





RESEARCH ARTICLE



## The effects of victim testimony order and judicial education on juror decision-making in trials for rape

Harrison D. H. Lee , Barbara M. Masser , Jason M. Tangen  and  
Blake M. McKimmie 

School of Psychology, The University of Queensland, Brisbane, Australia

### ABSTRACT

The victim's testimony in most rape trials is unlikely to match jurors' rape stereotypes and may instead seem typical of consensual sex. This research investigated whether providing judicial education about what commonly occurs in rape, and having a victim describe stereotype-consistent events early in their testimony, would guide jurors to interpret the victim's testimony as depicting rape. After pilot work, community members ( $N = 212$ , 3 non-binary, 113 females, 96 males) received either educative instructions or standard instructions and watched video testimony in which the victim described the details of the assault at the beginning or end of the testimony. Participants also evaluated whether the testimony depicted rape or consensual sex as the events were described. Further, participants then read that another juror thought that the defendant was not guilty, and we re-assessed participants' perceptions of the case. Participants who received the assault early categorised events as depicting rape. While educative instructions had no effect on evaluations of the testimony, participants who received education were more likely to find the defendant guilty. However, regardless of condition, participants perceived the defendant as less likely to be guilty after reading the juror's statement compared to before. Recommendations for trial interventions are discussed.

### ARTICLE HISTORY

Received 7 October 2021  
Accepted 28 June 2022

### KEYWORDS

Rape; schema theory; jury directions; trial interventions; juror decision making

In rape trials involving a male defendant and a female victim, the rate of acquittal is disproportionately higher than other offences (Cossins, 2020). One reason for this disparity is that jurors are less likely to believe a victim when her behaviour is inconsistent with stereotypical beliefs about rape and is viewed as more congruent with what occurs in consensual sex (Masser et al., 2010; Nitschke et al., 2021). Potentially exacerbating this problem, most victims are asked to describe their account of the alleged rape in a chronological order (Buckles, 2007). Since most rape cases involve the assault of a female victim by a male acquaintance in a dating context, a victim may first describe events that are more closely associated with the consensual sex stereotype (McKimmie et al., 2020). Jurors may interpret a victim's description of the details of the assault (i.e. the rape event) based on these prior events and decide that she consented to sexual intercourse.

**CONTACT** Harrison D. H. Lee  [harrison.lee1@uq.net.au](mailto:harrison.lee1@uq.net.au)  School of Psychology, The University of Queensland, Brisbane, QLD, 4072, Australia

This article has been republished with minor changes. These changes do not impact the academic content of the article.

© 2022 Informa UK Limited, trading as Taylor & Francis Group

In contrast, asking a victim to describe events that are more congruent with the rape stereotype early in her testimony may guide jurors to evaluate the rape event as being more consistent with rape (Lee et al., 2021). Nevertheless, jurors may see the victim as less credible when she then describes the events that are less typical of rape later in her testimony (e.g. consensual kissing). To counter this problem, judges' educative instructions about what commonly occurs in rape may help jurors understand the context of these unexpected behaviours and reinterpret the atypical events as consistent with rape (Ellison, 2019; Ellison & Munro, 2009). The aim of our research is to investigate whether having a victim describe stereotype-consistent events early in her testimony in conjunction with the provision of educative instructions will guide jurors to evaluate the testimony as more congruent with rape compared to when the victim describes events in chronological order or when a judge delivers standard instructions.

### ***Schemas about rape and consensual sex***

Schemas are knowledge structures that contain assumptions about groups of people (stereotypes), events (scripts), and the roles people play in events (role schemas) that are used to efficiently evaluate information (Bartlett, 1932; Macrae et al., 1994). Perceivers are especially likely to rely on schemas when their ability to carefully attend to information is impaired (Sherman et al., 2000), such as in a trial (Sivasubramaniam, 2017; see Kleider-Offutt et al., 2016 for a review).

In a rape trial, jurors may rely on stereotypical beliefs about the crime, such as rape myths, to help them understand the evidence. Rape myths are attitudes and generally false beliefs about sexual assault that are widely endorsed and serve to justify sexual violence towards women (Burt, 1980; Lonsway & Fitzgerald, 1994). These myths include beliefs about rape victims (e.g. typical victims are often injured because they physically resist the assault), beliefs that exonerate most perpetrators (e.g. real rapists are over-sexed psychopaths), beliefs that deny many allegations (e.g. genuine victims are always visibly distressed while testifying), and beliefs about the people who are typically involved in rape (e.g. most rapists are strangers to their victims) (Bohner et al., 2009). During a trial, jurors may be less likely to believe that a rape has occurred when the victim's allegation is inconsistent with these beliefs (Krahé, 2016; Taylor & Joudo, 2005). Therefore, to evaluate a victim's allegation, jurors may depend on rape myths as a general schema about what typically occurs in a 'real rape' (Bohner et al., 2009).

The real rape script (Littleton & Dodd, 2016; Ryan, 1988) depicts a stranger who forcefully rapes a woman in a deserted public place, and despite physically and verbally resisting, she cannot stop his assault (Littleton et al., 2009). In most rape trials, however, the victim's description of events may be inconsistent with this schema. Most victims are non-forcefully assaulted – but are often coerced – indoors by an acquaintance on a date or in a hook-up context (Lorenz & Ullman, 2016). Further, although a victim will not consent to sex, she may not physically resist the perpetrator (Edwards et al., 2014). As such, what occurs in these types of cases may seem to overlap with what is described in consensual sex scripts (seduction, date, and hook-up scripts) (Stuart et al., 2019). In these scripts, a man is expected to pursue a woman and initiate sexual activity (Krahé et al., 2007). Conversely, a woman is expected to initially reject a man's advances before eventually consenting to sex (Masters et al., 2013). Most victims of rape,

however, voice their non-consent at the time of the assault (Cook & Messman-Moore, 2018). Therefore, a victim's description of events is usually ambiguous as it is both partially consistent with jurors' schemas about rape and their schemas about consensual sex.

### ***How a victim describes the events in her testimony***

Jurors may use their schemas about rape and consensual sex to help decide a verdict (McKimmie et al., 2014b; Stuart et al., 2019). The story model (Pennington & Hastie, 1993) suggests that jurors apply their schemas to the evidence to construct a narrative about what occurred during the alleged crime. A juror's schema may become more strongly activated when they encounter evidence that is consistent with the schema (Axelrod, 1973; Brewer & Nakamura, 1984). Jurors are then likely to evaluate subsequent evidence as congruent with the gist of the active schema (Sherman et al., 2000; Williams & Jones, 2005). However, jurors may stop categorising subsequent evidence as schema-congruent if the evidence contradicts the active schema (Kunda & Thagard, 1996). Regardless of which schema a juror uses to interpret the evidence, jurors are likely to construct a story about the alleged crime based on their interpretation (Pennington & Hastie, 1993). Jurors may then match their story to the most suitable verdict and favour this decision during deliberation. Therefore, in trials for rape, the order in which a victim testifies about the alleged events may determine which schema jurors use to create their stories.

Prosecutors often aim to encourage a victim to describe the alleged events in an order that helps the jury build a coherent story (Studebaker, 2017). Having a victim describe the events in a chronological order may help jurors understand the causal and temporal order of each event (Baker, 1978). Supporting this assertion, Pennington and Hastie (1988, 1992) found that mock jurors are more persuaded by evidence presented in chronological order compared to evidence that is delivered in a random order. However, in most cases of rape, a victim is likely to testify that she knew the defendant and engaged in some consensual sexual activity with him before the assault (Edwards et al., 2014; Flack et al., 2007). Therefore, a victim who testifies in a chronological order may first expose jurors to events that are more strongly associated with the consensual sex scripts than the rape schema (McKimmie et al., 2020). Jurors may then use their consensual sex schema to evaluate the testimony and construct a story that is congruent with this schema (Axelrod, 1973; Littleton et al., 2006).

As early evidence may guide jurors in constructing their stories (Pennington & Hastie, 1993), prosecutors may be more persuasive by asking a victim to describe the events in a different order. During an assault, a victim's behaviour which indicates non-consent may seem more congruent with the rape script than the consensual sex schema (Littleton & Axsom, 2003). Therefore, having a victim describe the rape event early may provoke jurors to use their rape schema to evaluate her testimony as consistent with rape (Rumelhart, 1980).

Research assessing this idea shows mixed results. Specifically, when a victim describes the rape event early in her testimony, jurors may evaluate the assault as more consistent with their rape schema than when a victim testifies in chronological order (Lee et al., 2021). However, jurors who watch the rape-first version of a victim's testimony may not categorise the events that occurred before the assault (e.g. consensual kissing) as consistent with the rape schema. Without a clear schema to help interpret these events, jurors

take longer to organise the events described, and they construct less complete narratives about the alleged rape (Lee et al., 2021, 2022). Jurors' incomplete narratives may be less persuasive during deliberation, which may reduce the likelihood of a jury finding the defendant guilty (Devine, 2012; Lee et al., 2022). Therefore, although having a victim describe the rape event first may lead to jurors' rape schema becoming initially activated, jurors may not interpret subsequent events as schema-congruent or organise them into a persuasive story.

### ***Educative instructions and testimony order***

Other trial interventions may be needed to help jurors revise their rape schemas by providing the context for the events a victim is likely to testify about. This context may strengthen the effect of having a victim describe the rape event early, as jurors may then continue to interpret the testimony as consistent with their activated rape schema (Bracher, 2012; Kunda & Thagard, 1996). Research shows that judicial educative instructions about what frequently happens in rape can guide jurors to revise their schemas about this crime (Ellison & Munro, 2009; see Goodman-Delahunty et al., 2010 for evidence in cases of child sexual abuse). For example, a judge may inform jurors that it is common for victims of rape to consent to some sexual behaviour with the defendant before an alleged assault (Judicial Studies Board, 2010). If a judge delivers such information before a trial commences, jurors may perceive this behaviour as consistent with rape having occurred during the presentation of evidence (Cowan, 2021). Further, research suggests that perceivers who think that they relied on inaccurate stereotypes when evaluating information may correct for this bias by changing their interpretation (Fein et al., 2003; Kunda & Spencer, 2003). As such, if a judge repeats educative instructions in summation, jurors may be reminded of the breadth of their revised rape schema and so be less biased when considering their verdicts (Ellison, 2019).

Judges in the United Kingdom regularly deliver educative instructions in trials for rape (Smith & Skinner, 2017; Temkin et al., 2018). Further, in Australia, judges are permitted to provide jurors with some context about what commonly occurs in sexual assault (Byrne, 2022; Duncanson & Henderson, 2014). Although jurors do not currently receive education in other countries, legal scholars have recently recommended that such instructions be included in some jurisdictions (e.g. New Zealand) to help mitigate the influence of inaccurate stereotypes on juror decision-making (McDonald et al., 2020).

While judges' educative instructions may help jurors revise their rape schemas, jurors may not form evaluations of the evidence that are resistant to other jurors' different or contradictory interpretations of the evidence. Research suggests that jurors may disregard education about what occurs in most rapes when other jurors discuss their stereotypic expectations about consensual sex (Ellison & Munro, 2009, 2013). Even when education is provided, jurors may argue that the defendant believed the victim was consenting to intercourse as the events leading up to the assault were consistent with a typical sexual encounter (Ellison & Munro, 2013). Since such a statement emphasises jurors' socially shared scripts about consensual sex, jurors may be persuaded to disregard the conflicting education they learnt during the trial and find the defendant not guilty (Ellison & Munro, 2009).

