

**The effect of evidence timing and witness motivation upon juror
evaluations of alibi witnesses and defendants**

The present study examined whether evidence timing and witness motivation effect mock jurors' decisions. Participants read a mock case where the defendant's alibi was; not corroborated, corroborated by a motivated alibi witness (with prior relationship with the defendant), or corroborated by an unmotivated alibi witness (with no relationship with the defendant). Where present, the alibi corroboration was provided either at a timely point in the police investigation, or delayed to 'ambush' the court. Supporting prior literature, timely alibis were seen as significantly more reliable when substantiated by an unmotivated alibi witness than by a motivated witness. Additionally, when the alibi witness was unmotivated, timely evidence was perceived as significantly more reliable than ambush evidence. However, alibi corroborator and timing did not have a significant effect on either case verdicts or perceptions of defendant reliability. The findings suggest that defendants may not be unfairly advantaged if their ambush alibi is admitted into court.

Keywords: alibi witness evidence; alibi timing; alibi witness motivation; juror decision-making; credibility; deception; juror decision-making; mock juries;

Considerable research has focused upon prosecution eyewitnesses (see for example Bradfield Douglass, Neuschatz, Imrich, & Wilkinson, 2010) whereas research and understanding of alibi evaluations remains limited (Sommers & Douglass, 2007). It has been demonstrated in real cases in America that alibi corroboration from friends, family, and/or acquaintances does not always prevent false convictions (The Innocence Project, 2010), possibly because alibi evidence is perceived as being less reliable than other forms of trial evidence, such as DNA and eyewitness testimony (Olson & Wells, 2004). In fact, alibis appear to be viewed negatively as a default (Allison, Jung, Sweeney, & Culhane, 2014) with the high level of suspicion directed towards alibi evidence dubbed the *alibi scepticism hypothesis* (Olson & Wells, 2004). In addition, people perform at worse than chance levels when discriminating between true and false alibi statements (Culhane, et al., 2013). It is therefore likely that juror biases and poor detection of deceptive alibis are hindering the administration of justice (Wells et al., 1998). Further research is required if this type of evidence is to be better understood and evaluated more accurately in court.

Motivation

The alibi literature has drawn a distinction between *motivated* alibi witnesses (with an existing relationship with the defendant) and *unmotivated* alibi witnesses (with no relationship with the defendant prior to the case), based upon the alibi witness's perceived motivation to lie for the defendant. Culhane, Hosch, and Kehn (2008) found that a majority of participants believed someone, mostly a friend, parent or romantic partner, would lie on their behalf if required. More recently, Culhane et al. (2013) discovered that alibis provided by student participants were most commonly corroborated by family, friends and familiar others, with strangers and colleagues rarely providing a supporting statement. Furthermore, Hosch, Culhane, Jolly, Chavez, & Shaw (2011) found that participants were most willing to lie for their biological relations (sister and cousin), followed by those related by marriage (sister-in-law and cousin-in-law) and were least likely to lie for individuals with only a social connection (co-worker and stranger seen regularly in a shop). Similarly, a significant association between unmotivated alibi witnesses and revealing a defendant's offending behaviour has also been found when utilising a more ecologically valid mock-police interview paradigm (Fawcett, 2012) rather than questionnaires (Culhane, et al., 2008; Hosch et al., 2011). In general, the

evidence suggests a greater likelihood of deception by motivated compared to unmotivated alibi witnesses.

Prior research has posited that motivated alibi witness deception stems from increased likelihood of reciprocal altruism amongst known individuals (Hosch et al., 2011). Hosch et al. suggest that Hamilton's (1964) kin selection theory could explain why individuals are more willing to provide a false alibi for those to whom they are genetically related; the altruistic false alibi enhances the chance of shared genes being passed to future generations. Greater alibi scepticism towards defendants with motivated alibi witnesses compared to those with an unmotivated alibi witness or no alibi witness at all (Burke & Turtle, 2004; Culhane, 2005; Culhane & Hosch, 2004; Golding, Stewart, Yozwiak, Djadali, & Sanchez, 2000) could also be explained by evaluator decision-making being driven by a belief in kin selection theory and/or reciprocal altruism.

