



THE IMPACT OF THE USE OF PRE-RECORDED EVIDENCE ON JUROR DECISION-MAKING: An Evidence Review



CRIME AND JUSTICE

**THE IMPACT OF THE USE OF PRE-
RECORDED EVIDENCE ON JUROR
DECISION-MAKING:
An Evidence Review**

2018

Vanessa Munro (Warwick University)

Contents

Acknowledgements	4
Executive Summary	i
Background	i
Perceived Risks and Benefits of Pre-Recorded Evidence	i
Scope of the Review	i
Use of Pre-Recorded Evidence by Child Witnesses	ii
Use of Pre-Recorded Evidence by Vulnerable Adults Witnesses	ii
Complicating Factors in Comparing Studies	iii
Using Pre-Recorded Evidence in Practice	iii
Conclusion	iii
1. Introduction	1
1.1 Existing Provisions in Relation to Special Measures	1
1.2 The Use of Pre-Recorded Testimony in Scotland	2
1.3 Recent Proposals and Initiatives	3
1.4 The Remit and Aims of this Evidence Review	4
1.5 Outline of Structure	4
2. Understanding Jury Simulation Methods	6
2.1 Parameters of the Literature Search	6
2.2 Simulation Studies: The Importance of Method	7
2.3 Trial Scenarios and Stimuli	7
2.4 Sampling Issues	9
2.5 Measures of Influence	9
2.6 Creating an Evidence Base	10
3. Jurors' Perceptions of Pre-Recorded Evidence Given by Child Witnesses	11
3.1 Introduction	11
3.2 Jurors' Ability to Detect Deception	12
3.3 Jurors' Empathy and Assessments of Credibility	13
3.4 Jurors' Responses to Emotion, Age and Memory	16
3.5 Jurors' Perceptions in Jurisdictional Context	17
3.6 England and Wales: Section 28 Pilot	19
4. Jurors' Perceptions of Pre-Recorded Evidence Given by Vulnerable Adults	20
4.1 Introduction	20
4.2 Jurors' Assessments of Adult Testimony in Rape Trials	20
4.3 Jurors' Assessments of Adult Testimony Beyond Rape	24
4.4 Future Research	25

5. Using Pre-Recorded Evidence in Practice: Influence upon Jurors.....	27
5.1 Technological Considerations and Concerns	27
5.3 Future Research	30
6. Conclusion	31
References	32

Acknowledgements

I am much indebted to Professors James Chalmers and Fiona Leverick (University of Glasgow), Lorraine Murray and Rachel Ormston (Ipsos MORI) and the various members of the Research Advisory and Steering Groups associated with the overarching Jury Research Project of which this Evidence Review forms a part, for their careful consideration of, and comments on, previous drafts. My thanks are also due to Natalie Kyneswood, a PhD student at Warwick Law School, for her excellent research assistance in the early stages of the literature review. My approach to writing this Evidence Review has been influenced by previous research that I conducted on jury decision-making, funded by the Economic and Social Research Council, to whom I am also grateful. Discussion in Chapter Four in particular draws heavily upon that work, conducted with Professor Louise Ellison (University of Leeds).

Executive Summary

Background

In recent years, a growing interest has been expressed by many practitioners and policy-makers within the Scottish criminal justice system in making greater and more effective use of digital technology in the courtroom, particularly – but not necessarily exclusively – in relation to the delivery of testimony by child and vulnerable adult witnesses. Provision already exists in Scotland for live-links to be utilised in order to avoid witnesses having to come into court to give evidence, for prior statements or recorded police interviews to be submitted as evidence-in-chief, and for testimony to be taken and recorded ahead of time by a court-appointed commissioner. However, to date, applications to make use of pre-recorded testimony have been rare.

Perceived Risks and Benefits of Pre-Recorded Evidence

Research has demonstrated that both child and vulnerable adult witnesses appreciate the opportunity to give testimony in alternative ways designed to ameliorate the stressors associated with giving evidence in the courtroom in the presence of the accused. Despite this, criminal justice practitioners have often highlighted concerns regarding the extent to which the use of live-links and pre-recorded testimony can influence jurors' credibility assessments and, ultimately, their verdict decisions. Some have worried that allowing witnesses to give testimony outside of the courtroom sends a signal to jurors about an inability to face the accused, which can either be interpreted as re-enforcing the truth of the allegation or – conversely – as implying the witness' knowing deception. Others have suggested that the presentation of the witness on a TV screen reduces jurors' ability to read body language in order to pick up on non-verbal cues of deception or veracity; while others have worried that evidence presented on a TV screen will be less vivid and have less (emotional) impact than live testimony. The aim of this Evidence Review is to evaluate the existing research that tests the legitimacy of these concerns. It considers evidence in relation not only to witnesses' use of pre-recorded testimony at trial, but also live-link facilities, since it is often difficult to clearly disentangle the effects of the TV screen medium itself from the effects associated with the timing and conditions of the actual testimony.

Scope of the Review

The primary focus is on studies that have sought to generate 'first hand' insight into the dynamics and substance of jury deliberations, rather than those which have interviewed practitioners about what they hypothesise influences jury decision-making. While this latter form of evidence can provide a useful point of triangulation, it does not provide a robust foundation for understanding the dynamics and content of collective discussions within the jury room. In a context in which many jurisdictions have imposed legal restrictions on the direct questioning of real jurors about their deliberations, a variety of simulation techniques have been developed. These seek to provoke responses to trial scenarios from third party observers, which can be analysed in order to increase our understanding of jury decision-making. As will be discussed in Chapter Two, such simulation studies present distinctive methodological challenges, but – when carefully designed with an eye to the realism

of the trial environment – they provide useful insights which can, at least in some cases, be cautiously extrapolated from to catch a glimpse of what goes on within the jury room.

The Review draws upon experimental studies, mostly from the 1990s onwards, based on an extensive literature review of English language publications across a range of UK, Commonwealth and European jurisdictions. It spans Government evaluations, reports by independent research institutes, and peer-reviewed studies conducted by academic researchers, often but not exclusively published within psychology journals. A prioritised focus has been given to research studies that rely on the most rigorous methodologies, arise in legal systems of most relevance to Scotland, and / or have been conducted most recently, on the basis that these hold most evidential weight.

Use of Pre-Recorded Evidence by Child Witnesses

A number of studies have focused on the impact of the use of special measures in general, and live-links and pre-recorded testimony in particular, by child witnesses. Broadly speaking, these have demonstrated that – contrary to many people’s misplaced confidence in their ability to do so – jurors are not in fact significantly better able to reach the truth and discern signs of deception when children testify in open court as compared to testifying via live-link or pre-recorded testimony. Moreover, while some – but by no means all – studies have suggested that jurors may prefer children’s testimony to be delivered live in court, there is no clear evidence that this impacts in any significant way upon verdict outcomes. The existence of group deliberation appears to be key in this respect, reducing any pre-deliberation propensity on the part of individual jurors to rate less highly the credibility and likeability of child witnesses who give evidence via live-link or pre-recorded video. Research in this area has also established, however, that findings in respect of child witnesses are complicated by the interaction of mode of evidence delivery with factors such as the perceived emotionality of the child, his or her age and level of understanding, and jurors’ preconceptions regarding the reliability of children’s memory, particularly over time.

Use of Pre-Recorded Evidence by Vulnerable Adults Witnesses

While fewer studies have been conducted on the use by adults of pre-recorded evidence, research involving fairly sophisticated rape trial simulations has indicated that the level of any impact upon mock jurors is low, and its direction unpredictable. The use of special measures may increase one person’s empathy for an adult rape complainant at the same time that it raises another’s suspicion about her credibility in equal measure. Beyond sexual offence trials, existing research is extremely limited. Some studies suggest that mode of testimony may have a stronger influence, which can work against witnesses, but it is difficult to place confidence in these findings due to certain weaknesses in their underlying methods: in particular, their failure to incorporate a group deliberation stage, which has been shown - both in relation to child witnesses and adult rape complainants - to perform a key role in neutralising individual influences, so as to counteract any significant impact of testimony mode on verdict outcomes.

Complicating Factors in Comparing Studies

Comparing findings in relation to the influence upon jurors of the use of pre-recorded evidence is complicated by the fact that such testimony is introduced in different ways across studies, and across legal systems. Much of the research on child witnesses has relied on one-way CCTV links (in which the advocates and judge relocate to a remote room to take the witness' testimony, which is then relayed to jurors and the accused in the courtroom), rather than two-way transmissions in which counsel and the judge also remain in the courtroom.

Likewise, while some of the studies exploring the effects of pre-recorded evidence have relied on videos of pre-trial depositions in which witnesses are asked questions by counsel on both sides ahead of time in the presence of a judge, others have utilised videotapes of forensic interviews, often completed nearer the time of the alleged incident by police officers. This variability in the ways in which pre-recorded evidence is introduced to jurors can make extrapolating findings across studies more complicated and may make predictions regarding its impact upon jurors more jurisdictionally-specific.

Using Pre-Recorded Evidence in Practice

There are additional factors associated with the way in which live-link or pre-recorded evidence is operationalised at trial which may also interact with the influence upon jurors associated with the mode of testimony *per se*. The length and format of police forensic interviews have, for example, been suggested to have a significant effect, but the existing evidence is somewhat inconclusive. What is more clear is that jurors are prone to be distracted by the poor audio and visual quality of live-links and pre-recorded evidence when they are used in many courtrooms, and that factors such as the choice of camera perspective may bear careful scrutiny for their potential to influence jurors' assessments of witness credibility. If current calls to make greater use of such testimony are to be acted upon in Scotland, it is incumbent upon policy-makers and practitioners to ensure that they are introduced within interview contexts and courtrooms in a manner that prevents undue influence upon jurors.

Conclusion

While there is a need for further, and more methodologically rigorous, research in this area, particularly in relation to adult witnesses, the existing evidence does not establish a significant risk of negative juror influence associated with the use *per se* of pre-recorded testimony by either child or adult witnesses. Some – but by no means all – studies suggest a preference on the part of jurors for evidence that is presented live in court, but in simulations with a group deliberative component, mimicking actual jury decision-making, the broad consensus of researchers to date has been that this preference does not impact significantly upon verdict outcomes.

1. Introduction

This chapter sets out the existing provisions in relation to the use of pre-recorded evidence in Scottish criminal trials, which represent one element of a broader package of special measures that are currently made available to child and vulnerable adult witnesses. It outlines recent calls for greater use of such pre-recorded evidence, which have been informed by objectives including to reduce stress for witnesses, to improve the quality of evidence provided, and to avoid unnecessary delays and inefficiency within the trial process. The chapter then sets out the aims and remit of this Evidence Review, which is situated against, but not intended to speak directly to, these calls.

1.1 Existing Provisions in Relation to Special Measures

Special measures were introduced in Scotland (via provisions now contained under sections 271A-271M of the Criminal Procedure (Scotland) Act 1995, as amended by the Vulnerable Witnesses (Scotland) Act 2004) with an explicit aim to “reduce the distress and anxiety that, until now, has meant that many witnesses were unable to give their evidence” and to enable “vulnerable witnesses to give their evidence in a way which is best suited to their individual needs” (Scottish Executive, 2005: v, vii).

Witnesses under the age of 18 are automatically regarded as vulnerable, as are alleged victims of specified sexual, trafficking, domestic abuse and stalking offences. They are entitled to give evidence by use of ‘standard’ special measures, which involve either (1) use of a screen in the courtroom to shield the witness from the accused, or (2) the use of a live TV link which enables the witness to give testimony remotely, either from another part of the court building or from an external location. In addition, it is a ‘standard’ special measure to allow the witness to have a third party (often a relative, friend or representative from a voluntary organisation) act as a ‘supporter’ in the run up to and during the giving of testimony, wherever a screen or live link is used.

Adult witnesses who do not fall under the existing categories for ‘standard’ special measures entitlement can also seek the court’s permission to make use of them. Succeeding in an application to do so requires establishing that there is a significant risk that the quality of evidence may be diminished because the witness is suffering from a mental disorder, or because s/he is experiencing fear or distress in connection with giving evidence at the trial. Factors to be taken into account in determining if an adult witness is appropriately deemed ‘vulnerable’ for this purpose include whether the circumstances of the offence or nature of the evidence are apt to be particularly distressing, the relationship between the witness and the accused, the witness’ age and maturity, and any threats that have been made to the witness from the accused or persons associated with the accused, as well as the witness’ religious beliefs, sexual orientation, ethnic, social and cultural background, domestic or employment circumstances, or any physical disability that could affect the giving of evidence.

In addition, or in the alternative, to these ‘standard’ special measures, an application may also be made in criminal proceedings by any vulnerable witness to enable them to: (1) make use of a designated ‘supporter’ for live, non-screened testimony, (2) exclude the public during the taking of evidence, (3) have prior statements (usually

made to the police during the investigation stage) function as evidence-in-chief, or (4) give one's examination-in-chief and cross-examination ahead of time, before a court-appointed commissioner (usually a judge), in the presence of legal counsel for the Crown and defence, and the court clerk, but not the accused, with the video of those proceedings being submitted as evidence at trial in the place of live testimony.

In practice, as was anticipated by the legislation, it is common for vulnerable witnesses to make use of a combination of these special measures. For example, a supporter may be used in conjunction with a protective screen in the courtroom, or prior statements may be submitted as evidence-in-chief with a protective courtroom screen or remote live TV link then being used whilst the cross-examination is undertaken.

