mall: False memory or false defense? *Journal of Child Custody, 16*(1), 20-41.

272 Crook, L. S., & McEwen, L. E. (2019). Deconstructing the lost in the mall study. *Journal of Child Custody, 16*(1), 7-19.

(Loftus & Ketcham, 1994; see Chapter Eight on recovered memory), Loftus claimed that the lost in the mall study was "proof" that implanting traumatic memories was possible. (p. 99)

It has also been contended that the event of being lost in a shopping mall is familiar to most people and, therefore, should be relatively easy to implant in memory. Children are often warned about the dangers of getting lost, have fears about getting lost, read classic tales about children who get lost (e.g., Hansel and Gretel, Snow White and the Seven Dwarves, Pinocchio, Goldilocks and the Three Bears), and often do get lost, if only briefly.[273] In addition, it is possible that a child might be lost in a shopping mall, even if briefly, and that it did occur but the adult has forgotten the event or the child was with another caregiver. In addition, the age of the child (five years) in this study is of relevance. Many adults might accept and take on a memory for something that a parent or older sibling said occurred when the child was aged five years but may be less willing to consider that this occurred when they were older unless they themselves explicitly remembered it.

The mall study has also been criticized for the inference that being lost while shopping is analogous to recollection of traumatic abuse during childhood.[274] [275] [276] In particular, Pezdek et al. (1997)[277] set out to replicate this study using 20 participants. One false event, an incident very similar to that used by Loftus and Pickrell described the subject being lost in a mall while shopping with a parent (the relatively plausible event). The other false event described the subject receiving a rectal enema for constipation (the relatively implausible event). Pezdek and colleagues noted that much of the research on planting false memories was used to evaluate the probability of planting false memories for childhood sexual abuse and, therefore, they selected a false event that might be seen to approach this experience. This particular false event was suggested because, like sexual abuse, being given a rectal enema may be shameful and embarrassing and involves discomfort in a private part of the body. They reported that the most important finding involved the number of participants who remembered the relatively more plausible versus the relatively less plausible false event. Three participants remembered the false event about being lost and recalled additional details of this event. This figure (15%) was lower but compared fairly well with Loftus and Pickrell's report of 25% false recall for the same false event. However, none of the participants remembered the false event about receiving a rectal enema. Pezdek et al. noted that although it may be relatively less difficult to plant a false memory that an adult had been lost in a mall when he or she was a child, it is more difficult to plant a false memory in an adult that he or she had received a rectal enema as a child. They concluded that because the findings of Loftus and Pickrell in the lost in the mall study are frequently applied to cases involving adults'

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273 Pezdek, K., Finger, K., & Hodge, D. (1997). Planting false childhood memories: The role of event plausibility: *Psychological Science, 8*(6), 437-441

274 Brewin, C. R., & Andrews, B. (2017). Creating memories for false autobiographical events in childhood: A systematic review. *Applied Cognitive Psychology, 31*(1), 2–23.

275 Murphy, W. J., Mitchell, M., & Sardina, A. (2013). Analysis of Loftus, E. & Pickrell, J. E. (1995). *The formation of false memories.* https://blogs.brown.edu/recoveredmemory?s= Murphy

276 Pezdek, K., Finger, K., & Hodge, D. (1997). Planting false childhood memories: The role of event plausibility. *Psychological Science, 8*(6), 437–441.

277 *Ibid;* Pezdek, K., Finger, K., & Hodge, D. (1997).

memory for childhood sexual abuse, it is especially important to evaluate the appropriateness of this generalization.

The Pezdek et al. study will be discussed further below. In addition, the lost in the mall experimental paradigm cannot be seen to be in any way analogous to a therapist suggesting that a patient may have been abused in childhood. Therapists do not invite trusted family members to convince a client that childhood abuse has occurred. [278]

Other studies cited by memory expert witnesses include two experiments conducted by Braun et al. (2002).[279] For the first, they recruited 107 undergraduate student participants who viewed an advertisement for Disney that suggested that they had shaken hands with Mickey Mouse as a child. Relative to controls, the ad increased participants confidence that they personally had shaken hands with Mickey as a child at a Disney resort. The authors considered the possibility that the increased confidence could be due to a revival of a true memory or the creation of a new, false one. For the second experiment 167 participants viewed an ad for Disney that suggested that they shook hands with an impossible character (e.g., Bugs Bunny who was a Warner Bros character who would not have been at a Disney park). Again, relative to controls, the ad increased confidence that they personally had shaken hands with Bugs Bunny as a child at a Disney resort. The authors concluded that, "*The two studies provide empirical evidence for autobiographical advertising's influence on how consumers remember their past. Specifically, it was found that autobiographically focused advertising can make events (even impossible ones) seem more likely to have happened to consumers as children."…….Previous work on false memories finds that very similar characters, for example, Mickey Mouse and Minnie, are easily substituted for one another in memory (Loftus, 1997)."*

Hyman et al. (1995)[280] conducted two experiments. The first involved 20 introductory psychology student participants. The questionnaires sent to their parents included questions about specific childhood events that occurred between the ages of two to 10 years, in six event categories. The categories included were: (1) getting lost; (2) going to the hospital: (3) an eventful birthday; (4) loss of a pet; (5) a family vacation; and (6) interaction with a prominent or famous person. For each event described, parents were asked to indicate the age of their child when the event occurred, and to describe activities, places, and individuals involved in the event. In addition, two false event descriptions were used, with one event being positive and one negative in emotional valence. For example, within the eventful birthday category, the positive event was the individual's birthday party at age five during which pizza were served and a clown visited. Within the going to the hospital category, the negative event was presented as an overnight visit to the hospital at age five due to a high fever and a possible ear

278 Blizard, R. S., & Shaw, M. (2019). Lost-in-the-mall: False memory or false defense? *Journal of Child Custody*, *16*(1), 20-41.

279 Braun, K. A., Ellis, R., & Loftus, E. F. (2002). Make my memory: How advertising can change our memories of the past. *Psychology & Marketing*, *19*(1), 1-23.

280 Hyman Jr., I. E., Husband, T. H., & Billings, F. J. (1995). False memories of childhood experiences. *Applied Cognitive Psychology*, *9*, 181-197.

infection. During the first interview no participants incorporated any of the false information into an event description. During the second interview four of the 20 participants (20%) incorporated false information in an event description. The authors concluded that they had demonstrated that individuals will create false recalls of childhood experiences in response to misleading information and the social demands present in repeated interviews. In common with other studies, inaccuracies where they did occur were in the details of an event that had in fact taken place rather than a false memory for a completely new event.

The second experiment by Hyman et al. utilised 51 students as participants. They were told that their parents had reported various events (some true and some false) that had occurred when they were aged two to 10 years. The first false event was attending the wedding reception of a friend of the family and accidentally spilling a punch bowl. The second false event was having to evacuate a grocery store when the overhead sprinkler systems erroneously activated. The third false event was being left in the car in a parking lot and managing to release the parking brake resulting in the car rolling into something. The focus of the study was the impact of repeated interviews. None of the participants provided false recalls at the first interview but, by the third interview, 13 of the 51 participants did. Of the 13, however, only six gave false recall that was very clear; five were less clear false recalls and two recalled the false event attributing the false recall to an image and expressed doubts as to whether image was actually a memory of the event.

In similar vein, Hyman and Billings (1998)[281] involved 66 introductory psychology students as participants. In the first interview, the interviewer first told the participants that they would be asked about some childhood events based on information their parents had provided. For this study all students were asked about the same false event: *"when you were five you went to the wedding of a friend of the family and at the reception you were running around with some other kids, bumped into the table holding the punch bowl, and spilled the punch on the parents of the bride."* The authors reported that 27% of the participants created false childhood memory reports in response to the repeated false event (15% were clear false memories and 12% were partial false memories). They concluded "*This not only replicates the creation of false memories in this type of interview context, but also closely mirrors the percentage of false memories observed in Hyman et al. (1995) and Loftus and Pickrell (1995)."* As with the Loftus and Pickrell study, the false event was one that was said to have occurred when they were very young, they were told the event had been remembered by their parents, and the interview was conducted in a leading and persuasive manner.

Lindsay et al. (2004)[282] asked 45 undergraduate student participants to work at remembering three school-related childhood events (two true events provided by parents, one experienced in Grade 5 or 6 and the other in Grade 3 or 4, and one pseudoevent). By random assignment, 23 of the participants were also given their school classes' group photos from the

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281 Hyman, I E., & Billings, J. Jr. (1998). Individual differences and the creation of false childhood memories. *Memory, 6*(1), 1-20.

282 Lindsay, D. S., Hagen, L., Read, J. D., Wade, K. A., & Garry, M. (2004). True photographs and false memories. *Psychological Science, 15*, 149-154.

years of the to-be-recalled events as memory cues. All parents reported that their child never experienced the target pseudoevent (putting Slime, in the teacher's desk in Grade 1 or 2; i.e., 5 or 6 years old). Participants were given a narrative customised to use their name and their teacher's name. In Session 1, 13.6% of the 22 participants in the no-photo condition were judged to have memories of the pseudoevent, and an additional 31.8% were classified as having images but no memories. At the end of Session 1, participants were told that for the rest of the experiment they were to focus their efforts on recalling the (pseudo) event to spend some time each day over the next week working at remembering more about that event, and were given a printed copy of the narrative (and, for participants in the photo condition, a copy of the class photo) to use as a memory cue. At session 2, 22.7% of the 22 participants who were not shown the school photos were judged as having memories of the pseudoevent, and an additional 22.7% classified as having images but not memories. In Session 2, however, 65.2% of the participants in the photo condition were judged to have memories of the pseudoevent, and an additional 13% were scored as having images but not memories, for a total of 78.2%. False reports in Session 2 were significantly more common in the photo than the no photo condition, both when measured with the relatively strict memories criterion. The authors concluded that "*the results converge with prior evidence that combining a plausible narrative attributed to a family member with social pressure, demand characteristics, and sustained memory recovery techniques can lead a substantial percentage of undergraduate subjects to report memories of a childhood pseudoevent. Additional research is needed to assess the relative contributions of the various components of these suggestive influences in fostering false-memory reports."* As with the other studies reported above, the conditions that lead to recall amount to a degree of persuasion, seldom in evidence in cases before the courts.

Porter et al. (1999)[283] recruited 77 student participants for their study which followed the methodology as reported by Hyman et al. reported earlier in this section. Parents of the students were asked about six highly emotional events which the participant may have experienced between the ages of 4 and 10 years. The event categories were selected to be of a negative emotional tone (highly stressful and frightening to a child, but noncriminal) and such that the participant was the central "victim" in the event. The events were: a serious medical procedure, getting lost, getting seriously harmed by another child, a serious animal attack, a serious indoor accident, and a serious outdoor accident. In the first interview, one real and one false event title were presented to the participant. The participant was informed that each event had occurred according to the parents and had been randomly selected from the questionnaire. The interviewer then introduced the first event and asked the person to explain what had happened. For each event (real or false), the interviewer provided four details supposedly given by the parents. If a participant could not initially recall the real event, the participant was interviewed about an alternative real event. Failure to recall the false event (as expected) resulted in encouragement by the interviewer to take time and focus on recovering it. Next, some social pressure was applied ("Most people are able to retrieve lost memories if they try hard enough").

[283] Porter, S., Yuille, J. C., & Lehman, D. R. (1999). The nature of real, implanted, and fabricated memories for emotional childhood events: Implications for the recovered memory debate. *Law and Human Behavior, 23*, 517-537.

Guided imagery instructions were used to help people generate images for the false event ("Picture yourself in [the location], imagine what it looked like and felt like to be there. Try to remember what the weather was like, the people who were there [named], what thoughts were running through your head. Visualize what it might have been like and the memory will probably come back to you"). At the end of this interview, the participant was encouraged to take a few minutes each night to try to recover the memory and write down any thoughts pertaining to it. Of the 77 participants, 68 (88.3%) immediately recalled the real event. Overall, 20/77 or 26% of participants "recovered" a complete memory for the false event and another 30% exhibited a partial false memory. Thus, while 34 participants (44.2%) did not "recover" any false information, more than half experienced memory distortion, either partly or completely. The participants (mis)reported events but were not asked if they believed the events had really happened. As with the other studies their memory reports were produced under conditions of strong persuasion.

Shaw and Porter (2015)[284] used a modified familial-informant false-narrative paradigm to attempt to convince 30 student participants (average age 20 years) that they had committed a crime when they were between the ages of 11 and 14. The researchers provided some accurate cues from the information provided by the participants' parents/caregivers. When participants had difficulty recalling the false event, the experimenter encouraged them to try to remember it, and told them that most people can remember these kinds of memories if they try hard enough. They also were told to practice visualisation of the false event each night at home. Of the 30 participants, 21 (70%) were classified as having false memories of being involved in the criminal event resulting in police contact. The authors did not distinguish between false memories and false beliefs. Wade et al. (2018)[285] reanalysed the data using different coding and the results of this indicated that of the 30 participants, 8 (26%) reported a memory of the false events: 13 (43%) accepted the suggestion as true to some degree but did not meet the criterion for remembering and 9 (20%) rejected the false events or reported no memory for the false events. It is important to note the degree of persuasion that went into this effort to produce false reports. This included information provided by parents/caregivers, strong encouragement to "remember", regular visualisation. We are not aware of such evidence of active, strong persuasion being exercised in sexual violence cases coming before our courts.

Wade et al.[286] exposed 20 non psychology students (mean age 20 years) to a false childhood event via altered photograph and imagery instructions. Experimental confederates each provided a selection of photographs in which the participant was aged four to eight years. For each participant the authors selected and digitized three true photos of moderately significant events, such as birthday parties or family vacations and also photoshopped images

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284 Shaw, J., & Porter, S. (2015). Constructing rich false memories of committing crime. *Psychological Science, 26,* 291–301.

285 Wade, K. A., Garry, M., & Pezdek, K. (2018). Deconstructing rich false memories of committing crime: Commentary on Shaw and Porter (2015*). Psychological Science, 29*(3), 471–476.

286 Wade, K. A., Garry, M., Read, J. D., & Lindsay, D. S. (2002). A picture is worth a thousand lies: Using false photographs to create false childhood memories. *Psychonomic Bulletin & Review, 9,* 597-603.

of the participant and one or more family members into a prototype photo of a hot air balloon. At the first interview, the participants who could not recall an event (typically the false event) were reassured that *"many people can't recall certain childhood events at first because they haven't thought about them for such a long time."* They were given a few minutes to concentrate on getting the memory back. If they still recalled no details, the interviewer used context reinstatement and guided imagery to help the participant remember the event. If they still recalled no details, the interviewer introduced the next photograph and repeated the procedure. The target photo was in full view of the participants for the entire time it was discussed. At the end of the first interview, participants were given a copy of their photo booklet and were asked to take a few minutes each night to focus on recalling the forgotten event(s). Over three interviews, participants thought about a photograph showing them on a hot air balloon ride and tried to recall the event by using guided-imagery exercises. Fifty percent of the participants created complete or partial false memories. The participants were more confident that the true events had occurred than that the false event had occurred. For true events that were recalled, the participants were, on average, 90.8% confident that the event had occurred. Average confidence in the nonrecalled true events was 41.7%. The participants who "recalled" the false event were 44.5% confident that the event had occurred. By contrast, the participants classified as not remembering the false event were only 10.0% confident that it had occurred.

The authors related their results to some real-life contexts postulating that "*therapists who specialize in trauma memory often encourage their clients to peruse family photo albums as a means of "triggering" memories of childhood trauma."* Further stating that "*Viewing authentic childhood photographs while trying to recover traumatic memories may promote vivid visual images. Although some of these images are undoubtedly fragments of genuine experiences, others might be wholly fictional. Might these images—both true and false—subsequently be incorporated, along with products of suggestion and imagination, into illusory memories?"* Data indicated that subjects were not suspicious of the photographs (in 2002 photoshop was not as well-known as in 2020) conforming to a view that "the camera doesn't lie". The authors assertion that therapists use family photo albums as a means of "triggering" memories of childhood trauma is made without supporting citation and we are unaware of any empirical or clinical evidence to support this claim.

Pezdek et al. (1997)[287] were cited by the memory expert witnesses as implanting a memory in participants "*receiving holy communion despite not being Catholic".* Pezdek et al. conducted two experiments to test the hypothesis that events will be suggestively planted in memory to the degree that they are plausible and script-relevant knowledge exists in memory. In the first experiment 22 Jewish and 29 Catholic high school students were read descriptions of three true events and two false events reported to have occurred when they were 8 years old. One false event described a Jewish ritual, and one described a Catholic ritual. The majority of the Catholics (65.5%) and the Jews (86.4%) did not remember either

[287] Pezdek, K., Finger, K., & Hodge, D. (1997). Planting false childhood memories: The role of event plausibility. *Psychological Science*, *8*, 437–441.

of the two false events. Seven Catholics but no Jews remembered only the Catholic false event, three Jews but only one Catholic remembered only the Jewish false event. Two participants recalled both events. This is the part of the paper referenced by the memory expert witness. However, the memory expert witness omitted to report the results of the second experiment reported in this paper. In the second experiment, 20 experimental confederates read descriptions of one true event and two false events to a younger sibling or close relative. The more plausible false event described the relative being lost in a mall while shopping; the less plausible false event described the relative receiving an enema. This has been discussed above in relation to the Loftus and Pickrell study. Three participants remembered the false event about being lost in the mall and recalled additional details of this event. This figure compares fairly well with Loftus and Pickrell's (1995) report of 25% false recall for the same false event. However, none of the participants remembered the false event about receiving a rectal enema. This would have been an important caveat for the memory expert witnesses to have reported given that the evidence was given in a sexual violence trial.

Conclusions

As will be apparent from the descriptions of these experiments, they typically involve lying to participants by telling them that a family member confirms they were present at an event in their childhood that did not occur. The age of the child when the falsely reported event occurred was around five years old in most of the studies. Trust in a parent's memory for events occurring at that age may be greater than trust in one's own memory. In some studies participants practised imagining what might have happened at the event (that they do not recall) over three weekly sessions, guided by the experimenter. Participants then wrote accounts of the event that was later rated by the experimenter as qualifying or not as an actual memory. As is evident, the experimental procedures involved in most of these studies uses a strong degree of suggestion and social persuasion to produce a 'memory'. In most of the studies the participants are students. Evidence is lacking that these effects hold for the general population. Participants often produce something by way of false memory, but with varying degrees of confidence that they can recall the event or that the event occurred at all.