As individuals spend the majority of their time with family members and friends it is only logical that these relations are the most common individuals cited to corroborate genuine alibis both experimental research (Culhane et al., 2013) and real life settings. However, Olson and Wells (2004) discovered that participants overestimated the ease with which alibi providers can produce strong evidence to support their alibi, suggesting that alibi scepticism stems from the misperception that genuine alibis are easy to strongly corroborate. On a positive note, once they realised the difficulty of constructing their own alibi, participants subsequently viewed others' alibis more leniently. This implies that there may be a simple solution to counteract alibi scepticism; getting jurors to experience for themselves the difficulty of alibi generation and corroboration. However, more recently Strange, Dysart, and Loftus (2014) found that generation of their own alibi did not make people more trusting towards alibi witnesses.

Another aspect of alibi scepticism is the belief that unmotivated strangers are more likely to provide accurate alibis as they have no clear motive to lie. However, Marion and Burke (2013) found that 23% of participants lied to protect a previously unknown individual accused of a mock theft, showing that relative strangers cannot always be relied upon to be honest. Furthermore, individuals do not appear to consider the possibility of unmotivated stranger alibi witnesses being unreliable due to mistaken identification of the defendant (Olson & Wells, 2004). Therefore, just as people have an inaccurate understanding of the factors that influence prosecution eyewitness accuracy (Neal, Christiansen,

Bornstein, & Robicheaux, 2012) it appears they are also unaware of the factors which could affect alibi witness accuracy. Despite some evidence that motivation of child alibi witnesses does not influence perceptions of defendant guilt (Price & Dahl, 2012), there is almost blanket scepticism of motivated adult alibi witnesses (Olson & Wells, 2004). However, the evidence presented here suggests that this scepticism may be misplaced. This highlights the need for further academic attention on this issue, given the limited existing research.

Alibi timing

In accordance with section 6A(2) of the Criminal Procedure and Investigations Act (1996) in England and Wales the defence must give details of their defence statement if an alibi is involved. This allows thorough police investigation to exonerate innocent suspects with robust alibis prior to trial (Lord Chief Justice of England and Wales, 2008), therefore saving the time and money associated with a lengthy court case (Epstein, 1964). The very fact that the defendant is in court despite having an alibi may imply to jurors that the alibi is unreliable or false. It is, therefore, no surprise that mock detectives consider alibis to be stronger than do mock jurors (Sommers & Douglass, 2007). In relation to this Gooderson (1977) points out that the term *alibi* is heavily loaded and rather than being another piece of trial evidence, an alibi is viewed as a point for the defence to prove. In fact, alibis are only considered by jurors when there is a lack of other strong evidence in the case and prevent police scrutiny of their alibi veracity (Shpurik & Meissner, 2004). It may, therefore, be in the interests of defendants with a weak or false alibi to withhold this from the prosecution team until trial in order to *ambush* the case. Kerans (1982) states that "without notice of it [the alibi], the Crown is surprised and cannot rebut without an adjournment to investigate" (p. 47). Thus, there is a clear incentive for guilty defendants or those with little or no corroborating evidence to provide an ambush (deliberately delayed) alibi.

Through ruling as inadmissible any evidence that has not been disclosed prior to trial, judges have the ability to prevent alibis ambushing cases (*R v Chorley Justices* 2006). However, Epstein (1964) found that 52% of American prosecutors surveyed stated that alibi evidence not disclosed at an early stage was never or seldom excluded from court. More recently, an analysis of Canadian cases demonstrated that ambush alibis were a common tactic despite most Canadian jurisdictions having an early disclosure requirement similar to that in England and Wales (Criminal Justice Act, 2003; Criminal Procedure and

Investigations Act, 1996; Turtle & Burke, 2003). In fact, the Lord Chief Justice of England and Wales (2008) stated that he could not think of a single instance where a lack of disclosure prevented an alibi defence being heard in court, such was the rarity of this ruling being followed. This apparent international disregard of legislation and case law may be due to the overriding objective of the criminal procedure rules for criminal cases to be dealt with 'justly.' A judge's refusal to admit potentially exonerating evidence into court solely due to its late disclosure may not be considered just. The potential therefore exists for ambush alibis to weaken the prosecution team's case and ultimately allow guilty defendants to be acquitted.