However, jurors who receive educative instructions may potentially be more resistant to other jurors' contradictory statements when a victim describes the rape event early in her testimony. Specifically, after interpreting the rape event using the rape schema (Lee et al., 2021), jurors who receive educative instructions may also perceive the events that occurred before the assault as consistent with this schema (Bracher, 2012). Jurors may then continue categorising the events relayed in the testimony as typical of rape (Kunda & Thagard, 1996). Perceivers' attitudes become more extreme the longer they interpret information as consistent with a schema (Millar & Tesser, 1986; Tesser & Leone, 1977). Therefore, if jurors categorise a victim's entire testimony as consistent with the rape schema, jurors' evaluations may be more certain and potentially more resistant to other jurors' conflicting interpretations of the evidence (Clarkson et al., 2008; Rucker et al., 2014). In the current research, we will test whether educative instructions help mock jurors reinterpret the atypical events described in the rape-first version of a victim's testimony and form evaluations that are resistant to other jurors' contradictory statements.

### **Pilot study**

The aim of the Pilot Study was to examine whether mock jurors understand educative instructions about what frequently happens in rape. According to McGuire's (1968) model of persuasion, for a message (e.g. judicial instructions) to influence a person's decision-making, the person must attend to and comprehend the information. A person must also retain and retrieve the message before applying the information to their decision. Since judges' instructions frequently include complex language and concepts, jurors often struggle to comprehend them (Kapardis, 2014; McKimmie et al., 2014a). Therefore, before we investigated the use of education in conjunction with the rape-first variation of a victim's testimony as a trial intervention, we tested whether participants comprehended a simplified version of these instructions. Specifically, we examined whether participants understood that what occurs in most rapes deviates from the assumptions of the rape schema. When participants began the study, we assessed their endorsement of the rape schema (baseline). Participants completed this measure at two other points in the study – after completing a distractor task and after watching the video of the educative instructions. To allow us to assess the effect of instructions above and beyond the effect of repeated measurement of rape schema endorsement, we randomised the order in which participants received the instructions and the distractor task. The Pilot Study was preregistered on the Open Science Framework: <https://osf.io/59dh3>.

We predicted that there would be an interaction between Order (instructions first vs. distractor task first) and Point of Measurement (baseline vs. after distractor task vs. after instructions) on participants' endorsements of the rape schema. Specifically, participants would endorse the rape schema more strongly before receiving the educative instructions compared to their endorsement after the instructions. To determine whether this effect of educative instructions is greater than the effect of repeatedly assessing rape schema endorsement, we expected that participants would show less change in their endorsement of the rape schema after completing the distractor task compared to after they received the instructions.

## Method

### Participants

Participants ( $N = 163$ ) were community members from the United Kingdom and Australia recruited through Prolific and paid US\$1.36 to participate. The pilot study was completed online using Qualtrics survey software. Twelve participants were excluded from the analysis because they either failed the attention check question ( $N = 4$ ), experienced a software error while watching the video of the judge's instructions ( $N = 1$ ), opted to withdraw at the end of the study ( $N = 1$ ), did not engage with the study's distractor task ( $N = 1$ ), or did not recall at least one of the judge's instructions ( $N = 5$ ). The final sample comprised 151 participants (3 non-binary, 1 gender fluid, 81 women, 66 men) aged 18–74 years ( $M = 34.15$ ,  $SD = 12.73$ ). An a priori power analysis using G\*Power 3.1 (Faul et al., 2009) suggested that this design was sufficiently powered (a sample size of 150 was required for a power of .95 with an effect size of  $f = 0.3$ ). Participants were informed before commencing that the study involved watching a fictional rape trial. After consenting, participants provided information about their age and gender. Ethical approval for the Pilot Study was obtained from The University of Queensland Health and Behavioural Sciences, Low and Negligible Risk Ethics Sub-Committee (Approval Number: 2020002466).

### Materials

**Educative instructions.** Before watching the approximately three-minute video of the judge's instructions, participants were asked to imagine themselves as a juror in a rape trial. In this video, a jury received instructions that aimed to correct the most common misconceptions about what typically occurs in rape (see McKimmie et al., 2020). Specifically, the judge stated that (a) complainants are equally likely to appear either distressed or composed in trial (Burgess & Carretta, 2016), (b) whether a complainant appears distressed or composed does not indicate whether she is lying or not (DePaulo et al., 2003), (c) most victims know the perpetrator (Cossins, 2020), (d) most rapes occur at a residence (Gilbert et al., 2019), (e) some consensual sexual activity often occurs before an assault (Lorenz & Ullman, 2016), (f) victims may either fight back or freeze (Cook & Messman-Moore, 2018), and (g) most perpetrators will not use force (DeGue et al., 2010). This information was consistent with the instructions available to judges in the United Kingdom (see Judicial Studies Board, 2010). The actor who played the judge was a man aged between 40 and 50 years and was dressed in judicial attire. After watching this video, participants were asked to imagine that they had just watched the complainant testify about what happened during the alleged rape. Participants then watched a video in which the judge reminded the jury about what commonly occurs in rape. This second video played for approximately two minutes.

**Rape schema endorsement measure.** Participants' endorsement of the rape schema was assessed using seven items. Unlike other scales that assess attitudes about rape (i.e. rape myth acceptance scales; Burt, 1980), these items focused on participants' beliefs about what commonly occurs in rape, not on their attitudes about who is typically at fault. Specifically, we measured the extent to which participants believed in common misconceptions about what typically happens in rape (i.e. the misconceptions targeted by the educative instructions; McKimmie et al., 2020). An example of one of the items was,

'Victims of rape do not typically kiss or engage in other date-like behaviour with the perpetrator before the assault', with participants responding on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale (items are available at <https://osf.io/n8apq/>). Participants' responses to this measure were averaged with higher scores indicating greater endorsement of the rape schema ( $\alpha = .77$ ).

## Results and discussion

A 2 (Order: instructions first vs. distractor task first)  $\times$  3 (Point of Measurement: baseline vs. after distractor task vs. after instructions) mixed factorial analysis of variance (ANOVA) on participants' endorsements of the rape schema showed significant main effects of Order,  $F(1, 149) = 14.84, p < .001, \eta_p^2 = .09$ , Point of Measurement,  $F(1.79, 267.10) = 129.75, p < .001, \eta_p^2 = .47$ , and a significant interaction between these variables,  $F(1.79, 267.10) = 38.25, p < .001, \eta_p^2 = .20$ . As expected, follow up simple effects at each level of Order were significant (see Table 1). When the instructions were presented first, participants endorsed the rape schema to a lesser extent after watching the instructions compared to baseline. Further, participants in this condition did not endorse the rape schema any differently after completing the distractor task compared to after they received the instructions. When the distractor task was presented first, participants endorsed the rape schema to a lesser extent after receiving the instructions compared to after they completed the distractor task. Moreover, participants in this condition did not endorse the rape schema any differently after completing the distractor task compared to baseline. As such, the effect of educative instructions was above and beyond that of the effect of repeatedly assessing endorsement of the rape schema. Thus, after receiving education, participants tended to understand that what occurs in most rapes differs from what is described in the rape schema.

## Main study

In the Pilot Study, we found that mock jurors comprehended educative instructions about what frequently occurs in rape. Therefore, the aim of the Main Study was to investigate whether educative instructions in conjunction with varying the order of a rape victim's testimony would help jurors evaluate this evidence without being influenced by events that contradict the rape schema. Participants watched a video in which a judge either delivered educative instructions or standard instructions both at the start and end of a trial. Next, participants watched video testimony in which a victim either described the rape event first, followed by the other events in chronological order, or she described all the events in chronological order. While watching this video, participants continually evaluated the extent to which the events described depicted rape or consensual sex.

**Table 1.** Means (standard deviations in parentheses) and simple effects for the interaction between order and point of measurement on rape schema endorsement in the pilot study.

Order	$F$	$p$	$\eta_p^2$	Baseline	Distractor task	Instructions
Instructions first	90.09	<.001	.54	3.07 <sup>a</sup> (1.01)	2.13 <sup>b</sup> (0.74)	2.15 <sup>b</sup> (0.77)
Distractor task first	78.32	<.001	.52	3.28 <sup>a</sup> (0.96)	3.21 <sup>a</sup> (0.94)	2.32 <sup>b</sup> (0.83)

Note. Means without a common superscript (e.g. 3.07<sup>a</sup> vs. 2.13<sup>b</sup>) significantly differ ( $p < .001$ ).

Participants' responses were recorded after every second of the video testimony. While uncommon, psychological researchers have measured participants' judgements of video and audio stimuli on a second-by-second basis (e.g. emotion research, Coutinho & Cangelosi, 2011; family psychology, Gottman & Levenson, 1985; education, Srivastava et al., 2019). Similarly, some research on juror decision-making has assessed participants' evaluations of the evidence as it is presented (e.g. Lee et al., 2021; Pennington & Hastie, 1992; Stewart et al., 2000; Stone, 1969), as jurors may not wait until the end of a trial before interpreting the evidence (Pennington & Hastie, 1993). As such, by repeatedly measuring participants' evaluations of the victim's testimony, we investigated how the victim's description of early events influenced participants' interpretations of subsequent events.

After receiving instructions in summation, participants were asked to give an individual verdict and describe what happened during the alleged rape. By analysing the content of participants' descriptions, we investigated the extent to which participants organised the events described into a complete story (Lee et al., 2022). Further, we assessed participants' difficulty in creating their stories by recording the time it took them to complete this task (Lee et al., 2021). Participants then read a statement that ostensibly came from a fellow juror, which described the alleged rape as being congruent with a typical sexual encounter (e.g. 'Janine consented to sex because she flirted with him, she kissed him, and she didn't say no or push him away'). We then re-assessed participants' verdicts and measured how persuaded they were by this statement. Through these measures, we tested whether variations in victim testimony order, and educative instructions, help jurors resist the influence of stereotype-inconsistent statements that may otherwise impact perceptions of guilt.

We expected that having a victim describe behaviours that are more typical of rape early in her testimony would lead to participants' rape schema becoming more strongly activated (Lee et al., 2021, 2022). Further, we anticipated that participants who watched this testimony and received educative instructions would continue to categorise the events described as consistent with this schema (Ellison & Munro, 2009). Based on this reasoning we made the following prediction:

- (1) There would be an interaction between Testimony Order and Instruction Type on participants' categorisation of the events described, and their perceptions of the defendant's guilt. Specifically, participants who watched the rape-first testimony and received educative instructions would categorise the events described as more consistent with rape – and be more likely to find the defendant guilty – than (a) those who watched the chronological testimony and received educative instructions, (b) those who watched the chronological testimony and received standard instructions, and (c) those who watched the rape-first testimony and received standard instructions.