1.2 The Use of Pre-Recorded Testimony in Scotland

There has been a relatively large volume of witnesses making use of 'standard' special measures in Scottish courts since their introduction, with applications for screens, supporters or live TV links accounting for 99% of requests made by vulnerable witnesses from 2011-2014. By contrast, it has been reported that – until relatively recently at least – there has been “next to no use made” of the opportunity to give evidence-in-chief in the form of a prior statement or to give evidence ahead of time to a commissioner (Scottish Court Service, 2015: 13; see also Richards et al, 2008). What is more, the rules surrounding the use of such statements have developed on an ad hoc basis, without a structured approach to accommodate the full pre-recording of the investigative interview as the presumed evidential gold standard. At present, it is not standard practice in Scotland for police interviews with, or statements from, child or vulnerable witnesses to be visually recorded. This can be contrasted with the position in jurisdictions like England and Wales, where recorded 'Achieving Best Evidence' interviews are regularly used in lieu of examination-in-chief for vulnerable witnesses, and steps have been taken to roll out the opportunity for witnesses to also undergo their cross-examination ahead of time in front of counsel and the trial judge.

In its 2015 'Evidence and Procedure Review', the (then) Scottish Court Service observed that practitioners in England, Australia and Norway – despite jurisdictional differences in the modes through which testimony is taken and integrated into trial proceedings – are “convinced that there are clear benefits to be had from a systematic and structured approach to the use of audio-visually recorded forensic interviews as a witness' principal evidence, and from the recording of cross-examination” (2015: 25). What is more, the report goes on to state “these benefits accrue both to the witnesses themselves, in terms of their ability to cope with and recover from the ordeal, and to the administration of justice, in terms of greater certainty and efficiency” (2015: 25). It advocates for the more routine use of pre-recorded interviews as evidence-in-chief in cases involving vulnerable witnesses, together with the accompanying use of pre-recorded cross-examinations of witnesses ahead of trial, and supports a longer term aim of reducing significantly the time delay between these two evidential stages.

In tandem with these developments specifically in relation to special measures, criminal justice policy-makers and practitioners have been increasingly aware of the need to “bring trial procedures rooted in the Victorian era into the modern, technologically-enhanced society today and in years to come” (Scottish Court

Service, 2015: 3). Though not without its operational challenges, the use of pre-recorded evidence could be vital in this context, promoting a more responsive and efficient criminal justice system, whilst retaining due respect for its central pillars of truth-seeking and fair process. Affording an opportunity ahead of trial for all witnesses, vulnerable or otherwise, to provide testimony could be seen to increase the prospects for justice, by preserving a more contemporaneous account that is perhaps more likely to be accurate and complete in its recounting of events (Westera et al, 2013a). With this in mind, the Scottish Court Service's 'Evidence and Procedure Review' also set out to explore whether "substantial improvements can be made to the administration of justice with the widespread use of pre-recorded statements in place of testimony in court and a more imaginative use of live-link technology" (2015: 9).

1.3 Recent Proposals and Initiatives

In 2016, the 'Evidence and Procedure Review – Next Steps' Report was published, recommending that "initially for solemn cases, there should be a systematic approach to the evidence of children or vulnerable witnesses in which it should be presumed that the evidence-in-chief of such a witness will be captured and presented at trial in pre-recorded form; and that the subsequent cross-examination of that witness will also, on application, be recorded in advance of trial" (Scottish Courts and Tribunals Service, 2016: 28). Later that year, the Cabinet Secretary for Justice outlined his vision for the greater use of pre-recorded evidence by child and vulnerable adult witnesses (Scottish Government, 2017: 7). In March 2017, new High Court guidance (Practice Note 1 of 2017) was issued, which came into effect from May 2017. This built on experience from other jurisdictions and required that, before evidence could be taken by a commissioner, the parties must appear at a court hearing to discuss in detail all the measures that will ensure that a witness can give his / her evidence fully and with the minimum risk of further trauma: this should include consideration of the location and environment for the recording, the timing of the session, what communication aids may be required, the lines of inquiry to be pursued, the forms of questions to be asked and the extent to which it is necessary for the defence case to be put to the witness.

The report of the Pre-Recorded Further Evidence Work-Stream Group of the Evidence and Procedure Review Child and Vulnerable Witness Project, chaired by The Rt Hon Lady Dorrian, which coincided with the issue of this new Practice Note, also proposed a broader initiative to enable greater use of pre-recorded evidence for vulnerable adult and child witnesses. More specifically, it set out a 'Level 1' vision for children under the age of 16 who are complainers in cases involving the most serious crimes, who should have their complete evidence taken in the course of a visually recorded forensic interview conducted by a trained forensic interviewer, without any direct questioning being undertaken by lawyers. While the Report suggested that this 'Level 1' response may well be extended to other vulnerable adult and child witnesses in the future, the Group recommended a more limited response in the interim (mindful of resource implications and the need to ensure adequate training to meet demand) whereby in the majority of cases tried in the solemn courts, complainers aged 16 and 17, child witnesses, and vulnerable adult witnesses should have their investigative interview or witness statement visually recorded for use as their evidence-in-chief, with cross examination and further examination being undertaken using procedures for the taking of evidence by a

commissioner and thus also avoiding the need to come to trial to give evidence, unless the witness chooses to do so. In June 2017, a consultation document was produced by the Scottish Government, seeking responses by the end of September 2017 on a number of related issues, including whether the longer-term aim of law and policy in this area should be the presumption that child and other vulnerable witnesses should have all their evidence taken in advance of a criminal trial, and if so how best that should be phased in to allow for appropriate piloting and implementation.

1.4 The Remit and Aims of this Evidence Review

These developments in relation to the availability and use of special measures by child and vulnerable adult witnesses (and, indeed, proposals for a shift towards digital courtrooms for a broader range of trial participants) inform the context in which this Evidence Review has been conducted. However, the remit of this Evidence Review is focussed specifically on the impact upon juries of the use of these alternative forms of trial arrangement. Mindful of the difficulties of disentangling the effects of the video / TV medium from the timing and conditions of testimony, and reflecting the parameters of many of the key studies in this area, the Report includes discussion of the impact upon jurors of live-links as well as the use of pre-recorded evidence specifically.

As identified above, the primary logic behind the use of live-link and pre-recorded testimony (and indeed other forms of special measures) is to enable witnesses to give their best evidence by ameliorating a number of stressors associated with giving testimony in the courtroom, in the presence of the judge, jury and the accused. Previous research has confirmed that witnesses tend to appreciate this opportunity and often report that it helped them to give their account more effectively (Murray, 1995; Hamlyn et al, 2004; Burton et al, 2006). Despite this, research with criminal justice practitioners has highlighted concerns regarding the extent to which use of such mediums can influence the jury's credibility assessments, their deliberations and ultimately their verdicts regarding the accused's guilt.

Some commentators have worried that allowing witnesses, and in particular complainers, to give testimony outside of the courtroom sends a signal to jurors about an inability to face the accused, which can either be seen to suggest that the allegations are true or, conversely, that the witness is deliberately lying (Cashmore & De Haas, 1992). Meanwhile, others have suggested that the presentation of the witness on a TV screen reduces jurors' ability to read body language in order to pick up on non-verbal cues of deception or veracity (Brackel, 1976; Grant, 1987; Montoya, 1992; Davies, 1999); and others have expressed concern that evidence presented on a TV screen will be less vivid and have less (emotional) impact on jurors than live testimony (Eastwood & Patton, 2002; McMillan & Thomas, 2011). The aim of this Evidence Review is to outline and evaluate existing research that sets out to directly test the legitimacy of these concerns.

1.5 Outline of Structure

In the absence of being able to observe the deliberations of 'real' juries in a number of jurisdictions, the majority of the research examined in this Evidence Review involves simulation experiments in which the responses of mock jurors are recorded and analysed. Though offering an important glimpse behind the closed doors of the

jury room, there are a number of methodological challenges associated with this form of research which must be borne in mind. Chapter Two provides an overview of these.

Thereafter, the Review turns to the substantive findings arising from these simulation studies in respect of the impact upon jurors of receiving testimony from a witness via a pre-recorded video or live TV link. Chapter Three explores the existing research in the context of child witnesses, whilst Chapter Four focusses upon the evidence base regarding vulnerable adult witnesses, particularly in the context of sexual offences. In Chapter Five, attention turns to a small but significant body of research that examines the optimal conditions for introducing pre-recorded evidence for jurors.

2. Understanding Jury Simulation Methods

This chapter begins with a brief account of the search criteria used to underpin this Evidence Review. As noted above, the primary focus is upon research studies that rely upon trial simulations to develop insight into juror attitudes and jury outcomes. The majority of discussion in this chapter is devoted, therefore, to highlighting some key methodological considerations that must be borne in mind when evaluating the persuasiveness of such studies. Researchers are often required to balance expediency and the need to isolate specific variables with the imperative to develop realistic and engaging trial stimuli in their study design.

This chapter highlights the difficulties that can result in terms of the external validity – that is, the relevance to the ‘real’ world – of studies that rely on brief vignettes, trial transcripts, or short and overly simplified trial reconstructions. It also reflects on the somewhat uncertain implications of relying on convenience samples drawn from the student population as jury participants, and highlights the considerable importance of including measures for tracking influence that are not only transparent but also embedded within the realities of the task of collective verdict deliberation which confronts jurors in actual criminal trials. This methodological understanding is necessary to effectively evaluate the strength of resultant substantive claims in relation to the use of pre-recorded evidence.

2.1 Parameters of the Literature Search

In terms of inclusion criteria, it was originally intended that the search would encompass material published between the years 2000 to 2017, but it soon became apparent that a number of significant studies were published prior to this, so these were also included in the review. The search focused on the main English speaking jurisdictions that use juries in criminal cases, namely Scotland, England and Wales, Northern Ireland, the Republic of Ireland, Canada, the Australian jurisdictions, New Zealand and the US jurisdictions; but did not exclude empirical research undertaken by researchers working in other jurisdictions where it was clearly of relevance.

In order to identify relevant sources, an extensive search of electronic databases was undertaken. This encompassed legal databases (such as Westlaw, Lexis Nexis and HeinOnline), scientific databases (such as PsychARTICLES), multidisciplinary databases (such as JSTOR and Ingenta Connect) and the databases of the major academic journal publishers (such as Wiley Online Library, Sage Journals Online and Springer Link). Some of these databases (such as JSTOR) also index academic books, but a specific search of other sources (such as Google Scholar and library catalogues) was undertaken to identify relevant material in book format. A snowballing technique (checking the references cited in each study) was then used to identify relevant sources of evidence that may not be indexed electronically. In addition, a further search was undertaken to identify relevant Government reports (by searching Government websites and national libraries in relevant jurisdictions) as well as reports published by law reform bodies such as Law Commissions and third sector bodies.

Following these searches, and preliminary review of all papers and reports of potential relevance, 52 papers of direct relevance were identified and evaluated. These papers – alongside others pertaining to the surrounding context – are fully

referenced in the discussion below. Priority of focus has been given within the Review to research studies that have relied on the most rigorous methodologies, arisen in legal systems of most relevance to Scotland, and / or been undertaken most recently, on the basis that these hold the greatest evidential weight.

2.2 Simulation Studies: The Importance of Method

A number of different methods might be used to generate insight into the factors (including in relation to mode of evidence delivery) that influence jurors. Observation of courtroom proceedings can be instructive to a degree, as can interviews with practitioners. However, to the extent that such methods rely on the subjective interpretation (whether by the observing researcher or the practitioner) of jurors' body language and other signaling behaviours during trial proceedings, or conjecture based on verdict outcome about what likely occurred behind the closed doors of the jury room, they can only provide partial insights and may not be especially robust. In particular, in situations where – as is the case in this Evidence Review – the objective of research is to test in a relatively controlled fashion the effect of a specific trial factor, these methods are often of limited value. Thus, while observational and interview-based research will be drawn upon where applicable and appropriate in this Evidence Review, its primary focus will be upon studies that set out to generate and evidence 'first hand' insights into the dynamics and substance of jury deliberations.

In several jurisdictions, including Scotland (s. 8 Contempt of Court Act 1981), restrictions have been imposed that prohibit any direct questioning of real jurors in respect of the content of their verdict deliberations. These restrictions, though supportive of the solemnity and sanctity of trial proceedings, impose a significant obstacle on our ability to properly understand verdict outcomes, and the factors that influence jurors' decision-making. In an effort to overcome this, researchers (particularly psychologists) have developed a variety of methods for stimulating, tracking and recording juror influences. Such jury simulations hold significant potential to bridge (at least partially) the existing knowledge gap between what happens in the courtroom and resultant verdict outcomes. However, the reliability of their findings hinges upon their methodological rigour and the degree to which they have attended to the evidential and practical realities of the trial environment they seek to emulate. It is fair to say that, in this respect, jury simulations to date have been rather mixed. Indeed, as discussed below, there has been a wide spectrum in relation to the complexity and realism of the trial stimulus relied upon, diverse approaches to the recruitment and demographic representativeness of participants, and considerable variety in terms of the measures utilised to track jurors' substantive responses.

2.3 Trial Scenarios and Simulations

In their review of existing jury simulations, Lieberman and Sales acknowledge that there have been a number of studies in the past in which the research instruments relied upon are “so far removed from the dynamics of an actual trial that it is difficult to place high confidence” in their findings (1997: 592). In some cases, only a very brief trial vignette has been used; in others, excerpts from a written trial transcript have been relied upon. Such written formats, though relatively easy to set up, deprive participants of a key source of information available to real jurors, who are known to devote considerable attention (for better or worse) to the non-verbal

behaviour of the parties. Other researchers have relied instead on a videotape of a trial re-enactment. This allows observation of trial parties' demeanour and personal characteristics, but it remains unclear whether observing a videotaped trial creates a distance to proceedings which reaffirms jurors' sense of the artificiality of the simulation. This may be particularly relevant in this Evidence Review, where some studies have specifically set out to explore the impact of video-mediated testimony whilst situating it within the broader context of a videotaped trial. Where researchers have instead used live trial re-enactments, they have generally concluded that they provide more realistic and engaging stimuli (Finch & Munro, 2008; Ellison & Munro, 2014). It should be noted, however, that live re-enactment comes with a risk of subtle variation in delivery across trial conditions, which, depending on the focus of the study, may create problems.