However, several American studies demonstrate that ambush alibis may not provide defendants with an unfair advantage in court. Utilising a mock juror research paradigm Berman and Cutler (1996) revealed that convictions were less likely in the presence of any inconsistent prosecution eyewitness testimony. Furthermore, witnesses whose statements in court are inconsistent with their previous statements are perceived as being significantly less accurate than witnesses who exaggerate, are inconsistent with other witnesses or recall items not previously recalled (Brewer, Potter, Fisher, Bond, & Luszcz, 1999).

Similarly, American police officers' responses to questionnaires demonstrate that changes to alibis are generally thought to be indicative of deception, rather than memory failures (Dysart & Strange, 2012), and these changes are evaluated more negatively than alibis that are maintained (Culhane & Hosch, 2012). This may be due to evidence inconsistency being a popular, although inaccurate, cue to deception (Vrij, 2008). Confidence is greater amongst alibi witnesses with consistent stories (Strange et al., 2014) implying that jurors' over reliance on consistency as a cue to honesty (evidence here) may also account for scepticism of inconsistent evidence in real cases. However, examination of this suggestion is prevented by the lack of video stimuli in much of the relevant alibi research. This all implies that ambush alibis may be viewed as synonymous with deception and rather than provide defendants with an advantage in court, may actually benefit the prosecution (Culhane, et al., 2013). Although they may arise out of a deliberate attempt to ambush the court, genuine honest alibis that ambush the court can also occur. Despite a widespread perception that memory is accurate (Valentine, 2008), copious research illustrates that memory is reconstructed from incompletely encoded information and influenced by schematic expectations (for example see Osborne & Davies, 2014). Ridley (2013) and Brewer (1988) assert that greater

attention at the time of experiencing and encoding means that significant events may be recalled more accurately. Although they are good at recalling which day of the week a memorable event occurred, American college students frequently cite the wrong week when asked for an alibi for a given time (Skowronski, Betz, Thompson, & Shannon 1991). Similarly, when alibis are requested many participants state where they usually are at the specified time, rather than where they actually were if this deviates from their usual schema (Kurbat, Shevell, & Rips, 1998; Leins & Charman, 2013). Due to the necessity of consulting calendars and diaries to discover one's own whereabouts, Kurbat et al. (1998) termed this trend the *calendar effect*. These findings imply that innocent suspects (for whom the time of the crime lacks significance until they become a suspect) may be more susceptible to changing their alibi due to a reliance on schemas and a lack of salience to their actions at the time of the crime. In fact, Olson and Charman (2011) found that mistakes forced 36% of innocent mock suspects to change their alibi just 48 hours after providing it, and Strange et al. (2014) found that fewer than 50% of participants providing honest alibi stories were consistent following a one-week delay. To consider all ambush alibis as indicative of guilt is therefore inappropriate, as theoretically ambush alibis will be more common amongst innocent defendants (Strange et al., 2014). However, Culhane et al. (2013) found that, following a two day delay, 11.9% of participants changed their deliberately false alibi story, compared to fewer than 4% of participants changing their truthful alibi suggesting that changes to alibis may actually be more commonly associated with deception than honesty.

Dahl, Brimacombe, and Lindsay (2009) investigated the effect of alibi evidence and eyewitness evidence timing within the police investigation setting. Although examining the stage at which police interviewed the witnesses rather than ambush strategies per se, their findings indicated that investigators are not influenced more by eyewitness evidence than alibi witness evidence. Instead, a strong alibi (colleague with corroborating receipts) was found to have an effect on decision-making if it was received after eyewitness evidence. It was only when the alibi presented was weak (best friend with no physical corroborating evidence), and an eyewitness had positively identified the suspect, that alibi evidence failed to influence mock-police evaluations of suspect guilt. These findings clearly indicate the importance of timing and corroboration upon evaluation of eyewitnesses and alibi witnesses within the low alibi-suspicion investigation setting (Sommers & Douglass, 2007). In addition, researchers have suggested that further research regarding alibi timing (alibi disclosed

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during initial investigations opposed to alibi disclosure during the trial) is required (Mathews & Allison, 2010). It is therefore important that these variables are assessed within the courtroom setting where general suspicion of alibis is greater (Sommers & Douglass, 2007).