Jurors who watch the rape-first version of a victim's testimony may struggle to construct a story as they may not interpret the events described later in the testimony as consistent with the rape schema (Lee et al., 2021, 2022). After receiving education however, jurors may reinterpret these events as schema-consistent, which may help them construct



a story as complete as those who hear the victim testify in a coherent chronological order (Pennington & Hastie, 1993). Therefore, we made the following prediction:

- (2) There would be an interaction between Testimony Order and Instruction Type on how participants constructed their stories. Specifically, for participants who watched the rape-first testimony, those who received educative instructions would construct more complete stories – and take less time to create these stories – than those who received standard instructions. Further, participants who watched the rape-first testimony and received educative instructions would construct their stories as efficiently and completely as those who watched the chronological testimony and received either educative or standard instructions.

If participants who receive educative instructions categorise the entire rape-first testimony as consistent with the rape schema, they may form more extreme evaluations of this evidence (Millar & Tesser, 1986; Tesser & Leone, 1977). Therefore, participants may be more resistant to the mock juror's statement that the defendant is not guilty (Holbrook & Krosnick, 2010). Based on this reasoning, we made the following prediction:

- (3) There would be an interaction between Testimony Order and Instruction Type on participants' perceptions of the juror's statement, and their evaluations of the defendant's guilt. Specifically, participants who watched the rape-first testimony and received educative instructions would perceive the juror's statement as less persuasive – and be more likely to find the defendant guilty after reading this statement – than (a) those who watched the chronological testimony and received educative instructions, (b) those who watched the chronological testimony and received standard instructions, and (c) those who watched the rape-first testimony and received standard instructions.

The Main Study, including the hypotheses, design, materials, exclusion criteria, and analysis plan were preregistered on the Open Science Framework: <https://osf.io/j6btn>. Unplanned analyses were conducted to follow up any unexpected findings and are listed as exploratory.

## **Method**

### **Participants**

Participants were ( $N = 267$ ) community members from the United Kingdom and Australia recruited through Prolific and paid US\$2.26. Forty-seven participants were excluded as they had internet problems during the study, and so the video of the victim's testimony did not play correctly. Four participants were excluded because they did not follow instructions by responding to the event categorisation measure while watching the victim's testimony. An additional four participants were excluded because they did not recall at least one of the judge's instructions ( $N = 2$ ) or indicated that they wished to withdraw their data ( $N = 2$ ). The final sample comprised 212 participants (3 non-binary, 113 women, 96 men) aged 18–81 years ( $M = 33.58$ ,  $SD = 12.26$ ). An a priori power analysis suggested that this design was sufficiently powered (a sample size of 210 was required

for a power of .95) to detect a moderate effect size ( $f = 0.25$ ) at an alpha value of 0.05. The estimated moderate effect size was based on research that has assessed the effect of Testimony Order, and educative instructions, on mock jurors' evaluations of the evidence (Goodman-Delahunty et al., 2010, 2011; Lee et al., 2021). Ethical approval for the Main Study was obtained from The University of Queensland Human Research Ethics Committee A (Approval Number: 2019000279).

### **Design**

Participants were randomly allocated to one of four conditions formed by the between-subjects manipulations of Testimony Order (chronological vs. rape-first) and Instruction Type (educative vs. standard). The key dependent variables included participants' categorisation of the victim's description of events (as consensual sex or rape), perceptions of the likelihood of the defendant's guilt, verdicts, written narratives, and perceptions of the mock juror's statement about the evidence as persuasive. Participants' responses to the event categorisation measure operationalised the repeated measures variable, Time in Video (i.e. participants' categorisations over the duration of the testimony). A second repeated measures variable was operationalised using participants' responses to the guilt likelihood measure before and after reading the mock juror's statement.

### **Materials and procedure**

Participants were informed before commencing that the study involved watching a fictional rape trial. After consenting, participants provided information about their age and gender.

**Event categorisation measure.** Participants then received instructions about how to respond to the event categorisation measure while watching the victim's video testimony. These instructions informed participants that they would indicate whether the victim's description of events depicted rape or consensual sex by moving a slider on a rating scale from 1 (*consensual sex*) to 100 (*rape*). The position of the slider was recorded once a second. Participants then watched a video unrelated to the study and practised responding to a question using a sliding scale with different end points. While practising, participants also watched a screen recording of the experimenter using the slider to respond to the same example question.

**Judge's instructions.** Next, participants were asked to imagine themselves as a juror in a trial where the defendant (Neil) is accused of raping Janine. Participants then watched either the educative or standard version of the judge's instructions. In both versions, the judge first informed the jury about Neil's charge of rape and instructed them about the burden of proof. For the educative instructions, the judge then provided the jury with the same information detailed in the Pilot Study. In the standard version, the judge instead instructed the jury to ignore pre-trial publicity, to not talk about the trial outside of the court room, and to inform the court if they know or have formed an opinion about the defendant. After watching Janine's testimony, participants received more instructions from the judge. In this video, the judge first explained the definitions of rape and consent (see Sexual Offences Act, 2003). Participants who initially watched the educative instructions were then reminded about what commonly occurs in rape.

In contrast, participants who received standard instructions were told to provide a unanimous verdict, that they are the deciders of fact, and to ignore pre-trial publicity (videos are available at <https://osf.io/8kuby/>).

**Victim's testimony.** After receiving the judge's pre-trial instructions, participants then watched the video of Janine's testimony, which played for approximately six minutes. The actress who played Janine was a woman aged less than 30 years and was dressed in semi-formal attire. Participants were asked to respond to the event categorisation measure any time information from the testimony led them to update their evaluation. To ease interpretation, participants' responses to this measure were grouped into clusters for each 10 s interval of video (i.e. 10 scores for each 10 s interval). The scores in each cluster were then averaged to calculate a mean score for each 10 s interval to operationalise Time in Video.

Testimony Order was manipulated by varying the order in which Janine described the events in her testimony. In the video, the prosecutor called Janine to the stand to testify about the alleged rape. For the chronological condition, Janine first explained how she went to a bar with her friends where she saw Neil, an old colleague, who later danced with her. Neil and Janine then went to Neil's apartment where they continued talking and eventually started kissing. Janine then stated that Neil penetrated and raped her. The prosecutor then asked Janine to explain what Neil did specifically. She then described how Neil pushed her onto a sofa, pinned her down, and assaulted her. Janine explained that she did not physically resist this assault, but she did tell Neil that she wanted to go home. In the rape-first testimony, Janine first explained what occurred during the rape event (from the point where she stated that Neil penetrated and raped her). After this event, Janine then described the events that occurred before the assault in the order in which she explained them in the chronological testimony. The rape-first testimony ended after Janine described Neil kissing her at his apartment (videos are available at <https://osf.io/ved37/>).

**Perceptions of guilt and written narrative.** After watching the judge's summation instructions, participants indicated whether Neil was guilty or not guilty of rape. To measure guilt likelihood at time 1, participants were then asked how likely it is that Neil committed rape, on a scale from 1 (*not at all*) to 7 (*very*). Next, participants were asked to imagine themselves deliberating with their fellow jurors and that one juror had asked them to explain what they think happened on the night Janine was allegedly raped. Participants then wrote down what they thought occurred.

**Mock Juror's statement.** Next, participants were asked to imagine that another juror had described their interpretation of what happened during the alleged rape. Participants then read a statement which argued that Neil honestly believed Janine consented to intercourse and therefore is not guilty (text available at <https://osf.io/hmyx3/>). The statement was based on actual mock jurors' interpretations of Janine's testimony (Lee et al., 2022).

**Verdict change.** After reading the mock juror's statement, participants returned another verdict for Neil. Participants' responses to both verdict measures operationalised the

change in verdict measure. Specifically, participants who changed their verdict from guilty to not guilty received a code of  $-1$ . Participants who changed their verdict from not guilty to guilty received a code of  $1$ . Finally, participants' responses which did not change were coded as  $0$ . After indicating a second verdict, participants completed the guilt likelihood measure at time 2.

**Mock Juror persuasiveness.** Participants then evaluated the mock juror's statement on the following 7-point semantic differential scales (Westera et al., 2015): unpersuasive/persuasive, unconvincing/convincing, poorly presented/well presented, and unclear/clear. Responses were averaged to create a composite measure with higher scores denoting greater persuasiveness ( $\alpha = .86$ ).

**Manipulation check measures.** Participants then indicated at what point during the video testimony Janine described Neil pushing her down and penetrating her, on a scale from  $1$  (*towards the beginning*) to  $7$  (*towards the end*). This measure assessed the effectiveness of the manipulation of Testimony Order. Participants then indicated whether the judge delivered six different instructions during the trial (e.g. 'Did the judge tell you that most rapes will occur at a residence, such as the complainant's or the defendant's home?'), by responding either yes ( $1$ ) or no ( $0$ ). These items assessed the effectiveness of the manipulation of Instruction Type. Five of the six instructions were delivered in the videos depicting the educative instructions. In contrast, only two of the instructions were delivered in the videos depicting the standard instructions. Responses were totalled, with higher scores indicating that participants recognised that they received the educative instructions.

## Results and discussion

### Manipulation checks

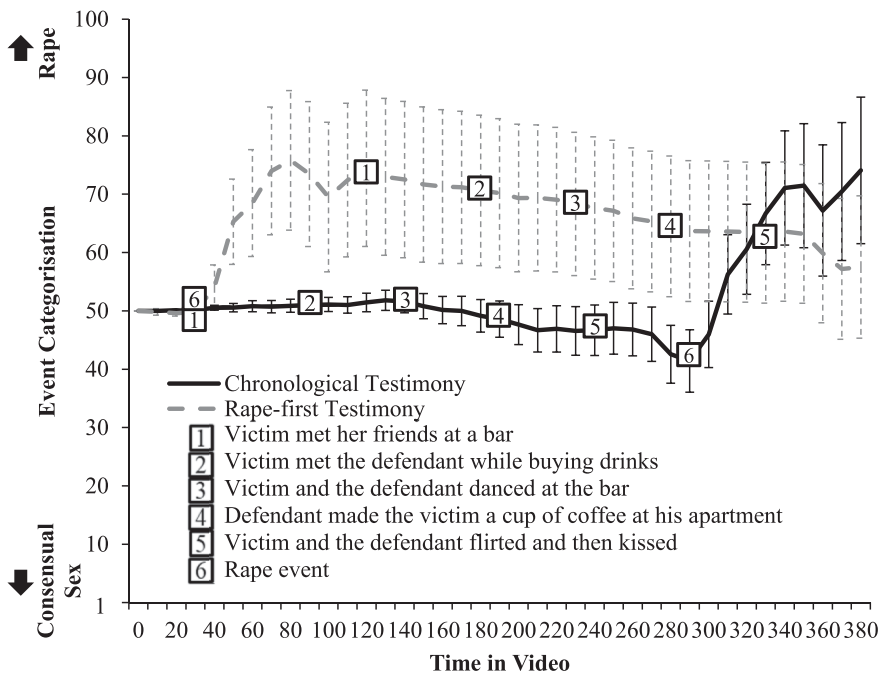
To assess the effectiveness of the manipulations of Testimony Order and Instruction Type, two  $2$  (Testimony Order: rape-first vs. chronological)  $\times$   $2$  (Instruction Type: educative vs. standard) between-subjects ANOVAs were conducted on the manipulation check measures. Testimony Order was successfully manipulated with participants in the rape-first condition reporting that the victim described the rape event significantly earlier in her testimony ( $M = 2.01$ ,  $SD = 1.68$ ) than those in the chronological condition ( $M = 5.78$ ,  $SD = 1.05$ ),  $F(1, 208) = 384.33$ ,  $p < .001$ ,  $\eta^2 = .65$ . There were no other significant effects,  $ps > .636$ . Furthermore, Instruction Type was successfully manipulated with participants who received educative instructions correctly recognising that they heard significantly more of the educative instructions ( $M = 4.87$ ,  $SD = 0.86$ ,  $Mode = 5$ ) than those who received standard instructions ( $M = 2.26$ ,  $SD = 1.18$ ,  $Mode = 2$ ),  $F(1, 208) = 338.96$ ,  $p < .001$ ,  $\eta^2 = .62$ . There were no other significant effects,  $ps > .414$ .