Furthermore, despite strong efforts at persuasion, effects are not universal or consistent. Among studies cited by the memory expert witnesses, the rate of false memory has ranged from zero[288] to 65 percent.[289] The zero result was from Pezdek et al. who attempted to implant a false memory of a rectal enema. The study reporting a 65 % rate was from Lindsay et al. where participants were led to believe they had put slime on a teacher's desk during early childhood. This contrast in findings may reflect differences in the event participants are asked to remember, which range from those likely to be regarded as of great personal significance to those likely to be perceived as relatively benign. The age at which the event is proposed to

288 *Ibid* Pezdek, K., Finger, K., & Hodge, D. (1997).

289 Lindsay et al., 2004). Lindsay, D. S., Hagen, L., Read, J. D., Wade, K., & Garry, M. (2004). True photographs and false memories. *Psychological Science, 15*, 149– 154.

have occurred may also be significant, with the likelihood being that participants have less trust in memory accuracy for events in early childhood.

It has been asserted by some of the memory expert witnesses and in the empirical research they cite, that the false memory implantation studies are relevant to a situation where therapists may use suggestive therapeutic techniques to implant false memories in their clients. The false memory experimental paradigm does not however represent what occurs in therapy. For example, therapists do not invite trusted family members to convince a client that childhood abuse has occurred,[290] and nor do they provide doctored photos, with the patient's picture inserted into an event where they were not actually present, as is done in some false memory investigations,[291] as has been suggested. We discuss this issue further in Chapter Eight.

Scoboria et al. (2017)[292] conducted a meta-analysis approaching researchers in Canada, New Zealand, USA, and UK who had published peer-reviewed memory implantation studies involving adult participants. Ultimately, from this pool they obtained data from eight published studies published in the years 1996 to 2012 and involving a total of 423 participants. These included (1) Desjardins and Scoboria (2007)(N=43); suggested event, trouble with teacher for putting slime on the desk;[293] (2) Lindsay et al. (2004)(N=45); trouble with teacher for putting slime on a teacher's desk; [294] (3) Hyman and Pentland (1996)(N=64) spilled punch bowl on parents of the bride at a wedding;[295] (4) Ost et al. (2005)(N=26)[296] one of eight events: going to hospital, becoming lost, an eventful family holiday, an eventful birthday celebration, wedding attended, winning a contest, death of a friend or relative (not actually used), and a serious accident involving a friend or family member (one participant only). The remainder of the studies involved participants being given false information that during childhood they had been on a hot air balloon ride (5) Garry and Wade (2005)(N=44); [297] (6) Hessen et al.

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290 Blizard, R. S., & Shaw, M. (2019) Lost-in-the-mall: False memory or false defense? *Journal of Child Custody*, *16*:1, 20-41.

291 Brewin, C. R., & Andrews, B. (2017). Creating memories for false autobiographical events in childhood: A systematic review. *Applied Cognitive Psychology*, *31*(1), 2–23.

292 Scoboria, A., Wade, K.A., Lindsay, D. S., Azad, T., Strange, D., Ost, J., & Hyman, I.E. (2017). A mega-analysis of memory reports from eight peer-reviewed false memory implantation studies, *Memory*, *25*(2), 146-163.

293 Desjardins, T., & Scoboria, A. (2007). "You and your best friend Suzy put slime in Ms. Smollett's desk": Producing false memories with self-relevant details. *Psychonomic Bulletin & Review*, *14*, 1090–1095.

294 Lindsay, D. S., Hagen, L., Read, J. D., Wade, K., & Garry, M. (2004). True photographs and false memories. *Psychological Science, 15,* 149– 154.

295 Hyman, I. E., & Pentland, J. (1996). The role of mental imagery in the creation of false childhood memories. *Journal of Memory and Language*, *35*, 101–117.

296 Ost, J., Foster, S., Costall, A., & Bull, R. (2005) False reports of childhood events in appropriate interviews. *Memory, 13*(7), 700-710.

297 Garry, M., & Wade, K. A. (2005). Actually, a picture is worth less than 45 words: Narratives produce more false memories than photographs do. *Psychonomic Bulletin and Review*, *8*, 155–161.

(2012)(N=81);[298] (7) Strange et al. (2008)(N=100); [299] and (8) Wade et al. (2002)(N=20).[300] In the meta-analysis, only 11% of participants were rated as showing a high degree of acceptance of the suggested event along with moderate imagery and elaboration. Participants were not themselves asked whether they really believed the suggested event had occurred. Two main points emerge. Firstly, a high degree of deception and effort is required to have participants accept a false memory in the laboratory setting and, secondly, even under those conditions, only a small percentage of participants fully report the false memory. These factors seem relevant to any consideration of the relevance of the cited research to sexual violence situations.

Scoboria et al. concluded that it is likely that several different factors contribute to differences in the rate of false memories across studies. For example, the nature of the suggested event and the persuasiveness of the research assistant may play roles. Another likely contributor might be variation across studies in how false memories were defined or operationalised. In summary, they state (at page 160) that *"It is simply incorrect to state that false memories are entirely false."* The caveat they placed on their results was that while the "*results firmly support the assertion that suggesting false events can produce false memory in a substantial percentage of people. On the one hand, it is likely to be more difficult to lead people to develop false beliefs or memories of childhood sexual abuse than of, say, a childhood prank. On the other hand, participants in the studies reviewed here were undergraduate students and the suggestive pressures brought to bear were brief and relatively mild".* They pointed to the difficulties in objectively determining when someone is recollecting the past, versus reporting other forms of knowledge or belief or describing mental representations that have originated in other sources of experience. They indicated that one of their important findings is that a memory report can look like a genuine memory to observers, even if the person does not explicitly report remembering the event. They reported that one tenth of the participants in the combined sample appeared to have strong episodic mental representations (i.e., memory of a specific event) of the suggested event, but ultimately reported that they did not remember it. This highlights the difference between a report and a memory which may not be the same thing.

Brewin and Andrews (2017) in reviewing the experimental literature about false memory implantation, state that there are sufficient grounds to conclude that a (probably small) minority of people might develop false memories of childhood events under these laboratory conditions and that any such memories might contain a mixture of true and false elements. While acknowledging the implications of the research for the criminal justice arena, and the extremely damaging consequences of false allegations, they opine that it cannot be

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298 Hessen Kayfitz, J., & Scoboria, A. (2012). False memory is in the details: Photographic details predict memory formation. *Applied Cognitive Psychology*, *26*, 333–341.

299 Strange, D., Wade, K., & Hayne, H. (2008). Creating false memories for events that occurred before versus after the offset of childhood amnesia. *Memory, 16, 475-484.*

300 Wade, K. A., Garry, M., Read, J. D., & Lindsay, D. S. (2002). A picture is worth a thousand lies: Using false photographs to create false childhood memories. *Psychonomic Bulletin & Review*, *9*, 597–603.

concluded that false memories of childhood events are common, that they are easy to suggest or implant or that the majority of individuals are susceptible to them.

It has also been posited that false memory research has focused narrowly on preventing unsubstantiated allegations of abuse, while neglecting the possibility of testimony of genuine abuse victims/survivors being wrongly dismissed[301] and also deflecting inquiry away from researching how offenders may interfere with survivors' memories for abuse.[302]

301 Blizard, R. S., & Shaw, M. (2019). Lost-in-the-mall: False memory or false defense? *Journal of Child Custody, 16*(1), 20-41.

302 Becker-Blease, K., & Freyd, J. J. (2017). Additional questions about the applicability of "false memory" research. *Applied Cognitive Psychology, 31*(1), 34–36.

CHAPTER EIGHT

RECOVERED MEMORY AND REPRESSION

Memory expert witnesses have provided opinions to the courts on 'recovered memory' and 'repressed memory'. These concepts have been associated with controversy both in the psychology/mental health domain and legal domain. In this chapter we firstly give some historical background to the controversy, then we examine the briefs offered by memory expert witnesses that refer to recovered memory and repressed memory, and then comment on the assertions made in light of clinical and empirical evidence.

Background to 'recovered memory' and 'repressed memory'

For over one hundred years, those involved in the treatment of trauma and researchers involved in understanding trauma have noted the phenomenon of short-term or long-term amnesia for distressing negative events. Thom and Fenton (1920)[303] described the loss of memory for combat trauma, noting that memory often returned with psychotherapy. McFarlane and van der Kolk (1996)[304] observed that the issue of traumatic amnesia and delayed recall was not controversial when it was discussed in literature in the 1940s when authors gave detailed descriptions of it in books on combat neuroses[305] or later when Sargant and Slater (1941)[306] reported military personnel admitted to a field hospital had amnesia for trauma, or when van der Kolk noted it in Vietnam combat veterans in 1989.[307] However, they reported that when similar problems started to be documented in girls and women in the context of domestic abuse, this was unacceptable and that the issue of memory "moved from science into politics" (p. 566).[308]

In the 1980s and 1990s, there was a backlash against the increased recognition of child sexual abuse and prosecution of those cases.[309] [310] [311] [312] In this context, the issue of false

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303 Thom, D., & Fenton, N. (1920). Amnesias in war cases. *American Journal of Insanity, 76,* 437-448.

304 McFarlane, A. C., & van der Kolk, B. A. (1996). Conclusions and future directions. In B. A. van der Kolk & A. C. McFarlane & L. Weisaeth (Eds.), Traumatic stress: The effects of overwhelming experience on mind, body, and society (pp. 559-575). New York: The Guilford Press.

305 McFarlane and van der Kolk citing Kardiner, A. (1941). *The traumatic neuroses of war*. National Research Council. https://doi.org/10.1037/10581-000 and Myers, C. S. (1940). *Shell shock in France* 1914-1918. University Press; Macmillan.

306 Sargant, W., & Slater, E. (1941). Amnesic syndromes in war. *Proceedings of the Royal Society of Medicine, 34,* 757-764.

307 van der Kolk, B. (1989). The compulsion to repeat the trauma: Re-enactment, revictimization, and masochism, *Psychiatric Clinics of North America*, *12*(2), 389-411.

308 McFarlane, A. C., & van der Kolk, B. A. (1996). Conclusions and future directions. In B. A. van der Kolk & A. C. McFarlane & L. Weisaeth (Eds.), Traumatic Stress: The effects of overwhelming experience on mind, body, and society (pp. 559-575). New York: The Guilford Press.

309 Salter, A. C. (1998). Confessions of a whistle-blower: Lessons learned. *Ethics & Behavior, 8*(2), 115-124.

310 Bolen, R. M. (2001). *Child sexual abuse: Its scope and our failure*. New York: Academic/Plenum Publishers.

311 Conte, J. R. (1994). Child sexual abuse: Awareness and backlash. *The Future of Children, 4*(2), 224-232.

312 Olafson, E., Corwin, D. l., & Summit, R. C. (1993). Modern history of child sexual abuse awareness: Cycles of discovery and suppression. *Child Abuse & Neglect, 17,* 7-24.

memory reached prominence in the early 1990s in USA with the formation of the False Memory Syndrome Foundation (FMSF) in 1992. The FMSF was formed by Pamela and Peter Freyd after their adult daughter Jennifer Freyd (now a prominent academic researcher) accused Peter Freyd of sexual abuse when she was a child. Following this, in New Zealand in 1994, Felicity Goodyear-Smith formed the group, Casualties of Sexual Allegations or COSA, which had a brief history. The USA based FMSF was formally dissolved in December 2019. However, during the 28 years of its existence, the FMSF presented a powerful influence and some of its members went to extraordinary lengths to discredit both those who had made allegations of sexual abuse and the therapists to whom they had reported. This included encouraging those accused to follow an alleged victim to their therapist's office, and to interrogate others to whom the person may have reported, and suggesting that they pose as a patient, and picket therapists offices.[313]

Pope (1996)[314] in questioning the validity of the False Memory Syndrome (FMS) noted that *"Expert witnesses, therapists, policy makers, reporters, the courts, graduate courses, and continuing education programs could thus cite a growing literature accepting and helping institutionalize the notion that false memory syndrome was not only a scientifically validated disorder caused by psychotherapy, but that the number of documented cases was exceptionally large."*

While, as we acknowledge later in this chapter, it cannot be denied that some therapists may have used unvalidated and unethical methods for assessing child sexual abuse, it is extremely doubtful that this was an adequate foundation for the purported existence of FMS or, as suggested by Goldstein and Farmer (1993), that it "*is an iatrogenic disease created by therapy … that has reached epidemic proportions."* (p. 9)[315]

There is, in fact, no such syndrome as indicated in the title False Memory Syndrome.[316] A review of the relevant literature has demonstrated that the existence of such a syndrome lacked general acceptance in the mental health arena, and that the construct was based on a series of faulty assumptions, many of which have been scientifically disproven. Dallam

313 See Pope, K. S. (1996). Memory, abuse, and science: Questioning claims about the False Memory Syndrome epidemic. *American Psychologist, 51*(9), 957-974.

314 Ibid Pope, K. S. (1996).

315 Goldstein, E. & Farmer, K. (1993). *True stories of false memories*. Boca Raton, FL: SIRS Books. Cited by Pope (1996).

316 The definition of false memory syndrome found in the literature published by the FMSF was written by John Kihlstrom, who has served as an FMSF Scientific and Professional Advisory Board member. The False Memory syndrome was defined by Kihlstrom as "a condition in which a person's identity and interpersonal relationships are centered around a memory of traumatic experience which is objectively false but in which the person strongly believes. Note that the syndrome is not characterized by false memories as such. We all have memories that are inaccurate. Rather, the syndrome may be diagnosed when the memory is so deeply engrained that it orients the individual's entire personality and lifestyle, in turn disrupting all sorts of other adaptive behaviors. The analogy to personality disorder is intentional. False Memory Syndrome is especially destructive because the person assiduously avoids confrontation with any evidence that might challenge the memory. Thus, it takes on a life of its own, encapsulated, and resistant to correction. The person may become so focused on the memory that he or she may be effectively distracted from coping with the real problems in his or her life." (Kihlstrom, 1993; Kihlstrom, 1998, p. 16; also quoted in FMSF, 1995)

(2001) in reviewing epidemiological evidence and the research literature concluded that *"…in the absence of any substantive scientific support, 'False Memory Syndrome' is best characterized as a pseudoscientific syndrome that was developed to defend against claims of child abuse."* [317]

The memory expert witnesses' briefs of evidence about 'recovered memory' and 'repression'

The memory expert witnesses have provided statements and citations that indicate a concern that people make false allegations after having 'recovered' memories during therapy of child sexual abuse, or that they have in other ways 'recovered' false memories that have hitherto been 'repressed'. There are two strands to this argument, one being that therapists (albeit perhaps unwittingly) implant false memories of child sexual abuse in their clients, and the other being about whether 'repression' and subsequent 'recovery' of childhood memories of abuse is possible. However, since the memory expert witnesses conflate these two issues in citing literature, we describe the literature in the first instance and then later deal with those specific to therapists' methodology and the repression issue.

The memory expert witnesses have reported that the issue of people recalling events that did not occur was first raised in the 1990s, when an increasing number of people 'recovered' memories of highly traumatic events including childhood sexual abuse while undergoing therapy. We previously discussed this briefly at Chapter Four where we described memory expert witnesses' discussion of "real-life" phenomena about wrongful convictions arising from mistaken eyewitness identification. They have also reported that there have been wrongful convictions arising from cases in which adults reported *"suddenly remembering childhood sexual abuse."* Memory expert witnesses have also cited laboratory research demonstrating the mechanisms by which people can come to believe a wide range of experiences that did not occur. In Chapters Five, Six and Seven we have described the laboratory research upon which this assertion has been based and we have commented on the relevance of those research paradigms to the real-life situation of sexual violence perpetrated by those by whom a victim/survivor is well known.

The memory expert witnesses have cited Bernstein and Loftus (2009) in support of the opinion that people can come to believe a wide range of experiences that did not occur. The abstract to this paper is as follows: "*How can you tell if a particular memory belonging to you or someone else is true or false? Cognitive scientists use a variety of techniques to measure groups of memories, whereas police, lawyers, and other researchers use procedures to determine whether an individual can be believed or not. We discuss evidence from behavioral and neuroimaging studies and research on lying that have attempted to distinguish true from false memories."*

317 Dallam, S. J. (2001). Crisis or creation? A systematic examination of False Memory Syndrome. *Journal of Child Sexual Abuse, 9*(3/4), 9-36.

The conclusion of the authors is notably more circumspect than the memory experts' opinions indicate. Bernstein and Loftus conclude after reviewing the behavioural and neuroimaging studies that, "*However, as we have noted, it might be virtually impossible to tell reliably if a particular memory is true or false without independent corroboration. A focus on groups of memories and on the individual reporting the memory provides useful information about the mechanisms underlying true and false memory. Unfortunately, such approaches cannot answer our question.* ***Also, past work involving word lists and other pallid materials is far removed from the richer autobiographical memories that the courts care about."*** [318] And finally, "*When we obtain better imaging tools and analysis techniques, better individual difference measures (perhaps a battery of such measures used in conjunction with a battery of behavioral measures), and tools not yet invented, we might combine these measures in some way to predict whether a particular memory is likely true or false."*

In similar vein, the memory expert witnesses have also cited Loftus and Ketcham (1994); McNally (2005); and Noblitt and Perskin (2000). Citing McNally (2005) they have reported that most of these people who have 'recovered' memories had no recollection of these events prior to entering therapy. One memory expert witness reported that in the 1990s researchers began to examine the factors that can lead to an entirely false memory, this being motivated by the cases presenting in criminal courts across the USA wherein the only evidence was a person's 'recovered memory', a memory they claimed they had 'repressed' and 'recovered'. In this regard, the memory expert witness cited a review by Strange et al. (2007). They also reported that "real-world" examples indicated that people can come to remember entirely false but traumatic experiences, citing Lief and Fetkewicz (2000) as a case of people who thought they had recovered previously 'repressed' memories of satanic abuse, then retracted them. We describe these citations below.

The Loftus and Ketcham (1994)[319] citation is of a book entitled "*The Myth of Repressed Memory."* The review summary to the book reads, *"According to many clinical psychologists, when the mind is forced to endure a horrifying experience, it has the ability to bury the entire memory of it so deeply within the unconscious that it can only be recalled in the form of a flashback triggered by a sight, a smell, or a sound. Indeed, therapists and lawyers have created an industry based on treating and litigating the cases of people who suddenly claim to have 'recovered' memories of everything from child abuse to murder. This book reveals that despite decades of research, there is absolutely no controlled scientific support for the idea that memories of trauma are routinely banished into the unconscious and then reliably recovered years later. Since it is not actually a legitimate psychological phenomenon, the idea of 'recovered memory and the movement that has developed alongside it is thus closer to a dangerous fad or trendy witch hunt."*[320]

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318 Bernstein, D. M., & Loftus, E. F. (2009). How to tell if a particular memory is true or false. *Perspectives on Psychological Science, 4*, 370-374. Emphasis added

319 Loftus, E. F., & Ketcham, K. (1994). The myth of repressed memory. New York: St Martin's Press.

320 https://www.goodreads.com/book/show/668777.The_Myth_of_Repressed_Memory

This book squarely places a firm divide in relation to the issue of 'recovered memory'. Pope (1996) [321] describes this divide: *"On one side are the "True Believers," who insist that the mind is capable of repressing memories and who accept without reservation or question the authenticity of recovered memories. On the other side are the "Skeptics," who argue that the notion of repression is purely hypothetical and essentially untestable, based as it is on unsubstantiated speculation and anecdotes that are impossible to confirm or deny (Loftus & Ketcham, p. 31)."* The language adopted in describing the women who made allegations to therapists is indicative of the polarised views inherent in the book: "*Soon it was time to plunge into the gory details. A veritable competition began as one woman after another related her grisly stories, progressively upping the ante of horror."* (Loftus & Ketcham, p. 203).