Although changes to alibis (Culhane et al., 2008; Culhane & Hosch, 2012; Culhane et al., 2013), and the effect of alibi timing within cases, have been assessed previously (Price & Dahl, 2014), the current research is the only study to date examining whether ambush alibis influence juror decision-making. The past relevant literature is unclear as to whether ambush alibis will be taken as an indicator of inconsistency and deception, or unfairly benefit deceptive defendants through prevention of police investigation of alibi veracity. Thus, there is a need for empirical research regarding the effect of alibi disclosure timing upon juror decision making.

Summary

Research illustrates that mock jurors assess the testimony of motivated and unmotivated alibi witnesses differently. There is, however, no research pertaining to evaluations of alibi witnesses and defendants in cases involving ambush alibis, despite the evidence that ambush alibis may occur frequently. The study reported here therefore examines the influence of timely and ambush alibi evidence from motivated and unmotivated alibi witnesses upon juror decision-making. In accordance with the theories of kin selection, reciprocal altruism and lay perception that memory consistency is a cue to accuracy, it was hypothesised that motivated alibi witnesses and ambush alibis would be associated with more guilty verdicts than unmotivated alibi witnesses and timely alibis. Additionally, it was anticipated that assessments of defendant reliability and alibi witness reliability would be lower with ambush alibis and motivated witnesses, than with unmotivated alibi witnesses and timely alibi evidence.

Method

Design

The study implemented a 2 x 2 between participants experimental design. Alibi witness motivation (motivated, unmotivated) and alibi timing (timely, ambush) were manipulated systematically in an assault case to create four experimental conditions. A timely alibi occurred when defendants revealed their alibi within a police interview, whereas an ambush alibi was only revealed in court. The motivated witness was the defendant's girlfriend, and the unmotivated alibi

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witness was the defendant's neighbour. A fifth control condition contained no alibi witness evidence. Juror verdicts (guilty, not guilty), verdict confidence, and the perceived reliability of the defendant and the alibi witness formed the dependant variables.

Participants

Participants were an opportunity sample of psychology students at university in the North of England, as well as individuals from the community recruited through a snowballing technique on an online social media site. The study was hosted online and consisted of a series of linked webpages containing case information and evidence questionnaires. A total of 180 participants were evenly distributed between the five conditions took part in the research.

Participants all met the criteria for jury duty in England and Wales specified by the Juries Act (1974); they were aged between 18 and 70 years, were resident in the United Kingdom, the Channel Islands or the Isle of Man for a minimum of five years since reaching 13 years of age, were on the electoral register, had not served a prison or youth custody sentence within the previous ten years (or of over five years duration at any time), and had no current or previous mental health condition or mental illness. The sample was predominantly female with 48 males compared to 131 females (one participant did not record their sex). The mean age of participants was 21.15 years ($SD = 9.69$), with participants ranging from 18 to 63 years of age. The majority of participants were students (74.4%).

Materials

The study materials were delivered sequentially in a series of linked webpages with a separate URL associated with each condition. The first page outlined the study procedure, requirements, data use and gained informed consent from participants. The subsequent webpages contained the case indictment, trial summary, and questions about the participants' perceptions of the case.

The case was constructed so that there was sufficient evidence so that the defendant could stand trial, but not so much evidence that his alibi (where presented) would not be plausible and accurate. a qualified lawyer checked the indictment and trial were checked to ensure the charge of grievous bodily harm (GBH) brought against the defendant was appropriate to the injuries in the scenario, and that sufficient evidence existed for a trial to reasonably occur.

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The prosecution case contained circumstantial evidence against the defendant and an ambiguous timeline of events which provided the defendant with the opportunity to commit the offence. Combined, this evidence produced a tendency to guilty verdicts in the alibi witness absent control condition, which allowed the relative effect of alibi witness testimony in the experimental conditions to be assessed. As in previous mock jury research (Golding, et al., 2000) the evidence was presented in the form of a detailed 4 page summary of the case evidence.