Whether the stimuli are presented in written or visual form, there are additional challenges associated with the experimental context. Resource constraints entail that many of the more mundane delays associated with real jury service cannot be replicated and 'shortcuts' in evidence and procedure are required in order to capture the key facts and legal arguments in an appropriate time-frame. Moreover, given that simulation studies are typically designed to test the influence of a particular set of conditions, it is common practice to minimise participants' exposure to too many other factors by restricting the stimuli scenario (Kramer & Kerr, 1989). Concerns have been expressed that this may encourage jurors to rely on conjecture and stereotype to 'fill in the gaps' in a way that may not occur in a real trial (Visher, 1987; Diamond, 1997).

In some studies, 'shadow' juries have been utilised instead of mock simulations. Participants are recruited to observe the unfolding of a real trial from the public gallery and then asked to deliberate under the observation of the researchers. This addresses, of course, the above concerns regarding the realism of the trial stimuli. However, not only is this a cost-intensive method, it is also one tied very concretely to the particular trial observed, providing a one-time-only stimulus that cannot be manipulated to build up an understanding of the scale, function and consequences of a specific variable (for example, the characteristics of the parties or a particular fact). Thus, this method provides rich but relatively limited insight; and its findings relate confidently only to factors that proved influential for shadow juries, with limits remaining on the ability to extrapolate to the real jury even within the same case.

Both simulation and shadow jury methods encounter further challenges, moreover, as a result of the inevitable knowledge on the part of participants that they are not acting as real jurors in the case before them. The significance to be attributed to this role-playing dimension is unclear, however. Existing research does not support the implication that mock jurors will necessarily take their task less seriously, at least to the extent that this is reflected in their propensity to make legal mistakes vis-à-vis real jurors (Reifman et al, 1992); and there is evidence of mock jurors engaging conscientiously with their role and expressing stress regarding their verdicts (Bray & Kerr, 1987; Finch & Munro 2006, 2008; Ellison & Munro, 2010a). Moreover, studies that have set out to test for a verdict impact as a result of role-playing have produced inconclusive results (Wilson & Donnerstein, 1977; Zeisel & Diamond, 1978; Kerr et al, 1979).

2.4 Sampling Issues

A large proportion of existing jury simulation studies have relied on undergraduate students to act as participants, often in exchange for course credit. While this offers a convenient and cost-efficient approach to sampling, students do not represent a typical cross-section of the jury-service eligible population, at least in demographic terms (Sears, 1986). What impact this has on jury deliberations remains unclear, however (Bornstein, 2017). Simon and Mahan (1971) found that students displayed attitudinal differences which made them more likely to acquit than jurors drawn from a more representative jury pool; meanwhile, Sealy and Cornish (1973) found, to the contrary, that students were predisposed to be harsher on the accused than the 'typical' juror. Of course, it might be argued that the significance of using student participants lies not so much in attitudinal differences vis-à-vis the general population, but more in cognitive differences which will affect their ability to engage with the deliberation process (Miller et al, 1977; see also Weiten & Diamond, 1979). While there is some support for this, it is worth noting studies which have shown no statistically significant differences between student and other jurors in relation to, for example, their understanding of judicial instructions (Rose & Ogloff, 2001).

A further consideration to be borne in mind is the self-selecting nature of participants. Unlike real jury service, which can be compelled by the state, participants engage voluntarily in simulation studies. Attention to demographic profiles can ensure that samples match broadly either to the general population or to the profile of those who act as jurors locally or nationally, but self-selecting research participants may still differ attitudinally or cognitively from their 'real' counterparts. They may take part because of a particular interest in the subject matter or an inherently more socially conscious or altruistic nature, for example (Braunack-Mayer, 2002). It is currently unclear, however, what impact this may have on their approach to the substantive task.

2.5 Measures of Influence

Many researchers have asked participants to rate their evaluation of particular factors associated with the trial scenario, or their preferences for a verdict, on graded scales. This provides an externally observable measure that can be useful for statistical analyses, but it may not yield particularly valuable insights into the real process of jury deliberation, where a collective and binary verdict is required.

This maps on to a broader distinction within this field of existing research as between mock juror and mock jury studies. In the former, the individual is taken as the primary unit of analysis. In the latter, the jury is recognised to be more than the sum of its individual parts and group decision-making is built in as an integral part of the study design (MacCoun & Kerr, 1988; Young et al, 1999; Devine et al, 2004). In conjunction with the concerns raised above regarding jurors 'filling in the gaps' in abbreviated trial reconstructions, deliberation may be particularly important. Indeed, previous studies have maintained that within group discussion, "the knowledge, perspectives and memories of the individual members are compared and combined, and individual errors and biases are discovered and discarded, so that the final verdict is forged on the shared understanding of the case" (Ellsworth, 1989: 206).

Where deliberation has been included as a component of the research design in previous studies, it is also worth noting that there has been divergence regarding the

size and composition of mock juries, as well as the duration of discussion and the level of direction given to jurors on the pertinent legal tests. Several studies have departed from the jury numbers required in real cases within their jurisdiction to make discussions more manageable, particularly within constrained timescales. Few studies have used mock juries of 12 members or more, with most using 6 or 8. The impact of this on the tone, substance and outcome of deliberations remains unclear. While a number of studies have suggested that jury size does have an impact on tone and outcome (Lempert, 1975; Roper, 1980), others have concluded that it does not (Mills, 1973; Kerr and MacCoun, 1985; see also Mukhopadhaya, 2003).

2.6 Creating an Evidence Base

Generating stronger evidence from jury simulations requires a study design that involves carefully constructed and controlled stimuli, developed with an eye to the realities of the courtroom, using a representative sample of participants, and invoking measures to track juror influence that include a period of collective verdict deliberation. But even with this more rigorous approach, there remains in simulation studies a number of confounding variables relating to the type of trial, the fact pattern underpinning it, the attributes of the parties and their legal counsel, the substantive and procedural rules of the legal system, and the attitudinal preferences and discursive dynamics at play within any given jury. As subsequent chapters illustrate in respect of the impact of pre-recorded evidence in particular, this can make it difficult to extrapolate across individual studies to confidently identify a coherent set of findings.

3. Jurors' Perceptions of Pre-Recorded Evidence Given by Child Witnesses

This chapter outlines key findings arising from a number of studies that have focused on the impact of the use of special measures in general, and live-links and pre-recorded testimony in particular, by child witnesses. Broadly speaking, these have demonstrated that jurors are not significantly better able to reach the truth and discern signs of deception when children testify in open court as compared to testifying via live-link or pre-recorded testimony. Despite this, some – but by no means all – studies have suggested that jurors may prefer children's testimony to be delivered live in court. There is no clear evidence, however, that this impacts in any significant way upon verdict outcomes. Group deliberation appears to be key in this respect, reducing any pre-deliberation propensity by jurors to rate less highly the credibility and likeability of child witnesses who give evidence via live-link or pre-recorded video. Research has also established, though, that findings in respect of child witnesses are complicated by the interaction of mode of evidence delivery with factors such as the perceived emotionality of the child, his or her age and level of understanding, and jurors' preconceptions regarding the reliability of children's memory, particularly over time.

3.1 Introduction

It has been argued that “the traditional adversarial cross-examination is not a reliable method of either testing the truthfulness of what a child has previously said, or of obtaining from them further information that is accurate....(and) it is potentially abusive” (Spencer, 2012: 178). Giving evidence in criminal trials has been shown repeatedly to risk adverse mental, physical and psychological effects on child witnesses (Goodman et al, 1992; Hamlyn et al, 2004). Moreover, previous research on memory has shown that while all witnesses forget information over time, younger children are more susceptible to forgetting than older children and adults (Flin et al, 1992; Gudjonsson & Henry, 2003), and may also be more likely to guess answers to questions when they are unsure (Waterman & Blades, 2013; O'Neill & Zajac, 2013).

For many commentators and practitioners, such findings point in the direction of the routine use of special measures in respect of child witnesses. Enabling the child to give testimony without entering the intimidating environment of the courtroom or coming into direct contact with, or view of, the accused has been said to reduce witness stress and, consequently, to increase the ability to obtain 'best evidence'. In addition, the use of pre-recorded evidence in this context has been thought to have an added advantage in terms of being able to capture an account that is more contemporaneous (in many cases) to the alleged incident, and thus more likely to be complete than one given some months later. But concerns have been expressed about whether the use of such modes of testimony places the accused at a disadvantage in trial proceedings by positioning the witness as particularly frail and affected by events in the minds of the jury or, conversely, reduces the prospects of a child witness being believed and empathised with by a jury who are not able to observe them 'in the flesh'.

This chapter will first outline and evaluate the findings of existing research in relation to any impact, as a result of the use of pre-recorded and live-linked testimony by

child witnesses, on jurors' ability to detect witnesses' deception and accuracy. Having done so, it will then turn to explore any evident effects in relation to jurors' perceptions of witnesses' credibility. It will consider any evidence pointing to an impact on verdict outcomes as a consequence of these factors, and reflect on any specific conditions associated with children's testimony that may be particularly relevant to an evaluation of this evidence.

3.2 Jurors' Ability to Detect Deception

In his evaluation of arguments for and against the use of video technology in relation to child witness testimony in England and Wales, Davies notes that "advocates of conventional cross-examination argue that much useful non-verbal information is lost to the jury by the restricted view of the witness afforded by the conventional television shot" (1999: 244). This concern is grounded in an assumption, of course, that jurors are capable of accurately decoding, and drawing appropriate inferences from, the nonverbal cues they discern from seeing the witness 'in the flesh'. A number of studies have set out to investigate the reliability of this assumption and, broadly speaking, they have consistently established that observers often make mistakes in their decoding and interpreting of nonverbal cues, and that the likelihood of an untrained third party being able to detect truth on the basis of a witness' nonverbal behaviour is no different to chance (DePaulo et al, 1985; Ekman, 1985).

In a relatively early study, conducted by Clifford et al (1992), children were observed being questioned, either live from behind a one-way screen or via CCTV, in respect of a classroom incident they had witnessed eight months previously. Observers' ratings of witness credibility and accuracy showed little relationship to actual accuracy and there was no systematic impact on those ratings or their accuracy depending on the medium of observation in 9 of the 10 areas of testimony probed. The one exception to this was the "attractiveness" of the witness (meaning likeability rather than physical attractiveness), where evidence given in the courtroom by the child witness did lead to higher ratings from jurors than CCTV testimony. This is a consideration that will be discussed further below.

Similarly, in a study by Tobey et al (1995), 1,201 jurors were asked to judge the overall accuracy of children's testimony (aged 6 and 8 years old), regarding a play session with an adult where stickers were placed either on exposed areas of the children's bodies or on their clothes. Juror assessments were found to be poorly correlated to actual accuracy with no discernible differences between judgments made in regard to testimony given in or out of the courtroom (see also Goodman et al, 1992).

Likewise, in a study conducted by Orcutt et al (2001), 70 children aged between 7 to 9 years old played games with an adult male, during the course of which a video was made, in some cases involving the children showing their bare upper arms, bare toes and bare belly-buttons to the camera and in others showing only their shirt sleeves, shoes and belt buckles. Three weeks later, the children were asked to come to a courthouse and testify in open court or via CCTV about the play session (with some children being told to deliberately lie about their experiences). 987 jurors recruited from the local community were separated into groups (with an average of 12 members) to observe the children's testimony within the broader context of a live mock trial reconstruction. Thereafter, they completed individual questionnaires and were allowed up to 30 minutes within their groups to discuss and arrive at a verdict.

Across this fairly elaborate study, it was found that jurors were no more likely to detect deceit when the child's testimony was delivered in open court than when it was delivered via CCTV.

This finding in respect of children's live-linked CCTV testimony was replicated in a subsequent study by Goodman et al (2006) which explored the impact of pre-recorded video evidence. Here, 370 mock jurors observed a live reconstruction of a trial involving an alleged touching of a child witness (aged between 5 and 7) in the course of a 'Simon Says' play session with an adult male. Half of the children were telling the truth about having been touched on their noses, necks and bare stomachs during this game, while the other half were not. Across the study, half of witnesses gave live testimony and the other half used a pre-recorded video deposition with a social worker as evidence-in-chief. Having observed the trial reconstruction, participants completed questionnaires and then deliberated in groups ranging from 7 to 12 members towards a collective verdict for up to 30 minutes. On the basis of resultant data, the researchers in this study concluded that "adults, when faced with the task of determining whether unauthorised touching of a child occurred, were poor at distinguishing whether a particular child was lying or telling the truth. Furthermore, adults' abilities were neither helped nor hindered, for the most part, by seeing the child live or on videotape" (390).

Most recently, Landström and Granhag (2010) have explored the impact of live, CCTV and videotaped evidence together. 108 child witnesses (aged 10-11 years old) were divided into groups: 54 children participated in an actual event where they had an encounter with an adult male as they posted a letter near the gates of their school, while the remainder were read an account of this event and asked to imagine that it had happened to them. 3 weeks later, the children were asked to testify, and those who had not actually experienced the event were asked to report that they had. Witnesses were then divided across live, CCTV and pre-recorded evidence conditions. In total, 240 jurors took part in the study, 86% of whom were undergraduate students. They were asked to complete questionnaires but not to deliberate as a group towards a verdict. In respect of the adult observers' ability to accurately distinguish truth from falsehoods, the researchers concluded – in line with previous research - that no significant differences could be discerned across these modes of testimony.

Taken together, this provides a fairly compelling evidence base for rejecting any suggestion that the removal of children from the courtroom, and the presentation of their evidence on a TV screen, in and of itself, reduces the capacity of (mock) jurors to accurately decipher behavioural cues and discern truth from falsehood. Moreover, as Davies (1999) has argued, to the extent that the factual content of the testimony is likely to be a better guide to veracity than nonverbal behaviour, the suggestion in some previous research that jurors will pay more attention to that content when it is provided via TV link (Miller & Fontes, 1979; Clifford et al, 1992) may make use of this medium of testimony positively advantageous in terms of the process of truth-seeking.