The McNally (2005)[322] reference is to a book. His review purports to provide a comprehensive, balanced analysis of the clinical and scientific evidence bearing on this issue. He synthesized clinical case reports and the literature on the effects of stress, suggestion, and trauma on memory and concluded that traumatic experiences are unforgettable, but that people sometimes do not think about disturbing experiences for long periods of time.

The Noblitt and Perkin (2000)[323] citation refers to a revised edition of a book about cult and ritual abuse. We were unable to access this book.

Strange et al. (2007)[324] wrote a chapter in the book "Do Justice and Let the Sky Fall: Elizabeth Loftus and her Contributions to Science, Law, and Academic Freedom" edited by Garry and Hayne (2007).[325] This is a book written in large part to honour Elizabeth Loftus. The chapter by Strange et al. provides a review of the experimental research by Loftus on the issue of repression and recovered memories, then relates these studies to the "landmark legal case of November 1989" in which a woman alleged her father had raped and murdered her childhood friend 20 years earlier.

Lief and Fetkewicz (1995)[326] had False Memory Syndrome Foundation (FMSF) staff make telephone contact with persons who were regarded as "retractors" of sexual abuse allegations. They mailed a detailed questionnaire to 100 persons who had agreed to participate. Of these, 40 returned the survey instrument with many of those who did not participate reporting by phone or letter that it was too emotional. It was reported by the authors that a few were advised by their attorneys to decline; and that one had committed suicide. For

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321 Pope, K. S. (1996). Memory, abuse, and science: Questioning claims about the False Memory Syndrome epidemic, *American Psychologist, 51*, 9, 957-974.

322 McNally, R. J. (2005). *Remembering trauma.* Cambridge, MA: Harvard University Press.

323 Noblitt, J. R., & Perskin, P.S. (2000). *Cult and ritual abuse: Its history, anthropology, and recent discovery in contemporary America.* Westport CT: Praeger.

324 Strange, D., Clifasefi, S. L., & Garry, M. (2007). False memories. In M. Garry & H. Hayne (Eds.), *Do justice and let the sky fall: Elizabeth Loftus and her contributions to science, law, and academic freedom.* Hillsdale NJ: Lawrence Erlbaum Associates. (p. 137-170)

325 Garry, M., & Hayne, H. (Eds.) (2007). *Do justice and let the sky fall: Elizabeth Loftus and her contributions to science, law, and academic freedom*. Hillsdale NJ: Lawrence Erlbaum Associates.

326 Lief, H. I., & Fetkewicz, J. (1995). Retractors of false memories: the evolution of pseudomemories. *The Journal of Psychiatry & Law, 23*, 411-435.

almost all of the participants, "recovered" memories arose during therapy and over 80% stated that a direct suggestion was made by their therapist that they were victims of sexual abuse before memories were recovered. The high risk of bias in this study is obvious, the sample having been sourced in the records of FMSF and the survey conducted by their staff.

The role of therapists in the formation of false memories

The memory expert witnesses have reported that claims of recovered memories led psychological scientists to ask whether memories for entire events could be 'implanted', using similar techniques to those employed by therapists to help their clients to remember their past experiences. In this regard they reported that the Lost in the Mall study by Loftus and Pickrell (1995)[327] was the "seminal study" (see Chapter Six on memory implantation). As we stated in that chapter, the lost-in-the-mall experimental paradigm is a poor analogy for a therapist suggesting that a patient may have been abused in childhood.

The Garry et al. (1996)[328] study about "imagination inflation" (see Chapter Six) is also often cited by the memory expert witnesses in relation to their claims of therapist behavior leading to false allegations of child sexual abuse. This paper concluded that the imagination effect has relevance because *".... when a mental health professional repeatedly encourages a client to imagine an abusive childhood event, these imagination activities may unknowingly promote a greater belief that particular episodes occurred. The search for fact may create a fiction."* (p. 214). The memory expert witnesses also cite a paper by Wade et al.[329] in which participants were shown doctored childhood photographs of themselves with family members in a hot air balloon. We discussed this paper in Chapter Seven. Wade et al. related the results to the real-life context of therapy, postulating that "*therapists who specialize in trauma memory often encourage their clients to peruse family photo albums as a means of "triggering" memories of childhood trauma."*

At issue here is whether therapists do in fact "*repeatedly encourage a client to imagine an abusive childhood"* and encourage their clients to peruse family photos as a means of "triggering" memories of childhood trauma. These assertions are made without supporting citation and we are unaware of any empirical or clinical evidence to support such claims. The quotes also suggest that therapists set out to actively persuade their clients they were abused in childhood. Of particular concern here is whether such practices (and motivations) exist in Aotearoa New Zealand, and whether they were evidenced in the cases for which those briefs of evidence were prepared. Whilst some questionable therapeutic practices may have been an issue during the 1980s and 1990s in USA, there is no evidence that New Zealand therapists currently use these techniques and there were no cases in the sample of memory expert witness

327 Loftus, E. F., & Pickrell, J. E. (1995). The formation of false memories. *Psychiatric Annals*, *25*(12), 720–725.

328 Garry, M., Manning, C., G., Loftus, E., F., & Sherman, S., J. (1996). Imagination inflation: Imagining a childhood event inflates confidence that it occurred. *Psychonomic Bulletin & Review, 3,* 208-214.

329 Wade, K. A., Garry, M., Read, J. D., & Lindsay, D. S. (2002). A picture is worth a thousand lies: Using false photographs to create false childhood memories. *Psychonomic Bulletin & Review, 9,* 597-603.

briefs where this was, in fact, the case.[330] Therefore, this expert evidence given by them had no basis in the facts of the cases before the courts.

There also appears to be an assumption that it is common for memories of childhood abuse to be 'recovered' in therapy. This is rare. The significant majority of clients coming to therapy for child sexual abuse issues over the last 20 years, have already reported their victimisation to others. People go to therapists because they are bothered by memories and in order to address the issues surrounding such memories.

This is consistent with our experience (SB and FS) as clinical practitioners who have trained psychologists and other therapists, supervised the clinical practice of clinical psychologists and other practitioners, and ourselves assessed and treated survivors of child sexual abuse.

Entry for approval for ACC funded sensitive claims therapy is a report of abuse or trauma. Some clients who seek assistance from private practitioners for other reasons may report childhood sexual abuse once a trusting relationship has been established. They have usually been continuously aware of the trauma they report but most often they have avoided thinking about it. They do not try to remember the trauma (as has been suggested by one memory expert witness) but may have periods where they do not remember all details of the trauma until they are reminded of it (usually by some unexpected event). It is our experience, and those of the clinicians with whom we have worked, that the details are often disjointed and jumbled, this being consistent with symptoms of Posttraumatic Stress Disorder (PTSD) (Criterion D1 DSM-5; p. 271).[331] This is also noted in the relevant literature (e.g., Brewin, 2014; [332] Ehlers, Hackmann & Michael, 2004).[333] It is also our experience that most would prefer not to remember the traumatic events and would wish to be free of the intrusive re-experiencing phenomena that usually accompany PTSD.

It is not our experience that therapists (including clinical psychologists) suggest to clients that they have been sexually abused. We know of no instance where a therapist has

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330 There was one case wherein the complainant had been referred by her family doctor to a hypnotherapist for treatment for insomnia. She attended one session and also spoke to the hypnotist about her eating disorder (bulimia). She reportedly did not discuss the defendant or any aspect of the alleged rape or any of the other associated alleged sexual offences with the hypnotherapist. She reported to Police that she had discussed different worries and anxieties and that she did not feel as if she was hypnotised. Later that evening the complainant collapsed crying and the next day that she remembered all remaining aspects of the alleged rape. The methodology of the hypnotist was not apparent and he had kept no notes, although he told police he never made suggestions about possible trauma to clients. However, by the time the case went to trial, the hypnotherapist had died and was not available for cross-examination and the charges were dismissed (s 147). It would appear that this case was not one of "retrieval" of memories by guided imagery or hypnosis.

331 American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders. (5th Edition).

332 Brewin, C.R. (2014). Episodic memory, perceptual memory, and their interaction: Foundations for a theory of posttraumatic stress disorder. *Psychological Bulletin, 140,* 69-97.

333 Ehlers, A., Hackmann, A., & Michael, T. (2004). Intrusive re-experiencing in posttraumatic stress disorder: Phenomenology, theory, and therapy. *Memory, 12,* 403-415.

required a client to bring photograph albums to therapy for the purposes of "uncovering memories" or require them to bring photograph albums at all. We know of no instances where therapists have brought a client's family members to a therapy session to convince them they have been sexually abused as a child. While it is not the role of a clinician to cross-examine a client about the reality of their memory reports, at the same time, it is their task to promote the objective reality of clients. In this regard, if an adult client reported sexually abusive events said to have occurred once at the age of two or three years, tactful discussion of the phenomenon of childhood amnesia might be indicated, or else the reported time frame explored. In our experience, the majority of clinicians do not uncritically accept every utterance of a person assessed or treated.

Can an event be forgotten and then recovered?

Some memory expert witnesses have sought to discredit the concept of recovered memory by referring to the notion that so-called recovered memories have been 'repressed' and then stating that there is no scientific evidence for 'repression' and further suggesting that 'traumatic amnesia' maintains traction among people who are not memory scientists nor properly trained in the science of memory. We contend that such an assertion does not have a consensus, even amongst cognitive scientists.

As Brewin and Andrews (2014)[334] have indicated, it is essential to distinguish between the observed phenomenon (that traumatic events are sometimes forgotten) and the explanation (whether this be referred to as 'repression', 'dissociative amnesia', or 'deliberate forgetting'). The fact that specific terms used by way of explanations (e.g., 'repression') can be regarded as problematic, does not invalidate the original observation of the phenomena of apparently forgetting then remembering. This 'problem' with the term 'repressed' arises in part from its original use in psychoanalytical theory. Freud variously used the term to imply both unconscious and deliberate suppression of a memory. Unconscious repression implies that the memory becomes inaccessible because of its traumatic or emotionally unpleasant nature. It is taken to mean absolute memory loss for the event and does not allow for partial or vague memories to exist. The term was also used by Freud to refer to a deliberate process of not thinking about distressing events or topics.

Clinical research has supported the concept of dissociative amnesia and recovered memory in relation to traumatic events. Chu et al. (1999)[335] in reviewing the literature reported that clinical investigators have found relatively high rates of self-reported amnesia for childhood sexual abuse (19 percent to 62 percent) in clinical populations being treated for trauma related conditions. They reported their own investigation of 90 female patients who were in a unit specializing in the treatment of trauma-related disorders. Participants who reported recovering memories of abuse generally recalled these experiences while at home,

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334 Brewin, C. R., & Andrews, B. (2014). Why it is scientifically respectable to believe in repression: A response to Patihis, Ho, Tingen, Lilienfeld, and Loftus (2014). *Psychological Science, 25*(10), 1964-1966.

335 Chu, J. A., Frey, L. M., Ganzel, B. L., & Matthews, J. A. (1999). Memories of childhood abuse: Dissociation, amnesia and corroboration. *American Journal of Psychiatry, 156*(5), 749-755.

alone, or with family or friends, and of the participants/subjects who had had complete amnesia and attempted to corroborate their recovered memory, 89% were able to find some corroboration or verification of their abuse history. The authors concluded that abuse, particularly chronic abuse, beginning at early ages, is related to the development of high levels of dissociative symptoms including some amnesia for abuse memories.

Williams (1995)[336] followed up 129 women with documented histories of childhood sexual abuse identified in a 1970 study based on emergency room admissions. When interviewed 17 years later, 80 of the women recalled the abuse events. Sixteen percent of those who recalled the abuse reported that at some time in the past they had forgotten about it. Reviewing of the documented facts of the abuse in hospital records, indicated that there was no difference in accuracy of the descriptions of the sexual assaults when those with recovered memory were compared to those with continuous memories.

Wilsnack et al. (2002)[337] described patterns of forgetting and remembering childhood sexual abuse in a nationally representative sample of 711 US adult women. More than 25% of participants who reported having been sexually abused (15 % of the total sample) indicated that they had forgotten the abuse for some period of time but later remembered it on their own. The authors concluded that forgetting and subsequently remembering abuse experiences was not uncommon.

Loftus et al. (1994) found that of 57 participants reporting childhood sexual abuse, 19 % reported forgetting the abuse for a period of time and 81 % reported always remembering part or all of the abuse.[338]

Similarly, Melchert (1996) [339] investigated several questions regarding the relationships between histories of child abuse memories, childhood memory in general, repression, and dissociation. Of the total sample, one quarter reported a history of child abuse, and 18% of these reported a period when they lacked memories of their abuse. These participants endorsed a variety of descriptions of their recovered memories, many of which did not suggest a lack of conscious access to the memories.

This was consistent with a 1996 review of research literature about memory for childhood sexual abuse conducted by Epstein and Bottoms (1998)[340] who concluded that a significant number of childhood sexual abuse victims report forgetting their abuse at some

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336 Williams, L.M. (1995). Recovered memories of abuse in women with documented child sexual victimization histories. *Journal of Traumatic Stress*, *8*(4), 649-673.

337 Wilsnack, S. C., Wonderlich, S. A., Kristjanson, A. F., Vogeltanz-Holm, N. D., & Wilsnack, R. (2002). Self-reports of forgetting and remembering childhood sexual abuse in a nationally representative sample of US women. *Child Abuse & Neglect, 26*(2), 139–147.

338 Loftus, E. F., Polonsky, S., & Fullilove, M. T. (1994). Memories of childhood sexual abuse: Remembering and repressing. *Psychology of Women Quarterly, 18,* 67–84.

339 Melchert, T. P. (1996). Childhood memory and a history of different forms of abuse. *Professional Psychology: Research and Practice, 27,* 438–446.

340 Epstein, M. A., & Bottoms, B. L. (1998). Memories of childhood sexual abuse: a survey of young adults. *Child Abuse & Neglect*, *22,* 1217–1238.

time, then later remembering it. More recently, DePrince et al. (2012) reviewed 25 studies reporting forgetting of child sexual abuse with rates ranging from 12% to 68%. They observed that reported memories were often partial rather than all-or-none. They reported that participants in the samples would have known that the abuse events had occurred but that later they had additional details or additional incidents of the abuse.

As at 2015, over 110 documented and verifiable cases of substantiated recovered memory from legal, clinical, scientific, and other sources have been collected by Ross Cheit, the director of Brown University's Recovered Memory Archive.[341] To be included in this archive, the recovered memory at issue had to be corroborated by at least one of the following sources: (a) confession, guilty plea, or self-incriminatory statement; (b) testimony from other victims (or from an eyewitness to the abuse) or corroborative documentary evidence that was vitally relevant to the charges at issue; (c) corroboration of significant circumstantial evidence. Most cases documented have more than one kind of corroboration.

In 1996 the interim conclusions of the American Psychological Society Working Group on Investigation of Memories of Childhood Abuse in relation to memory were that "*It is possible for memories of abuse that have been forgotten for a long time to be remembered. It is also possible to construct convincing pseudo-memories for events that never occurred*"[342] They also concluded that the mechanisms by which both delayed recall and pseudo-memories occur were not then currently understood.

At the same time, the British Psychological Society released a report on Recovered Memories[343] that also concluded that the mechanisms for forgetting and remembering were unclear. Later, Wright, Ost and French (2006) in referring to the issue of recovered memory and understandings reached since the 1996 report, noted "*The belief that some of these claims are based on events that did occur, some on events that did not occur, and some a combination of the two was held by us then, and research over the past decade has provided much evidence to support this view. Finally, it is important to consider the wider implications of the recovered memory debate. Child sexual abuse is a large societal problem and children often do not disclose abuse unless specifically asked (London et al., 2005). The debate about recovered memories should not be used to deny these facts. What is important for the discipline is how it has used science to inform this debate."*[344]

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341 http://www.brown.edu/Departments/Taubman_Center/Recovmem/Archive.html

342 Recovered Memories (1996.) Interim report of the Working Group on Investigation of Memories of Childhood Abuse. American Psychological Association. In K. Pezdek & W. P. Banks (Eds.). *The recovered memory/false memory debate* (pp. 371–372). San Diego, CA: Academic Press.

343 *Recovered Memories: The report of the working party of the British Psychological Society* (1996). In K. Pezdek & W. P. Banks (Eds.). The recovered memory/false memory debate (pp. 373–392). San Diego, CA: Academic Press.

344 Wright, D.B., Ost, J & French, C.C. (2006). Recovered and false memories. *The Psychologist*, *19*(6), 352-355.

Conclusion

There is strong clinical and empirical support for the phenomenon of recovered memory. However, the terminology related to 'repression' which originally derived from psychoanalytic theory has served to muddy the waters in discourse about this. Whilst most victims of trauma do continuously remember their victimisation, and wish that they did not, there are others who have, through motivated and other processes forgotten the events, at least in part and for a period of time. It is also the case that the 'lost' memories can emerge with relevant cues which may occur unexpectedly. Recovered memories themselves may, like any other memories, be accurate, inaccurate or a mixture of both.

CHAPTER NINE

MEMORY FALLIBILITY IN PERSONALLY EXPERIENCED TRAUMATIC EVENTS

While memory expert witnesses have mostly relied on laboratory research, they have also cited studies that involve personally experienced events of a stressful nature. In part, these studies are cited as demonstrations of memory fallibility to real-world events, but they are also cited because they show that even memory for traumatic events can be altered by post-event influences. Memory expert witnesses have stated that there are reliable records of what took place in these personally experienced events that allows examination of memory reports against the actual events. The events involved and the various studies are the Boxing Day Tsunami (Heir et al., 2011), Operation Desert Storm (Southwick et al., 1997), the Pearl Harbour bombing (Weintraub, 1991), the 9/11 attacks (Giosan et al., 2009; Greenberg, 2004) and the Vietnam war (Koenen et al., 2007).

In the following we describe these studies and examine the strength of support they give to opinions expressed by experts about memory fallibility in sexual violence cases. Overall, we conclude that the studies cited provide at best, limited support for claims made by memory experts.