Further webpages required participants to indicate their verdict (guilty, not guilty) as well their confidence in this decision (rated from 0 [*not at all confident*] to 100 [*completely confident*]). Other questions asked participants to rate the reliability of the defendant and alibi witness (with scores ranging from 0 [*not at all reliable*] to 100 [*completely reliable*]). The final webpage thanked and debriefed participants as well as provided relevant sources of support and contact details for the research team.

Procedure

The URL for each of the study conditions was placed on an online university research participation database, as well as on social media. Each URL was sequentially available until the necessary number of participants was recruited to each condition. Upon clicking the URL, participants were taken to a secure site containing the study information and materials. They then worked through each page sequentially, reading information and providing responses where appropriate.

Ethics

The study was conducted in accordance with the principles of the Code of Human Research Ethics (British Psychological Society, 2006). This specific study was assessed and approved by the ethics committees at Sheffield Hallam University and Teesside University.

Results

Verdict

The majority of participants in each condition found the defendant guilty (see Table 1) with the raw data suggesting that, compared to having no alibi witness,

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a motivated alibi witness increases the frequency of guilty verdicts, whereas an unmotivated alibi witness has no impact on perceptions of guilt. A 2 x 2 x 2 hierarchical loglinear analysis was conducted to assess the influence of alibi witness (motivated, unmotivated) and alibi timing (timely, ambush) upon participant verdict (guilty, not guilty). The main effect of verdict was significant; $\chi^2(1) = 25.78, p < .001$; signifying that significantly more participants voted guilty ($n = 102$) than voted not guilty ($n = 42$). All other main effects and interactions were not significant (all $p > .05$) indicating that the motivation and timing of the alibi witness's evidence had no impact upon participants' verdicts. Chi² analyses comparing each of the experimental alibi conditions with the no alibi condition were all non-significant (all $p > .05$) meaning there was no significant association between condition and verdict.

Confidence in verdict

Across the whole sample, participants voting guilty ($M = 73.27, SD = 14.59$) were on average more confident in their verdict choice, than those reaching a not guilty verdict ($M = 60.10, SD = 20.79; t(178) = 4.758, p < .001$). Average verdict confidence scores ranged from 62.47 ($SD = 19.53$) in the unmotivated timely alibi condition to 73.94 ($SD = 12.82$) in the motivated timely alibi condition. Table 1 illustrates that participants hearing no alibi, and those hearing an alibi (either timely or ambush) from the defendant's girlfriend were more confident in their verdict, than participants hearing an alibi (either timely or ambush) from the defendant's neighbour. A one way ANOVA was conducted to examine the effect of condition (unmotivated timely alibi, motivated timely alibi, unmotivated ambush alibi, motivated ambush alibi, no alibi) upon verdict confidence. Conducting a one way ANOVA rather than a factorial ANOVA allowed for the no alibi condition to be included in this analysis as this condition straddled both the alibi timing and alibi witness variables. Although the overall ANOVA was significant; $F(4, 175) = 2.54, p = .042, partial \eta^2 = .55$; post hoc Bonferroni tests between each condition did not support this difference (all $p > .05$).

Insert Table 1 about here

Reliability of case evidence

Participants' ratings of defendant reliability were generally low (less than 50% of the available scale; see Table 2), with defendants rated least reliable when an unmotivated witness supported their ambush alibis ($M = 35.67, SD = 21.04$) and

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most reliable when they had no supporting alibi witness ($M = 41.25$, $SD = 22.37$). A 2 x 2 ANOVA revealed no significant main effect of alibi timing or alibi witness motivation on ratings of defendant reliability ($F(1, 140) = .071$, $p = .790$, $partial \eta^2 = .001$ and $F(1, 140) = .007$, $p = .931$, $\eta^2 = .000$ respectively), and there was no significant interaction between these variables, $F(1, 140) = .331$, $p = .566$, $partial \eta^2 = .002$.