3.3 Jurors' Empathy and Assessments of Credibility

A separate concern frequently raised by criminal justice practitioners relates to the impact of the use of live-links or pre-recorded evidence on jurors' assessments of the trial parties' credibility, and, relatedly, on the level of empathy that jurors can feel for

a witness who is not physically present in the courtroom but instead displayed in 'unreal' form on a TV screen. From as early as the mid 1980s, commentators have suggested that the use of TV and video medium may create an 'emotional distance' that will make it harder for the jury to connect with the witness and believe his or her testimony (MacFarlane & Krebs, 1986; Sharp, 1989: 96; for discussion see Davies, 1999: 246). This is a concern that continues to be expressed, for example, in the comment of one legal expert, cited in the Stern Review, that "juries prefer theatre to film" (2010:90).

There is not, however, a consistent evidence base to support this. Amongst the earliest studies to be conducted on this topic, Swim et al (1993) used a videotaped trial simulation in which the key witness, an 8 year old child, gave evidence in relation to an alleged sexual assault by her stepfather either live in court or via a videotaped deposition. 143 volunteering undergraduate students were asked to watch the trial simulation and then, alongside engaging in collective deliberations for up to 45 minutes, were asked to provide individual ratings of the parties' guilt and credibility at various stages. While live testimony was viewed somewhat more favourably by mock jurors (reflected in their scores for witness accuracy, consistency and confidence), the difference was not statistically significant, and the researchers uncovered little discernible impact in terms of overall attitudes towards the accused or trial outcomes.

Similarly, in a study by Ross et al (1994), a videotaped trial simulation involving a 10 year old child giving evidence in relation to an alleged sexual assault by her father, either in front of the accused at court, in court behind a screen, or via a live-link, was utilised. Here, the medium of evidence presentation was found to have had no overall impact on the pattern of guilty verdicts returned by the 300 undergraduate students who participated as mock jurors, and nor did it influence the perceived credibility of the parties in any significant way. Interestingly, in this study however, when the simulation was re-run, with a different cohort of 300 student participants being asked to provide ratings immediately after the child had given testimony, rather than at the end of the trial simulation, the researchers found that they were significantly more likely to convict the accused in cases where the child gave testimony in open court.

Ross et al concluded that while there may be some transient impact in the aftermath of live testimony that predisposes jurors towards conviction, when the evidence is situated in the context of the whole trial, this impact was of little significance, and mode of evidence delivery was ultimately largely neutral in its effects. Though there was no deliberation component included in this study, this finding about the significance of the time at which influence is captured also speaks to the importance of including a deliberation requirement, which has been suggested in other research to similarly contextualise and mediate any juror preference for live testimony.

In both of these studies, researchers evaluated the impact of TV-linked or video-recorded testimony by showing jurors a *videotaped* trial simulation. While this can test the influence associated with the fact that non-standard modes of evidence were used, the situation of a video medium *within* a video prevents researchers from evaluating the impact of the screen *per se*, in contrast to 'in the flesh' testimony (Swim et al, 1993: 606). These difficulties are not, however, associated with a study conducted by Tobey et al (1995), in which a live trial re-enactment was used, with similar results to those uncovered by Swim et al (1993) and Ross et al (1994). Here,

as discussed above, a trial was staged before 1,201 mock jurors (across the entirety of the study), with children aged 6 or 8 years old giving testimony about a play session with an adult in which stickers had been placed either on exposed parts of their bodies or their clothing. While jurors in this study rated the evidence given by children in the open court condition as significantly more accurate, believable and honest than that given via CCTV, in line with previous research, the medium of presentation of evidence was found to have had no overall impact upon the proportion of guilty verdicts returned.

This lack of transferability between mock jurors' assessments of credibility and their final verdicts is supported, moreover, by other research. In a study by Goodman et al (1998), for example, children aged either 5-6 or 8-9 years old participated in a play session with an adult male and then, about 2 weeks later, were asked to testify about it in a courthouse setting in front of mock juries comprised of volunteer members of the public (1,201 over the course of the study). Compared with children who testified live in court, children who testified via CCTV tended to be viewed as less distressed and more consistent in their testimony, but they also tended to be viewed as less credible. Nonetheless, the researchers found no significant relationship between mode of evidence delivery and verdict outcome.

Similarly, in the study by Orcutt et al (2001) mentioned above, in which children aged 7-9 years old testified about an incident in which they made a video with an adult male, researchers found that while witnesses were perceived to be less accurate, less attractive, less intelligent, less honest and more likely to have made up their story when they testified via CCTV rather than in the courtroom, and this did provoke a reduced proclivity to convict amongst mock jurors drawn from the local community at the pre-deliberation stage, after a 30 minute deliberation period, the researchers reported that "there was no significant main effect of trial condition on postdeliberation verdicts" (2001: 366). This suggests, then, that any such negative effects – though initially potentially significant - may be amenable to reappraisal and rebalancing as a result of a broader group discussion.

In respect of the use of pre-recorded video deposition specifically, results are similarly complicated. In a study by Eaton et al (2001), 108 volunteers, of whom 92 were undergraduate students, observed a 20 minute videotape of a simulated sexual abuse trial involving an 11 year old victim and then recorded their perceptions of the witness' credibility and the accused's guilt on a 5 point scale before deliberating for up to 20 minutes in groups to reach a verdict. The researchers found significantly lower ratings of overall credibility when the child gave testimony via CCTV live-link as compared to either giving evidence in person in the courtroom or via a video deposition conducted by a female psychologist. Again, however, there is some suggestion that the strength of this impact upon credibility had diminished by the close of deliberations.

Similarly, in Goodman et al's 2006 study in which 370 jurors observed a live trial reconstruction relating to the alleged touching of a child (aged 5-7 years old), with trials varying between live evidence and the use of a video deposition, it was found that "trial condition [negatively] affected the perceived credibility of the child...and influenced jurors' sympathy for the child which, in turn, contributed to guilt judgments." But despite this, it was also acknowledged by researchers that, by the end of jury deliberations, "no significant effects involving trial condition or child condition emerged" (2006: 387).

Overall, then, while some previous studies have indicated that there is no significant impact associated with the use of live-link or pre-recorded evidence modes of delivery vis-à-vis live testimony, others have suggested that there is a discernible impact – typically, but not always entirely consistently, in the direction of rendering the child witness less attractive and less credible. However, these studies have typically failed to find any reliable or significant impact on verdict outcomes, particularly when a deliberative component is built into the study design. This finding is supported by a study conducted in England and Wales for the Home Office in the wake of the introduction of video-evidence under the 1991 Criminal Justice Act, in which 93 real trials involving child witnesses (with an average age of 12 years) were observed to assess the content and style of questioning, and the apparent competence and demeanour of the witness, across live examination and videotaped evidence conditions. It found no significant differences as between the proportion of guilty verdicts delivered (Davies et al, 1995).

3.4 Jurors' Responses to Emotion, Age and Memory

The interaction between mode of delivery and the (real or expected) emotionality of witnesses' testimony poses further difficulties. Previous research has established an 'Emotional Victim Effect' whereby victim-witnesses who display (an acceptable level of) negative emotion, such as sadness or agitation, when testifying tend to be perceived by observers as more credible than those who display a more neutral or controlled manner (Kaufmann et al, 2003; Ask & Landström, 2010; Ellison & Munro, 2009a, 2009b). Much of this research has focused on adult female rape complainers. Indeed, a recent study which failed to replicate this finding in relation to an adult male testifying about physical assault has raised the question of whether the 'Emotional Victim Effect' correlates specifically to gender or to offences that are sexual in nature, which third parties may believe to be "particularly emotional events" (Landström et al, 2015a: 103). In respect of child witnesses, the evidence is more limited, but support for an 'Emotional Victim Effect' has been found in relation to allegations both of bullying (Ask & Landström, 2010) and physical assault (Wessel et al, 2013).

The existence of this research poses a dilemma for simulation studies. On the one hand, keeping the emotional demeanour of the trial parties constant permits a more precise isolation of the effects of changes in the mode of evidence delivery for experimental purposes. On the other hand, incorporating some differentiation in demeanour across conditions may provide a more accurate reflection of how they would unfold in the courtroom. The complexity and diversity of individual reactions to trauma further complicate this picture: a witness may, for example, be more emotional in pre-recorded evidence given the proximity in time to the incident, or calmer because she is not in the courtroom in the presence of the accused. While the majority of studies have opted for a consistent demeanour across evidence conditions, this may limit their applicability to 'real life' cases where the tone of pre-recorded testimony is likely to be (indeed, is designed to be) quite different from its live in-court equivalent.

This relates, of course, not only to observable emotional demeanour, but also to the levels of accuracy and confidence that observers expect witnesses to be able to provide in recollecting and recounting the alleged incident using different testimony conditions. Certainly in respect of child witnesses, the interaction between these factors remains unclear. In a study by McAuliff and Kovera (2012), 261 jury service

eligible volunteers from the local community completed questionnaires regarding their expectations of the emotionality that would be displayed by child witnesses (aged variously 5, 10 and 15 years old) who gave evidence via different modes of delivery. The researchers reported that participants typically expected a child using a live-link to be more confident and cooperative, provide longer responses and be less 'fidgety' than a child giving testimony live in court. But these expectations sit at odds with the bulk of previous research exploring the impact on children's observable behaviour across these conditions in actual trials, where no reliable differences emerged in terms of children's confidence, cooperation, ability to answer questions, amount of detail provided or levels of concentration, whether they testified in court or via a live-link (Murray, 1995; Davies et al, 1995). The researchers hypothesised that this may cause observers to judge children in live-link conditions more harshly when they fail to evidence the increased levels of confidence and comfort expected; and that it is this mistaken assumption, rather than the medium of delivery per se, that is central.

Closely bound up with these expectations regarding emotionality, behaviour and reliability of memory is the question of the relevance of the age of the child witness. Once again, however, there is little consistency in existing research on the impact of age on a third party's evaluations of credibility. A number of studies indicate that as age increases so too do witnesses' assessment of credibility (Goodman et al, 1987; Leippe & Romanczyk, 1987, 1989). However, in other studies, differences in age have been shown to have no, or even the reverse, effect on the verdict given (Castelli et al, 2005; McCauley & Parker, 2001). Indeed, Nikonova and Ogloff (2005) have illustrated that witness age can have positive, negative and neutral effects – in their work, children were regarded as more 'trustworthy' than young adults, and children under the age of 7 were deemed to have higher suggestibility and lower cognitive competence but higher accuracy than children over the age of 10. Despite this, age had no reliable or consistent impact on verdict outcome.

Much here may depend on the nature of the alleged violation, or the delay in time between its incident and its recounting. In cases where children have alleged physical assault (Pozzulo & Dempsey, 2009) or sexual assault (Ross et al, 2003), they have been rated in some previous studies as more credible than adults, but the opposite has been found in cases involving road traffic associated manslaughter (Goodman et al, 1987) (see also Krahenbuhl, 2012). Meanwhile, Antrobus et al (2016) have found that, across a sample of 102 student participants presented with a written sexual assault trial vignette involving a child witness, those who rated evidence presented via CCTV as less credible (c.f. pre-recorded evidence) also tended to hold the strongest pre-existing views about children's memory being unreliable over time, mapping on to a preference for pre-recorded and more contemporaneous forms of testimony. Trial outcomes may thus be influenced by jurors' assumptions regarding the reliability of children's memories, which interact with mode of testimony.

3.5 Jurors' Perceptions in Jurisdictional Context

It is important to bear in mind that this research exploring the impact on jurors of children's pre-recorded or live-link testimony has been designed and conducted across a range of legal jurisdictions, each with their own distinctive procedural rules for capturing and including such evidence. This makes reading across the studies to

create a reliable evidence base difficult and it means that any findings which are based on the procedures of one jurisdiction may not translate reliably to another.

The CCTV condition used in both the Goodman et al (1998) and Orcutt et al (2001) studies mentioned above, for example, involved a one-way link in which the witness sat in a separate room within the court building, and counsel for the prosecution and defence individually entered the room to examine and cross-examine, whilst the judge remained in the courtroom with the jury and defendant. In the study by Ross et al (1994), however, the judge also relocated along with the attorneys, whilst the defendant and jury remained in the courtroom to watch the testimony via a one-way link. Both of these models differ, of course, from the two-way CCTV system that is utilised in other jurisdictions, including Scotland, where the witness gives testimony from a remote location but with questions being directed by counsel in the courtroom.

Considerably less research has been conducted to date on the impact upon jurors of this latter mode of live-link delivery by child witnesses. Indeed, Landström & Granhag, in 2010, were amongst the first to do so. The study involved a mix of boy and girl witnesses, aged 10-11 years old, who testified as part of a broader trial re-enactment regarding an encounter they had had with an adult when posting a letter outside their school. The researchers found – in line with some previous research utilising a one-way CCTV model – that across the 240 mock jurors involved in the study, the majority of whom were undergraduate students, participants tended to perceive children in the live evidence condition more positively than children in the live-link condition, who in turn were perceived more positively than those who testified via pre-recorded video.

Unfortunately, however, no deliberation component was included. This meant that the impact on collective verdict outcomes was not explored, despite its centrality in a 'real' case. This is a significant limitation, particularly in light of previous research which often indicates a difference between individual and collective decision-making. Indeed, as Landström et al (2007) point out in relation to a prior study, which identified a similar effect in a comparison of evidence given by 10-11 year old child witnesses live in the courtroom versus via video testimony, "showing that the influence of one presentation mode is undue requires more in terms of experimental sophistication than showing enhanced influence. It is for future research to investigate whether one presentation mode leads to too much (or too little) influence on, for example, how jurors weigh oral testimony, which might result in biased verdicts" (2007: 345). In other words, the fact that a degree of impact – generally against finding the child witness credible – has been found in some studies that use both 1-way and 2-way CCTV models does not mean that this has an ultimately prejudicial influence upon trial outcomes, and research exploring how this translates during and after deliberation in 2-way live-links has yet to be adequately undertaken.