The memory expert witnesses have stated that if people have symptoms related to past trauma, this does not mean their memory for the traumatic event is accurate. They state that there is a growing body of research that supports the hypothesis that memory distortion is a "crucial component" of one's current stress-related symptoms. In this context they cite Heir et al. (2011).[345] " It is stated that the study of over 500 Norwegian tourists who were in the area struck by the 2004 Indonesian Boxing Day tsunami shows that people remembered traumatic experiences inaccurately over time, and that the direction of change was related to symptoms of post-traumatic stress disorder (PTSD).

The focus of the Heir et al. study is PTSD rather than memory. The paper is about the relationship between PTSD symptoms (measured in a questionnaire) and participants' perception of the danger they were in at the time of the event (measured on a rating scale). Perception of danger changed between the different time periods measurements were taken, several years apart. They were not asked to describe the actual events. In addition, there were no reliable records of individuals' experience of the tsunami that could have verified the accuracy of participants' accounts even if they had been asked for these.

345 Heir, T., Rosendal, S., Bergh-Johannesson, K., Michel, P. O., Mortensen, E. L., Weisaeth, L., & Hultman, C. M. (2011). Tsunami-affected Scandinavian tourists: disaster exposure and post-traumatic stress symptoms. *Nordic Journal of Psychiatry*, *65*, 9-15.

The paper by Southwick et al. (1997)[346] was about soldiers who took part in Operation Desert Storm. The authors administered 19 item questionnaires to 59 National Guard reservists one month, and then again two years after their return from the Gulf War. Eighty-eight percent changed their responses on at least one of the 19 items and 61 percent changed two or more items. The authors reported that there was a significant positive correlation between scores on the Mississippi Scale for Combat-related Posttraumatic Stress Disorder (PTSD) and the number of responses on the trauma questionnaire changes from "No" to "Yes" at two years. They concluded that these findings did not support the position that traumatic memories are fixed or indelible. Detailed accounts of events were not examined in this study, and nor could a comparison be made to actual experiences.

However, a subsequent comment by Butler and Koopman (1998)[347] noted that the distinction between memory recall and memory report may be a factor in interpreting the results. For example, one might view endorsement of an item such as "extreme threat to your personal safety" which was the item most frequently changed by participants, as a judgement about the characteristics of the event (in this case, belief about the level of danger they were in) rather than recall of the details of the actual event. In this respect the study is similar to that of Heir et al. (2011) described above. That is, participants may have been accurate in their memory at both times but thought differently about the memory's meaning and, consequently their reports, but not their recall of the event changed. This has parallels in child sexual abuse cases in that, while a child may not necessarily experience an act of child sexual abuse as traumatic at the time it occurred, (because of grooming and other factors), as they reach adulthood, they may become aware of the implications and deviancy of the events and subsequently experience those memories as traumatic. It is also of note, that as in the study by Heir et al., there were no "reliable records" of the traumatic situations experienced against which recall of events could be examined for accuracy.

The citation Weintaub (1991)[348] was not an academic paper but rather an article in the New York Times. It concerned Brigadier General Elliot Thorpe (1897-1989) who was a Lieutenant in the US Army, and an intelligence attaché serving in Java. The article indicated apparent inaccurate memories on the part of Thorpe about the bombing of Pearl Harbour, these written in a memoir (1969) after he had retired, compared to his account at the time in 1941. While this may reflect inaccurate memories, it might also reflect the re-writing of history by a man who felt his warnings about the potential bombing of Pearl Harbour went unheeded. The situation may reflect factors that are associated with the writing of memoirs as much as it reflects the accuracy of memory.

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346 Southwick, S.M., Morgan, C.A., Nicolaou, A.L., & Charney, D.S. (1997). Consistency of memory for combat-related traumatic events in veterans of Operation Desert Storm. *American Journal of Psychiatry, 154*, 173-177.

347 Butler, L. D., & Koopman, C. (1998). Consistency of memory among veterans of Operation Desert Storm. *The American Journal of Psychiatry*, *155*(9), 1300-1301.

348 Weintraub, S. (1991, December 4). *Three myths about Pearl Harbor*. New York Times, p. A27.

In further statements as to the inaccuracy of memory under conditions of stress, the memory expert witnesses have cited a study by Morgan et al. (2004)[349] who used as participants 509 soldiers in a US Army survival school. The course was intended to replicate the real-life experiences of prisoners of war. The participants were deprived of sleep and food for 48 hours and then interrogated. All participants experienced both high- and low-stress interrogations conducted by different instructors, these being separated by approximately four hours, and of equal duration (approximately 40 min). In the extreme stress situation, the interrogator engaged in "physical confrontation" aggression intended to be sufficient to produce physiological and psychological stress responses similar to those experienced by people experiencing life threats. In the less stressful situation, there was no physical confrontation, but the interrogator tried to trick the participant into producing information. The level of stress was assumed to be less than that imposed on the "physical confrontation" group. In relation to stress and the possible impact of this on memory, participants were administered the Dissociative Symptom Scale (CADSS) after completing the interrogation phase. Twenty-four hours after release, the participants were asked to identify their interrogator from either a lineup or photo array. For some participants, the interrogator was actually present in the lineup (or array), and for the remainder he was not. The findings were that soldiers subjected to the less extreme stress were better able to identify interrogators than the soldiers subjected to extreme stress.

The memory expert witness has claimed that these results apply more broadly than to situations in which victims try to identify perpetrators in lineups, and show that even people who are highly trained to work under extreme conditions are not protected from making errors. However, as will be apparent, this was primarily a study of 'eyewitness identification' of strangers (albeit that participants saw them for up to 40 minutes). It is of relevance that the participants were sleep and food deprived for 48 hours prior. Participants were not tested for their recall of the actual events that took place, but only the identification of the perpetrator. It shows a relationship between stress and inaccuracy, limited in this case to the identification of a perpetrator. The inaccuracies were false positives but not false negatives and confidence was lower in the high stress group indicating more caution in making the identification. The relevance of this study to the circumstances of sexual violence is weak.

Giosan et al. (2009)[350] evaluated 2,641 disaster restoration workers deployed at the World Trade Center site following the 9/11 attack, examining the relationships between the memory for the attack and PTSD. Each participant was evaluated twice by use of clinical interviews conducted over one year apart. Their recollection of the traumatic events was also assessed at these times. The 11 event variables targeted were as follows: witnessed people jump from buildings, seeing human remains, concerned about someone at the WTC, knew

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349 Morgan, C.A. III., Hazlett, G.A., Doran, T., Garrett, S., Hoyt, G., Baranoski, M. et al. (2004). Accuracy of eyewitness memory for persons encountered during exposure to highly intense stress. *International Journal of Psychiatry and Law, 27*, 265–279.

350 Giosan, C., Malta, L., Jayasinghe, N., Spielman, L., & Difede, J. (2009). Relationships between memory inconsistency for traumatic events following 9/11 and PTSD in disaster restoration workers. *Journal of Anxiety Disorders, 23*, 557-561.

someone injured, knew someone killed, attended funeral or memorial service, assisted people, was displaced in residence, having to evacuate, felt life in danger and disturbed by smell at the site. While overall, recall of events was consistent between the two time periods, the results showed that recall of traumatic events amplified over time and that increased endorsement of traumas at the second interview was associated with more severe PTSD symptoms. It was also shown that, of all the exposure variables targeted memory of the perception of life threat and of seeing human remains were differentially associated with PTSD symptoms. The greatest memory inconsistency was for a subjective event "being disturbed by the smell at the WTC site" for which half of the participants changed their reports from yes to no or from no to yes at the second interview.

Koenen et al. (2007)[351] in 1984 as part of a study of the health and wellbeing of American Legion members, and again in 1998, mailed survey forms to Vietnam American veterans and reported a sample of 1,462 participants who had responded on both occasions. They examined the consistency in combat exposure reports and their relation to PTSD symptoms and found that combat exposure reports were highly reliable (test–retest correlation=0.87), the authors describing this as *"excellent test–retest reliability over a 14-year period."* However, any changes in exposure reporting were related to changes in PTSD symptoms, specifically reexperiencing symptoms in that veterans who met criteria for a presumptive diagnosis of PTSD in 1984 but not in 1998 showed, on average, a significant decrease in combat exposure reported, and those who met criteria in 1998 but not in 1984 showed a significant increase. The authors concluded that although the effect sizes for these changes were small, they resulted in a stronger dose-response relationship between combat exposure and PTSD when both were assessed in 1998. The authors themselves noted that neither objective measures of the actual combat experienced, nor baseline measures of combat exposure soon after the exposure occurred, were available for the sample. Furthermore, they noted that because the data did not provide information on the accuracy of participants' memories of their combat experiences, it is unknown as to whether the changes in responding produced inflated or more accurate reports. Changes in reporting were positively associated with changes in PTSD symptoms and, accordingly, the data suggest that the very symptoms of PTSD most related to the individual veteran's memory of combat experiences, reexperiencing symptoms, were most related to increases in exposure reporting.

The studies by Giosan et al. and Koenen et al. show that the presence of PTSD symptoms is associated with greater inconsistency between reports of traumatic events across two time periods. However, both studies demonstrate that, overall, reports were mostly consistent across time periods, and that changes in reports were in relation to aspects of the central event rather than a new complete memory of the whole event. Where there are inconsistencies, it is not known which memory report is the more accurate because there is no reliable record of the original event. Likewise, the absence of a reliable record of the original event also makes

[351] Koenen, K. C., Stellman, S. D., Dohrenwend, B. P., Sommer, J. F., & Stellman, J. M. (2007). The consistency of combat exposure reporting and course of PTSD in Vietnam War veterans. *Journal of Traumatic Stress, 20*, 3-13.

it impossible to tell whether both reports were inaccurate. Another point is that these studies relied on cued recall, whereas allowing free recall of as much or as little as each individual can remember leads to greater accuracy. Neither study demonstrates false memory for a completely new event memory.

Flashbulb memories

Memory expert witnesses have also cited studies of what is known as flashbulb memory in asserting that people can be inaccurate in their memory even of unexpected, highly stressful, personally experienced events. They have cited in this regard examples from the Pearl Harbour bombing (Weintraub, 1991), and the 9/11 attacks (Greenberg, 2004).

The theory of flashbulb memory arose after Brown and Kulik (1977) studied people's memories of the assassination of John F. Kennedy. They defined flashbulb memories as memories for the circumstances in which one first learned of a very surprising and consequential (or emotionally arousing) event.[352]

The Weintraub report has been described already. The Greenberg (2004)[353] paper cited by the memory expert witness was a commentary on the false 'flashbulb' phenomenon, with reference to George W. Bush's memory for the 9/11 attacks. On at least three occasions, months apart, the President was asked how he heard the news of the attacks. His answers contained substantial inconsistencies between reports.

The memory expert witnesses have also cited a flashbulb memory study by Talarico and Rubin (2003)[354] which they cite as also showing inaccuracy of recall of a stressful event. In this study, university students recorded their memory of first hearing about the terrorist attacks of September 11 and of a recent everyday event. They repeated these recordings either 1, 6, or 32 weeks later. Consistency for the flashbulb and everyday memories did not differ, in both cases declining over time. However, ratings of vividness, recollection, and belief in the accuracy of memory declined only for everyday memories. The authors concluded that the accuracy of flashbulb memories may be no greater than for everyday events, but that confidence in their accuracy is greater than confidence about everyday events.

The memory expert witnesses also cite Hirst et al (2009)[355] who surveyed participants about their flashbulb memories of the 9/11 terrorist attack (where they were , how they learned about the attack etc), their memory for the event itself, whether they suffered personal loss as a result of the attack and also their present feelings about the attack. Participants (3000 in

352 Brown, R., & Kulik, J. (1977). Flashbulb memories. *Cognition, 5,* 73-99. At page 73.

353 Greenberg, D.L. (2004). George Bush's false 'flashbulb' memory of 9/11/01. *Applied Cognitive Psychology, 18,* 363-370.

354 Talarico, J. M., & Rubin, D. C. (2003). Flashbulb memories are special after all; In phenomenology, not accuracy. *Applied Cognitive Psychology, 21,* 557–578.

355 Hirst, W., Phelps, E. A., Buckner, R. L., Budson, A. E., Cuc, A., Gabrieli, J. D. E.,…. & Vaidya, C. J. (2009). Long-term memory for the terrorist attack of September 11: Flashbulb memories, event memories, and the factors that influence their retention. *Journal of Experimental Psychology: General, 138,* 161–176.

total) were surveyed on three occasions with 391 participants completing all three surveys. The findings were that the rate of forgetting for flashbulb memories and event memory (memory for details about the event itself) slows after a year, that the strong emotional reactions elicited by flashbulb events are remembered poorly, worse than non-emotional features such as where and from whom one learned of the attack, and that the content of flashbulb and event memories stabilizes after a year. A subsequent analysis of the data from that study investigated confidence and accuracy separately for specific details of their participants' flashbulb memories. The researchers found that, over time, more participants correctly remembered where they were when they learned about the attacks. Accordingly, their confidence was higher in their memory for location compared with other details.[356]

In citing these flashbulb memory studies the memory expert witnesses seem to be drawing a connection between the flashbulb memories and directly and personally experienced significant events. Whilst witnessing news items about the events such as the 9/11 attacks may be momentous and shocking, these are not the same as personally experienced traumatic events. Participants in flashbulb memory studies have not personally experienced or witnessed in person the events about which they are questioned (e.g., the 9/11 attacks). Furthermore, the flashbulb studies are about surrounding aspects of the event, albeit one they have observed rather than one in which they have participated. They are asked about the circumstances in which they first heard about the events or saw them depicted on television, what they were feeling at the time and so on.

In sexual violence the event is directly experienced and is most likely to be well remembered in its central aspects. But it is not uncommon for victims to sometimes forget the details of who they first told and when (because this can sometimes be verified). They are more likely to be accurate about what actually occurred and if there are errors, these are more likely to be errors of omission rather than commission.[357] [358] [359]

It is important to distinguish between memory consistency on different testing occasions about people's accounts of where they were and what they were doing when they heard about the event, and their memory accuracy about the objective facts about the event. It may be the case that people may not always report the exact same details of events when surveyed on separate occasions, but what they do report on each occasion may still be accurate. The studies do not target that aspect.

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356 Rimmele, U., Davachi, L., & Phelps, E.A. (2012). Memory for time and place contributes to enhanced confidence in memories for emotional events. *Emotion, 12*, 834-846

357 Sjoberg, R. L., & Lindblad, F. (2002) Limited disclosure of sexual abuse in children whose experiences were documented by videotape. *American Journal of Psychiatry, 159*, 312-314.

358 Leander, L., Christianson, S.A., & Granhag, P.A. (2007). A sexual abuse case study: Children's memories and reports. *Psychiatry, Psychology & Law, 14*, 120-129.

359 Pynoos, R. S. & Nader, K. (1989). Children's memory and proximity to violence. *Journal of the American Academy of Child and Adolescent Psychiatry, 28,* 236-241.

Conclusion

Memory expert witnesses have cited studies that involve real-life personally experienced events of a stressful nature in order to provide further evidence of the fallibility of memory to the evidence provided in laboratory studies. These studies were cited because they show that even memory for traumatic events can be altered by post-event influences. It is also asserted that there were reliable records of what took place that allowed examination of memory reports against the actual events.

However, in most of the studies cited detailed accounts of events were neither collected nor examined because the researchers never did collect detailed accounts. This was not their purpose. Rather they assessed changes in self-rated estimates of the danger they were in at the time, or changes in responses to questionnaire items. Nor were reliable records available against which individual memory reports could be compared, which means that even had participants been asked to provide a detailed description of events comparison could not have been made with their individual experience of the events endured.

The relevance of studies of flashbulb memories to sexual violence cases is difficult to discern. As Hirst et al. (2016) [360] have indicated, *"The linkage between FBMs and trauma suggested by this research needs to be approached cautiously, however. The horror of directly experiencing a traumatic event may impact the observer in ways that could not be anticipated by examining those who only learned of the traumatic event."* (p. 39)

[360] Hirst, W., & Phelps, E. A (2016). Flashbulb memories. *Current Directions in Psychological Science, 25*(1), 36 –41.

CHAPTER TEN

CHILDREN'S MEMORY REPORTS AND SUGGESTIBILITY

Understanding children's memory for sexual abuse acts relies upon three main sources of evidence: The first is from experimental studies in which factors thought relevant to reports of prior events are examined under controlled conditions using events that are known to have occurred. The second, although rare, is from children's reports of abuse that is available from recordings taken by the perpetrator which are later recovered by Police. The third source is clinical case studies from practitioners who provide assessment and therapy to children, family members and perpetrators. Memory expert witnesses who give evidence in sexual violence trials where the complainant is a child rely on experimental studies.

The common research procedure employed in experimental studies investigating children's memory reports is first that the participants are exposed to a contrived situation; for example, exposure to a clown who performs for the children and may break something. Children are subsequently questioned about these events. The experimental control that such a format affords has the advantage of allowing close examination of factors that may affect the children's reports of the events to which they have been exposed. Because the contrived event is scripted and recorded the details of the event are known and children's subsequent reports can be reliably tested for accuracy. The contrived event and the interview conditions can be systematically varied to study their effects on recall by comparing one group exposed to a particular condition and a control group in which that condition was absent or different in some way. Such research has allowed examination of such factors as suggestibility arising from use of leading questions (where the interviewer implants false information about the event), the influence of delay on reports, and so on.

Such experimental research has made important contributions to our understanding of children's memory reports and the conditions that may contribute to accuracy or inaccuracy. In the first decades of this research some of the leading experimental researchers in this work provided courtroom advocacy in USA in particular issuing strong warnings of the perils of trusting children's (and for that matter, adults') recall.[361] Some of these expert witnesses cast doubt on the veracity of any or most memory for traumatic events: a position Ross Cheit (2015)[362] in his detailed examination of the USA preschool sexual abuse trials, has labelled "disconfirmation bias". Other experimental researchers have worked more closely with practitioners and focused on development of interview protocols that in day to day practice maximize children's ability to provide full and accurate accounts of alleged abuse events and mitigate the influence of poor practice. Notable amongst this group is Michael Lamb and colleagues who developed the National Institute of Child Health and Human Development

361 See for example, Ceci, S. J., & Bruck, M. (1995). *Jeopardy in the courtroom: A scientific analysis of children's testimony.* Washington, DC: American Psychological Association.

362 Cheit, R. E. (2014). *The witch-hunt narrative: Politics, psychology, and the sexual abuse of children*. NY: Oxford University Press.

(NICHD) Protocol[363] which has been used in several countries and has been the foundation for New Zealand's evidential interview protocol.