Insert Table 2 about here

Table 2 illustrates that both the motivated and unmotivated alibi witnesses were rated as rather unreliable ($M = 40.39$, $SD = 24.98$) although variation was found between conditions such that the unmotivated timely alibi witness was perceived as the most reliable, and the motivated ambush alibi witness the least reliable type of alibi witness ($M = 56.75$, $SD = 23.17$ and $M = 33.33$, $SD = 25.27$ respectively). A 2x2 ANOVA was conducted to examine the effect of alibi timing (timely, ambush) and alibi witness motivation (motivated, unmotivated) upon perceptions of alibi witness reliability. This revealed significant main effects of alibi witness motivation; $F(1, 140) = 12.92$, $p < .001$, $partial \eta^2 = .084$, and alibi timing, $F(1, 140) = 5.96$, $p = .016$, $partial \eta^2 = .041$; as well as a significant interaction between these variables; $F(1, 140) = 5.75$, $p = .018$, $partial \eta^2 = .039$. Thus, a timely unmotivated alibi witness ($M = 56.75$, $SD = 23.17$) was perceived as significantly more reliable than an ambush unmotivated alibi witness ($M = 37.97$, $SD = 19.68$). Similarly, a timely alibi from an unmotivated alibi witness was rated significantly more reliable than a timely alibi from a motivated alibi witness ($M = 33.50$, $SD = 24.60$). However, there was no significant difference between the timely and ambush alibis provided by motivated alibi witnesses.

Discussion

The study revealed that both alibi witness motivation and alibi timing had an effect upon mock juror perceptions of alibi witness reliability. Furthermore, alibi witness evidence was rated as being rather unreliable ($M = 40.39$, $SD = 24.98$), thus offering support for the alibi scepticism hypothesis (Olson & Wells, 2004). However, defendants corroborated by an 'unreliable' alibi witness were not viewed as less reliable than those supported by a more reliable witness. Although prior research shows the police may believe that inaccurate alibis arise from deliberate deception (Dysart & Strange, 2012), the current study did not find support for this same belief amongst jurors as alibi witness motivation and alibi timing did not have a significant impact on case verdicts. However, due to the *investigator bias* (Masip, Alonso, Garrido, & Antón, 2005; Meissner &

Kassin, 2002), the police officers sampled by Dysart and Strange might have been inherently more suspicious of deception than the potential jurors in the general population sampled in the current study. Instead, the current findings support Olson and Charman's (2011) assertion that jurors may interpret inaccurate alibis as a sign of poor memory rather than deception. Qualitative analysis of mock jury deliberations in cases with weak and/or changing alibis would help to establish the accuracy of this assertion.

Alibi witness motivation

In accordance with previous research regarding the effect of alibi witness upon alibi believability (Allison & Brimacombe, 2010), the present findings suggest that although an unmotivated alibi witness has no impact upon a defendant's case, a motivated alibi witness may actually harm their defence. Hosch et al. (2011) found that motivated alibi witnesses related by marriage to a defendant (such as a sister-in-law) were perceived as less reliable than those with a social relationship and more believable than those with a biological relationship to the defendant (Hosch, et al., 2011). In the current study, the girlfriend of the defendant (motivated alibi witness) was viewed as a less reliable alibi witness than the neighbour of the defendant (unmotivated alibi witness). Therefore, a girlfriend alibi witness is viewed as more similar to a marriage or biological related witness, than a socially related alibi witness. Thus, the data reflect the suggestion that jurors perceive alibi witness evidence as an altruistic act influenced by the degree of relatedness between a defendant and their alibi witness (Hosch et al., 2011). These findings are in contrast to those of Marion and Burke (2013) who observed that individuals lied to protect suspects who appear innocent regardless of whether they like them. The relatively minor crime (minor theft) and ability to lie through omission, rather than actively construct a false story (Fawcett, 2012) could, however, account for Marion and Burke's differing findings.