### Hypothesis 1

**Event categorisation.** To test our first prediction, a  $2$  (Testimony Order: rape-first vs. chronological)  $\times$   $2$  (Instruction Type: educative vs. standard)  $\times$   $38$  (Time in Video: 1–38, 10 s segments) mixed ANOVA assessed the effects of Testimony Order and Instruction Type on how participants categorised the victim's description of events over the duration

of her testimony (see [Figure 1](#)). Unexpectedly, there was no significant main effect of Instruction Type,  $F(1, 208) = 3.82, p = .052, \eta_p^2 = .02$ , or interaction between this variable and Testimony Order,  $F(1, 208) = 2.51, p = .115, \eta_p^2 = .01$ . However, the main effect of Testimony Order was significant,  $F(1, 208) = 45.18, p < .001, \eta_p^2 = .18$ . Participants who watched the rape-first testimony evaluated the events described as more consistent with rape ( $M = 65.86, SD = 18.58$ ) than those who watched the chronological testimony ( $M = 52.69, SD = 7.94$ ). Further, the main effect of Time in Video was significant such that participants' evaluations of the events varied over the duration of the video,  $F(3.45, 717.66) = 33.15, p < .001, \eta_p^2 = .14$ .

Both main effects were qualified by a significant two-way interaction between Testimony Order and Time in Video,  $F(3.45, 717.66) = 59.58, p < .001, \eta_p^2 = .22$ . We then investigated the relationship between both variables further by conducting polynomial contrasts. There was a significant quadratic relationship,  $F(1, 208) = 231.16, p < .001, \eta_p^2 = .53$ , suggesting that the effect of Testimony Order on participants' categorisations of the events described changed over the duration of the testimony. Specifically, the data indicated an inverted U-shaped relationship between the rape-first condition and Time in Video (dashed grey line in [Figure 1](#)). On average, participants in this condition categorised the victim's description of the defendant assaulting her, and her indication that she wanted to go home, as more typical of rape than consensual sex. Participants then tended to evaluate the victim's description of meeting her friends at the bar, meeting the defendant while buying drinks, dancing with the defendant, going back to the



**Figure 1.** Two-way interaction between testimony order and time in video on event categorisation collapsed over instruction type in the main study. Event categorisation was measured on a sliding scale of 1 (consensual sex) to 100 (rape). Error bars represent the standard deviation for each participant's response over the duration of the video.

defendant's apartment, and kissing the defendant as more congruent with consensual sex. However, participants in the rape-first condition still evaluated these events as more typical of rape than those in the chronological condition.

The data indicated a U-shaped relationship between the chronological condition and Time in Video (black line in Figure 1). Participants in this condition tended to not evaluate the victim's description of meeting her friends, and the defendant, as congruent with either rape or consensual sex. On average, participants then categorised the victim's descriptions of dancing with the defendant, going back to the defendant's apartment, and kissing the defendant as more consistent with consensual sex. Participants then tended to interpret the rape event as more typical of rape. In the last 50 s of the testimony, participants' evaluations of the events described intersected with those in the rape-first condition. These findings do not support our first prediction that over the duration of the video, participants who watched the rape-first testimony and received educative instructions would categorise the events described as more typical of rape than those in the other conditions.

**Guilt likelihood.** Participants' responses to the guilt likelihood measure at time 1 were analysed using a 2 (Testimony Order: rape-first vs. chronological)  $\times$  2 (Instruction Type: educative vs. standard) ANOVA. There was no significant main effect of Testimony Order,  $F(1, 208) = 1.26, p = .262, \eta^2 = .01$ . However, the main effect of Instruction Type was significant,  $F(1, 208) = 15.95, p < .001, \eta^2 = .07$ . Participants who received educative instructions were more likely to find the defendant guilty ( $M = 5.21, SD = 1.42$ ) than those who received standard instructions ( $M = 4.37, SD = 1.63$ ). Counter to our predictions, there was no significant interaction between Testimony Order and Instruction Type,  $F(1, 208) = 0.30, p = .863, \eta^2 < .01$ .

**Verdicts.** A 2 (Testimony Order: rape-first vs. chronological)  $\times$  2 (Instruction Type: educative vs. standard) loglinear analysis showed a significant association between Instruction Type and participants' verdicts at time 1,  $\chi^2(1) = 14.10, p < .001$ . Participants who received educative instructions were more likely to return a verdict of guilty than a verdict of not guilty (83 *guilty* versus 30 *not guilty*) compared to those who received standard instructions (48 *guilty* versus 51 *not guilty*). Unexpectedly, the interaction between Testimony Order and Instruction Type was not significant,  $\chi^2(1) = 0.45, p = .504$ , nor was the association between Testimony Order and verdict,  $\chi^2(1) = 0.61, p = .434$ . These findings partially support our first prediction that participants who received educative instructions and watched the rape-first testimony would be more likely to find the defendant guilty than those in the other conditions.

## Hypothesis 2

**Narrative completeness.** For our second hypothesis, we predicted that for participants who watched the rape-first testimony, those who received educative instructions would take less time to construct a more complete story than those who received standard instructions. Further, we predicted that participants who watched the rape-first testimony and received education would not differ from those who watched the chronological testimony and received either educative or standard instructions. We conducted a content analysis that assessed the completeness of the written narratives.

Specifically, the first author counted the number of times participants mentioned (a) the rape event, (b) the events that occurred before the rape, and (c) the states of mind and intentions of the people relevant to the rape. A second rater who was blind to our second hypothesis then coded 20% of the narratives, with both raters agreeing on 90.98% of the coding. The continuous measures *rape event mentions*, *other event mentions*, and *intentions/states of mind mentions* were derived from this analysis. A series of 2 (Testimony Order: rape-first vs. chronological)  $\times$  2 (Instruction Type: educative vs. standard) ANOVAs were then conducted on each measure. Unexpectedly, there were no significant main effects, or two-way interactions between Testimony Order and Instruction Type,  $ps > .157$ .

**Response time.** The time taken to answer the written narrative measure was analysed using a 2 (Testimony Order: rape-first vs. chronological)  $\times$  2 (Instruction Type: educative vs. standard) analysis of covariance (ANCOVA). To control for the variance explained by the length of the narratives, the number of words in each narrative was entered as a covariate. As Testimony Order and Instruction Type had no significant effects on the number of words ( $ps > .131$ ), the assumption of independence between the covariate and treatment effects was not violated. Both the response time and the number of words were non-normally distributed. However, log transformations resulted in normal distributions for both variables. As the interpretations from the analyses were the same regardless of the distribution, we report the results from the untransformed variables. Lengthier narratives were significantly associated with a longer response time,  $F(1, 207) = 139.45, p < .001, \eta^2 = .40, r = .63$ . There was also a significant main effect of Testimony Order,  $F(1, 207) = 5.59, p = .019, \eta^2 = .03$ , while the main effect of Instruction Type was not significant,  $F(1, 207) = 0.15, p = .704, \eta^2 < .01$ . After controlling for the length of the narratives, participants who watched the chronological testimony took significantly longer to write their narratives ( $M = 375.26$  s,  $SD = 358.05$ ) than those who watched the rape-first testimony ( $M = 313.81$  s,  $SD = 258.43$ ). Counter to our predictions, the two-way interaction between Testimony Order and Instruction Type was not significant,  $F(1, 207) = 1.06, p = .304, \eta^2 = .01$ . Therefore, there was no support for our second prediction.

**Exploratory analysis.** Contrary to Lee et al. (2021), participants who watched the chronological testimony spent more time constructing their narratives than those who watched the rape-first testimony. Given the small effect of Testimony Order – especially when compared to the effect of the covariate (Richardson, 2011) – we explored whether controlling for the number of words artificially increased the magnitude of the treatment effect by reducing the error term (i.e. a suppression effect; see MacKinnon et al., 2000). After removing the covariate, a 2 (Testimony Order: rape-first vs. chronological)  $\times$  2 (Instruction Type: educative vs. standard) ANOVA showed no significant main effect of Testimony Order,  $F(1, 208) = 1.98, p = .161, \eta^2 = .01$ , nor any other effects ( $ps > .296$ ), on response time. As such, the significant effect of Testimony Order observed in the planned analysis may be unreliable.

### **Hypothesis 3**

**Guilt likelihood.** To test our third prediction, we assessed whether participants' perceptions of the likelihood of the defendant's guilt changed after reading the mock juror's

statement that the defendant was not guilty. A 2 (Testimony Order: rape-first vs. chronological)  $\times$  2 (Instruction Type: educative vs. standard)  $\times$  2 (Time: before vs. after reading the statement) mixed ANOVA showed significant main effects of Instruction Type,  $F(1, 208) = 18.93, p < .001, \eta_p^2 = .08$ , and Time,  $F(1, 208) = 12.60, p < .001, \eta_p^2 = .06$ . Participants who received educative instructions were more likely to find the defendant guilty ( $M = 5.15, SD = 1.44$ ) than those who received standard instructions ( $M = 4.22, SD = 1.67$ ). Regardless of condition however, participants were less likely to find the defendant guilty after reading the mock juror's statement ( $M = 4.61, SD = 1.78$ ) compared to before ( $M = 4.82, SD = 1.58$ ). Unexpectedly, the three-way interaction between Testimony Order, Instruction Type, and Time was not significant,  $F(1, 208) = 0.13, p = .718, \eta_p^2 < .01$ , nor were there any significant two-way interactions,  $ps > .128$ .

**Change in verdict.** Furthermore, a 2 (Testimony Order: rape-first vs. chronological)  $\times$  2 (Instruction Type: educative vs. standard) ANOVA showed no significant main effects or interaction on the change in verdict measure,  $ps > .283$ . Therefore, these findings do not support our third prediction that after reading the mock juror's statement, participants who watched the rape-first testimony and received educative instructions would be more likely to find the defendant guilty than those in the other conditions.

**Perceived persuasiveness.** Participants' perceptions of the persuasiveness of the mock juror's statement were assessed using a 2 (Testimony Order: rape-first vs. chronological)  $\times$  2 (Instruction Type: educative vs. standard) ANOVA. Unexpectedly, there were no significant main effects or interaction,  $ps > .095$ . As such, there was no support for our third prediction that participants who watched the rape-first testimony and received educative instructions would perceive the mock juror's statement as less persuasive than those in the other conditions.