Similarly, in respect of video evidence, in some studies (e.g. Eaton et al, 2001) this took the form of an advance statement provided by the witness to a professional, such as a social worker, whilst in others (e.g. Swim et al, 1993), it took the form of an advance trial deposition held in the judge's chambers and attended by the witness, judge and counsel on both sides. In both cases, this is some way removed from the sort of video testimony that is routinely utilised in many jurisdictions which rely primarily on video-recorded forensic interviews conducted by police officers as part of the investigation process. Again, there has been insufficient research conducted

involving this particular mode of pre-recorded evidence for us to be confident of its impact upon jurors. The findings of Davies et al (1999) in respect of real trials in England and Wales suggest that, however its use may impact upon jurors' evaluations of credibility and honesty, it does not translate into a consistent shift in conviction proclivity.

3.6 England and Wales: Section 28 Pilot

England and Wales have recently moved towards more expansive use of pre-recorded evidence, implementing section 28 of the Youth Justice and Criminal Evidence Act 1999 to combine the established use of recorded police forensic interviews as evidence-in-chief with a videotaped cross-examination conducted at a later date by the defence in the presence of the judge and prosecution counsel. Child witnesses were a key constituency included in this section 28 pilot in 2014. An evaluation of its implementation, which involved interviews with 40 practitioners and 16 witnesses (along with their parents or carers as appropriate), concluded that while the process of being cross-examined continued to be stressful and difficult for witnesses, section 28 reduced levels of distress and trauma, and encouraged a more focused set of questions from defence counsel.

Importantly, the introduction of pre-recorded cross-examination was bound up with a broader shift towards greater case management, and with a requirement to commit to an expedited timescale for ensuring that parties were 'trial ready' and to hold a 'ground rules' hearing so that questions to be put to the witness by counsel could be appraised in advance. It was also influenced by the growing currency of advocacy toolkits for responding to vulnerability, and by a decision of the Lord Chief Justice in relation to child witnesses, which sought to adjust the tone of cross-examination prior to, or at, court (*R v B* [2010] EWCA Crim 4 at [42]).

In order to assess the impact of section 28 upon jurors an evaluation would need to consider how these factors – in tandem – produced, or failed to produce, an effect. However, the influence of the use of pre-recorded examination and cross-examination upon jurors was not included in the Ministry of Justice Report. The only mention of this influence comes in a brief remark that four of the practitioners interviewed suggested that the complainant felt too remote and that this was apt to damage the prosecution case, whilst six observed that there had been a high level of (in their view 'right') convictions, arguably undermining these concerns (2016: 38). Beyond this, there was no detailed consideration of jurors' perceptions. Nevertheless, on the basis of this pilot, England and Wales have opted to roll out section 28 to all vulnerable witnesses. Further research is clearly needed to explore in more detail the impact upon jurors of this type of model of evidence delivery.

4. Jurors' Perceptions of Pre-Recorded Evidence Given by Vulnerable Adults

This chapter outlines the findings of existing research in relation to the impact upon jurors of the use by adults of pre-recorded evidence or live-links within criminal trials. Far fewer studies have been conducted in relation to adult witnesses vis-à-vis children, but the sophistication of trial simulations within these studies – which have typically focused on rape complaints – offer a high degree of confidence in respect of their findings. Research suggests that, in respect of adult rape complainers, the influence upon mock jurors of the use of pre-recorded evidence is unpredictable and unlikely to have a significant impact upon verdict outcomes. The use of special measures may increase one person's empathy for an adult rape complainer at the same time that it raises another's suspicion about her credibility in equal measure.

Beyond sexual offences trials, existing research is extremely limited. Some studies suggest that mode of testimony may have a stronger influence here, which can work to the detriment of assessments of the witness' credibility and likeability. It is difficult to place great confidence in these findings, however, on account of key weaknesses in these studies' underlying methods: in particular, their failure to incorporate a group deliberation stage, which has been shown elsewhere to neutralise individual influences and counteract any significant impact of mode of testimony on verdicts.

4.1 Introduction

In contrast to the relatively large number of studies which have explored the extent and ways in which mode of evidence effects observers' perceptions of children's testimony, there is a surprisingly sparse evidence base in relation to adults. It is likely of course that some of the considerations raised in relation to child witnesses in Chapter 3 will also be relevant in respect of adults. However, there are a number of distinguishing features – bound up, amongst other things, with jurors' particular preconceptions about children's maturity and memory, their perceptions and understanding of different types of adult vulnerability, and their views as to what it is reasonable to expect an adult accusing someone of a crime to withstand as part of the trial process, as well as, in some cases, distinctive procedural and evidential rules applying to adult versus child witnesses. This makes it important for jury researchers to also dedicate specific attention to adults (in all their diversity).

Of the work which has been undertaken to date on the impact upon jurors of adult witnesses' use of out-of-court live-links and pre-recorded evidence, the vast majority has focused upon sexual offence complainers. These studies have been marked by a more robust methodology than many previous simulation studies, which bolsters the confidence that can be attached to their findings, at least in respect of this type of trial.

4.2 Jurors' Assessments of Adult Testimony in Rape Trials

Research has identified a generally high level of appreciation of the protection afforded by special measures amongst adult rape complainers. Hamlyn et al (2004) found that vast proportions of adult witnesses (including sexual offence complainers) who had used them found them helpful, with one-third indicating that they had

enabled them to give evidence that they would not otherwise have been willing or able to give. At the same time, as with child witnesses, substantial concerns have been raised regarding the potential undue influence of the use of special measures on the proof process, and on juror decision-making in particular. In the specific context of adult sexual offences trials, critics have argued, for example, that the use of screens, live-links and pre-recorded interviews may unfairly prejudice the defence or imbue the complainant's testimony with an undeserved level of credibility (Burton et al, 2006; Payne, 2009a). Meanwhile, others have feared that the absence of the complainant in the courtroom and the mediating effect of the live-link may create a distance between the complainant and the jury which will make it less likely that his or her account will incite sympathy or be believed (Council of HM Circuit Judges, 2006; Hamlyn et al, 2004; Payne, 2009b).

Concerns have also been expressed regarding the extent to which the use of video-recorded police statements as evidence-in-chief places complainants at a disadvantage, since officers are engaged at that stage in an investigatory process, receiving and pursuing fresh information as the account unfolds. This means that these accounts can lack the kind of logical, sequential narrative that can be imposed by advocates who take the complainant through their testimony at trial, whether in open court or via live-link (Wade et al, 1998; Davies et al, 1999; Welbourne, 2002; Tinsley & McDonald, 2011).

In an effort to begin to test some of these concerns, Taylor & Joudo conducted a simulation study in Australia involving 18 different trial conditions, across which an adult female rape complainant gave testimony variously via CCTV, pre-recorded videotape or face-to-face in the courtroom, and with different levels of observable emotionality. The transcript was based upon an actual sexual assault case, and across the study 210 volunteer participants from the local community observed a 75 minute live trial re-enactment. Having done so, they were asked to complete questionnaires measuring both their pre- and post-deliberation preferences, as well as their broader attitudes in relation to rape. These responses were analysed alongside discussions undertaken in groups of 12 members (on average) within which participants were given up to one hour to deliberate and agree upon a collective, unanimous verdict.

Overall, the researchers were unable to identify any significant relationship between verdict preferences at the individual or collective level as a result of different modes of the witness' evidence delivery. This is not to say that, for some individual jurors, the use of live-link or pre-recorded evidence did not provoke specific reactions. Taylor and Joudo note, for example, that "although no systematic differences were found in pre-deliberation perceptions or propensity for jury verdict between face-to-face, CCTV and video conditions, some jurors in the CCTV condition expressed the view that they would have preferred the complainant to be physically present in the courtroom. These jurors stated that they felt unable to make an accurate assessment of her character, demeanour and truthfulness on the screen and that they would have liked her to be in the courtroom so that they could watch her non-verbal actions and whether she looked at the accused in giving her testimony" (2005: 62). The impulse to prefer live evidence and face-to-face confrontation may be particularly prevalent in rape trials where the physical ability of the complainant to resist her attacker is often paramount in jurors' minds (Ellison & Munro, 2010b) and where a lack of corroborating evidence often means the trial outcome depends upon the perceived credibility of the allegation (and of the complainant herself). But while some

jurors expressed this preference during the deliberations, it was not consistently shared and, in line with Davies (1999) in respect of child witnesses, Taylor & Joudo concluded that it did not, in any significant or reliable way, influence jurors' decision-making either pre- or post-deliberation.

Similarly, in respect of the complainer-witness' emotionality, while Taylor and Joudo found that individual jurors might seek to draw inferences from this in the course of deliberations, a calm or emotional demeanour were not interpreted and understood consistently. This meant, in the end, that any associated influence tended to be neutralised. As the researchers put it, "emotionality of testimony did not impact in any consistent or systematic way on jurors' perceptions of the complainant or the accused (other than perceiving her to be more stressed when emotional than neutral). This is likely to be explained by individual differences in preferences for victim testimony. Some jurors indicated that they found her testimony more plausible because she was not emotional; other jurors indicated they would have found her more plausible if she had been emotional" (2005: 66). Ultimately, therefore, the researchers concluded that "what may be much more important than the manner in which testimony is presented are the pre-existing attitudes, biases and expectations that jurors bring with them into the courtroom" (2005: 66) which, in their view, were the key determinants of verdicts.

The Taylor and Joudo study makes an important contribution to our understanding of juror assessments of vulnerable adult, as opposed to child, witnesses; and in a context in which much previous research has relied on a 1-way CCTV model in which counsel (and possibly the judge) relocate to a witness room in order to hear testimony in person, the use of a 2-way live-link is particularly valuable. But in the pre-recorded evidence condition within this study, jurors observed a videotape of the evidence that the witness gave live, rather than viewing a videotape of her forensic police interview as evidence-in-chief. As discussed in Chapter Three, while this allowed the researchers to fully isolate the mode of delivery by keeping content and form constant, it sits at odds from courtroom practice in a number of jurisdictions and as such reduces the transferability of findings arising in the pre-recorded condition to the 'real' world.

In this respect, the recent research by Ellison and Munro, in the context of England and Wales, is particularly instructive. Here, a mini-trial transcript was created with input from legal professionals, which was then re-enacted live by actors and barristers in front of an audience of 160 jury service eligible community volunteers across the study. After observing the 75 minute trial simulation, jurors were split into deliberating groups of 8 members and given 90 minutes to reach a verdict. Trial conditions varied only in respect of mode of evidence delivery, with the witness giving evidence either by means of a live TV link, from behind a screen in the courtroom, in open court, or by replacing her examination-in-chief with a pre-trial police forensic interview and undergoing cross-examination via a live TV link. Where the police interview was used, it covered the same substantive points as the examination-in-chief but repetition was increased and some narration was adjusted to render it less logically sequential in an effort to replicate the less structured way in which the account would unfold at this early stage.

Akin to Taylor & Joudo's research, Ellison & Munro (2014) explored data arising from jury verdicts, individual jurors' pre- and post-deliberation questionnaires, and the substantive content of group deliberations, which were recorded and coded for

analysis. The researchers similarly failed to establish any consistent pattern in terms of final verdict outcomes and jurors' preferences for in-court versus out-of-court video-mediated evidence. They specifically addressed three themes relevant to the question of the influence of mode of delivery upon jurors – (1) reducing the emotional impact of testimony; (2) influencing credibility assessments; and (3) fairness to the accused.

4.2.1 Reducing the Emotional Impact of Testimony

Ellison and Munro's study provides little support for the suggestion that the emotional impact of testimony will be reduced when a witness appears on a screen, translating into a loss of juror empathy. Across the deliberations, there were only a handful of exchanges which raised concerns of this sort and it was not clear that these had any impact upon jurors' approach to other aspects of the deliberation, or to their verdict. The majority of participants made no reference to the live-link or to the use of video-recorded evidence during deliberations, and when asked in post-verdict questionnaires to reflect on specific questions about the complainers' emotional state, there was no evidence to suggest that the mode of delivery had an impact. Indeed, 76% (n=63/83) of jurors in the conditions in which evidence was given either in open court or from behind a screen agreed or strongly agreed that the complainer was distressed whilst giving testimony, compared with 74% (n=57/77) of jurors in the trials where the complainer testified 'out of court' via either a live-link or through pre-recorded testimony. Similarly, 66% (n=55/83) agreed or strongly agreed that the complainer was nervous whilst giving her testimony in the 'in-court' conditions, compared with 55% (n=42/77) in the out of court conditions. The reduced response rate in the latter case reflects, no doubt, the perception that giving testimony inside the courtroom will be more stressful for witnesses than making use of live-links or pre-recorded evidence. Overall, however, the researchers concluded that these findings indicate that the use of special measures did not significantly preclude jurors from appreciating the emotional difficulties complainers experience when giving testimony.

4.2.2 Influencing Credibility Assessments

Ellison and Munro also found little evidence in support of concerns either that the use of special measures will imbue witness testimony with undeserved credibility or, conversely, that the witness' absence from the courtroom will undermine her perceived reliability or trustworthiness. This is not to say that there were not occasional jurors who expressed such views, but the direction of those comments – which were themselves much in the minority – was variable, suggesting that special measures could work in favour of the complainer as much as they could work against her. This stance was further reflected, moreover, in pre-deliberation questionnaires where 35% (n=29/83) of jurors in the open court and screen conditions reported that they believed the complainer's account and 39% (n=30/77) felt similarly in respect of the 'out of court' conditions. And while, as a consequence of deliberations, views shifted in this study somewhat away from a belief in the complainer's credibility, the broad parameters of that shift were comparable across in-court and out-of-court conditions. Thus, 28% (n=23/83) of jurors in the in-court conditions and 29% (n=22/77) in the live-link and video+link conditions combined continued to believe the complainer's account.