As context to the discussion that follows, it is useful to list the areas of consensus about child sexual abuse reports that has emerged from experimental research and other sources of information including the accumulated experience of clinical practitioners who work with children who report sexual abuse. This is as follows:[364] [365] [366] [367]

1. Even young children can provide accurate and detailed accounts of personally experienced events.
2. Furthermore, children's memory for distinctive and central events may be just as accurate as that of adults.
3. Older children typically provide more detailed accounts than younger children especially during spontaneous or free recall. As a result of this, younger children may require cues and prompts to elicit greater detail.
4. In pursuing further elaboration of accounts, broad open-ended questions and prompts, compared with closed-ended questions, are associated with greater accuracy, greater volume of information and fewer inconsistencies in reports.
5. Children may respond with inaccurate answers if subjected to suggestive questioning. Suggestion may be via verbal content (e.g., use of leading questions) and/or children's responses may be shaped by nonverbal cues that accompany questions (e.g., tone of voice, gestures, and facial expressions). Adults may also respond to suggestive questioning.
6. Exposure to misinformation may be incorporated into children's accounts of their experiences and may persist over time. That is, misinformation once incorporated may become part of how they remember the experience. (The same may occur for older children and adults). Where this occurs, it is usually in relation to peripheral rather than central or distinctive aspects of the recalled event.
7. Children's accuracy and resistance to misinformation improves when they are given emotional support.
8. Delay is associated with less accuracy in children's reports, particularly in relation to peripheral detail.
9. Where sexual abuse occurred over multiple episodes - as is common - there is increased likelihood of inaccuracy and lack of clarity concerning details of each individual episode. It may be difficult for a child to give accounts of different

363 Lamb, M. E., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2008). *Tell me what happened: structured investigative interviews of child victims and witnesses*. Chichester, UK: Wiley.

364 Brown, D. A., & Lamb, M. E. (2015). Can children be useful witnesses? It depends how they are questioned. *Child Development Perspectives, 9,* 250-255.

365 Goodman, G. S., Jones, O., & McLeod, C. (2017). Is there consensus about children's memory and suggestibility? *Journal of Interpersonal Violence, 32,* 926–939.

366 Baker-Ward, L., & Ornstein, P. A. (2002). Cognitive underpinnings of children's testimony. In H. L. Westcott, G. M. Davies & R. H. C. Bull (Eds.), *Children's testimony: a handbook of psychological research and forensic practice* (pp. 21-35). Chichester: John Wiley & Sons.

367 Pipe, M-E., Lamb, M. E., Orbach, Y., & Esplin, P. W. (2004). Recent research on children's testimony about experienced and witnessed events. *Developmental Review, 24*, 440-468.

enactments in relation to details such as those relating to place, date, time of day, what people were wearing, and so on.

10. Promises to tell the truth increase children's accuracy.

While there is consensus about these ten points, there are of course case by case exceptions: these are not universal laws that apply to every child or young person. For example, a child may be inaccurate in their report even though there is no evidence of suggestive questioning or conversely a young child may resist suggestions, a young person may give accurate detail about each of multiple abuse episodes, a child may lie about events despite promising to tell the truth. Also, as will be discussed in the following, while there is generally consensus on these points about children's memory reports, there are differences between experts who give evidence in criminal trials regarding the extent to which they apply to reports of child sexual abuse or trauma. As noted already, these are not universal rules.

The evidence of memory expert witnesses in trials involving children in Aotearoa New Zealand has, to our knowledge, always been for the defence. Their evidence always relies upon research rather than clinical case studies. In citing experimental studies, the memory expert witness gives authority to the opinion expressed. Rarely is a study they cite described in enough detail for the reader to evaluate its import for the expert's proposition. Even more rarely are caveats offered either about the study itself or about its generalisability to the circumstances of child sexual abuse. For this reason, in the following we describe the studies and any caveats in order to examine the dependability of the research they cite.

Experimental studies will vary according to several highly relevant dimensions, including:

(1) *The number of children impacted by the intervention*. Typically, a positive result is reported when change is statistically significant in the participants' reports from the experimental group compared with the reports of participants in the control group. To reach statistical significance not all children are necessarily affected. Universal change across all the experimental condition participants is extremely rare.

(2) *The to-be remembered event:* Typically, in experimental studies children are exposed to an event – the to-be-remembered event - and after a delay, the experimental group is exposed to a post-event. Obviously the to-be-remembered event can vary from those likely to be of significance - and therefore more memorable to a child - to relatively benign events. They can be fun events, or (more rarely) events that may produce some negative emotional reaction. The to-be-remembered event can be one observed by the children (e.g., a clown breaks an object - eyewitness studies) or an event directly experienced by the child (e.g., takes part in an activity with an actor, a policeman places his hand on the child's shoulder).

(3) *The post-event examined.* The post-event can vary in strength from mere exposure to other children talking about a to-be-remembered event to suggestions, and even active persuasion, from an authority figure.

(4) *Whether the false memory report was for a novel event or an aspect of an event.* That is, does the experiment involve an examination of the possibility of participants making a completely new memory report, or inaccuracy in relation to what might be regarded as a peripheral detail to a central event.
(5) *The age of the participants:* Most experimental studies have been conducted with young children. There is a smaller number that involve older children and relatively few with adolescents. As noted in the above list there may be differences between young children and older children with respect to several memory issues, including the amount of detail provided in free recall and vulnerability to suggestion.

We acknowledge that experimental studies have made a valuable contribution to understanding children's memory reports. This includes our understanding of those matters described above for which there is generally consensus between researchers and those who identify primarily as practitioners about children's memory. However, we should be cautious in extrapolating the findings of these studies to the circumstances of child sexual abuse; in general, and to individual cases that come before the courts. Experimental studies are to various degrees remote from the circumstances of child sexual abuse. Differences between the circumstances of experimental studies and the reality of sexual abuse should lead an expert citing studies in support to their opinions to express the uncertainties of such evidence. Such caution is consistent with the direction in the Code of Conduct for Expert Witnesses that if an expert witness believes that their evidence or any part of it is not a concluded opinion because of insufficient research or data or for any other reason, this should be stated in their evidence.

The most important caveat to experimental research findings is that experimental research does not and cannot represent the complexity and severity of sexual abuse. That is, it lacks ecological validity. For ethical reasons children in experimental studies cannot be subjected to the equivalent degree of severity or trauma that exists in sexual abuse. The events in experimental research differ in many ways from the real-world situation of child sexual abuse.

1. The contrived events in experimental research are almost always events that are *observed by* the child rather than events in which the child is an *active participant*; that is, a participant as in having something done directly with them as occurs in sexual abuse with touch or penetration by the perpetrator. Accordingly, this experimental research is typically referred to as *eyewitness evidence*.
2. The experimental events are usually enacted with groups of children rather than with the child alone, in a shared setting such as a classroom, or a place visited outside the classroom. Sexual abuse is almost always conducted in private with only the perpetrator and victim present.
3. The actor in contrived events in experimental research is typically a stranger rather than a person already known to the child and one with whom they may have a close

and dependent relationship. Sexual abuse is typically perpetrated by someone known to the child.[368] [369] [370] [371]

4. The event is typically a single event rather than the repeated and progressive intrusion on a child by a familiar person, as is typical of sexual abuse.
5. The contrived event is not imbued by the actor with the same demand for secrecy as typically takes place in sexual abuse.
6. The interview in which recall is tested typically lacks the equivalent gravitas of the forensic interview where the child is introduced to the purpose of the interview, the concepts of truth and lies are discussed and a promise to tell the truth is obtained.

In conclusion, experimental research lacks the reality of the actions and dynamics of sexual abuse in significant ways. In a recent review of the literature by Professor Gail Goodman, a highly respected researcher of children's testimony in the context of child sexual abuse, she stated there is risk *"…in the extent to which these findings get overgeneralized beyond the laboratory to complex situations involving factors difficult, if not impossible, to study in the ivory tower."* [372] Similarly, caution is stated by Deirdre Brown and Michael Lamb in relation to what they characterize as the "the laboratory/field study conundrum", that *"It may thus be timely to revisit some of the early research to determine whether conclusions about the impact of variables relating to the child, the type of event, and the way in which they are interviewed can be replicated when examined in the context of evidence-based interviewing practice exploring events more analogous to instances of maltreatment.*"[373]

Studies Relied Upon in Memory Expert Witness Reports

In the following we examine the studies cited in briefs of memory expert witnesses in terms of their relevance to child abuse. This includes comment on the comparability of the events studied to child abuse. As noted already, even young children can provide accurate and detailed accounts of personally experienced events, and children's memory for distinctive and central events may be just as accurate as that of adults. We note where the authors of studies themselves consider the significance of their work to the circumstances of child abuse. Such reservations on the part of authors have not been cited in the memory expert witness briefs available to us.

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368 Anderson, J., Martin, J., Mullen, P., Romans, S., & Herbison, P. (1993). Prevalence of childhood sexual abuse experiences in a community sample of women. *Journal of the American Academy of Child and Adolescent Psychiatry*, *32*, 911-919.

369 Hershkowitz, I., Horowitz, D., & Lamb, M. E. (2005). Trends in children's disclosure of abuse in Israel: A national study. *Child Abuse & Neglect*, *29*, 1203-1214.

370 Peleikis, D. E., Mykletun, A., & Dahl, A. A. (2004). The relative influence of childhood sexual abuse and other family background risk factors on adult adversities in female outpatients treated for anxiety and depression. *Child Abuse & Neglect*, *28*, 61-76.

371 Fanslow, J. L., Robinson, E. L., Crengle, S., & Perese, L. (2007). Prevalence of child sexual abuse reported by a cross-sectional sample of New Zealand women. *Child Abuse & Neglect, 31*, 935–945.

372 Goodman, G. S., Jones, O., & McLeod, C. (2017). Is there consensus about children's memory and suggestibility? *Journal of Interpersonal Violence*, *32*, 926–939.

373 Brown, D.A., & Lamb, M.E. (2019). Forks in the road, routes chosen, and journeys that beckon: A selective review of scholarship on children's testimony. *Applied Cognitive Psychology, 33,* 480–488.

Differences in memory between children and adults

Memory expert witnesses make comment on the greater fallibility of memory of children compared with adults and cite literature in this regard. It is stated that eyewitness ability is not consistent over the lifespan, with children's memory reports being in general less complete and less accurate than those of adults. This applied to differences in identification accuracy, citing Pozzulo and Lindsay (1998), the number or proportion of correct event details recalled, citing Goodman and Reed, (1986), and the degree to which the testimony is presented in a logical and coherent manner, citing Snow and Powell (2005).

Pozzulo and Lindsay (1998),[374] conducted a meta-analysis of studies that had investigated the ability of children and adults to accurately identify a person from lineups, and in particular the ability to reject target-absent lineups (reporting the target person is not present in the lineup offered). Preschoolers were less likely than adults to make correct identifications. Children over the age of five did not differ significantly from adults regarding correct identification rate. However, children of all ages examined were less likely than adults to correctly reject a target-absent lineup. This research is about eyewitness identification, not about children identifying a familiar person such as a family member. Notwithstanding the issue of relevance of eyewitness research to child sexual abuse, adults and children older than pre-schoolers had similar ability with respect accuracy in identifying a person in lineups; which is not indicated in memory expert witness briefs.

In the study by Goodman and Reed (1986),[375] children, three and six years of age, and adults, interacted with an unfamiliar man for five minutes. The contrived event involved meeting with a confederate in a room, where the man asked several questions and then asked the participant to perform several arm movements which constituted a game. Thus, the children were active participants rather than eyewitnesses, albeit in a benign activity. After the contrived event the participants were asked questions classified as "objective" "suggestive" "correct leading" "free recall" and "photo identification" and this was repeated at 4 or 5 days later. Differences between children and adults were found in some conditions but not others. For the "objective" questions the adults and 6-year-olds did not differ reliably in accuracy, but both groups answered more objective questions correctly than did 3-year-olds. For the "suggestive" questions, adults were more likely to answer suggestive questions correctly than were 6-year-olds, or 3-year-olds. However, when incorrect information was suggested about the central action of the experiment, that is, the arm movements, 100% of the adults resisted the suggestion, as did 94% of the 6-year-olds and 88% of the 3-year-olds and the age effect for this question was not statistically significant. On the objective counterpart for this question, all of the age groups reached 100% accuracy. The 6-year-olds answered the correctly leading questions with the greatest accuracy, followed by the 3-year-olds, and then the adults. In relation to the free recall questions the number of items of information correctly

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374 Pozzulo, J. D., & Lindsay, R. C. L. (1998). Identification accuracy of children versus adults: A meta-analysis. *Law and Human Behavior, 22,* 549-570.

375 Goodman, G. S., & Reed, R. S. (1986). Age differences in eyewitness testimony. *Law and Human Behavior, 10,* 317-332.

recalled increased with age: adults recalled more correct information than did the 6-year-olds, who in turn recalled more than the 3-year-olds. For the "photo identification" the 6-year- old participants had the highest mean identification accuracy, followed by the adults and the 3-year-olds. The authors noted that their findings are in substantial agreement with prior research that indicates that children as young as six years answered objective questions and recognized the confederate as accurately as adults did (p. 327). They further noted that the absolute difference in accuracy between 6-year-olds and adults on the suggestive questions was small and that the variables affecting the nature and degree of age differences in suggestibility appear to be complex concluding that a number of factors may lead to children's greater suggestibility, with strength of memory being only one, with adults' authority over children also contributing to child suggestibility. That is, this study does not provide substantial support to the opinion that "*Overall, children's memory reports tend to be less complete and less accurate than those of adults,"* including in the statements of the researchers themselves.

Snow and Powell's (2005)[376] study involved adolescent juvenile offenders rather than young children. This study is about narrative processes and not about memory; indeed, the authors state that the task did not tax memory processes (p. 247). The study is concerned with the narrative language (story telling) abilities of a group of juvenile offenders completing community-based court orders in Melbourne. Furthermore, the study is a comparison of like-aged participants. Thirty male young offenders were compared with 50 male non-offenders. The relevance of this study to age comparisons in memory ability is difficult to see.

Suggestibility

Memory expert witnesses have addressed suggestibility in relation to children's evidence asserting that children's inaccuracy is pronounced when given cues about what may or may not have happened following an event. Studies cited were Cordón et al. (2005), Jens et al. (1990), Keast et al. (2007) and Pozzulo and Lindsay (1998). In addition to errors in the context of taking part as an eyewitness, it was asserted that errors in children's memories also occur for directly experienced and personally significant events. Studies cited in this regard included Bruck et al. (1995), Burgwyn-Bailes et al. (2001), Gross et al. (2006), Leichtman & Ceci (1995), Pezdek and Roe (1997), Price and Connolly (2013) and Zajac and Hayne (2003). Furthermore, it was asserted that even overhearing a conversation about an event can lead to children reporting false information as if it happened to them, citing Principe and Schindewolf (2012). We describe these studies, first those that involved children as eyewitnesses, second where the event-to-be-remembered is one directly experienced by the child, and finally those involving overhearing conversation.

376 Snow, P. C., & Powell, M. B. (2005). What's the story? An exploration of narrative language abilities in male juvenile offender. *Psychology, Crime and Law, 11*, 239-253.

Eyewitness studies

There are several studies referred to in memory expert evidence where the child is an eyewitness to an event rather than directly experiencing the event.

In the study by Leichtman and Ceci (1995)[377] the central event of interest involved an actor named “Sam Stone” who visited preschoolers at their day care centre. Children were assigned to one of four conditions as follows: (a) control, (b) stereotype, (c) suggestion, and (d) stereotype plus suggestion. In each of the eight day-care classrooms, Sam Stone enacted the same scripted event. First, he entered the classroom and said hello to a teacher or aid who sat amidst the assembled children during a story-telling session. He was introduced by the teacher or aid to the children. Next, he commented on the story that was being read to the children by the teacher or aid ("I know that story; it's one of my favorites!!") and strolled around the perimeter of the classroom. Finally, he departed, waving goodbye to the children. In each case, the entire event lasted about two minutes. All the children, including those in the three experimental groups as well as the controls, received a forensic interview approximately 10 weeks after Sam Stone's visit. Children in the control group received no information about Sam Stone before his visit and were questioned once a week during the 4 weeks immediately following this visit in a neutral manner – they were simply asked questions about what Sam Stone had done during his visit to their school and were given no suggestions about the nature of this visit or Sam Stone's activities. Children in the stereotype condition, received considerable information about Sam Stone's personality before his visit to their school. Each week, beginning a month before the visit, research assistants went to the children's day-care centers, and in the course of playing with them, presented three different scripted stories about Sam Stone in which he was depicted as a kind, well-meaning, but very clumsy and bumbling person. Following Sam Stone's visit, children in the stereotype condition were treated identically to the control group, receiving four neutral interviews over the 4 weeks following his visit, and a fifth interview 10 weeks after the visit. A third group of children, those in the suggestion condition, did not receive the pre-event manipulation just described (i.e., the stereotype induction) but did receive a post-event manipulation consisting of misleading suggestive interviews (e.g., Sam Stone had ripped a book, he had soiled a teddy bear). A fourth group of children, those in the stereotype-plus-suggestion condition, were exposed to both the pre-event stereotype and the post-event leading question manipulations. The fifth interview, experienced by all children, was conducted by a new interviewer, who was not present during Sam Stone's visit or the first four interviews. In this interview for all four groups the same questions were asked and the same forensic procedures were used to interrogate children, beginning with rapport building, a request for free narrative and, finally, probing questions which were directed at the two events that did not occur during Sam Stone's visit but that children in the suggestion and stereotype-plus-suggestion conditions had heard about before; namely, Sam Stone's soiling a teddy bear and ripping a book. These probe questions asked whether they had "heard something" about the items and whether they had

[377] Leichtman, M. D., & Ceci, S. J. (1995). The effects of stereotypes and suggestions on preschoolers’ reports. *Developmental Psychology, 31,* 568-578.

seen Sam Stone engage in some activity with them. No child in the control group made any "false allegations" in their free narrative when initially asked to tell everything they could remember about the day that Sam Stone visited their classroom. Nearly all the 47 children assigned to the control group resisted stating anything erroneous had occurred, not only in their free narratives but also in response to probes. In summary, in the absence of any attempt by adults to taint the youngest children's reports before the fifth and final interview, their reports were largely, although not wholly, void of errors. As was the case in the control condition, none of the children assigned to the stereotype condition claimed that they observed Sam Stone damaging either item in their free narrative, when they were initially asked by the interviewer during the fifth interview to tell everything they could remember about Sam Stone's visit. Unlike the control and stereotype conditions, some children assigned to the suggestion condition claimed that they observed Sam Stone damaging either item in their free narrative. Twenty-one percent of the youngest children and 14% of the older children made spontaneous claims in their free narratives regarding damaged books (or teddy bears or both). The authors stated that "*Nothing approaching this level of suggestibility has heretofore been reported in the memory development literature, a function no doubt of the present study's use of repeated suggestions combined with a set of congruent expectancies."* (p. 573). They noted that, *"Although 5- and 6-year olds, and for that matter adults in analogous situations, do not have immunity to the social and memorial factors that potentiate report distortion, our older participants' greater ability to both resist situational demand characteristics and to accurately monitor their memory sources may have combined to render them dramatically less vulnerable to suggestion than their younger counterparts."* (p. 576). They concluded, "*Although younger children show a greater vulnerability to both pre-event and post-event suggestions, it is evident from the data we have presented that situations may be engineered in which even very young children's reports are wholly accurate. As demonstrated by our control group, when the context of a child's reporting of an event is free of the strong stereotypes and repeated leading questions that may be introduced by adults, the odds are tilted in favor of factual reporting."* (p. 576).