Ambush alibis

As the unreliability of the ambush witness did not affect ratings of defendant reliability or verdicts, there is no evidence that participants saw ambush alibis as indicative of the alibi witness and defendant working together to deceive the court. This finding is surprising given the widely held (but erroneous) belief that inconsistency is a sign of deception (Mann, Vrij, & Bull, 2004; Sporer, Penrod, Read, & Cutler, 1995), and that changes to testimony erode perceptions of

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witness confidence in court (Brewer & Burke, 2002), a factor previously demonstrated to be associated with guilty verdicts (Cutler, Penrod, & Dexter, 1990). However, Berman and Cutler (1996) found that jurors rated novel evidence in court (evidence not previously included in the investigation) as more reliable than contradictory evidence in court, and contradictions between pre-trial and in court evidence. The current study featured new evidence from a new witness, rather than new/inconsistent evidence from an existing witness as in Berman and Cutler's (1996) and Brewer and Burke's (2002) research. As the decreased reliability of the ambush alibi witness (as indicated by participants) was not sufficient to influence verdicts in the current study, it appears that a contradictory alibi witness is perceived as less reliable than an alibi witness whose testimony ambushes the court. This is an important finding because truthful defendants often change their alibi stories (Olson & Charman, 2011). The salience of witnessing a crime may make eyewitnesses less likely to change their evidence than honest alibi witnesses who are unaware that their actions at a particular time may later be of importance. Due to alibi witnesses' more plausible susceptibility to the calendar effect (Brewer, 1988), changes to an alibi should be viewed with less scepticism than changes to eyewitness testimony (Olson & Charman, 2011). Although direct comparisons of eyewitnesses and alibi witnesses were not possible, that all alibi witnesses were not seen as entirely unreliable suggests that jurors may have some awareness of the calendar effect. However, this did not stop participants from being more sceptical of changing ambush alibi witness evidence than of consistent timely alibi witness evidence. This suggests that an overestimation of the ease with which an alibi can be supported (Strange et al., 2014; Turtle & Burke, 2001) is the cause of this enhanced scepticism to changes to alibi evidence (Culhane, 2005). Furthermore, these findings imply that to promote fair evaluation of alibis in court, judicial instruction on the difficulty of corroborating alibi stories and providing jurors with experience of this task are required (Turtle & Burke, 2001). Moreover, scepticism towards motivated alibi witnesses seems to negate the effect of alibi timing in that motivated alibi witnesses were viewed as so unreliable that ambush evidence was unable to further reduce juror reliability ratings without that evidence being discounted altogether.

Verdicts

Although the current findings support the concept of a negative bias regarding alibi witnesses, there was no effect of alibi timing or witness motivation upon

perceptions of defendant reliability or guilt. In contrast to previous research (Culhane, 2005; Lindsay, Lim, Murando, & Cully, 1986) the presence of an alibi witness had no effect on evaluations of the defendant or on case verdicts compared to having no alibi corroborator. Thus, weak alibis do not affect jurors' decision-making (Dahl et al., 2009). Shpurik and Meissner (2004) and Pozzulo, Pettalia, Dempsey, and Gooden (2014) suggest that jurors only consider alibi testimony when lacking other evidence against the defendant, an assertion reinforced by the low reliability ratings of the alibi evidence in general in the present study. This contradicts the results of similar studies which found higher guilt ratings when a motivated alibi witness testified (Hosch et al., 2011). Utilising a continuous measure of guilt, Hosch et al. found that a corroborating alibi witness reduced belief in defendant guilt by 22%, but whether this reduction translates into a not guilty verdict is dependent upon participant formulations of the 'reasonable doubt' standard (Dhami, 2008) which have been shown to vary widely (Horowitz, 1997). Horowitz demonstrated that reasonable doubt varies from 60% to 90% certainty in guilt, meaning that a 22% reduction may not be sufficient to convince participants of the defendant's innocence. The dichotomous verdict (guilty, not guilty) utilised in this study reflected the real-world verdicts available to jurors but prevents examination of any more subtle effects of the study variables upon levels of perceived guilt. As Olson and Wells (2004) highlight, guilt estimates are not always sensitive enough to measure perceptions of alibis, although further research with a more sensitive measure of guilt help elucidate this new research area. Certainly, a belief that the alibi witness was unreliable (and potentially that they were deceptive) did not have a significant effect on evaluations of the defendant, suggesting that any deception by the alibi witness is not seen as stemming from the defendant. This is an interesting finding requiring further investigation through a qualitative examination of mock juror deliberations over an alibi witness charged with perjury.