4.2.3 Fairness to the Accused

Ellison and Munro's study also found little evidence to suggest that the use of special measures prejudices the defence, either by suggesting to the jury that the witness cannot face being in the same room as, and needs to be protected from, the accused, or more generally by creating an imbalance in the procedures by which competing accounts are provided. The risk that the use of special measures may impact adversely upon the accused was explicitly raised in the deliberations by jurors in three trials – all of which involved use of a CCTV live-link – but in each instance the suggestion was quickly challenged by other jurors. When asked specifically in post-deliberation questionnaires if they felt that the trial they had observed was fair, the majority of participants across all trial conditions answered affirmatively; and where jurors did register concerns, there was no suggestion of a clear association between this and the mode of the witness' testimony. Indeed, participants in the open court condition were most likely to give a negative answer to this question – 20% did so, as compared to 16% for the video+link and 15% in the live-link condition – and their supplementary comments established that their main concern was the perceived insufficiency of evidence provided in the trial rather than the use of special measures.

4.3 Jurors' Assessments of Adult Testimony Beyond Rape

Rape trials – though an obvious and important terrain upon which to conduct experiments testing for the impact of the use of special measures upon jurors – provide a very particular context. Sexual offences by their nature require recounting an intimate form of violation, and rape trials are often characterised, or presumed to be characterised, by heightened levels of emotionality that may influence the ways in which jurors perceive alternative modes of evidence delivery, and the credibility of the adult witness who relies upon them. Existing research in relation to adult witnesses in other types of trial is extremely limited, but where it has been conducted, there is some suggestion of a stronger influence upon mock jurors as a result of mode of testimony.

In a study by Landström et al (2005), 122 students were recruited as mock jurors in a trial regarding a staged car accident. 12 adult witnesses observed the accident and were divided into groups of 'truth-tellers' and 'liars' to then be interviewed. That interview was either pre-recorded and played to jurors or re-enacted live in front of them. In line with previous studies, the researchers found that while jurors who watched truthful witnesses often rated them as having to think less hard than did jurors who watched their lying counterparts, this did not translate into an effective cue for deception. Jurors were no better than chance in assessing the veracity of the adult witness testimony, regardless of mode of presentation. But on the question of jurors' credibility assessments, there was some evidence of an impact. The researchers reported that "the live observers rated the witnesses more positively than did the video observers. Specifically, the results showed that live (versus video) observers rated the witnesses as being more eloquent and more pleasant" (2005: 928).

Similar results also emerged in a study by Fullwood et al (2008), in which 60 undergraduate students were recruited and grouped across three conditions to observe an adult female give testimony concerning a 'fairly innocuous' domestic incident, either face-to-face, via a video, or via a video preceded by a brief face-to-

face introduction. Here, the authors concluded that jurors' perceptions were influenced by mode of delivery to the extent that they "perceived themselves to be less able to emotionally engage with the witness and felt that the testimony was less believable when presented via video compared to the face-to-face presentation" (2008: 7).

Further, in a recent study by Landström et al (2015a), it was suggested that mode of evidence delivery had an influence upon a group of 81 law student volunteers who observed an adult male witness give a statement in relation to a physical assault either live or via a videotaped interview, and were then asked to rate their confidence in the truth of the allegation and their perceptions of the witness' emotional demeanour. The researchers concluded that "male assault victims are considered less credible if their statement is presented on video, as opposed to live" and suggest this is "troublesome" since it poses "real-life implications in light of the increased use of visual technology in the legal arena" (2015: 103). These latter claims in particular over-reach, however.

The findings emerging in these studies merit further exploration, but in evaluating their contribution to the existing field of research, it is crucial to bear in mind their methodological limitations. In marked contrast to the studies on adult rape complainants, where considerable effort has been taken to ensure realism to trial proceedings, with recruitment from the local community and extended scope for collective deliberations, these non-rape studies of adult witnesses rely on student volunteers, do not contextualise the witness testimony in the broader setting of a trial re-enactment, and do not include any group deliberative process, despite the importance that has been attributed to this in mediating and moderating jurors' potential preferences for live testimony in previous research involving child witnesses.

In a context in which Fullwood et al explicitly acknowledge that "there is no reason necessarily to believe that such perceptions would affect the decision-making process of the jury" (2008: 3), the omission of this deliberative component is particularly disappointing, and marks as all the more premature the sort of claims made by Landström et al (2015) in relation to any purported "real life implications" of this work. These studies raise the prospect that – notwithstanding findings of a minimal impact in the rape trial context – adult witness testimony in relation to other offences may be perceived differently by jurors depending upon the mode of its delivery. Without further, and more careful, investigation, however, it is not possible to draw this conclusion with any confidence, and it is certainly not possible to predict what impact such difference in perception might have in the overall context of verdict deliberations.

4.4 Future Research

It is clear from the above discussion that there are several dimensions to the impact on jurors of adult witnesses' use of special measures that are yet to be properly investigated, let alone understood. A substantial research project is currently underway, funded by the Nuffield Foundation, which may address a number of gaps in our existing understanding (<http://www.nuffieldfoundation.org/juries-digital-courtroom-and-special-measures>). As of yet, however, no findings are available, and to the extent that it relies on videotaped trial simulations as a background context into which video-mediated forms of testimony are inserted, its conclusions may be

limited. From the evidence that is currently available, there is little support for concerns regarding the impact of mode of evidence delivery upon verdict outcomes, notwithstanding the influence it may have on some individual jurors in a range of unpredictable, and often contradictory, ways. The research base in respect of non-sexual offences and male adult complainers is less established, and while there is some suggestion that pre-recorded evidence may work to the disadvantage of witnesses in these contexts, the absence of a deliberative component within existing studies – particularly given the significance attached to them in studies on child and other adult witnesses, and their practical import in real cases – is a major omission.

Further work is clearly needed in order to provide a richer and more diverse spectrum of studies in relation to adult witnesses and mode of evidence delivery. In addition, future research should seek to supplement the findings of existing studies on rape trials by including an evaluation of the impact on jurors of the use of pre-recorded cross-examination (as currently being rolled out in England and Wales). While Taylor and Joudo's study included a pre-recorded cross-examination, and found that this, as part of the overall pre-recorded evidence condition, had no significant effect on jurors, this cross-examination followed on from a pre-recorded examination-in-chief that was very different in style and format from the forensic police interviews routinely utilised in many jurisdictions. As such, the question of the impact upon jurors of this format of evidence in adult cases remains unsatisfactorily addressed by existing research.

More broadly, as will be discussed briefly in Chapter Five, there may be a need to conduct further research to explore the impact of differential modes of introducing pre-recorded and live-link evidence within the criminal courtroom. In both the Taylor & Joudo and Ellison & Munro studies, best practice was followed. Images of the witness were presented on a very large plasma screen, which was clearly visible to all jurors. This is not always the case in real courtrooms where smaller screens may be used or screens may be located at a distance that impairs jurors' view. In addition, Ellison & Munro's pre-recorded interview was scripted on the basis of examples of best practice identified within police training videos and in accordance with the 'Achieving Best Evidence' guidelines (Ministry of Justice, 2011). As a result, the videotape did not replicate certain interviewing practices which have been identified as a cause for concern (HMCPSP/HMIC, 2007), and a case could legitimately be made for research that better reflects the variable quality of interviews and screen technology in courts.

5. Using Pre-Recorded Evidence in Practice: Influence upon Jurors

This chapter turns attention to a small but important body of research which examines the impact upon jurors of differential ways of introducing pre-recorded evidence or live-link testimony in practice within criminal trials. In this respect, the length and format of police forensic interviews has been suggested to have a significant effect, but the existing evidence remains inconclusive. What is more clear, however, is that jurors are prone to be distracted by the poor audio and visual quality of the live-links and pre-recorded evidence relied upon in many courtrooms, and that factors such as the choice of camera perspective used may bear careful scrutiny for their potential to influence jurors' assessments. This research is relevant for jurisdictions, including Scotland, who are considering making greater use of such modes of testimony, and are keen to identify best practice to ensure its introduction without unintended influence upon jurors' evaluations of the evidence before them.

5.1 Technological Considerations and Concerns

A number of studies across different jurisdictions have expressed concern regarding the practical experience for jurors of observing video-recorded witness statements. In particular, it has been noted that such videos can be of poor visual quality and that the screens upon which a witness' image appears (in pre-recorded and live-link conditions) are often too small or too remotely located to be viewed comfortably. The inadequacy and unreliability of audio-visual technology within the courtroom is a problem that impacts upon both adult (Stern, 2010; HMCPSI/HMIC, 2007) as well as child witnesses (MoJ, 2016). Plotnikoff & Woolfson (2009) found, for example, that 40% of child witnesses who gave evidence in real trials over the course of their study experienced problems with technical equipment in the courtroom, or with playing their visually recorded statements. Meanwhile, in a study in Australia involving 277 actual jurors in child sexual assault trials, nearly one-third reported having had problems seeing or hearing witnesses' pre-recorded statements because of poor audio or visual quality, with more than half reporting that this had distracted them from the evidence being presented (Cashmore & Trimboli, 2006).

In line with this, in respect of adult rape complainants, Taylor and Joudo suggest that "many police officers have difficulty operating complex recording equipment" and they report common issues such as poorly focused cameras, sub-standard sound quality, and extraneous noise or interruptions in interviews, which may distract jurors and make it more difficult for them to concentrate on the content of testimony (2005: 281). In its 'Evidence and Procedure Review', the Scottish Courts Service directly highlighted these concerns, suggesting that – in order to mitigate any 'barrier' effect associated with observing a witness' evidence on screen – it would be important to "work with other partners to improve the quality and accessibility of video-link facilities" (2015: 34) and ensure that "the interaction between the questioner and the witness is as clear as possible" (2015: 33).

While these issues of audibility and visibility are undoubtedly important, other technical aspects, for example, in relation to the camera angle used for recording, may also merit reflection. In the context of criminal confessions, for example, camera perspective has been shown – in some studies – to influence observers'

assessments of the voluntariness of the confession and of the suspect's guilt (Lassiter et al, 2002; Ratcliff et al, 2006). When the camera is focused on the subject only, confessions tend to be perceived as more voluntary and reliable than when the camera is focused on both the interrogator and the subject. Moreover, Landström & Granhag (2008) have shown that camera perspective can similarly impact on assessments of credibility in relation to child witnesses. When the camera was focused on the child alone, they found in their study that participants tended to assess the statement as more truthful, compared with when the focus was on both the child and the interviewer.

It is important to note, however, that this finding was not confirmed in Landström et al's subsequent research, which also involved a child witness but found no significant effects as a consequence of camera perspective. The researchers hypothesised that the source of these differential outcomes may lie in the fact that in the 2008 study, the child was testifying about a more emotionally neutral event whereas in the 2015 version, the child was testifying about a bullying incident that they had encountered. Landström et al suggested that "it is possible that when taking part of an emotionally involving interview, observers direct their attention more towards the child, leaving less room for extra-legal factors, such as the camera perspective bias, to influence their judgments" (2015b: 379). This is clearly an issue that requires further investigation, but if such factors are apt to influence jurors, it is important that they are taken into account, and that this influence is mitigated against in the best practice that is adopted.

5.2 Length and Structure of Police Forensic Interviews

A further concern that has been expressed is that the forensic interviews relied upon in the courtroom as evidence-in-chief by witnesses are often unduly lengthy and convoluted (Westera et al, 2013b; Westera et al, 2011). Research has certainly established that witness' responses in the context of police interviews are often longer and more detailed than those provided via live evidence-in-chief: indeed, as much as five times longer in respect of female adult rape complainers (Westera et al, 2013b; see also Edwards (2003); Konradi (1977)). Whilst, on the one hand, this reflects a success of special measures to the extent that it enables witnesses to give a more complete account than they may manage in the courtroom, the worry of many commentators is that jurors will disengage from, or be unable to process effectively, the content of such lengthy video interviews.

Currently, there is little evidence to support this concern. Westera et al (2015), in a study that involved over 400 members of the public as volunteers, tested the impact that different lengths of testimony have on third party observers. They concluded that neither the overall length of the testimony nor the length of individual responses per se had any significant effect on ratings of complainer credibility or in relation to the perceived guilt of the accused. These testimonies were not, however, situated in the broader context of a simulated trial where their relative length may have had a different significance. What is more, they took the form of computer-generated audio recordings, which reduced the influence of other factors associated with juror engagement for experimental purposes, but left open the question of this influence in the context of 'real' trials.

The most obvious remedy to any lingering concern about length would, of course, be for prosecutors to edit video interviews before they are shown to the jury. While this comes at some risk to narrative flow, in its guidance in relation to child abuse cases,

the CPS in England and Wales clearly supports this approach, stating that “it is particularly important to edit irrelevant material from long, rambling interviews” lest jurors struggle to identify and concentrate effectively on the key issues (2009: Reviewing of Videos, para 3). One of the sections of the interview most likely to meet with the cutting room floor in this context is the section at the start, where the interviewer explains the basis upon which the questioning will proceed, and asks basic questions to create a rapport and, particularly in the case of child witnesses, establish their levels of understanding. In respect of adult rape complainers, Westera et al’s recent work with New Zealand prosecutors would strongly support that removal. Here, prosecutors suggested that “the preamble is detrimental to the perception of the victim” because “what is the first thing the jury see of our victim? Her sitting there for 10 minutes being lectured on how she’s to respond” (2017: 257).

At the same time, however, Krahenbuhl has raised questions about the wisdom of this editing, at least in relation to child witnesses. In her study, 323 participants were recruited from the local and university community and asked to read an edited version of a real investigative interview transcript involving a child witness (who was aged either 4 or 6 years old depending on trial condition). Though the study’s reliability may be somewhat undermined by its use of a written transcript rather than an observation of videotaped testimony in a trial simulation, Krahenbuhl found that removing the rapport stage had an overall negative effect on jurors’ assessments. While it has been suggested that the rapport stage is superfluous at best, and prejudicial towards the witness at worst, her findings indicated that “when [it] was presented, participants rated the child as providing more complete and clear information, as being more accurate, honest, credible and confident than when the rapport stage presentation was omitted. The child was also perceived by participants to understand the functions of the interview more fully and the interview was perceived to be of a higher quality” (2012: 855).