This study was one of the earliest of its kind and has been influential in the research literature. We report this in some detail to show how in citing this study in support of children's vulnerability, without detail or caveats – as has been the case in several memory expert briefs –the potential effect is to exaggerate the fallibility of children's evidence, and in particular the memory reports of older children who are more often the complainants in sexual violence trials than preschoolers. Overall, the conclusions support the accuracy of even young children's memory. It provides support for the impact of suggestion in this particular context, but also demonstrates immunity to suggestion, especially in the older children. However, it is then also important to consider the relevance of this study: the same effects cannot be assumed where the child is a participant rather than an eyewitness, where the person is well known to them, the event is repeated, and so on, as in sexual abuse.

In the study by Keast et al. (2007)[378] involving children with an average age of 11 years, and adults, where the task involved viewing a video (duration 140 seconds) of a nonviolent theft of a credit card in a restaurant, and subsequently identifying the thief and the waiter from photo "lineups". In the first of two experiments (the one relevant to the present context) one group of children (and adults) were given an "unbiased instruction" which began with the statement "Now we would like you to identify the thief/waiter. He may or may not be in the lineup below." The "biased instruction" did not note the possibility that the thief/waiter might not be present in the lineup. The instruction was "Now we would like you to identify the thief/waiter. Please indicate your decision by clicking on a face." Relevant to the above issue, children were less accurate than adults. Biased instructions increased false identifications for both children and adults. While these findings support the opinion offered by memory expert witnesses that specific cues – in this case biased questions – may produce inaccuracies in children's reports, this was in the context of child as eyewitness, engaged in a staged and benign event involving unfamiliar people (represented in photographs) with little connection to the circumstances of child sexual abuse.

Studies involving directly experienced events

Other studies involve children as direct participants in the event-to-be-remembered, thus moving a step closer to the circumstances of child abuse. As already noted above, one memory expert witness has stated, that children's memories for directly experienced and personally significant events can also be subject to post-event influences. However, the events examined are nevertheless still remote from the circumstances of child abuse, including that they are unlikely to be distinctive or important for the child participants.

In the study by Cordón et al. (2005),[379] involving 3 to 6 year olds, children took part in a five-minute period of play with toys with an experimental confederate teaching assistant (TA). The study was an investigation of the effects of three conversational rules ("I don't know", "I can't help you", "I may trick you") as a means of reducing errors in children's memory reports in the context of three interview styles: neutral (e.g. "Did the TA turn the radio off?"), repetitive (e.g., "Are you sure the TA turned the radio off?") and accusatory (e.g., after the child's initial response, "She shouldn't have done that, that was really wrong"). The staged play interactions about which the child participants were later questioned included the following set of activities: 1) The TA went to the radio and turned it off; 2) The TA picked up a puppet (Cookie Monster) and playfully touched the child's face with it; 3) The TA 'accidentally' stepped on a box of crayons, breaking a couple of crayons; 4) The TA taught the child how to play with the Simon toy by holding the child's hand in her own; 5) During the interaction, the TA told the child that she was really hot and took off a sweater (leaving a shirt underneath). As the TA took off her sweater, she exclaimed that it was stuck and asked the child for help in taking off the sweater. Children were interviewed about the event after it

[378] Keast, A., Brewer, N., & Wells, G. L. (2007). Children's metacognitive judgements in an eyewitness identification task. *Journal of Experimental Child Psychology, 97,* 286-314.

[379] Cordón, I. M., Saetermoe, C. L., & Goodman, G. S. (2005). Facilitating children's accurate responses: Conversational rules and interview style. *Applied Cognitive Psychology, 19,* 249-266.

took place, and again 2-3 weeks after the staged event and 5-6 weeks after the staged event. Those taught all three conversational rules provided a smaller proportion of incorrect responses when questioned about playing with the toys and the actions of the TA than children who were taught fewer rules or the control group who were not taught any conversational rules. However, of more importance in the present context, there was no effects of interview style on the proportion of incorrect responses. That is, when children were interviewed in a repetitive or accusatory manner, their error rates were not higher than when they were interviewed in a neutral manner. The interview style was presumably the cue that the memory expert witness asserts has impact on children's memory reports, yet there was no effect found. In reality, the findings appear to contradict their stated opinion.

In the study by Jens et al. (1990)[380] 24 children with mental retardation (sic) and 30 children with normal intelligence were asked to perform a series of tasks or to only imagine performing them. The tasks were those performed alone such as putting a hat on, crawling like a tiger, making silly faces, or the same activities with the experimenter. The source of suggestion, or cues, was asking the children about activities they had not performed or imagined; that is, asking misleading questions. There were no overall differences between the two groups in the number of correct responses, both groups performed well but remembered activities performed better than those imagined. Of greatest relevance in the present context is the finding that responses to questions about activities neither performed nor imagined were good for the initial questions although they decreased in response to a follow-up probe (e.g., "Did we/you really do that, or did you imagine doing it?"). Accuracy of responses to the misleading questions decreased over the eight week period. This study provides some support for the opinion that cues may impact children's memory reports, though the effects were small in relation to initial open-ended questions. However, as with the other studies reviewed here, the circumstances of this study differ in many ways to the circumstances of child sexual abuse and its investigation.

Zajac and Hayne (2003)[381] examined the effect of cross examination style questioning on the accuracy of 46 five and six-year-old children concluding that examination style questioning is inappropriate for young children. Cross-examination frequently involves strong suggestion and challenges in the questions put to the target. In this experiment children were taken as a group to the local police station and were shown the fingerprinting equipment and had their right thumbprint taken. Children were then organized into groups of 4–5 and had their "mug shot" taken. The policeman showed the children the jail cell and then took the children outside to see the police cars. The policeman turned the lights and siren on in one of the cars. The children then returned to school. They were then randomly assigned to one of two groups. Thirty of them were repeatedly given misleading information about what had actually happened at the police station during two misinformation interviews two and four

380 Jens, K. G., Gordon, B. N., & Shaddock, A. J. (1990). Remembering activities performed versus imagined: A comparison of children with mental retardation and normal intelligence. *International Journal of Disability, Development, and Education, 37,* 201-213.

381 Zajac, R., & Hayne, H. (2003). The effect of cross-examination on the accuracy of children's reports. *Journal of Experimental Psychology: Applied, 9,* 187-195.

weeks after the event. During these interviews, children were told that two additional, but untrue, events had occurred during the trip to the police station: that they had tried on handcuffs and that a lady had come into the police station to report that her child's bike had been stolen. The other 16 children served as a control group and were not exposed to misleading information. Six weeks after the event, all children were interviewed about what had happened at the police station. This interview was carried out by an interviewer who had not been present during the earlier misleading interviews. The children were asked to tell what had happened at the police station, then asked, "Can you tell me anything else?" When children ceased to provide further information, the directed recall part of the interview began. Children were asked four yes/no questions about whether two of the true events (photo and police car) and the two false events (handcuffs and stolen bike) had occurred at the police station. Eight months after the direct examination interview (nine and a half months after the police station visit), all children were interviewed individually by an interviewer who had not been present during the misleading interviews or during the direct examination interview. The interviewer played the child a video that had been made of them at the first interview. After this the child was asked "Can you tell me how old you are?" "Do you know when your birthday is?" "Can you tell me where you live?" Each child was then asked four sets of 10 questions that pertained to the four topics that he or she had discussed during the direct examination interview (photo, handcuffs, car, and stolen bike). For the cross-examination style questions the children were asked confirmatory questions, for example, "You said in the video that you got your photo taken, didn't you?" Invariably, children answered this question positively. The next questions included questions common to cross-examination, for example, complex, ambiguous, irrelevant, leading, and closed questions and challenged the child's certainty about the topic in question (e.g., "Are you sure that you got your photo taken?" "I don't think you really got your photo taken?" "I think someone told you to say that." "That's what really happened, isn't it?"). If the child did not acquiesce to this, they were asked another leading question (e.g., "But that might be the case, don't you think?"). The authors reported that the 16 control children were highly accurate during direct examination when asked questions about both true and false events and that there was little or no cross-contamination of their original reports by their school mates in the misled group. In response to cross-examination, 85% of the children changed at least one of the answers that they had provided during their direct examination interview with one-third of children changing all their previous responses. The errors made by children in the misled group were largely restricted to the false events this indicating that the effect of prior misinformation was highly specific to those events (i.e., children in the misled group were not simply confused, but rather made most of their mistakes when they were asked questions about events for which they had received misleading information). The authors concluded that children's responses during cross-examination may not have reflected changes in their memory for the event, but rather compliance with suggestions that they know are incorrect. That is, children may have agreed with the suggested information during cross-examination even though they believed that the interviewer's suggestions were incorrect.

As with other experimental research, this study does not represent closely the circumstances of sexual abuse: the event was experienced in company of other children, the adults in the event were unfamiliar, it was a single event, there were no demands for secrecy it can be assumed to be a non-aversive event, etc. Also, the strength of suggestion was extreme. Thus, the authors conclude the responses may not have reflected changes in memory, but rather compliance with powerful persuasion.

In the Gross et al. (2006)[382] study, the event-to-be-remembered was also a trip to a local police station. The main focus of the study was the impact of drawing as an influence on children's responding. Some of the children (all participants were aged 5-10 years old) were provided with both true and false information about the trip; the false information being two events that never took place during the visit to the police station. One of the experimental groups of children were asked to draw and describe the events. Six weeks after the trip, all children were interviewed about what had happened at the police station. Children spontaneously reported aspects of the false events during this final interview. When asked specific questions children not only repeated information that had been discussed with them during earlier interviews - some of which was false information - but they also elaborated on the false events, providing additional details about events that had never happened. In relation to drawing the authors concluded that, "In some instances, in fact, children who were given the opportunity to develop stories as they drew were even more likely to succumb to the effects of this false information than children who were supplied with the same amount of false information provided by an adult interviewer." (p. 23).[383] The study indicates caution about the use of drawing in evidential interviews. However, this study in showing effects of drawing along with false information provision is still remote from the circumstances of sexual abuse investigation, and subject to the same reservations we have expressed in relation to those other studies.

Price and Connolly (2013)[384] examined children's memory for a repeated event after a one-year delay. As noted previously, child sexual abuse typically involves repeated events rather than a one-off incident. Seventy-one children (4–5-years and 6–7-years at initial interview) who experienced a repeated event were compared to children who experienced the same target event only once. Suggestions were for specific details the children did not experience during either session (e.g., "While you did the puzzle, you listened to piano music"). Control details were details that were not suggested but were presented at a general level (e.g., "While you did the puzzle, you listened to music"); naming the overall category without the specific detail. That is, for a control detail the specific detail the child experienced (e.g., cat puzzle) was not mentioned at all – only the overall activity (e.g., puzzle). Control details were included to measure the extent to which children would report a suggested detail

382 Gross, J., Hayne, H., & Poole, A. (2006). The use of drawing in interviews with children: A potential pitfall. In J. R. Marrow (Ed.), *Focus on child psychology research* (pp. 119-144). New York: Nova Publications.

383 *Ibid* Gross, J., Hayne, H., & Poole, A. (2006).

384 Price, H. L., & Connolly, D. A. (2013). Suggestibility effects persist after one year in children who experienced a single or repeated event. *Journal of Applied Research in Memory and Cognition, 2*, 89-94.

by chance alone. Thus, for half of the children, a particular detail (e.g., a cat puzzle) was suggested, and for the other half it was not suggested. For all children the researchers recorded reports of suggested details (e.g., having completed a cat puzzle). Each suggestive detail was presented three times and was embedded within three separate questions or statements. When questioned a year later, children who reported an instance of a repeated event were more likely to report that a non-experienced detail had occurred and reported less correct information than did single-event children. The researchers reported that after one year a significant suggestibility effect was still present. As will be evident, the children were involved in benign play activities and the to-be-remembered details were for certain aspects of the event which may not have been especially memorable or distinctive in the first place.

Some studies have involved touch. This aspect may be a further attempt by researchers to better represent the circumstances of child abuse, although obviously, for ethical reasons, it does not involve aversive touching in terms of the intimate, embarrassing and aversive touching implicated in child abuse.

In the study by Pezdek and Roe (1997),[385] involving two groups, one of 4 year olds and one of 10 year olds, a female experimenter placed her hand on either the child's hand or the child's shoulder during the viewing of a story told in a sequence of slides. The children participated individually in one 25-minute session that was always conducted by the same female experimenter. At one identifiable point early in the session, the experimenter showed each child a picture of a rose projected on a screen and while focusing the projector, asked if he or she could see the rose clearly. At this point, for ten seconds, the experimenter either put her hand on the participant's hand (event A), put her hand on the participant's shoulder (event B), or – for the control group – she did not touch the participant at all. The suggestion stage occurred about 15 minutes later, after viewing the story. At this point, each child was read a narrative that "reviewed" for them what had happened during the session. Regarding the target behavior, in the three experimental conditions participants were either told (a) that they had been touched in a different way (B was suggested if A had occurred, or A was suggested if B had occurred), (b) that they had been touched (A or B) if they had not been touched, or (c) that they had not been touched if they had been touched (either A or B). In the two control conditions, the narrative mentioned nothing about the touching incident. At the end of the experimental session, each child was given a memory test. The test included three questions about the touching incident—one general question followed by two specific questions: (1) "When I showed you the picture of the flower on the screen and asked if you could see it, did I touch you?" (2) "When I showed you the picture of the flower on the screen and asked if you could see it, did I put my hand on your shoulder?" (3) "When I showed you the picture of the flower on the screen and asked if you could see it, did I put my hand on your hand?" The results were that children were able to be influenced to report that a different event occurred to that which took place than that which was experienced (where the child was touched), but children were less easily influenced to report that something occurred when it

[385] Pezdek, K., & Roe, C. (1997). The suggestibility of children's memory for being touched: Planting, erasing, and changing memories. *Law and Human Behavior, 21*, 95-106.

had not, nor that nothing occurred when it had. That is, it was relatively easier to suggestively change a memory report than to suggestively plant or erase a memory. They concluded that, "*This study indicates that it is inappropriate to provide courtroom testimony regarding the probability of suggestively planting memories based on the classic suggestibility research that has largely been restricted to the investigation of suggestively changing memories. Expert witnesses who testify in courts of law should be clear to distinguish between the conclusions based on studies that involve suggestively changing memories and those that involve suggestively planting or erasing memories."* We note that while the children in this study were participants rather than eyewitnesses, being touched on the hand or shoulder would not be considered aversive or outside of the normal experience of most children, nor necessarily particularly memorable. Notwithstanding the relevance of this study to child sexual abuse, the authors' own conclusion about the limits of suggestibility are worthy of note, but do not appear in the briefs of evidence of memory expert witnesses.

Memory expert witnesses have also cited studies involving medical procedures which they assume may even more closely than studies involving touch represent the circumstances of sexual abuse. As stated by the authors of one of these studies, "Medical procedures provide an analogue to abusive situations in that they involve touching of the child's body by an adult and generally provoke some degree of anxiety." [386]

The study by Bruck et al. (1995)[387] involved 75 five-year-old children's reports of their visits to a pediatrician where they had received an injection for Tetanus inoculation. Children were given pain-affirming feedback (the shot hurt), pain-denying feedback (the shot did not hurt), or neutral feedback (the shot is over). One week later, they did not differ in their reports concerning how much the shot hurt or how much they cried. One year later (four to 18 months, average delay = 11 months) the same children were visited and during three separate visits, they were asked to identify the pediatrician and the research assistant from a montage of photographs including some of people who had not been present and either given additional pain-denying or neutral feedback. All children correctly selected and named the pediatrician. Only 35% of the children selected the correct picture of the research assistant (RA). They were also given misleading or non-misleading information about the actions of the pediatrician and the assistant. Children in group 1 were falsely reminded that the RA had given them their inoculation and oral vaccine, and that the pediatrician had shown them a poster, given them treats, and read them a story during the inoculation visit. Children in group 2 were falsely re minded that the RA had given them their inoculation and their oral vaccine, and that someone had shown them a poster, given them treats, and read them a story. The reverse held for children in group 3, who were told that someone had given them an inoculation and an oral vaccine but falsely reminded that the pediatrician had shown them a poster, given them treats, and read them a story. Children in group 4 were given no misinformation and were simply re

386 Burgwyn-Bailes, E., Baker-Ward, L., Gordon, B. N., & Ornstein, P. A. (2001). Children's memory for medical treatment after one year: The impact of individual differences variables on recall and suggestibility. *Applied Cognitive Psychology, 15*, S25-S48.

387 Bruck, M., Ceci, S. J., Francoeur, E., & Barr, R. (1995). "I hardly cried when I got my shot!" Influencing children's reports about a visit to their paediatrician. *Child Development, 66,* 193-208.

minded that someone had given them an inoculation and an oral vaccine, and that someone had shown them a poster, given them treats, and read them a story. In the fourth and final visit, children recalled the details of their inoculation visit. Children given pain-denying feedback reported that they cried less and that the shot hurt less than did children given neutral feedback. Those who were given misleading information about the actions of the assistant and the pediatrician made more false allegations about their actions than did children who were not given this information. The authors reported that their results challenge the view that suggestibility effects are confined to peripheral, nonaction events; in this study children's reports about salient actions involving their own bodies in stressful conditions were influenced.

The study by Burgwyn-Bailes et al. (2001)[388] involved 24 children with an average age of 5 years, who had sustained facial lacerations that required minor medical treatment by a plastic surgeon. The features of the procedure were as follows; the child lay on the table; the nurse asked how they got hurt; the nurse applied and reapplied the numbing agent; the nurse asked whether the wound had got cold and tingly; the doctor explained "sutures"; the doctor told the child he would clean the wound; the doctor put a light on his head; the doctor put on special glasses; the doctor put a cloth on the child's face; the doctor sings a song; the doctor puts medicine on the wound; the doctor applied the sutures; the doctor applied a bandage to the wound; the doctor told the child to do quiet things for a week until the wound had healed. The authors reported that the children as a group showed relatively high levels of recall at the first interview recalling an average of 78% of the features of the event; 73% after a six-week interval and 72% after one year. However, when the children were subjected to suggestive and misleading questions as a group, they responded positively to false suggestions at the rate of 12% at first interview and at six weeks 15% and one year at 16%. The authors noted that while the children as a group showed, "a fairly low level of suggestibility" some children responded more reliably than others. The authors note that their results, "add to the growing evidence that memory for salient events, especially those that are likely to be discussed repeatedly with friends and family members are likely to endure over time."