Limitations

The online data collection used here may be seen as a limitation due to the potential for different response patterns online and offline, and the lack of jury deliberation, and summarised materials. However, while trial summaries have limited ecological validity, they are appropriate in mock juror research (Diamond, 1997). Moreover, prior juror decision-making research has used online methodology (Evans & Schreiber, 2010). More specifically, no significant

effect of presentation modality (online or offline) has been found in other alibi research (Fawcett, 2012). In general, the findings of psychological research conducted using web technology do not differ substantially from those collected using traditional pen and paper methodology (Gosling, Vazire, Srivastava, & John, 2004). Furthermore, deliberations have not been used in the research examining mock juror evaluations of alibi evidence (for example Burke & Turtle, 2004; Culhane & Hosch, 2004; Olson & Wells, 2004; Sommers & Douglass, 2007). This is due to extensive interviews with real jurors revealing that deliberations play a modest role in determining verdicts (Bornstein, 1999; Kalven & Zeisel, 1966; Meyers, Brashers, & Hanner, 2000).

Summary and conclusions

In summary, this study assessed whether alibi scepticism bias observed in American mock juror studies (Culhane, et al., 2008; Olson & Wells, 2004) is prevalent in the UK population. As alibi evidence was not rated as very reliable the alibi scepticism hypothesis (Olson & Wells, 2004) and Turtle & Burke's (2001) assertion that people overestimate the ease of evidencing a genuine alibi were supported.

More specifically the current study examined the specific impact of alibi timing (timely, ambush) and alibi witness motivation (motivated, unmotivated) upon juror decision-making. In support of prior research (Burke & Turtle, 2004; Culhane, et al., 2008; Olson & Wells, 2004) motivated alibi witnesses were perceived as significantly less reliable than unmotivated alibi witnesses. As changes to testimony have been associated with deception and decreased credibility (Berman & Cutler, 1996; Mann et al., 2004) it was anticipated, and indeed found, that timely alibi witness evidence would be viewed as more reliable than ambush alibi witness evidence. That defendant reliability and guilt were not affected by type and timing of alibi witness corroboration, suggests that a weak alibi alone is not sufficient to convince a jury of a defendant's guilt. Instead, jurors may see a weak or inconsistent alibi as reflecting genuine memory failure or mistakes (Olson & Charman, 2011) rather than deliberate deception. However, further research is required to explore the accuracy of this suggestion. In summary, the findings imply that by allowing ambush alibi evidence to be heard in the UK courts, judges do not appear to be providing defendants with an unfair advantage.

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Table 1. Verdict and verdict confidence according to condition and decision reached

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Condition ^a	Verdict Frequency (%)		Verdict Confidence According to Condition and Decision Reached					
	Guilty	Not Guilty			Guilty		Not Guilty	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
No alibi	63.89	36.11	71.95	14.21	71.09	14.61	73.46	13.90
Motivated timely alibi	72.22	27.78	73.95	21.82	77.19	11.74	65.50	12.12
Motivated ambush alibi	83.33	16.67	71.42	19.91	75.37	18.37	51.67	16.02
Unmotivated timely alibi	63.89	36.11	62.47	19.54	68.04	15.65	52.62	22.36
Unmotivated ambush alibi	63.89	36.11	66.92	19.24	73.52	9.11	55.23	26.38

Note. ^a $n = 36$

Table 2: Reliability of alibi witness evidence and defendant evidence by experimental condition

	Condition
	Evidence Type
	Alibi Witness
	Defendant
	<i>M</i>
	<i>SD</i>
	<i>M</i>
	<i>SD</i>
No alibi witness	

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N/A

N/A

41.25

22.37

Motivated timely alibi

33.50

24.60

36.33

23.74

Motivated ambush alibi

33.33

25.27

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	37.47
	23.11
Unmotivated timely alibi	
	56.75
	23.17
	38.78
	20.62
Unmotivated ambush alibi	
	37.97
	19.68
	35.67
	21.04
Total	

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40.39

24.98

37.90

22.05

Note. 0 = Not at all reliable, 100 = Completely reliable