Related to this point about its length in and of itself, concerns have also been expressed regarding the adequacy of police interviewing techniques relied upon in the video interview (Stern, 2010). In McMillan and Thomas’ research on rape prosecution, for example, practitioners reported that, in addition to “inadequate stylistic / technical abilities on the part of the police”, which meant that complainers were filmed at a distance that made it impossible for jurors to see their facial expressions, they felt that the ability of the prosecution to present an effective case was often undermined by “the attention to detail and the rigorous and at times repetitive questioning required by the police to further their investigation” (2011:275-6). Similarly, in a study involving interviews with prosecutors in New Zealand, Westera et al reported that respondents consistently described the police forensic interview as incoherent and “not unfolding like a normal human interaction” (2017: 256). Whilst the use of open questions is core to best practice under ‘Achieving Best Evidence’ guidelines in England and Wales (and its counterpart in other jurisdictions where police undertake forensic interviews), respondents expressed frustration at the tendency for such questions to provoke narrative responses in which too much irrelevant detail was provided, creating the prospect of minor inconsistencies that could taint a witness’ overall credibility.

This speaks, of course, to a broader tension which lies at the heart of the use of such interviews for dual purposes within the criminal justice process. The aim of the police interview is not, after all, just to gather evidence for future use in the courtroom, it is also a fundamental part of the investigative process, conducted at a point in time in

which the interviewer cannot know or predict which factual specifics (the colour of the curtains, the weather on the night in question, etc.) may prove to be relevant. While using the police investigative interview may be cost- and time-efficient, and ensures that the witness needs only give testimony (or at least evidence-in-chief) on one occasion, there are undoubtedly challenges associated with navigating its dual purpose in a way that avoids the interview becoming too comprehensive and unwieldy.

5.3 Future Research

As with the question of the overall impact of mode of evidence delivery (whether by child or adult witnesses) upon jurors, the evidence base in respect of these more operational aspects of introducing pre-recorded testimony into the criminal courtroom is limited. Nonetheless, it is clear that, to the extent that there is evidence of some level of influence upon jurors - in respect of some types of witness in certain types of cases – it is important to understand better what exactly produces this effect. Further research about the impact of camera perspective, the consequences of high and low quality AV equipment, and the challenges and opportunities associated with the use of police forensic interview is needed. This will allow us to more confidently identify, and take steps to ameliorate, any negative impacts upon jurors' credibility assessments associated with the introduction of pre-recorded testimony into trial proceedings.

6. Conclusion

Though a number of studies have been conducted to explore the influence of the use of pre-recorded and live-link testimony within criminal trials upon (mock) juror perceptions and jury verdicts, there is considerable diversity in terms of the scale and methodological rigour of that existing research. The trial simulations relied upon have varied significantly in their level of detail and realism, as well as between written transcript, audio recording, video re-enactment or live performance formats. The size and composition of mock jury samples has also varied across these studies. These factors must be born in mind when evaluating study findings, both on their own terms and in terms of their transferability to the real criminal courtroom.

Nonetheless, such research does yield some significant and valuable insights into the factors that may frame evaluations of witnesses and their evidence during jury deliberations, in a context in which direct research with real jurors on the substance of their decision-making is still prohibited in many jurisdictions, including Scotland.

From the available research, there appears to be no compelling evidence of an impact *per se* from the use of pre-recorded evidence or live-links, whether by child or adult witnesses, that translates reliably into an effect on verdict outcomes in criminal trials.

In respect of child witnesses, it has often been found that jurors may harbour an initial preference for evidence delivered 'live and in the flesh'. However, a number of studies have now also established that, where a group deliberation component is built into the research design (mimicking the real trial process), this influence is neutralised such that it does not translate in any consistent or reliable way into verdict outcomes.

In respect of adult witnesses, the evidence base is significantly more limited. However, robustly designed studies, both in Australia and England, indicate that the use of pre-recorded evidence or link-links, at least by female rape complainers, does not significantly effect juror evaluations. The position in respect of adults in other trial contexts is less clear, and requires further investigation. As things stand, however, there is good reason to think that, as with child witnesses, any juror preferences for live testimony may be mitigated in the process of deliberation.

That this may be so in the experimental context, however, does not entail that additional complications associated with the practical use of such testimony within real criminal courtrooms (including in respect of the audio visual quality and length of recorded evidence, for example) may not produce their own distinctive influences upon jurors, and this would need to be warded against in any plans for implementation.

References

Antrobus, E., McKimmie, B. & Newcobe, P. (2016) 'Mode of Children's Testimony and the Effect of Assumptions about Credibility' 23(6) *Psychiatry, Psychology and Law* 922 – 940

Ask, K. & Landström, S. (2010) 'Why Emotions Matter: Expectancy Violation and Affective Response Mediate the Emotional Victim Effect' 34(5) *Law and Human Behavior* 392-401

Bornstein, B. (2017) 'Mock Juror Sampling Issues in Jury Simulation Research: A Meta-Analysis' 41(1) *Law and Human Behavior* 13-28

Brackel, G. (1976) 'Videotape in Trial Proceedings: A Technological Obsession?' 61 *American Bar Association Journal* 956-959

Braunack-Mayer, A. (2002) 'The Ethics of Participating in Research' 177(9) *Medical Journal of Australia* 471-472

Bray, R. & Kerr, N. (1987) *The Psychology of the Courtroom*, New York: Academic Press

Burton, M., Evans, R. & Sanders, A. (2006) 'An Evaluation of the Use of Special measures for Vulnerable and Intimated Witnesses', London: Home Office (Findings 270)

Cashmore, J. & De Haas, N. (1992) 'The Use of Closed-Circuit Television for Child Witnesses in the ACT', Sydney: Australian Law Reform Commission

Cashmore, J. & Trimboli, L. (2006) 'Child Sexual Assault Trials: A Survey of Juror Perceptions', Crime & Justice Bulletin No 102, Sydney: NSW Bureau of Crime Statistics and Research

Castelli, P., Goodman, G. & Ghetti, S. (2005) 'Effects of Interview Style and Witness Age on Perceptions of Children's Credibility in Sexual Abuse Cases' 35(2) *Journal of Applied Social Psychology* 297-317

Clifford, B., Davies, G., Westcott, H. & Garratt, K. (1992) 'Video Technology and the Child Witness,' Final Report to the Police Foundation, London: University of East London

Council of HM Circuit Judges (2006) 'Convicting Rapists and Protecting Victims: A Consultation Response of the Council of Her Majesty's Circuit Judges', London: Council of HM Circuit Judges

Crown Prosecution Service (2009) 'Child Abuse – Guidance on Prosecuting Cases of Child Abuse', London: CPS

Davies, G., Wilson, C., Mitchell, R. & Milsom, J. (1995) 'Videotaping Children's Evidence: An Evaluation', London: Home Office

Davies, G., Hoyano, L., Keenan, C., Maitland, L. & Morgan, R. (1999) 'An Assessment of the Admissibility and Sufficiency of Evidence in Child Abuse Prosecutions', London: Home Office

Davies, G. (1999) 'The Impact of Television on the Presentation and Reception of Children's Testimony' 22 *International Journal of Law and Psychiatry* 241-256

Devine, D., Olafson, K., Jarvis, L., Bott, J., Clayton, L. & Wolfe, J. (2004) 'Explaining Jury Verdicts: Is Leniency Bias for Real?' 34(10) *Journal of Applied Social Psychology* 2069-2098

DePaulo, B., Stone, J. & Lassiter, G. (1985) 'Deceiving and detecting deceit' in B, Schlenker (ed.) *The Self and Social Life*, New York: McGraw Hill, 323-370

Diamond, S. (1997) 'Illuminations and Shadows from Jury Simulations' 21(5) *Law and Human Behavior* 561-571

Eastwood, C. & Patton, W. (2002) 'The Experiences of Child Complainants of Sexual Abuse in the Criminal Justice System', Canberra: Criminology Research Council

Eaton, T., Ball, P. & O'Callaghan, M. (2001) 'Child Witness and Defendant Credibility: Child Evidence Presentation Mode and Judicial Instructions' 31 *Journal of Applied Social Psychology* 1845-1858

Edwards, J. (2003) 'Medical Examinations of Sexual Assault Victims: Forensic Use and Relevance' 15 *Judicial Officers Bulletin* 65-72

Ekman, P. (1985) *Telling lies: Clues to Deceit in the Marketplace, Politics and Marriage*, New York: Norton

Ellison, L. & Munro, V. (2014) 'A Special Delivery? Exploring the Impact of Screens, Live Links and Video-Recorded Evidence on Mock Juror Deliberation in Rape Trials' 23(1) *Social and Legal Studies* 3-29

Ellison, L. & Munro, V. (2010a) 'Getting to (Not) Guilty: Examining Jurors' Deliberative Processes in, and Beyond, the Context of a Mock Rape Trial' 30(1) *Legal Studies* 74-97

Ellison, L. & Munro, V. (2010b) 'A Stranger in the Bushes or An Elephant in the Room? Critical Reflections on Received Rape Myth Wisdom in the Context of a Mock Jury Study' 13(4) *New Criminal Law Review* 781-801

Ellison, L. & Munro, V. (2009) 'Turning Mirrors Into Windows? Assessing the Impact of (Mock) Juror Education in Rape Trials' 49(3) *British Journal of Criminology* 363-383

Ellsworth, C. (1989) 'Are Twelve Heads Better than One?' 52 *Law and Contemporary Problems* 247-255

Finch, E. & Munro, V. (2008) 'Lifting the Veil: The Use of Focus Groups and Trial Simulations in Legal Research' 35 *Journal of Law and Society* 30-51

Finch, E. & Munro, V. (2006) 'Breaking Boundaries? Sexual Consent in the Jury Room' 26(3) *Legal Studies* 303-320

Flin, R., Boon, J., Knox, A. & Bull, R. (1992) 'The effect of a 5 month delay on children's and adult's eyewitness memory' 83(3) *British Journal of Psychology* 323 – 336

Fullwood, C., Judd, A. & Finn, M. (2008) 'The Effect of an Initial Meeting Context and Video-Mediation on Jury Perceptions of an Eyewitness' *Internet Journal of Criminology* 1-11

Goodman, G., Golding, J., Helgeson, V., Haith, M. & Michelli, J. (1987) 'When a Child Takes the Stand: Jurors' Perceptions of Children's Eyewitness Testimony' 11(1) *Law and Human Behavior* 27-40

Goodman, G., Taub, E., Jones, D., England, P., Port, L., Rudy, L., Prado, L., Myers, J. & Melton, G. (1992) 'Testifying in Criminal Court: Emotional Effects on Child

Sexual Assault Victims', 57(5) *Monographs of the Society for Research in Child Development* 1-161

Goodman, G., Tobey, A., Batterman-Faunce, J, Orcutt, H., Thomas, S., Shapiro, C. & Sachsenmaier, T. (1998) 'Face-to-Face Confrontation: Effects of Closed-Circuit Technology on Children's Eyewitness Testimony and Jurors' Decisions' 22 *Law and Human Behavior* 165-203

Goodman, G., Myers, J., Qin, J., Quas, J., Castelli, P., Redlich, A. & Rogers, L. (2006) 'Hearsay versus Children's Testimony: Effects of Truthful and Deceptive Statements on Jurors' Decisions' 30(3) *Law and Human Behavior* 363-401

Grant, J. (1987) 'Face-to-Television Screen-to Face: Testimony by Closed Circuit Television in Cases of Alleged Child Abuse and the Confrontation Right' 76 *Kentucky Law Journal* 273-299

Gudjonsson, G. & Henry, L. (2003) 'Child and Adult Witnesses with Learning Disabilities: The Importance of Suggestibility' 8 *Legal and Criminological Psychology* 241-252

Hamlyn, B., Phelps, A., Turtle, J. & Sattar, G. (2004) 'Are Special Measures Working? Evidence From Surveys of Vulnerable and Intimidated Witnesses', London: Home Office Research Study 283

HMCPs/HMIC (2007) 'Without Consent: A Report of the Joint Inspection into the Investigation and Prosecution of Cases Involving Allegations of Rape', London: HMCPs

Kaufmann, G., Drevland, G., Wessel, E., Overskeid, G., & Magnussen, S. (2003) 'The Importance of Being Earnest: Displayed Emotions and Witness Credibility' 17(1) *Applied Cognitive Psychology* 21-34

Kerr, N. & MacCoun, R. (1985) 'The Effects of Jury Size and Polling Method on the Process and Product of Jury Deliberation' 48(2) *Journal of Personality and Social Psychology* 349-363

Kerr, N., Nerenz, D. & Herrick, D. (1979) 'Role Playing and the Study of Jury Behaviour' 7(3) *Sociological Methods and Research* 337-355

Konradi, A. (1997) 'Too Little Too Late: Prosecutors' Pre-Court Preparation of Rape Survivors' 22 *Law and Social Inquiry* 1-54

Krahenbuhl, S. (2012) 'Does the Jury Really Need to Hear it All? The Effect of Evidence Presentation Practice on Jury Assessments of Children's Eyewitness Testimony' 18(9) *Psychology, Crime and Law* 847-858

Kramer, G. & Kerr, N. (1989) 'Laboratory Simulation and Bias in the Study of Jury Behaviour: A Methodological Note' 13(1) *Law and Human Behavior* 89-99

Landström, S., Ask, K. & Sommar, C. (2015a) 'The Emotional Male Victim: Effects of Presentation Mode on Judged Credibility' 56(1) *Scandinavian Journal of Psychology* 99-104

Landström, S., Ask, K., Sommar, C. & Willen, R. (2015b) 'Children's Testimony and the Emotional Victim Effect' 20(2) *Legal and Criminological Psychology* 365-383