## General discussion

The aim of the current research was to investigate whether educative instructions help mock jurors evaluate the rape-first version of a victim's testimony without being influenced by events that deviate from the rape schema. In the Pilot Study, we tested whether mock jurors comprehended simplified educative instructions about what frequently occurs in rape. After receiving educative instructions, participants tended to understand that what occurs in most rapes differs from the rape schema. In the Main Study, we tested whether providing educative instructions, and having a victim describe the rape event early, would cause jurors to categorise her testimony as consistent with their rape schema (Ellison, 2019; Lee et al., 2021). Specifically, we assessed whether after categorising the rape event as congruent with this schema, participants would continue to evaluate the events leading up to the assault as typical of rape. We also assessed if providing education would help participants organise the events described in the rape-first testimony into a complete story (Lee et al., 2022). Finally, we tested whether after receiving education, participants' evaluations of the rape-first testimony would be resistant to contradictory statements that the alleged rape depicted a typical sexual encounter.



### **Evaluations of the victim's testimony**

Counter to our predictions in the Main Study, the judge's educative instructions did not influence participants' evaluations of the victim's description of events. Instead, participants' evaluations of both variations of victim testimony order replicated Lee et al. (2021) despite the inclusion of educative instructions in the current study. When the victim described how she voiced her non-consent during the rape event early in her testimony, participants categorised this part of the testimony as rape. As a victim is expected to verbally resist during a stereotypical rape (Littleton & Axsom, 2003), participants' rape schema may have been more strongly activated at the start of the testimony (Axelrod, 1973). However, participants in both testimony order conditions evaluated the victim's description of socialising with, and consensually kissing, the defendant as less typical of rape. Since such events are incongruent with the rape schema (Krahé et al., 2007; Littleton et al., 2006), participants may not have interpreted the events described before the assault using this schema. Although the judge's educative instructions specifically mentioned that these events frequently occur in rape, it seems that participants were not influenced by this information in their evaluations of the testimony. Therefore, varying the order of the victim's description of events may not have affected participants' final evaluations of the case, such as their perceptions of guilt.

The failure of participants to be influenced by the educative instructions (which can be thought of as a persuasive message) may have occurred for a variety of reasons. According to McGuire's (1968) model of persuasion, for a persuasive message to influence a person's decision-making, that person must attend to and comprehend the information. The person then needs to retain and retrieve the message before knowing how to apply the information to their decision-making. If any one of these steps fails, the person will not be persuaded by the message.

Using McGuire's (1968) model, we can rule out unlikely explanations for why participants may not have applied the educative instructions to their evaluations of the victim's testimony. The Pilot Study findings suggest that participants attended to and comprehended the instructions – participants understood after receiving the education that what commonly occurs in rape is different from the rape schema. Another possible explanation is that in the Main Study, participants were asked to do two tasks at once – watch the victim's testimony and make continuous ratings – which could have placed participants under cognitive load and interfered with their abilities to retain the instructions. This explanation is also unlikely however, as research suggests that perceivers do not experience cognitive load when completing simultaneous tasks that are multimodal (e.g. watching the victim testify [visual] while responding to the event categorisation measure [spatial]; Brünken et al., 2004; Yuviler-Gavish et al., 2011).

Consistent with McGuire's (1968) model, a more likely explanation is that participants did not know how to apply the educative instructions to their evaluations of the testimony. Judges' educative instructions will usually inform jurors that rapes frequently involve events that also occur in consensual sex – for example, most victims socialise with the defendant before an assault (Judicial Studies Board, 2010). A judge, however, will not state that such events necessarily mean that a victim was raped. As such, the instructions did not provide positive direction to participants about how to evaluate the victim's testimony. That is, the instructions did not tell participants how to determine

whether rape occurred, only that the presence or absence of features were not diagnostic of rape occurring or not occurring. Without receiving more diagnostic information, it is possible that participants in the Main Study may have found these instructions unhelpful.

### ***Perceptions of guilt***

In contrast to the evaluations of the victim's testimony, the educative instructions did influence perceptions of guilt in the Main Study. Participants who received education were more likely to find the defendant guilty than those who received standard instructions. As participants who received education at the start of the trial were given a reminder of this information after the victim testified, this reminder may have impacted participants' perceptions of the case. Specifically, participants may have adjusted their judgements of guilt after realising their evaluation of the victim's testimony was biased. Research suggests that perceivers who believe that they relied on stereotypes when interpreting information may correct for this bias by changing their evaluation (Fein et al., 2003; Kunda & Spencer, 2003). After receiving the reminder of the events that commonly occur in rape, participants may have realised that they incorrectly evaluated many of these events as less typical of rape (Ellison, 2019). Participants then adjusted for this bias and so were more likely to find the defendant guilty than those who received standard instructions. Future research should test this explanation by assessing whether participants' perceptions of their own bias change from evaluating a victim's testimony, to after they receive educative instructions in summation (see Burns & Granz, 2021 for similar methods).

These findings have implications for policymakers who are responsible for standardising judicial instructions in trials for rape. Currently, most jurisdictions that have lay jury systems do not permit judicial educative instructions in court, while judges in Australia may only provide some context about what frequently happens in rape (Byrne, 2022; Duncanson & Henderson, 2014). Our findings suggest that such instructions may somewhat fulfill their purpose of alerting jurors to their misconceptions about sexual assault, which may in turn lead to a greater likelihood of conviction in trials for rape (Gillen, 2019; Leahy, 2014). Therefore, policymakers should consider allowing educative instructions in court to mitigate the barriers to conviction that are prevalent in many jurisdictions (Cossins, 2020; Daly & Bouhours, 2010). Furthermore, in the United Kingdom where educative instructions are permitted, each judge may decide whether to deliver these instructions at the start of a trial, at the end, or not at all (Maddison et al., 2017; Temkin et al., 2018). While this rule presents the potential for education to be delivered both at the start and at the end of a trial, it is not mandated. Our findings suggest that jurors may only become aware of their biases after being reminded of what happens in most rapes at the end of the trial. As such, judges should deliver educative instructions both before and after the presentation of evidence.

### ***Mock Juror's statement***

Even after adjusting for bias, participants' perceptions of guilt in the Main Study may not have been resistant to change. Regardless of condition, participants were less likely to find the defendant guilty after reading the mock juror's statement that the alleged rape depicted a typical sexual encounter. Further, participants' perceptions of this statement

as persuasive were not influenced by the type of instruction they received or the order in which the victim testified.

Participants who received educative instructions may have been influenced by the mock juror's statement as they had not applied the education to their evaluations of the evidence. Specifically, participants who received education and watched the rape-first testimony did not interpret all the events described during the testimony as consistent with the rape schema. As perceivers' evaluations become more extreme the longer they interpret information as schema-consistent (Millar & Tesser, 1986), participants' perceptions of the case may not have been sufficiently resistant to change (Holbrook & Krosnick, 2010). Thus, participants were less likely to find the defendant guilty after reading the mock juror's statement.

### **Improving educative instructions**

Jurors may need more diagnostic instructions to help evaluate a victim's testimony and become more confident that a rape has occurred. Legal scholars have recently recommended that judges provide directions on *affirmative consent*, which inform jurors that a victim does not consent to intercourse unless she clearly indicates her agreement to the defendant (Dowds, 2019; Witmer-Rich, 2016). Judges' instructions on affirmative consent would also inform jurors that a defendant cannot reasonably believe that a victim consented if he did not check whether she agreed to sex (Cossins, 2020). Research suggests that perceivers who receive instructions on affirmative consent are more likely to interpret an alleged assault as depicting rape (Miller, 2020). As such, after changing the relevant legislation, similar instructions should be integrated with the current educative directions available to judges. Jurors may then be provided with more useful criteria to help evaluate whether a victim was raped.

Instructions about affirmative consent may be particularly effective when a victim describes the rape event early in her testimony. The results from the Main Study suggest that jurors who watch this version of a testimony may initially evaluate the rape event as consistent with their rape schema (Lee et al., 2021). With the help of the instructions, jurors may then continue to evaluate a victim's lack of (affirmative) consent during the events that occurred before the assault as consistent with a rape occurring (Miller, 2020). If jurors interpret all the events described during a victim's testimony as congruent with their rape schema, jurors may then match this interpretation to the best fitting verdict and decide that the defendant is guilty (Pennington & Hastie, 1993). Future research should investigate whether instructions about affirmative consent assist jurors to evaluate the rape-first version of a victim's testimony without being influenced by schema-inconsistent information.

### **Written narratives**

Unexpectedly, in the Main Study, the completeness of participants' written narratives did not differ based on varying victim testimony order or the type of instructions participants received. Further, participants who watched the chronological testimony took longer to write their narratives and so may have found it more difficult to construct a story than those who watched the rape-first testimony. The latter finding is in direct contrast to Lee et al. (2021). Using a similar written narrative measure, Lee and colleagues found

that asking a victim to describe events in chronological order led to mock jurors having less difficulty in creating a story. However, the exploratory analysis in the current study suggested that controlling for the length of the narratives may have suppressed the error in the statistical model (MacKinnon et al., 2000). This suppression likely resulted in the significant effect of testimony order on narrative response time, which suggests that the effect obtained in the current study may be unreliable.

As such, having a victim describe the rape event first may not impact jurors' difficulty in creating a complete story. Research suggests that jurors are more likely to understand how the alleged events are temporally related when the evidence is presented in chronological order (Pennington & Hastie, 1988, 1992). Pennington and Hastie came to this conclusion by comparing evidence presented in chronological order to evidence that was delivered in a completely random order. In the current study however, apart from the rape event, the victim described the other events in the rape-first testimony in chronological order. Therefore, participants may have still understood how the events described were temporally related and so did not struggle to organise this testimony into a complete story (Baker, 1978).

### **Limitations**

Whilst the findings advance our understanding on interventions that aim to mitigate some of the barriers to conviction in rape trials, this research is not without limitations. Due to the COVID-19 pandemic, we collected data online and so were unable to record participants' verbalised stories about the alleged rape. Instead, we measured participants' narratives in the Main Study by asking them to write down what occurred (Lee et al., 2021). A juror's story is important as they may tell it during deliberation to persuade their fellow jurors to choose a particular verdict (Levett & Devine, 2017). However, jurors often verbalise a story that is different to the one they have mentally constructed (Devine, 2012). When the evidence is difficult to interpret, jurors may use confusing phrases or omit key events while articulating their narrative. The current research suggests that jurors who watch the rape-first version of a victim's testimony may struggle to interpret the events described as completely consistent with their rape schema. As such, jurors who watch this version of a testimony may provide less coherent and complete narratives during deliberation (Lee et al., 2022). Therefore, future research may determine whether variations in victim testimony order impact jurors' difficulty in creating stories by having participants verbalise their narratives.

In the Main Study, we assessed participants' written narratives and perceptions of guilt, but we did not measure participants' reasons for their verdicts. Examining mock jurors' stories about an alleged crime is important, as jurors may match their narrative to the most suitable verdict (Pennington & Hastie, 1993). However, other research on legal decision-making has explored more directly why jurors may choose a particular verdict. For example, Lippert et al. (2018) used pathfinder analysis to examine mock jurors' reasons for their verdicts in trials for rape. As such, future research should explore more directly whether victim testimony order and educative instructions impact how jurors decide their verdicts in rape trials.