However, even in the closer approximation to the circumstances of sexual abuse represented in these two studies involving medical procedures, there are several significant differences. Unlike the circumstances of medical procedures, sexual abuse typically occurs in private, is a repeated event, is shrouded in secrecy, is not discussed outside perpetrator and child interactions, is usually beyond a young children's comprehension, and is carried out by a person well known to the victim – typically a family member or person with whom the child interacts in other circumstances. Medical procedures typically involve a single event, performed with the knowledge, support and presence of parents, performed by a person with whom the child has little familiarity, and is an event that typically is discussed at length and in a positive open manner subsequent to the operation being performed.

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388 Burgwyn-Bailes, E., Baker-Ward, L., Gordon, B. N., & Ornstein, P. A. (2001). Children's memory for medical treatment after one year: The impact of individual differences variables on recall and suggestibility. *Applied Cognitive Psychology, 15*, S25-S48.

Impact of overhearing

Memory expert witnesses have asserted that overhearing a conversation about an event can lead children to report that event as if they remember it happening to them, citing Principe and Schindewolf (2012).

Principe and Schindewolf (2012) [389] provide a review of the literature about the impact of children overhearing information and incorporating this into their subsequent reports. In some of the studies about children's overhearing that are reported in this review, the event-to-be-remembered was a contrived event with a fictitious archaeologist Dr Diggs,[390] and in other studies, a magic show.[391] [392] [393] [394] [395] There is no dispute that the overall findings of these studies are that young children who overheard conversations about an event (either from adults or from other children) reported the event during a formal interview, even when they were asked open ended questions. However, in the review paper cited by the memory expert witnesses, the authors state, "*Our work also holds **some*** (our emphasis) *applied relevance to legal settings involving young witnesses as it reveals powerful sources of memory error not readily eliminated by common techniques used to minimize reporting errors in forensic interviews (e.g., exclusive nonsuggestive questioning, videotaping interviews)."* The authors go on to state, "*Caution, of course, is required in generalizing our findings to situations involving child witnesses (e.g., our to-be-remembered events are enjoyable, children are not pressured to make false reports, interviewers are not rewarded for eliciting certain claims)."* This caveat has not been repeated in the reports of memory expert witnesses.

One memory expert witness stated that hearing other witnesses talk about their experiences can "convince" people that they were there, and cited a study by Pynoos and Nader (1989)[396] who interviewed 113 school age children (specific ages or ranges are not given) some of whom had been "highly exposed" to a sniper attack, some of whom had "risk factors" and some who had not been exposed. During this event, one child and one passer-by and been killed and 13 children and one playground attendant had been injured. Bullets

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389 Principe, G. F., & Schindewolf, E. (2012). Natural conversations as a source of false memories in children: Implications for the testimony of young witnesses. *Developmental Review, 32(3),* 205-223(221)

390 Principe, G. F., & Ceci, S. J. (2002). "I saw it with my own ears": The effects of peer conversations on pre-schoolers' reports of non-experienced events. *Journal of Experimental Child Psychology, 83(1),* 1-25.

391 Principe, G. F., Kanaya, T., Ceci, S. J., & Singh, M. (2006). Believing is seeing: How rumours can engender false memories in pre-schoolers. *Psychological Science, 17*(3), 243-248.

392 Principe, G. F., Tinguely, A., & Dobkowski, N. (2007). Mixing memories: The effects of rumours that conflict with children's experiences. *Journal of Experimental Child Psychology, 98*(1), 1-19.

393 Principe, G. F., Guiliano, S., & Root, C. (2008). Rumour mongering and remembering: How rumours originating in children's inferences can affect memory. *Journal of Experimental Child Psychology, 99*(2), 135-155.

394 Principe, G. F., Daley, L., & Kauth, K. (2010). Social processes affecting the mnemonic consequences of rumours on children's memory. *Journal of Experimental Child Psychology, 107*(4), 479-493.

395 Principe, G. F., Haines, B., Adkins, A., & Guiliano, S. (2010). False rumours and true belief: Memory processes underlying children's errant reports of rumoured events. *Journal of Experimental Child Psychology, 107*(4), 407-422.

396 Pynoos, R. S. & Nader, K. (1989). Children's memory and proximity to violence. *Journal of the American Academy of Child and Adolescent Psychiatry, 28,* 236-241.

shattered windows, pierced metal doors and made holes in playground equipment. Each child was given the same semi structured interview to thoroughly explore his/her experience. This occurred between six and 16 weeks after the event. In their initial recall, the exposed children commonly left out the most life-threatening part of their experience (e.g., one boy described that he was on the school playground, saw the deceased girl shot and was aware of gunfire as he ran inside. He omitted the period of time that he was pinned down on the open playground with bullets hitting the ground on either side of him, however. Children who were on the playground but not in the line of fire placed themselves at an even greater distance from the death and injuries. Five children did not even mention their minor shotgun injuries during their extremely abbreviated accounts of the shooting. One child did not report that she was shot in the neck and that her life may have been saved by the friend who pulled her down. Some children who were not at school during the shooting, including those already on the way home and those on holiday, tended to remember themselves as being closer to the violence in location and time (e.g., one girl said she was at the school gate when the shooting occurred when she was actually half a block away). Children who were not at school were more susceptible to rumour and sometimes tended to distort the facts according to their own fantasy and life experience. The major finding was that the children tended to alter their perception of life threat with the most endangered reducing their report of life threat by not mentioning their own injury or increasing their reports of distance from deceased or injured persons, by not mentioning moments of direct danger and by situating themselves in a safe location. Conversely the least threatened group tended to increase their life threat by bringing themselves closer to the danger or imagining the danger moving closer to them.

While this study demonstrated that children may be influenced by hearing other witnesses talk about their experiences so that they later report they were there, there is no evidence that the non-exposed children were "convinced" they were there. In addition, one salient finding of the study, this being that the children who were actually injured or very close to danger tended to not report this, has not been noted by the memory expert witnesses. In our view, this may indicate a selective reporting of the research to fit a point of view.

Discussion

In presenting the details of experimental studies and drawing attention to their relevance and caveats provided by some authors, we do not intend to disregard the evidence they provide for suggestibility. This research does present evidence for suggestibility, but from studies that are to various degrees remote from the circumstances of child sexual abuse. The experimental studies cited by memory expert witnesses often involve children as an eyewitness, or if they do personally experience the event, it is likely to be innocuous. The contrived events are not serious, or are unimportant, in comparison with the central, serious, distinctive actions in sexual abuse. Furthermore, experimental studies are frequently concerned with peripheral details of a central event. The contrived events, and even events that involve real medical interventions, lack similarity to the dynamics of sexual abuse in respect of factors such as that abuse is typically by a person well known to the victim, (and often a person regarded with affection), it usually involves repeated episodes, it is imbued with secrecy, and reports are

often made reluctantly, and in the presence of demands for truthfulness. In providing evidence in criminal trials it is our contention that there is a duty for expert witnesses to acknowledge that the results from experimental research should be applied with caution to real world child sexual abuse. Overgeneralization should be avoided. Generalizations from experimental studies have appropriately guided the development of forensic interview protocols, where the utmost caution should prevail. Generalizations and unqualified statements from experimental research serve less well in memory expert evidence delivered in criminal trials.

There is also a notable omission in the briefs from memory expert witnesses. As stated at the outset of this chapter, there are three sources of knowledge that inform our understanding of children's memory reports, the second being from children's reports of abuse that can be compared with recordings by the perpetrator which were recovered by Police. Thus, the children's reports could be reliably checked for accuracy. These studies reveal the opposite to usual defence argument that the child's memory report is entirely false or that they inflate details of what took place.

In one such study, Swedish researchers[397] examined the accounts given by ten children, with an average age of nearly six years, who had been sexually abused on a total of 102 occasions by the same man who was known to them prior to the offending taking place. Police found videotapes of the offending when searching for drugs in his home. The offending ranged from indecent assault to oral, anal and/or vaginal intercourse. None of the children had previously disclosed the sexual offending to anyone, and neither had any such offending been previously suspected by anyone. When the children were interviewed by Police, half of them did not report any sexual abuse during the interviews. This included the child who had suffered the greatest number of incidents and most severe sexual assaults according to the videotaped evidence. It is of note that none of the children reported sexual abuse behaviour that was not documented on video.

In a similar study, also in Sweden,[398] the researchers examined the reports of eight children, aged three to ten, who had been subject to a single act of sexual abuse by a person they had not previously met; that is, a stranger. The abuse had been documented by the perpetrator in photographs he had taken. The researchers also had access to the detailed confession of the perpetrator and medical examinations of the children. Detailed analysis of the police interviews found that most of the children reported no details, or very few details of the sexual abuse. In addition, the youngest children expressed to the interviewer on almost 100 occasions that they did not want to talk about the abuse.

397 Sjoberg, R. L., & Lindblad, F. (2002) Limited disclosure of sexual abuse in children whose experiences were documented by videotape. *American Journal of Psychiatry, 159*, 312-314.

398 Leander, L., Christianson, S.A., & Granhag, P.A. (2007). A sexual abuse case study: Children's memories and reports. *Psychiatry, Psychology & Law, 14*, 120-129.

In an analogous study, American researchers[399] examined the reports of 28 young people, aged 3 years to adolescence, where their sexual victimisation was known from the presence of sexually transmitted disease. Less than half of them reported sexual abuse during the initial formal interview.

These studies indicate that with respect to sexual abuse, many children are reluctant to report what took place, either in full, or in the details. The caveat to these three studies is that the sample sizes are small. Nonetheless, they are important because it is certain that sexual abuse of these children had occurred. Furthermore, the findings are consistent across the various studies, and in combination they include a large group of children.

It is also relevant to consider that children's reports may not accurately reflect memory. This possibility is of relevance to experimental studies investigating the effects of cues or suggestibility on children's memory reports. As already mentioned, Zajac and Hayne (2003)[400] have referred to this possibility or likelihood in relation to their study. This is illustrated further in a study by Righarts et al. (2015)[401] who found that while children in their laboratory sample responded to suggestive cross-examination type questioning with decreased accuracy, their later responses to non-suggestive questioning were as accurate as responses given before the suggestive questioning. Young children aged 5-6 years visited a police station. They were interviewed one to three days later about events that took place in a direct examination format (that is, without suggestions). Either one to three days later for one group or 8 months later for a second group, children were interviewed in a cross-examination format designed to persuade them to change their original responses. Then a further week after the cross-examination interview, the direct examination questions were repeated. Relative to the first interview, the accuracy of children's reports decreased significantly during the cross-examination style interview, irrespective of delay. When children were interviewed again one week after cross-examination, however, their responses and accuracy were similar to those observed during the direct examination interview. That is, during cross-examination, the children made changes to their earlier testimony even when their memory for the event remained intact.

The authors surmised that while the children made changes to their responses under conditions of suggestive questioning, their memory for the event remained intact. Reports may not be the same as memory. This caution applies equally to the real-world context of forensic interviewing: poor interviewing may produce unreliable reports without significantly affecting memory for abuse events. Thus, careful adherence to evidential interview protocols by evidential interviewers is importance.

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399 Lawson, L., & Chaffin, M. (1992). False negatives in sexual abuse disclosure interviews: incidence and influence of caretaker's belief in abuse in cases of accidental abuse. Discovery by diagnosis of STD. *Journal of Interpersonal Violence, 7*, 532-542.

400 Zajac, R., & Hayne, H. (2003). The effect of cross-examination on the accuracy of children's reports. *Journal of Experimental Psychology: Applied, 9*, 187-195.

401 Righarts, S., Jack, F., Zajac, R., & Hayne, H. (2015). Young children's responses to cross-examination style questioning: the effects of delay and subsequent questioning. *Psychology, Crime & Law, 21*(3), 274–296.

CONCLUSIONS

This report has addressed expert evidence about memory that has been proffered to New Zealand courts. The context of the briefs of evidence is sexual violence. Almost all cases available to us and referenced in case law were those involving sexual violence, predominantly against children. The one exception involved physical violence by a father against his young daughter. It may be assumed the reason that memory expert evidence has appeared almost exclusively in matters concerning sexual violence is that it is rare for there to be witnesses other than the victim. Thus, the court depends to a great degree on the testimony of the complainant, and in this regard, their recollection of events. Notwithstanding this observation, there are other crimes without witnesses.

The Court has adopted a cautious approach to the admission of expert memory evidence. This is indicated in *M v R* where it is stated that, "In practice courts are cautious about expert evidence on memory and do not facilitate it as they do counterintuitive evidence about victims' behaviour. Rather, they assess it on a case by case basis for substantial helpfulness, which is an amalgam of relevance, reliability and probative value."[402] The Court stated the reasons for this caution as being: (a) As noted, jurors are taken to understand memory, so it is first necessary to identify the issue to which the evidence is directed and decide that it is not within their ordinary knowledge or capacity to understand. (b) Memory is a developing science, which may increase the risk of error inherent in expert evidence. (c) The court must be satisfied that the witness rests his or her opinion on relevant specialised knowledge or skill and (d) Care may be needed to ensure that the witness's opinion complies with the Code of Conduct for Expert Witnesses, which requires transparency of qualifications, reasons and sources.

Judges can of course themselves give information and warnings about memory as provided in the provisions of the Evidence Act as set out in s 122, *Judicial directions about evidence that may be unreliable*, s 125, *Judicial directions about children's evidence*, and s 126 *Judicial warnings about identification evidence*. Such advice is of a general nature, much removed from the lengthy and detailed briefs offered by memory expert witnesses.

Apart from the legal barriers to the admissibility of memory expert evidence in our courts, we have in this report addressed concerns about the nature of the memory evidence that has been presented and/or proposed. The briefs of evidence cover similar topics regardless of the case or the court for which they are prepared. Apart from those briefs of evidence provided for the appellate courts, it is unclear as to whether the reports we have seen were intended for pre-trial hearings or for evidence to a jury at trial, as they are highly similar in format. They are an amalgam of academically phrased commentary citing research literature and comment on the specifics of the given case with opinion as to the reliability of the memory of the complainant(s).

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402 M (CA68/2015) v R [2017] NZCA 333 [2 August 2017] at [28]

The briefs of evidence offered cover a wide range of topics including that related to eyewitness (mis)identification resulting in wrongful convictions; by-stander eyewitness memory, "transference", etc. These topics are included routinely regardless of the facts of a given case. The discourse on the impact of post-event misinformation on memory is usually speculative given that there is most commonly no evidence at trial indicating that the complainants were actually subject to post-event misinformation. The impact of conversations with others involving post-event misinformation is also proffered without any evidence at trial that this actually occurred.

Instead the experts speculate that this may have occurred. Similarly, it has been asserted that 'transference" may have occurred in cases in which the complainant(s) and defendant are either family members or persons well known to each other. As we have stressed, the research evidence proffered by the memory experts (for understandable ethical reasons) consists of studies and experiments that are quite far removed from the actual experience of sexual violence. The briefs of evidence offer none of the caveats that are contained in some of the research papers cited, especially in relation to applicability to real world situations.

As discussed in Chapter Two, the Code of Conduct for Expert Witnesses sets clear expectations for expert witnesses concerning relevance (opinion is admissible only where the facts upon which the opinion is based are expressly stated and present in admissible evidence; the (basis rule') and balance (experts must state where evidence may be incomplete or inaccurate without some qualification, and state where their opinion does not have consensus within the literature).

In response to rebuttal expert evidence that has drawn attention to the relevance or otherwise of the expert evidence about memory to sexual violence trials, some of the memory experts have asserted (both in written briefs and viva voce evidence) to the effect that the laws of memory cover all situations and that memory for child sexual abuse is no different to memory for other events. We disagree, and point to our analysis of the research studies cited in relation to their ecological validity to sexual violence cases. We have also noted in the introduction to Part Two this paper, Roediger's (2008) [403] assertion that there are no laws of memory, because it all depends on context.

Finally, we briefly consider potential implications for victims/survivors of sexual violence and child sexual abuse should memory evidence of this nature be more widely accepted in our courts. We emphasise that to date, this does not seem to have been the case. In the course of cross-examination complainants will routinely be challenged as to the truth of

[403] Roediger, H. L. (2008). Relativity of remembering: Why the laws of memory vanished. *Annual Review of Psychology*, 59, 225-254.

their allegations, typically in the form of accusations they are lying.[404] [405] [406] [407] But add to this the situation where an expert witness might be permitted to give evidence that speculates (without any specific evidential basis) that the complainant may have misidentified a defendant (despite them being a close family member or someone close to the complainant), that the complaint was false and may have arisen because of some misinformation given to the complainant; that the complaint had arisen simply because the complainant had spoken about and told someone about it; that the complainant may have "imagined" that the alleged sexual offending occurred; that the complaint has arisen because the complainant has had a false memory about the entire episode.

While it is reasonable and desirable that a robust defence be mounted in the interests of the defendant, it is unreasonable that a defence is advanced on the basis of unsound propositions; a situation made worse by a lack of transparency about the science upon which the propositions depend. In this report, we have addressed transparency by describing the studies that memory expert witnesses cite in support of their opinions. We have also argued that memory expert evidence has often failed to meet the standards of evidence required as set out in the Code of Conduct for Expert Witnesses regarding relevance and balance. In our opinion, these circumstances have the potential to place barriers in the way of access to justice of complainants of sexual violence.