Landström, S. & Granhag, P. (2010) 'In-court Versus Out-of-Court Testimonies: Children's Experiences and Adults' Assessments' 24 *Applied Cognitive Psychology* 941-955

Landström, S. & Granhag, P. (2008) 'Children's Truthful and Deceptive Testimonies: How Camera Perspective Affects Adult Observers' Perception and Assessment' 14(5) *Psychology, Crime and Law* 381-396

Landström, S., Granhag, P. & Hartwig, M. (2007) 'Children's Live and Videotaped Testimonies: How Presentation Mode Affects Observers' Perception, Assessment and Memory' 12 *Legal and Criminological Psychology* 333-348

Landström, S., Granhag, P. & Hartwig, M. (2005) 'Witnesses Appearing Live Versus on Video: Effects on Observers' Perception, Veracity Assessments and Memory' 19 *Applied Cognitive Psychology* 913-933

Lassiter, G., Geers, A., Handley, I., Weiland, P. & Munhall, P. (2002) 'Videotaped Interrogations and Confessions: A Simple Change in Camera Perspective Alters Verdicts in Simulated Trials' 87(5) *Journal of Applied Psychology* 867-874

Leippe, M. & Romanczyk, A. (1989) 'Reactions to Child (Versus Adult) Eyewitnesses: The Influence of Jurors' Preconceptions and Witness Behavior' 13(2) *Law and Human Behavior* 103-132

Leippe, M. & Romanczyk, A. (1987) 'Children on the Witness Stand: A Communication / Persuasion Analysis of Jurors' Reactions to Child Witnesses' in S. Ceci et al (eds.) *Children's Eyewitness Memory*, New York: Springer, 155-177

Lempert, R. (1975) 'Uncovering Nondiscernible Differences: Empirical Research and the Jury-Size Cases' *75 Michigan Law Review* 644-707

Lieberman, J. & Sales, B. (1997) 'What Social Science Teaches Us About the Jury Instruction Process' *3 Psychology, Public Policy and the Law* 589-644

MacCoun, R. & Kerr, N. (1988) 'Asymmetric Influence in Mock Jury Deliberation: Jurors' Bias for Leniency' *54 Journal of Personality and Social Psychology* 21-33

MacFarlane, K. & Krebs, S. (1986) 'Videotaping of Interviews and Court Testimony' in K. MacFarlane & J. Waterman (eds.) *Sexual Abuse of Young Children: Prevention and Treatment*, New York: Guildford Press, 67-100

McAuliff, B. & Kovera, M. (2012) 'Do jurors get what they expect? Traditional versus alternative forms of children's testimony', *18(1) Psychology, Crime & Law* 27– 47

McCauley, M. & Parker, J. (2001) 'When Will a Child Be Believed? The Impact of the Victim's Age and Juror's Gender on Children's Credibility and Verdict in a Sexual Abuse Case' *25(4) Child Abuse and Neglect* 523-539

McMillan, L. & Thomas, M. (2009) 'Police Interviews of Rape Victims: Tensions and Contradictions' in M. Horvath & J. Brown (eds.) *Rape: Challenging Contemporary Thinking*, Cullompton: Willan Publishing, 255-280

Miller G. & Fontes, N. (1979) *Videotape on Trial: A View from the Jury Box*, Beverley Hills: Sage

Miller, G., Fonest, N., Boster, F. & Sunnafrank, M. (1977) 'Methodological Issues in Jury Research: What Can Simulations Tell Us?', paper presented at the Meeting of the American Psychological Association, San Francisco

Mills, L. (1973) 'Six Member and Twelve Member Juries: An Empirical Study of Trial Results' *6 University of Michigan Journal of Law Reform* 671-711

Ministry of Justice (2016) 'Process Evaluation of Pre-Recorded Cross-Examination Pilot (Section 28)', London: Ministry of Justice

Ministry of Justice (2011) 'Achieving Best Evidence in Criminal Proceedings: Guidance on Interviewing Victims and Witnesses, and Guidance on Using Special Measures', London: MoJ

Montoya, J. (1992) 'On Truth and Shileding in Child Abuse Cases' 43 *Hastings Law Review* 1259-1319

Mukhopadhaya, K. (2003) 'Jury Size and the Free Rider Problem' 19(1) *Journal of Law, Economics and Organization* 24-44

Murray, K. (1995) 'Live Television Link: An Evaluation of Its Use by Child Witnesses in Scottish Criminal Trials', Edinburgh: Scottish Office Central Research Unit

Nikonova, O. & Ogloff, J. (2005) 'Mock Jurors' Perceptions of Child Witnesses: The Impact of Judicial Warning' 37(1) *Canadian Journal of Behavioural Science* 1-19

Office for Criminal Justice Reform (2007) 'Convicting Rapists and Protecting Victims: Justice for Rape – Responses to Consultation', London: OCJR

O'Grady, C. (1996) 'Child Witnesses and Jury Trials: An Evaluation of the Use of Closed Circuit Television and Removable Screens in Western Australia', Perth: Western Australia Ministry of Justice.

O'Neill & Zajac (2013) 'The Role of Repeated Interviewing in Children's Responses to Cross-Examination-Style Questioning' 104(1) *British Journal of Psychology* 14-38

Orcutt, H., Goodman, S., Tobey, A., Batterman-Faunce, J. & Thomas, S. (2001) 'Detecting Deception in Children's Testimony: Factfinders' Abilities to Reach the Truth in Open Court and Closed-Circuit Trials' 25 *Law and Human Behavior* 339-372

Payne, S. (2009a) 'Redefining Justice: Addressing the Individual Needs of Victims and Witnesses', London: Home Office

Payne, S. (2009b) 'Rape: The Victim Experience Review', London: Home Office

Plotnikoff, J. & Woolfson, R. (2009) 'Measuring Up? Evaluating Implementation of Government Commitments to Young Witnesses in Criminal Proceedings', London: NSPCC

Pozzulo, J. & Dempsey, J. (2009) 'Witness Factors and their Influence on Jurors' Perceptions and Verdicts' 36(9) *Criminal Justice and Behavior* 923-934

Ratcliff, J., Lassiter, G., Schmidt, H. & Snyder, C. (2006) 'Camera Perspective Bias in Videotaped Confessions: Experimental Evidence of its Perceptual Bias' 12(4) *Journal of Experimental Psychology: Applied* 197-206

Reifman, A., Guisick, S. & Ellsworth, P. (1992) 'Real Jurors' Understanding of the Law in Real Cases' 16(5) *Law and Human Behavior* 539-554

Richards, P., Morris, S. & Richards, E. (2008) 'Turning Up the Volume: The Vulnerable Witnesses (Scotland) Act 2004'

available at <http://www.gov.scot/Publications/2008/07/25160344/0>).

Roper, R. (1980) 'Jury Size and Verdict Consistency: A Line Has to be Drawn Somewhere' 1414 *Law and Society Review* 977-995

Rose, V. & Ogloff, J. (2001) 'Evaluating the Comprehensibility of Jury Instructions: A Method and An Example' 25(4) *Law and Human Behavior* 409-431

Ross, D., Jurden, F. Lindsay, R. & Kenney, J. (2003) 'Replications and Limitations of a Two-Factor Model of Child Witness Credibility' 33(2) *Journal of Applied Social Psychology* 418-431

Ross, D., Hopkins, S., Hanson, E., Lindsay, R, Hazen, K & Eslinger, T. (1994) 'The Impact of Protective Shields and Videotape Testimony on Conviction Rates in a Simulated Trial of Child Sexual Abuse' 18(5) *Law and Human Behavior* 553-566

Scottish Court Service (2015) 'Evidence and Procedure Review Report', Edinburgh: Scottish Court Service

Scottish Courts and Tribunals Service (2016) 'Evidence and Procedure Review – Next Steps', Edinburgh: Scottish Courts and Tribunals Service

Scottish Courts and Tribunals Service (2017) 'Evidence and Procedure Review: Child and Vulnerable Witnesses Project: Pre-Recorded Further Evidence Work-Stream Project Report', Edinburgh: Scottish Courts and Tribunals Service

Scottish Executive (2005) 'Special Measures for Vulnerable Adult and Child Witnesses: A Guidance Pack', Edinburgh: Scottish Executive

Scottish Government (2017) 'Pre-Recording Evidence of Child and Other Vulnerable Witnesses: A Consultation', Edinburgh: Scottish Government

Sealy, A. & Cornish, W. (1973) 'Jurors and Their Verdicts' 36(5) *Modern Law Review* 496-508

Sears, D. (1986) 'College Sophomores in the Laboratory: Influences of a Narrow Data Base on Social Psychology's View of Human Nature' 51 *Journal of Personality and Social Psychology* 515-530

Sharp, F. (1989) 'Video Evidence – A Doubtful Benefit for Children' *Journal of Child Law* 95-97

Simon, R. & Mahan, L. (1971) 'Quantifying Burdens of Proof: A View from the Bench, the Jury and the Classroom' 5 *Law and Society Review* 319-330

Spencer, J. (2012) 'Conclusions' in J. Spencer & M. Lamb (eds) *Children and Cross-Examination: Time to Change the Rules?* London: Bloomsbury

Stern, V. (2010) 'Stern Review of Rape Reporting in England and Wales' London: Home Office

Swim, J., Borgida, E. & McCoy, K. (1993) 'Videotaped Versus In-Court Witness Testimony: Does Protecting the Child Witness Jeopardize Due Process?' 23(8) *Journal of Applied Social Psychology* 603-631

Taylor, N. & Joudo, J. (2005) 'The Impact of Pre-Recorded Video and Closed Circuit Television Testimony by Adult Sexual Assault Complainants on Jury Decision-Making: An Experimental Study', Australian Institute of Criminology Research and Public Policy Series (No. 68), Canberra: Australian Institute of Criminology

Tinsley, Y. & McDonald, E. (2011) 'Use of Alternative Ways of Giving Evidence by Vulnerable Witnesses: Current Proposals, Issues and Challenges' 42(4) *Victoria University of Wellington Law Review* 705-742

Tobey, A., Goodman, G., Batterman-Faunce, J., Orcutt, H. & Sachsenmaier, T. (1995) 'Balancing the Rights of Children and Defendants: Effects of Closed-Circuit Television on Children's Accuracy and Jurors' Perceptions' in M. Zaragoza et al (eds.) *Applied Psychology: Individual, Social and Community Issues, Volume 1: Memory and Testimony in Child Witnesses*, Thousand Oaks: Sage, 214-239

Visher, C. (1987) 'Juror Decision-Making: The Importance of Evidence' 11 *Law and Human Behavior* 1-17

Wade, A., Lawson, A. & Aldridge, J. (1998) 'Stories in Court' 10(2) *Child and Family Law Quarterly* 179-189

Waterman, A. & Blades, M. (2013), 'The Effect of Delay and Individual Differences on Children's Tendency to Guess' 49(2) *Developmental Psychology* 215-226

Weiten, W. & Diamond, S. (1979) 'A Critical Review of the Jury Simulation Paradigm – The Case of Defendant Characteristics' 23 *Law and Human Behavior* 71-93

Welbourne, P. (2002) 'Videotaped Evidence of Children: Application and Implications of the Memorandum of Good Practice' 32 *British Journal of Social Work* 553-571

Wessel, E., Magnussen, S. & Melinder, A. (2013) 'Expressed Emotions and Perceived Credibility of Child Mock Victims Disclosing Physical Abuse' 27(5) *Applied Cognitive Psychology* 611-616

Westera, N., Powell, M. & Milne, B. (2017) 'Lost in the detail: Prosecutors' perceptions of the utility of video recorded police interviews as rape complainant evidence', 50(2) *Australian & New Zealand Journal of Criminology* 252–268

Westera, N., McKimmie, B. & Kebbell, M. (2015) 'Does the narrative style of video evidence influence judgements about rape complainant testimony?' 29(5) *Applied Cognitive Psychology* 637–646

Westera, N., Kebbell, M. & Milne, B. (2013a) 'Losing Two Thirds of the Story: A Comparison of the Video-Recorded Police Interview and Live Evidence of Rape Complainants' (2013) *Criminal Law Review* 290-308

Westera, N., Kebbell, M. & Milne, B. (2013b) 'It is Better, but does it look better? Prosecutor Perceptions of Using Rape Complainant Investigative Interviews as Evidence' 19(7) *Psychology, Crime and Law* 595-610

Westera, N., Kebbell, M. & Milne, R. (2011) 'Interviewing Rape Complainants: Police Officers' Perceptions of Interview Format and Quality of Evidence' 25(6) *Applied Cognitive Psychology* 917-926

Wilson, J. & Davies, G. (1999) 'An Evaluation of the Use of Videotaped Evidence for Juvenile Witnesses in Criminal Courts in England and Wales' 7(1) *European Journal of Criminal Policy and Research* 81-96

Wilson, D. & Donnerstein, E. (1977) 'Guilty or Not Guilty? A Look at the 'Simulated' Jury Paradigm' 16 *Journal of Applied Social Psychology* 175-190

Young, W., Cameron, N. & Tinsely, Y. (1999) 'Juries in Criminal Trials Part 2: A Summary of the Research Findings', Wellington: *New Zealand Law Commission Paper 37*

Zeisel, H. & Diamond, S. (1978) 'The Effect of Peremptory Challenge on Jury and Verdict' 30 *Stanford Law Review* 491-531



© Crown copyright 2018

You may re-use this information (excluding logos and images) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit <http://www.nationalarchives.gov.uk/doc/open-government-licence/> or e-mail: psi@nationalarchives.gsi.gov.uk.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

This document is also available from our website at www.gov.scot.
ISBN: 978-1-78851-666-2

The Scottish Government
St Andrew's House
Edinburgh
EH1 3DG

Produced for
the Scottish Government
by APS Group Scotland
PPDAS375266 (03/18)
Published by
the Scottish Government,
March 2018



Social Research series
ISSN 2045-6964
ISBN 978-1-78851-666-2

Web and Print Publication
www.gov.scot/socialresearch

PPDAS375266 (03/18)