During the Pilot Study, we manipulated the order in which participants received the educative instructions and the distractor task. However, we did not include a

manipulation check. We only manipulated this variable to assess whether the effect of instructions was greater than the effect of repeated measurement of rape schema endorsement. As such, we believed that checking participants' awareness of when they received the instructions, and the distractor task, would not contribute to the conclusions of the research. We instead checked the quality of the data by including an attention check question and removing participants who did not recall at least one of the judge's instructions.

In contrast to the Pilot Study, we did not examine participants' endorsements of the rape schema in the Main Study. The extent to which jurors endorse stereotypes about rape may influence their perceptions of the evidence and a defendant's guilt (McKimmie et al., 2014b; Stuart et al., 2019). As such, whether a victim's early description of the rape event leads to a juror's rape schema becoming activated may depend on the extent to which the juror endorses this schema (Lee et al., 2021). Further, as judicial education about what frequently occurs in sexual assaults may guide jurors to revise their rape schema (Ellison & Munro, 2009), such instructions may have larger effects on jurors who have more stereotypical expectations about rape. Future research should explore whether the effects of victim testimony order and educative instructions vary as a function of mock jurors' endorsements of the rape schema.

A further limitation was that we did not investigate whether defence counsels' cross-examination of a victim or presentation of evidence impacts the effectiveness of victim testimony order and educative instructions. During cross-examination, a defence lawyer may highlight to the jury the characteristics of the case that are inconsistent with the rape schema (Smith, 2019; Temkin et al., 2018). Further, if the defendant decides to testify, he may explain that he believed the victim consented as her behaviour was congruent with a typical sexual encounter (Burgin & Flynn, 2021). Our findings showed that even participants who watched the rape-first testimony, and received educative instructions, were less likely to find the defendant guilty after reading a statement that highlighted the events that were inconsistent with typical rape. Therefore, future research should examine whether the defence's presentation of evidence or cross-examination of a victim undermines the effects of victim testimony order and educative instructions.

Another limitation was that we did not assess whether participants' perceptions of the case changed after discussing the evidence in a group deliberation. During deliberation, jurors tend to discuss interpretations of the evidence that are shared by the group and avoid voicing opinions that contradict agreement (Burnett & Badzinski, 2000; Waters & Hans, 2009). In trials for rape, jurors are likely to state interpretations that are consistent with socially shared scripts about consensual sex (Ellison & Munro, 2013). As our findings suggest that jurors' perceptions of guilt may be influenced by such statements, a jury's subsequent discussion of similar interpretations may further decrease their likelihood of finding a defendant guilty. Therefore, the effectiveness of varying victim testimony order, and educative instructions, may be undermined during deliberation. Future research should investigate whether these trial interventions mitigate the influence of stereotypes about consensual sex on both individual and group decision-making.

As discussed above, our research methods lacked many characteristics of a real trial. Further, although we recruited community members for both studies, we did not ensure that participants were eligible to serve on a jury (e.g. did not have criminal records). Bornstein et al. (2017) meta-analysis, however, suggests that sample

characteristics are unlikely to impact the external validity of research on mock juror decision-making. Moreover, Diamond (1997) suggests that researchers studying juror decision-making should first investigate novel phenomenon by conducting experiments with high internal validity before considering more realistic mock trials and methodology. However, Koehler and Meixner (2017) argue that researchers who aim to inform legal policy should use more ecologically valid designs and samples. Therefore, future research should use more realistic methods, and recruit jury eligible samples, when investigating the effects of victim testimony order and judicial education on juror decision-making.

We did not report any findings involving participant gender and how this factor potentially interacts with the effects of victim testimony order and educative instructions. Men are more likely to endorse stereotypes about rape, and assign blame to victims, than women (see Suarez & Gadalla, 2010 for a meta-analysis). However, gender is unlikely to change the nature of the effects of independent variables in cases of rape (McKimmie & Masser, 2010; also see Bollingmo et al., 2009; Bongiorno et al., 2016; Golding et al., 2016; Masser et al., 2010; Schuller et al., 2010 for examples). As participant gender was unlikely to change the nature of the effects of testimony order and instruction type in the current research, we did not make any a priori predictions focusing on gender. Further, given the resources available to us we could not sufficiently power our studies to reliably explore any interactions involving gender (see Giner-Sorolla et al., 2019). Future research should investigate whether participant gender moderates the effects of victim testimony order and educative instructions on juror decision-making.

### **Conclusions and implications**

The current research contributes to our understanding of whether variations in victim testimony order, and educative judicial instructions, influence juror decision-making in trials for rape. Counter to our predictions, judges' educative instructions about what frequently occurs in rape may not influence jurors' evaluations of a victim's description of events. Instead, having a victim describe the rape event early may guide jurors to initially interpret the testimony as congruent with their rape schema (Lee et al., 2021). However, similar to when a victim testifies in chronological order, jurors who watch a rape-first testimony may still struggle to evaluate the events that are less consistent with this schema as typical of rape (Lee et al., 2022). As such, varying victim testimony order may not affect jurors' perceptions of a defendant's guilt. Nevertheless, having a judge repeat this education in summation may guide jurors to adjust their evaluation and find a defendant guilty (Ellison, 2019). Even with education, jurors' perceptions of guilt may still be influenced by other jurors who argue that the alleged rape was consistent with a typical sexual encounter (Ellison & Munro, 2009, 2013).

Therefore, although educative instructions about what frequently occurs in rape may somewhat influence jurors' perceptions of a defendant's guilt, jurors may struggle to apply these directions to the evidence presented. Judges may need to deliver instructions that provide guidance for how to interpret counter-stereotypical aspects of the victim's evidence rather than focussing on countering the stereotype itself. For example, future research could investigate if education about affirmative consent better complements the rape-first version of a victim's testimony in helping jurors evaluate with more certainty that the events described are consistent with a rape occurring (Miller, 2020). Developing

such trial interventions is key to reducing the impact of stereotypes that otherwise weaken a victim's credibility in the eyes of jurors.

## Open Scholarship



This article has earned the [Center for Open Science](#) badges for Open Data, Open Materials and Pre-registered. The materials are openly accessible at <https://osf.io/4x7mk/> (Pilot Study) and <https://osf.io/m7tqw/> (Main Study), <https://osf.io/59dh3> (Pilot Study) and <https://osf.io/j6btn> (Main Study) and <https://osf.io/59dh3> (Pilot Study) and <https://osf.io/j6btn> (Main Study).

## Acknowledgements

The authors would like to thank Lachlan Brown who assisted with the content analysis and Paul Jackson who provided technical expertise. We would also like to thank Elizabeth Reeves for her helpful comments on the manuscript.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Funding

This work was supported by an Australian Government Research Training Program Scholarship awarded to Harrison Lee.

## Data availability statement

The data presented in this research can be found at <https://osf.io/ecag7/> (Pilot Study) and <https://osf.io/zcewd/> (Main Study).

## ORCID author statement

**Harrison Lee:** Conceptualisation, Methodology, Software, Formal analysis, Project administration, Writing–Original Draft.

**Barbara Masser:** Supervision, Resources, Conceptualisation, Methodology, Software, Writing–Review & Editing.

**Jason Tangen:** Supervision, Resources, Conceptualisation, Methodology, Software, Writing–Review & Editing.

**Blake McKimmie:** Supervision, Resources, Conceptualisation, Methodology, Software, Writing–Review & Editing.

## ORCID

Harrison D. H. Lee  <http://orcid.org/0000-0001-8879-894X>

Barbara M. Masser  <http://orcid.org/0000-0001-9385-6497>

Jason M. Tangen  <http://orcid.org/0000-0002-0649-2566>

Blake M. McKimmie  <http://orcid.org/0000-0002-2750-6111>

## References

- Axelrod, R. (1973). Schema theory: An information processing model of perception and cognition. *American Political Science Review*, 67(4), 1248–1266. <https://doi.org/10.2307/1956546>
- Baker, L. (1978). Processing temporal relationships in simple stories: Effects of input sequence. *Journal of Verbal Learning and Verbal Behavior*, 17(5), 559–572. [https://doi.org/10.1016/S0022-5371\(78\)90337-7](https://doi.org/10.1016/S0022-5371(78)90337-7)
- Bartlett, F. C. (1932). *Remembering*. Cambridge University Press.
- Bohner, G., Eyssel, F., Pina, A., Siebler, F., & Viki, G. T. (2009). Rape myth acceptance: Cognitive, affective and behavioural effects of beliefs that blame the victim and exonerate the perpetrator. In M. Horvath, & J. Brown (Eds.), *Rape: Challenging contemporary thinking* (pp. 17–45). Willan Publishing.
- Bollingmo, G., Wessel, E., Sandvold, Y., Eilertsen, D. E., & Magnussen, S. (2009). The effect of biased and non-biased information on judgments of witness credibility. *Psychology, Crime & Law*, 15(1), 61–71. <https://doi.org/10.1080/10683160802131107>
- Bongiorno, R., McKimmie, B. M., & Masser, B. M. (2016). The selective use of rape-victim stereotypes to protect culturally similar perpetrators. *Psychology of Women Quarterly*, 40(3), 398–413. <https://doi.org/10.1177/0361684316631932>
- Bornstein, B. H., Golding, J. M., Neuschatz, J., Kimbrough, C., Reed, K., Magyarics, C., & Luecht, K. (2017). Mock juror sampling issues in jury simulation research: A meta-analysis. *Law and Human Behavior*, 41(1), 13–28. <https://doi.org/10.1037/lhb0000223>
- Bracher, M. (2012). Schema criticism: Literature, cognitive science, and social change. *College Literature*, 39(4), 84–117. <https://doi.org/10.1353/lit.2012.0044>
- Brewer, W. E., & Nakamura, G. V. (1984). The nature and functions of schemas. In R. S. Wyer Jr, & T. K. Srull (Eds.), *Handbook of social cognition* (pp. 119–160). Erlbaum.
- Brünken, R., Plass, J. L., & Leutner, D. (2004). Assessment of cognitive load in multimedia learning with dual-task methodology: Auditory load and modality effects. *Instructional Science*, 32(1-2), 115–132. <https://doi.org/10.1023/B:TRUC.0000021812.96911.c5>
- Buckles, T. (2007). *Crime scene investigation, criminalistics, and the law*. Thomson Delmar Learning.
- Burgess, A. W., & Carretta, C. M. (2016). Rape and its impact on the victim. In R. R. Hazelwood, & A. W. Burgess (Eds.), *Practical aspects of rape investigation: A multidisciplinary approach* (pp. 3–18). Taylor and Francis.
- Burgin, R., & Flynn, A. (2021). Women’s behavior as implied consent: Male “reasonableness” in Australian rape law. *Criminology & Criminal Justice*, 21(3), 334–352. <https://doi.org/10.1177/1748895819880953>
- Burnett, A., & Badzinski, D. M. (2000). An exploratory study of argument in the jury decision-making process. *Communication Quarterly*, 48(4), 380–396. <https://doi.org/10.1080/01463370009385605>
- Burns, M. D., & Granz, E. L. (2021). Confronting sexism: Promoting confrontation acceptance and reducing stereotyping through stereotype framing. *Sex Roles*, 84(9-10), 503–521. <https://doi.org/10.1007/s11199-020-01183-5>
- Burt, M. R. (1980). Cultural myths and supports for rape. *Journal of Personality and Social Psychology*, 38(2), 217–230. <https://doi.org/10.1037/0022-3514.38.2.217>
- Byrne, G. (2022). Helping jurors to understand: Misconceptions about delay in making a complaint. *Alternative Law Journal*, 47(1), 16–22. <https://doi.org/10.1177/1037969X211052707>
- Clarkson, J. J., Tormala, Z. L., & Rucker, D. D. (2008). A new look at the consequences of attitude certainty: The amplification hypothesis. *Journal of Personality and Social Psychology*, 95(4), 810–825. <https://doi.org/10.1037/a0013192>
- Cook, N. K., & Messman-Moore, T. L. (2018). I said no: The impact of voicing non-consent on women’s perceptions of and responses to rape. *Violence Against Women*, 24(5), 507–527. <https://doi.org/10.1177/1077801217708059>
- Cossins, A. (2020). *Closing the justice gap for adult and child sexual assault: Rethinking the adversarial trial*. Springer Nature.
- Coutinho, E., & Cangelosi, A. (2011). Musical emotions: Predicting second-by-second subjective feelings of emotion from low-level psychoacoustic features and physiological measurements. *Emotion*, 11(4), 921–937. <https://doi.org/10.1037/a0024700>