404 Randell, I., Seymour, F., Henderson, E., & Blackwell, S. (2018). The experiences of young complainant witnesses in criminal court trials for sexual offences. *Psychiatry, Psychology and Law, 25*, 357–373;

405 Randell, I., Seymour, F., McCann, C., Anderson, T., & Blackwell, S. (2020). Young witnesses in New Zealand's sexual violence pilot courts. https://www.lawfoundation.org.nz/wp-content/uploads/2020/05/2018_45_10_Young-Witnesses-in-NZs-Sexual-Violence-Pilot-Courts-final-research-report-rcvd-7.5.2020.pdf

406 McDonald, E. (2020). Rape myths as barriers to fair trial process: Comparing adult rape trials with those in the Aotearoa Sexual Violence Court Pilot. https://ir.canterbury.ac.nz/handle/10092/18594

407 Blackwell, S.J.Y. (2007). *Child sexual abuse on trial:* Doctoral thesis. The University of Auckland.

THE AUTHORS

Dr Suzanne Blackwell

Dr Suzanne Blackwell is a clinical psychologist and a Fellow of the New Zealand Psychological Society. She provides expert evidence for both prosecution and defence, and advises counsel on pre-trial and trial matters. She heads a sexual risk assessment team for the Medical Council of New Zealand, and since 1987 has chaired disciplinary conduct committees for the New Zealand Psychologists Board. She is an Honorary Research Fellow at the School of Psychology, University of Auckland. In 2004-2007 she conducted research into jurors' knowledge of child sexual abuse issues, this project being funded by the New Zealand Law Foundation. She has published in the area of child sexual abuse and trial issues. In 2011, she was awarded the Ballin Award by the New Zealand Psychological Society for "her significant contributions to psychology and the legal profession." With Professor Fred Seymour, she was an editor of the book, Psychology and the Law in Aotearoa New Zealand (2018).

Professor Fred Seymour ONZM

Fred Seymour is a clinical psychologist and Emeritus Professor in the School of Psychology, University of Auckland. His research and clinical practice have predominantly been in the areas of child and family therapy, child sexual abuse, and parental separation. His research has contributed to the development of services for child abuse investigation and treatment, expert evidence in the courts, and psychoeducation programmes for parents following separation. He is a former Director of the Clinical Psychology Programme, Head of the School of Psychology, President of the New Zealand Psychological Society and member of the Psychologists Board. Before joining Auckland University, he worked as a clinical psychologist and manager in child and family mental health agencies. He maintains a private practice which includes provision of expert evidence in the criminal courts in relation to child abuse allegations.

Sarah Mandeno, Barrister, Station Chambers

Sarah is an experienced barrister specialising in serious crime. Following her admission to the bar in 1999 she worked for the Auckland Crown Solicitor's office prosecuting on behalf of the Crown and other government agencies. In 2004 to 2007 she worked in the United Kingdom and qualified as a solicitor of England and Wales in 2006. In 2007 she left her position at Field Fisher Waterhouse in London, where she was primarily involved in the conduct of regulatory proceedings for the General Medical Council and Nursing and Midwifery Council, to rejoin the Auckland Crown Solicitor's office where she was a senior Crown prosecutor (2008) and an Associate (2009). Between June 2016 and January 2018, she worked as a senior lawyer at the Public Defence Service, Manukau before commencing practice as a Barrister in June 2018. Since then she has been appearing for legally aided clients (PAL 1-4), private clients and government agencies including Fire and Emergency NZ and the NZ Parole Board in various proceedings. She is also an approved Youth Advocate (PAL 1-4) and undertakes assignments as either the assigned advocate or counsel to assist the Court in the Youth Courts in the Counties Manukau area (including Te Kooti Rangitahi and Pasifika Court). In 2020 Sarah was appointed as a member of the Abuse in Care Inquiry Legal Assistance Panel. Sarah is a member of the Criminal Committee of the New Zealand Bar Association and on the committee for the South Auckland Bar Association.

APPENDIX ONE

RECOVERED MEMORIES CHECKLIST FOR COUNSEL

In Chapter Eight we covered the area of so called 'recovered memories' concluding that there is empirical and clinical support for these. However, we acknowledge that 'recovered memory' has been contentious within criminal trials. While it is our experience that the vast majority of complainants coming before our courts will say they have continuous memory at some level for alleged child abuse, some complainants may say their memories have been 'recovered'. For avoidance of issues about this arising at trial, prosecutors in historical cases might profitably seek to discover how the complainants' memory came about and under what conditions. We offer this check list for consideration.

Was the memory continuous for most relevant details since the event?	If continuous proceed. If not ask the following;
How old was the complainant at the time of the alleged offending?	If the complainant is now an adult and was reportedly aged four years or younger at the time of the alleged offending, go to Appendix Two re childhood amnesia. Do not proceed further at this stage
Was the alleged offending over a period of time?	If the complainant is now an adult and the alleged offending spanned a protracted period of time but including the ages prior to four years, seek to clarify the time frames. If offending continues to be alleged as occurring prior to the age of four years, if you are a prosecutor, consider not pursuing charges related to this early alleged offending, but retaining charges for alleged offending past the complainant age of four or five years. Refer Appendix Two re childhood amnesia.
In what context was the event(s) re-remembered	Seek information on possible cues or events that were associated with re-remembering.
Has the complainant sought therapy in relation to the alleged offending or associated psychological problems?	If so, did they remember the alleged offending before going to therapy?
Was it first remembered in therapy? If so, did the complainant know anything at all about the alleged event before going to therapy? What sort of therapist?	If first remembered in therapy, had they told anyone else prior or had another person told them about it or similar events? If recall occurred in therapy seek details of what was occurring in therapy. Was there "guided imagery" or "hypnosis" that directly focused on sexual abuse issues? Was the point of therapy to "remember" sexual abuse? Prior to the complainant remembering the alleged offending, did the therapist ever suggest to her/him that sexual abuse had occurred?

If there remain issues related to (1) non-continuous memories of the alleged offending; (2) memories for events occurring when the complainant was younger than four years in the context that the complainant is now an adult and; (3) any information about therapeutic practices that might be seen as suggesting events that may not have occurred, it may be useful to seek a file review by a psychologist experienced in child sexual abuse issues and the phenomena of recovered memory and childhood amnesia. We raise the issue about unethical therapeutic practices in the knowledge that these are rare but cannot be totally discounted.

APPENDIX TWO

CHILDHOOD AMNESIA CHECKLIST FOR COUNSEL

We note that memory expert witnesses have not commented extensively in the area of childhood amnesia. One reason for this may be that this issue does not frequently arise in criminal trials and, most commonly, prosecutors do not bring charges in cases based on alleged incidents said to have occurred when a complainant was aged younger than three years in the context that the complainant has become an adult. However, in our experience prosecution has occasionally proceeded in such instances. On several occasions over the last 10 years, one of us (SB) has been consulted by prosecutors regarding allegations of sexual abuse when the person was very young, with the result that charges were withdrawn.

Childhood amnesia (sometimes also referred to as infantile amnesia) refers to the inability of adults and some teenagers to recall events that occurred during their infancy and early childhood.[408] [409] Sometimes, a person, as a late teenager or an adult, will say that they can remember in detail something that occurred when they were a baby or when they were a very young child aged younger than two or three years. However, there is general consensus that this would be most unlikely except for fleeting images. If we, as adults, have any memories of events prior to the age of three years, these are likely to be in the form of brief disconnected pictures without details and without a logical account of events.

We know that young children, including very young babies, have an ability to encode and remember events they have experienced, and that they can retain these memories for extended periods. However, the research literature suggests if these memories of specific events are laid down prior to the age of three years, the memories will fade over time and may be lost to what has been termed 'childhood amnesia'.

There appears to be a general consensus that adults' earliest autobiographical memories are for events that occurred when they were approximately three to four years of age. However, it is important to note that childhood amnesia does not apply to the ability to learn and recall semantic information (general knowledge facts, concepts, vocabulary) or procedural memory (skills) which begins in infancy and continues throughout adult life. It should also be noted that childhood amnesia is not a sudden occurrence, but rather a gradual loss of earlier memories for events. Thus, it seems that from about the ages of six to ten years, these memories acquired prior to the age of three years will show a decline in detail and context, eventually becoming forgotten by adulthood.

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408 Simcock, G., & Hayne, H. (2002). Breaking the barrier? Children fail to translate their preverbal memories into language. *Psychological Science, 13*(3), 225–231.

409 Hayne, H. (2004). Infant memory development: Implications for childhood amnesia. *Developmental Review, 24*(1), 33–73.

How old was the complainant at the time of the alleged offending?	If the complainant is now an adult and was reportedly aged close to four or five years at the time of the alleged offending, seek to verify this age by other available evidence to rule out any possibility that they were younger than four years.
How old is the complainant now?	*If the complainant is still a child aged under 13 years* and says that the alleged offending occurred when they were under four years seek to verify this age by other available evidence. If they allege offending when they were aged four to 12 years, proceed as normal but verifying ages where possible
	If the complainant is now a teenager or adult and alleges offending occurring prior to the age of four years, seek to examine for details that might seem more than expected for a child aged younger than four years.
Was the alleged offending over a period of time?	If the offending spanned a protracted period of time but including the ages prior to four years, seek to clarify the time frames and, if offending continues to be alleged as occurring prior to the age of four years, if you are a prosecutor ,consider not pursuing charges related to that alleged offending but retaining charges for alleged offending past the complainant age of four or five years.

If there remain issues related to the age of the now adult complainant at the time of the alleged offending being younger than four years, or a teenager alleging offending prior to the age of four years and giving unusual detail, it may be useful to seek a pre-trial file review by a psychologist experienced in child sexual abuse issues and the phenomena of childhood amnesia.

APPENDIX THREE

CASE LAW IN RELATION TO 'TRANSFERENCE'

This material is not included in Chapter One on case law because it is not about admissibility, but specifically about the issue of 'transference'. It is presented here because of the confusion about the term 'transference' evident in legal proceedings.

As we have indicated clearly in Chapter Four, the term 'transference' refers to situations of erroneous eyewitness identification of strangers or people not well known to a witness and the relevant research literature relates to police lineups or photomontages of strangers. 'Transference' would not apply to sexual violence trials in situations where the defendant and the complainant are well known to one another, which is most commonly the case in child sexual abuse. Nonetheless, memory expert witnesses have asserted in individual trials of historical sexual abuse that "there is a plausible scientific basis" that a complainant may have confused the defendant (a person well known to them) with another person (also a person well known to them). They have done this citing only literature that has related to eye witness identification of strangers, usually in police lineup situations. However, as we have noted in Chapter Four, the empirical research does not support the concept of 'transference' in non-stranger/non-familiar cases.

As will be evident from the following case law, some decisions have appeared to validate the phenomenon of 'transference' in sexual violence cases where the defendant was well known to the complainant(s).

In *R v Morrice* [410] the Court of Appeal ordered a retrial on the basis that counsel should have been permitted to cross examine the complainant (a 12-year-old girl with learning difficulties and a borderline IQ) about prior sexual abuse by another man. At trial counsel had submitted that memory expert evidence should be admissible on the grounds of the phenomenon known as transference, whereby the actions of one person are attributed to another. The complainant lived in a caravan park with her father, and the defendant lived at the same park as did another man (A). She reported sexual offending by the defendant and also by A. She later also told another person that she had been sexually abused by her own father and another man (C). As a result of these allegations against four men and her behavioural and psychological functioning, the complainant's credibility was at issue.

Whilst it is possible that the complainant's credibility was unreliable for those reasons (but not related to any 'transference'), it is also possible that she was, in fact, the victim of sexual offending by multiple perpetrators. Multiple sexual victimisations by different

410 *R v Morrice* CA66/2008 29 July 2008

perpetrators is a well-recognised phenomenon in the child sexual abuse literature.[411] [412] [413] [414] and victimisation by child sexual abuse is associated with high risk of subsequent sexual revictimisation.[415] [416]

Citing and summarising Morrice [417] the Court of Appeal in *T v R* identified three kinds of case in which evidence of the previous sexual experiences of a complainant child might be relevant: (1) to explain the complainant's sexual knowledge; (2) to show that the complainant might, consciously or otherwise, have transferred the experience of previous abuse to another person; and (3) or suggest other motives for a false complaint.[418] Here, the Court seems to have legitimised the concept of 'transference' in cases which do not involve strangers or those not well known.

In *Ieremia v R* counsel for the appellant submitted that the trial judge had erred in failing to recognise that on the existing evidence, transference was a plausible theory and provided expert evidence to support transference. The Court recorded an understanding that the argument being advanced was that (a) the evidence was of abuse by others that happened and (b) that the complainants had honestly but mistakenly attributed the abuse to the appellant. The Court noted at [36] that all the expert witness had recorded was "*First that it would be possible for a person who was actually abused to come to remember a different person committing that abuse and, second, that LF states she was being abused by a second individual.*"[419] This was clearly a statement without evidential or empirical foundation.

In *R v Ashley Palmer,*[420] the Court of Appeal noted that defence counsel had applied to cross-examine the complainant concerning consensual sexual activity between her and her boyfriend. It was his contention that it was possible that in her mind she had confused this incident with the alleged non-consensual sexual incidents with the accused. The presiding judge declined that application on the basis that "*The possibility of transference should be supported by more concrete submissions or evidence than has been put to me. It is difficult to accept that a 15-year-old girl could confuse consenting sexual relations with her boyfriend with unwanted sexual activities by a 50-year-old man."* The Court of Appeal upheld the trial judge's ruling.

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411 Swanston, H.Y., Parkinson, P.N., Oates, R.K. O'Toole, B.I., Plunkett, A.M., & Shrimpton, S (2002). Further abuse of sexually abused children. *Child Abuse & Neglect, 26,* 115-127.

412 Boney-McCoy, S. & Finkelhor, D. (1995). Prior victimization: A risk factor for child sexual abuse and for PTSD related symptomatology among sexually abused youth. *Child Abuse &Neglect, 19,* 1401-1421

413 Long, P.J, & Jackson, J.L. (1991). Children sexually abused by multiple perpetrators: Familial risk factors and abuse characteristics. *Journal of Interpersonal Violence, 6*(2) 147-159.

414 Fergusson, D. M., Horwood, J. L., & Lynskey, M. T. (1997). Childhood sexual abuse, adolescent sexual behaviors, and sexual revictimization. *Child Abuse & Neglect, 21,* 789-803.

415 Breitenbecher, K. H. (2001). Sexual revictimization among women: A review of the literature focusing on empirical investigations. *Aggression and Violent Behaviour, 6,* 415-432.

416 Kellogg, N. D., & Hoffman, T. J. (1997). Child sexual revictimisation by multiple perpetrators. *Child Abuse & Neglect, 21*(10), 953-964.

417 *R v Morrice* CA66/2008 29 July 2008

418 *T (CA71/2017) v R* [2017] NZCA 166 [9 May 2017]

419 *Ieremia v R* [2020] NZCA 17 [18 February 2020]

420 *The Queen v Graham Ashley Robert Palmer* [2001] NZCA 84 (8 March 2001)

In *R v C* [421] the alleged offending was against the appellant's young step-daughter and had spanned a period of six and a half years from 1995. The trial judge had declined a section 44 application for the complainant to be cross examined about her sexual victimisation by another offender. The Court of Appeal noted at [50] *"The central issue, of course, is whether sexual abuse perpetrated by Mr K might have been mistakenly attributed by the complainant to the appellant, transference as it is sometimes called."* They concluded, however, "*It is hardly surprising, given the breadth of the leave sought, that the Judge declined the s 44 application."* This was because of a perception that, *"far from there being "muddlement" between the two men, the complainant's evidential interviews were quite specific."*[422]

In *R v L*, [423] the applicant was the brother of the two complainants. It was argued by counsel that the allegations of contemporaneous abuse by the father raised real concerns of transference of allegations against the applicant. The Court of Appeal quashed the convictions and ordered a new trial on the basis of the mental health status of one of the complainants and her credibility and did not further consider the transference question.

In *Nguyen v R* [424] relying on the *R v Morrice* decision, counsel suggested there had been "conscious transference" by the complainant (i.e., the use of the prior experience with her stepbrothers as a basis for making the complaint against the defendant who was a family friend who stayed at the family home on occasion). The Judge declined this, finding *"there were significant differences between the nature and circumstances of the two sets of offending; the "conscious transference" argument was no more than speculative; there was an absence of any expert evidence on that subject; the admitted offending by the stepbrother did not challenge the complainant's credibility; and its admission would be grossly unfair to the complainant."* The Court of Appeal agreed at [15] that the risk of "conscious transference" was no more than speculative given the significant differences in the circumstances of the prior incident when compared with the offending alleged against the defendant and that it was wholly unrealistic to suggest there is any link of the kind suggested.

> In *TPN v R* [425] the trial judge noted of the defence expert witness (a psychiatrist) that;
> In his evidence, he accepted that the materials he had seen did not so much as hint that false attribution had actually occurred in this case. However, that did not surprise him. He stated that three factors made it more likely that false attribution could have occurred (namely, (i) 3 different perpetrators were involved, (ii) the offending in each instance was of a similar type, and (iii) the perpetrators were older, male and all relatives); he also conceded that three factors made it less likely (namely that (i) the complainant had specific memories of the events, (ii) she knew all three perpetrators well, and (iii) the acceptance of some of her specific allegations against him by the accused himself).

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421 *R v C (CA395/2008*) [2009] NZCA 272; [2010] 2 NZLR 289; (2009) 24 CRNZ 338 (26 June 2009) at [53] and [54].
422 *Ibid*
423 *R v L (CA304/06) CA CA304/06* 15 June 2007
424 *Nguyen v R* CA797/2010 [11 February 2011]
425 *TPN v R* [2010] NZCA 29.

The trial judge summarised the evidence of the defence expert:

> …his opinion was that false attribution may have occurred here; and that although he could not point to any indicators to confirm that view, it was simply something that could never be discounted in circumstances such as this. [The expert witness] maintained this view despite his inability to point to any concrete indicator in support, such as habitual or false previous complaints by the complainant. I regarded that opinion as insufficient to overcome the *R v M* test of "... more than speculative".

One of the authors of this paper (SB) gave evidence for the Crown at the pretrial hearing and indicated that all of the three alleged perpetrators were well known and familiar to the complainant, and that the offending by the uncles had occurred in locations which were distinct from the places at which the applicant is alleged to have offended against the complainant. The Court of Appeal permitted cross examination of the complainant about the prior sexual victimisation concluding at [17]

> While Dr Blackwell was sceptical about the prospects of this having happened there is, at this stage, a difference between the two experts on this aspect and neither has examined the complainant. When a pre-trial application is being considered under s 44(3), care must be taken not to prematurely usurp the function of the jury in assessing conflicting evidence.

Of course, examination of the complainant was irrelevant here, it was not for an expert witness to determine whether the evidence of a complainant was reliable or not. What was relevant was an understanding of the issue of 'transference' which has no legitimate relevance in cases where the defendant and other alleged offenders are well known to a complainant. We note that this is not the case when a complainant has been sexually violated by a number of persons in the context of a gang rape. In that situation, the complainant may become confused as to who did what if there are many perpetrators and the offending was repeated over a number of hours (as has frequently been the case in trials before the New Zealand courts). That situation is not 'transference' but rather confusion in a highly traumatic situation.

In our opinion, it is appropriate that care is taken in legal proceedings to become properly informed as to the actual meaning of the term 'transference' and its incorrect use in situations where a defendant is well known to a complainant witness. It is also important that memory expert witnesses consider the ethical issues inherent in relating research about misidentification of strangers to the situation faced in sexual violence courts.