- Cowan, R. (2021). Asking for it. How rape myths can prejudice trials and potential solutions. In R. Killian, E. Dowds, & A. McAlinden (Eds.), *Sexual violence on trial* (pp. 85–96). Routledge.
- Daly, K., & Bouhours, B. (2010). Rape and attrition in the legal process: A comparative analysis of five countries. *Crime and Justice*, 39(1), 565–650. <https://doi.org/10.1086/653101>
- DeGue, S., DiLillo, D., & Scalora, M. (2010). Are all perpetrators alike? Comparing risk factors for sexual coercion and aggression. *Sexual Abuse: A Journal of Research and Treatment*, 22(4), 402–426. <https://doi.org/10.1177/1079063210372140>
- DePaulo, B. M., Lindsay, J. J., Malone, B. E., Muhlenbruck, L., Charlton, K., & Cooper, H. (2003). Cues to deception. *Psychological Bulletin*, 129(5), 74–118. <https://doi.org/10.1037/0033-2909.129.1.74>
- Devine, D. J. (2012). *Jury decision making: The state of the science*. New York University Press.
- Diamond, S. S. (1997). Illuminations and shadows from jury simulations. *Law and Human Behavior*, 21(5), 561–571. <https://doi.org/10.1023/A:1024831908377>
- Dowds, E. (2019). Towards a contextual definition of rape: Consent, coercion and constructive force. *The Modern Law Review*, 83(1), 35–63. <https://doi.org/10.1111/1468-2230.12461>
- Duncanson, K., & Henderson, E. (2014). Narrative, theatre, and the disruptive potential of jury directions in rape trials. *Feminist Legal Studies*, 22(2), 155–174. <https://doi.org/10.1007/s10691-014-9264-2>
- Edwards, K. M., Probst, D. R., Tansill, E. C., Dixon, K. J., Bennett, S., & Gidycz, C. A. (2014). In their own words: A content-analytic study of college women's resistance to sexual assault. *Journal of Interpersonal Violence*, 29(14), 2527–2547. <https://doi.org/10.1177/0886260513520470>
- Ellison, L. (2019). Credibility in context: Jury education and intimate partner rape. *The International Journal of Evidence & Proof*, 23(3), 263–281. <https://doi.org/10.1177/1365712718807225>
- Ellison, L., & Munro, V. E. (2009). Turning mirrors into windows?: Assessing the impact of (mock) juror education in rape trials. *British Journal of Criminology*, 49(3), 363–383. <https://doi.org/10.1093/bjc/azp013>
- Ellison, L., & Munro, V. E. (2013). Better the devil you know? 'Real rape' stereotypes and the relevance of a previous relationship in (mock) juror deliberations. *The International Journal of Evidence & Proof*, 17(4), 299–322. <https://doi.org/10.1350/ijep.2013.17.4.433>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. (2009). Statistical power analyses using G\*power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160. <https://doi.org/10.3758/BRM.41.4.1149>
- Fein, S., Hoshino-Browne, E., Davies, P. G., & Spencer, S. J. (2003). The role of self-image maintenance in stereotype activation and application. In S. J. Spencer, S. Fein, M. P. Zanna, & J. M. Olson (Eds.), *Motivated social perception: The Ontario symposium* (Vol. 9, pp. 21–44). Erlbaum.
- Flack, W. F., Daubman, K. A., Caron, M. L., Asadorian, J. A., D'Aureli, N. R., Gigliotti, S. N., Hall, A. T., Kiser, S., & Stine, E. R. (2007). Risk factors and consequences of unwanted sex among university students: Hooking up, alcohol, and stress response. *Journal of Interpersonal Violence*, 22(2), 139–157. <https://doi.org/10.1177/0886260506295354>
- Gilbert, L., Sarvet, A. L., Wall, M., Walsh, K., Reardon, L., Wilson, P., Santelli, J., Khan, S., Thompson, M., Hirsch, J. S., & Mellins, C. A. (2019). Situational contexts and risk factors associated with incapacitated and nonincapacitated sexual assaults among college women. *Journal of Women's Health*, 28(2), 185–193. <https://doi.org/10.1089/jwh.2018.7191>
- Gillen, J. (2019). *Report into the law and procedures in serious sexual offences in Northern Ireland*. Department of Justice. <https://www.justice-ni.gov.uk/sites/default/files/publications/justice/gillen-report-may-2019.pdf>.
- Giner-Sorolla, R., Aberson, C. L., Bostyn, D. H., Carpenter, T., Conrique, B. G., Lewis, N. A., & Soderberg, C. (2019). *Power to detect what? Considerations for planning and evaluating sample size*. <https://osf.io/d3v8t/>.
- Golding, J. M., Lynch, K. R., & Wasarhaley, N. E. (2016). Impeaching rape victims in criminal court: Does concurrent civil action hurt justice? *Journal of Interpersonal Violence*, 31(19), 3129–3149. <https://doi.org/10.1177/0886260515584342>
- Goodman-Delahunty, J., Cossins, A., & O'Brien, K. (2010). Enhancing the credibility of complainants in child sexual assault trials: The effect of expert evidence and judicial directions. *Behavioral Sciences & the Law*, 28(6), 769–783. <https://doi.org/10.1002/bsl.936>

- Goodman-Delahunty, J., Cossins, A., & O'Brien, K. (2011). A comparison of expert evidence and judicial directions to counter misconceptions in child sexual abuse trials. *Australian & New Zealand Journal of Criminology*, 44(2), 196–217. <https://doi.org/10.1177/0004865811405140>
- Gottman, J. M., & Levenson, R. W. (1985). A valid procedure for obtaining self-report of affect in marital interaction. *Journal of Consulting and Clinical Psychology*, 53(2), 151–160. <https://doi.org/10.1037/0022-006X.53.2.151>
- Holbrook, A. L., & Krosnick, J. A. (2010). Operative and meta-attitudinal manifestations of attitude accessibility: Two different constructs, not two measures of the same construct. In J. P. Forgas, J. Cooper, & W. D. Crano (Eds.), *The psychology of attitudes and attitude change* (pp. 109–124). Psychology Press.
- Judicial Studies Board. (2010). *Crown court benchbook*.
- Kapardis, A. (2014). *Psychology and law: A critical introduction*. Cambridge University Press.
- Kleider-Offutt, H. M., Clevinger, A. M., & Bond, A. D. (2016). Working memory and cognitive load in the legal system: Influences on police shooting decisions, interrogation and jury decisions. *Journal of Applied Research in Memory and Cognition*, 5(4), 426–433. <https://doi.org/10.1016/j.jarmac.2016.04.008>
- Koehler, J. J., & Meixner, J. B. Jr. (2017). Jury simulation goals. In M. B. Kovera (Ed.), *The psychology of juries* (pp. 161–183). American Psychological Association. <https://doi.org/10.1037/0000026-008>
- Krahé, B. (2016). Societal responses to sexual violence against women: Rape myths and the “real rape” stereotype. In H. Kury, S. Redo, & E. Shea (Eds.), *Women and children as victims and offenders: Background, prevention, reintegration* (pp. 671–700). Springer. [https://doi.org/10.1007/978-3-319-08398-8\\_24](https://doi.org/10.1007/978-3-319-08398-8_24)
- Krahé, B., Bieneck, S., & Scheinberger-Olwig, R. (2007). Adolescents’ sexual scripts: Schematic representations of consensual and nonconsensual heterosexual interactions. *Journal of Sex Research*, 44(4), 316–327. <https://doi.org/10.1080/00224490701580923>
- Kunda, Z., & Spencer, S. J. (2003). When do stereotypes come to mind and when do they color judgment? A goal-based theoretical framework for stereotype activation and application. *Psychological Bulletin*, 129(4), 522–544. <https://doi.org/10.1037/0033-2909.129.4.522>
- Kunda, Z., & Thagard, P. (1996). Forming impressions from stereotypes, traits, and behaviors: A parallel-constraint-satisfaction theory. *Psychological Review*, 103(2), 284–308. <https://doi.org/10.1037/0033-295X.103.2.284>
- Leahy, S. (2014). Bad laws or bad attitudes? Assessing the impact of societal attitudes upon the conviction rate for rape in Ireland. *Irish Journal of Applied Social Studies*, 14(1), 18–29. <https://doi.org/10.21427/D7ZD9F>
- Lee, H. D. H., McKimmie, B. M., Masser, B. M., & Tangen, J. M. (2021). Guided by the rape schema: The influence of event order on how jurors evaluate the victim’s testimony in cases of rape. *Psychology, Crime & Law*, 1–31. <https://doi.org/10.1080/1068316X.2021.1984483>
- Lee, H. D. H., Tangen, J. M., McKimmie, B. M., & Masser, B. M. (2022). *The influence of event order on the narratives jurors construct and tell in cases of rape*. Manuscript under review.
- Levett, L. M., & Devine, D. (2017). Integrating individual and group models of juror decision making. In M. B. Kovera (Ed.), *The psychology of juries* (pp. 11–36). American Psychological Association. <https://doi.org/10.1037/0000026-002>
- Lippert, A., Golding, J., Lynch, K., & Haak, E. (2018). When a corporation rapes: Perceptions of rape in civil court for corporate defendants. *Psychology, Crime & Law*, 24(7), 703–726. <https://doi.org/10.1080/1068316X.2017.1421185>
- Littleton, H., Tabernik, H., Canales, E. J., & Backstrom, T. (2009). Risky situation or harmless fun? A qualitative examination of college women’s bad hook-up and rape scripts. *Sex Roles*, 60(11-12), 793–804. <https://doi.org/10.1007/s11199-009-9586-8>
- Littleton, H. L., & Axsom, D. (2003). Rape and seduction scripts of university students: Implications for rape attributions and unacknowledged rape. *Sex Roles*, 49(9-10), 465–475. <https://doi.org/10.1023/A:1025824505185>
- Littleton, H. L., Axsom, D., & Yoder, M. (2006). Priming of consensual and nonconsensual sexual scripts: An experimental test of the role of scripts in rape attributions. *Sex Roles*, 54(7-8), 557–563. <https://doi.org/10.1007/s11199-006-9017-z>

- Littleton, H. L., & Dodd, J. C. (2016). Violent attacks and damaged victims: An exploration of the rape scripts of European American and African American U.S. college women. *Violence Against Women*, 22(14), 1725–1747. <https://doi.org/10.1177/1077801216631438>
- Lonsway, K. A., & Fitzgerald, L. F. (1994). Rape myths: In review. *Psychology of Women Quarterly*, 18(2), 133–164. <https://doi.org/10.1111/j.1471-6402.1994.tb00448.x>
- Lorenz, K., & Ullman, S. E. (2016). Alcohol and sexual assault victimization: Research findings and future directions. *Aggression and Violent Behavior*, 31, 82–94. <https://doi.org/10.1016/j.avb.2016.08.001>
- MacKinnon, D. P., Krull, J. L., & Lockwood, C. M. (2000). Equivalence of the mediation, confounding and suppression effect. *Prevention Science*, 1(4), 173–181. <https://doi.org/10.1023/A:1026595011371>
- Macrae, C. N., Milne, A. B., & Bodenhausen, G. V. (1994). Stereotypes as energy-saving devices: A peek inside the cognitive toolbox. *Journal of Personality and Social Psychology*, 66(1), 37–47. <https://doi.org/10.1037/0022-3514.66.1.37>
- Maddison, D., Tonking, S., Wait, H., & Ormerod, D. (2017). *Crown court compendium part 1 jury and trial management and summing up 2017*. Judicial College.
- Masser, B., Lee, K., & McKimmie, B. M. (2010). Bad woman, bad victim? Disentangling the effects of victim stereotypicality, gender stereotypicality and benevolent sexism on acquaintance rape victim blame. *Sex Roles*, 62(7-8), 494–504. <https://doi.org/10.1007/s11199-009-9648-y>
- Masters, N. T., Casey, E., Wells, E. A., & Morrison, D. M. (2013). Sexual scripts among young heterosexually active men and women: Continuity and change. *The Journal of Sex Research*, 50(5), 409–420. <https://doi.org/10.1080/00224499.2012.661102>
- McDonald, E., Benton-Greig, P., Dickson, S., & Souness, R. (2020). *Rape myths as barriers to fair trial process*. Canterbury University Press.
- McGuire, W. J. (1968). Personality and attitude change: An information-processing theory. In A. G. Greenwald, T. C. Brock, & T. M. Ostrom (Eds.), *Psychological foundations of attitudes* (pp. 171–196). Academic Press.
- McKimmie, B. M., Antrobus, E., & Baguley, C. (2014a). Objective and subjective comprehension of jury instructions in criminal trials. *New Criminal Law Review*, 17(2), 163–183. <https://doi.org/10.1525/nclr.2014.17.2.163>
- McKimmie, B. M., & Masser, B. M. (2010). The effect of gender in the courtroom. In J. R. Adler, & J. M. Gray (Eds.), *Forensic psychology: Concepts, debates and practice* (2nd ed., pp. 95–122). Willan.
- McKimmie, B. M., Masser, B. M., & Bongiorno, R. (2014b). What counts as rape? The effect of offense prototypes, victim stereotypes, and participant gender on how the complainant and defendant are perceived. *Journal of Interpersonal Violence*, 29(12), 2273–2303. <https://doi.org/10.1177/0886260513518843>
- McKimmie, B. M., Masser, B. M., Nitschke, F., Lee, H., & Schuller, R. A. (2020). The impact of schemas on decision-making in cases involving allegations of sexual violence. *Current Issues in Criminal Justice*, 32(4), 420–439. <https://doi.org/10.1080/10345329.2020.1829780>
- Millar, M. G., & Tesser, A. (1986). Thought-induced attitude change: The effects of schema structure and commitment. *Journal of Personality and Social Psychology*, 51(2), 259–269. <https://doi.org/10.1037/0022-3514.51.2.259>
- Miller, M. K. (2020). Judgments about sexual assault vary depending on whether an affirmative consent policy or a “no means no” policy is applied. *Journal of Aggression, Conflict and Peace Research*, 12(3), 163–175. <https://doi.org/10.1108/JACPR-03-2020-0485>
- Nitschke, F. T., Masser, B. M., McKimmie, B. M., & Riachi, M. (2021). Intoxicated but not incapacitated: Are there effective methods to assist juries in interpreting evidence of voluntary complainant intoxication in cases of rape? *Journal of Interpersonal Violence*, 36(9-10), 4335–4359. <https://doi.org/10.1177/0886260518790601>
- Pennington, N., & Hastie, R. (1988). Explanation-based decision making: Effects of memory structure on judgment. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 14(3), 521–533. <https://doi.org/10.1037/0278-7393.14.3.521>
- Pennington, N., & Hastie, R. (1992). Explaining the evidence: Tests of the story model for juror decision making. *Journal of Personality and Social Psychology*, 62(2), 189–206. <https://doi.org/10.1037/0022-3514.62.2.189>

- Pennington, N., & Hastie, R. (1993). The story model for juror decision making. In R. Hastie (Ed.), *Inside the juror: The psychology of juror decision making* (pp. 192–221). Cambridge University Press.
- Richardson, J. T. E. (2011). Eta squared and partial eta squared as measures of effect size in educational research. *Educational Research Review*, 6(2), 135–147. <https://doi.org/10.1016/j.edurev.2010.12.001>
- Rucker, D. D., Tormala, Z. L., Petty, R. E., & Briñol, P. (2014). Consumer conviction and commitment: An appraisal-based framework for attitude certainty. *Journal of Consumer Psychology*, 24(1), 119–136. <https://doi.org/10.1016/j.jcps.2013.07.001>
- Rumelhart, D. E. (1980). Schemata: The building blocks of cognition. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension: Perspectives from cognitive psychology, linguistics, artificial intelligence, and education* (pp. 33–58). Erlbaum.
- Ryan, K. M. (1988). Rape and seduction scripts. *Psychology of Women Quarterly*, 12(2), 237–245. <https://doi.org/10.1111/j.1471-6402.1988.tb00939.x>
- Schuller, R. A., McKimmie, B. M., Masser, B. M., & Klippenstine, M. A. (2010). Judgments of sexual assault: The impact of complainant emotional demeanor, gender and victim stereotypes. *New Criminal Law Review*, 13(4), 759–780. <https://doi.org/10.1525/nclr.2010.13.4.759>
- Sexual Offences Act. (2003). (UK) s. 1.
- Sherman, J. W., Macrae, C. N., & Bodenhausen, G. V. (2000). Attention and stereotyping: Cognitive constraints on the construction of meaningful social impressions. *European Review of Social Psychology*, 11(1), 145–175. <https://doi.org/10.1080/14792772043000022>
- Sivasubramaniam, D. (2017). The justice motive: Psychological research on perceptions of justice in criminal law. In R. Levy (Ed.), *New directions for law in Australia: Essays in contemporary law reform* (pp. 147–153). ANU Press.
- Smith, O. (2019). Narratives, credibility and adversarial justice in English and Welsh rape trials. In U. Andersson, M. Edgren, L. Karlsson, & G. Nilsson (Eds.), *Rape narratives in motion. Palgrave studies in crime, media and culture* (pp. 71–99). Palgrave Macmillan. [https://doi.org/10.1007/978-3-030-13852-3\\_4](https://doi.org/10.1007/978-3-030-13852-3_4)
- Smith, O., & Skinner, T. (2017). How rape myths are used and challenged in rape and sexual assault trials. *Social & Legal Studies*, 26(4), 441–466. <https://doi.org/10.1177/0964663916680130>
- Srivastava, N., Velloso, E., Lodge, J. M., Erfani, S., & Bailey, J. (2019). *Continuous evaluation of video lectures from real-time difficulty self-report*. Proceedings of the 2019 CHI conference on Human factors in computing systems (pp. 1–12). <https://doi.org/10.1145/3290605.3300816>.
- Stewart, T. L., Whiteside, S. P., & Golding, J. M. (2000). The effectiveness of expert witnesses in civil trials involving repressed memories of sexual assault. *American Journal of Forensic Psychology*, 18(4), 27–62. <https://psycnet.apa.org/record/2000-16075-002>.
- Stone, V. A. (1969). A primacy effect in decision-making by jurors. *Journal of Communication*, 19(3), 239–247. <https://doi.org/10.1111/j.1460-2466.1969.tb00846.x>
- Stuart, S. M., McKimmie, B. M., & Masser, B. M. (2019). Rape perpetrators on trial: The effect of sexual assault-related schemas on attributions of blame. *Journal of Interpersonal Violence*, 34(2), 310–336. <https://doi.org/10.1177/0886260516640777>
- Studebaker, C. A. (2017). Integrating concepts of trial advocacy into juror decision-making research. In M. B. Kovera (Ed.), *The psychology of juries* (pp. 59–82). American Psychological Association. <https://doi.org/10.1037/0000026-004>.
- Suarez, E., & Gadalla, T. M. (2010). Stop blaming the victim: A meta-analysis on rape myths. *Journal of Interpersonal Violence*, 25(11), 2010–2035. <https://doi.org/10.1177/0886260509354503>
- 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*. <https://apo.org.au/sites/default/files/resource-files/2005-12/apo-nid2236.pdf>.
- Temkin, J., Gray, J. M., & Barrett, J. (2018). Different functions of rape myth use in court: Findings from a trial observation study. *Feminist Criminology*, 13(2), 205–226. <https://doi.org/10.1177/1557085116661627>
- Tesser, A., & Leone, C. (1977). Cognitive schemas and thought as determinants of attitude change. *Journal of Experimental Social Psychology*, 13(4), 340–356. [https://doi.org/10.1016/0022-1031\(77\)90004-X](https://doi.org/10.1016/0022-1031(77)90004-X)

- Waters, N. L., & Hans, V. P. (2009). A jury of one: Opinion formation, conformity, and dissent on juries. *Journal of Empirical Legal Studies*, 6(3), 513–540. <https://doi.org/10.1111/j.1740-1461.2009.01152.x>
- Westera, N. J., McKimmie, B. M., Kebbell, M. R., Milne, R., & Masser, B. (2015). Does the narrative style of video evidence influence judgements about rape complainant testimony? *Applied Cognitive Psychology*, 29(5), 637–646. <https://doi.org/10.1002/acp.3146>
- Williams, K. D., & Jones, A. (2005). Trial strategy and tactics. In N. Brewer, & K. D. Williams (Eds.), *Psychology and law: An empirical perspective* (pp. 276–321). Guilford Press.
- Witmer-Rich, J. (2016). Unpacking affirmative consent: Not as great as you hope, not as bad as you fear. *Texas Tech Law Review*, 49(1), 57–88.
- Yuviler-Gavish, N., Yechiam, E., & Kallai, A. (2011). Learning in multimodal training: Visual guidance can be both appealing and disadvantageous in spatial tasks. *International Journal of Human-Computer Studies*, 69(3), 113–122. <https://doi.org/10.1016/j.ijhcs.2010.11.005>