

UC Irvine

UC Irvine Previously Published Works

Title

Why Errors in Alibis Are Not Necessarily Evidence of Guilt

Permalink

<https://escholarship.org/uc/item/4gk847zk>

Journal

Zeitschrift für Psychologie, 222(2)

ISSN

2190-8370

Authors

Strange, Deryn
Dysart, Jennifer
Loftus, Elizabeth F

Publication Date

2014

DOI

10.1027/2151-2604/a000169

Peer reviewed

Why Errors in Alibis Are Not Necessarily Evidence of Guilt

Deryn Strange,¹ Jennifer Dysart,¹ and Elizabeth F. Loftus²

¹John Jay College of Criminal Justice, CUNY, New York, NY, USA, ²School of Social Ecology, University of California, Irvine, CA, USA

Abstract. Laypeople, police, and prosecutors tend to believe that a suspect's alibi, if truthful, should remain consistent over time (see Burke, Turtle, & Olson, 2007; Culhane & Hosch 2012; Dysart & Strange, 2012). However, there is no empirical evidence to support this assumption. We investigated (a) whether some features of an alibi – such as what was happening, who with, where, and for how long – are more likely to produce errors than others; and (b) whether consistency in alibi stories is correlated with particular phenomenological characteristics of the alibi such as a person's confidence and sense of reliving the event. We asked participants to imagine they were suspected of a crime and to provide their truthful alibi for an afternoon 3 weeks prior and to complete questions regarding the phenomenological characteristics of their memory. We also asked participants to locate evidence of their actual whereabouts for the critical period. Participants returned a week later, presented their evidence, re-told their alibi, and re-rated the phenomenological characteristics of the alibi. Our results revealed that participants were largely *inconsistent* across all aspects of their alibi, but there was variability across the different features. In addition, those who were inconsistent were less confident, recollected the time period in less detail and less vividly, and were less likely to claim to remember the time period. We conclude that inconsistencies are a normal byproduct of an imperfect memory system and thus should not necessarily arouse suspicion that a suspect is lying.

Keywords: forensic psychology, alibi, inconsistency, recall, error

Empirical interest in alibis is growing; and it is not hard to see why. A review of the 311 DNA exoneration cases in the United States to date reveals that many of those who were wrongfully convicted provided some form of alibi evidence (see www.innocenceproject.org). Indeed, in many cases, the exonerees provided witnesses who were able to corroborate those alibis; some had more than one. For example, Marvin Anderson offered four alibi witnesses to support his claim that he had been washing his car at the time of the crime; Edward Honaker offered two family members, a friend, and an acquaintance to support his alibi; while Stephen Avery offered 16 alibi witnesses to support his alibi that he had been with his family buying a gallon of paint (see www.innocenceproject.org). Why, then, did these cases go forward? Why were these alibi stories not believed by law enforcement, prosecutors and, ultimately, by juries?

Much of the extant research on alibis has focused on the social psychological issues that affect the way an alibi is perceived: the believability of the story, the believability of the alibi witness, and the persuasiveness of the corroborating evidence (e.g., Allison & Brimacombe, 2010; Allison, Mathews, & Michael, 2012; Culhane, & Hosch, 2004; Dahl, Brimacombe, & Lindsay, 2009; McAllister & Bregman, 1989; Olson & Wells, 2004; Sargent & Bradfield, 2004; Sommers & Douglass, 2007). By contrast, less research has examined the underlying cognitive task:

how easy is it to remember what you did and when you did it (see, Culhane & Hosch, 2012; Culhane, Hosch, & Kehn, 2008; Olson & Wells, 2012)? For example, 5 days after Jennifer Thompson was raped, when the investigating detectives asked Ronald Cotton where he was at the time of the crime he claimed that he had been with friends. However, after a conversation with his mother, Cotton realized he had gotten his weekends mixed up and had actually been sleeping on his mother's couch at the time of the crime (Thompson-Cannino, Cotton, & Torneo, 2009). Are such alibi consistency errors common when people are asked – on the spot, without prior notice – to generate a truthful alibi? In the study we present here, we address that question and consider whether there are particular characteristics of the alibi story that are more prone to error. In addition, we consider whether the phenomenological characteristics associated with an alibi story – such as the sense of reliving the events – are related to the consistency and believability of that story.

Providing an alibi is a test of our autobiographical memory; a test for which there is an inherent assumption that people will be accurate, in part, because the consequences of an error are so great (Kassam, Gilbert, Swencionis, & Wilson, 2009). Yet, decades of research have conclusively demonstrated that that belief is erroneous. First, consider the research on personally experienced events and the

robust memory errors that have been demonstrated in eyewitness identification (see Wells, Memon, & Penrod, 2006 for a review), coerced-internalized false confessions (e.g., Kassin & Gudjonsson, 2004), and falsely recalled memories of childhood sexual abuse (e.g., Loftus & Ketcham, 1994). In these areas of research, people are consistently mistaken about the details of an event or can come to believe they had an entire (false) experience. Second, consider the research on important cultural events. People generally believe that the accuracy of their memories for particularly shocking, emotionally laden, and momentous events (e.g., where they were on the morning of September 11, 2001) is as accurate and detailed today as they were the day the memory was formed (for a review, see Talarico & Rubin, 2009). Yet even these memories – the ones we swear we will “never forget” – fade and are as susceptible to erroneous recollection as every-day or mundane memories. Taken together, these lines of research have led to a general acceptance, at least among experts, that memories are malleable and fallible (Benton, Ross, Bradshaw, Thomas, & Bradshaw, 2006).

By contrast, there has been no apparent change in the public perception of an inconsistent alibi: we still believe that the details of an innocent person's alibi should not change (Burke et al., 2007; Culhane & Hosch, 2012; Kassam et al., 2009; Olson & Wells, 2012). Indeed, law enforcement officers appear to hold the same belief. Dysart and Strange (2012) found that 81% of their law enforcement respondents agreed with the statement that if a suspect's alibi story changed over time, it is likely that the suspect lied to police. However, they were sensitive to the passage of time. Although 93% of respondents believed it extremely *unlikely* that an alibi error could be made for a crime that occurred 10 min earlier, 28% of respondents believed that errors are *likely* after 1 week. Importantly, Culhane and Hosch (2012) found that when an alibi did change – regardless of whether it was strengthened or weakened – current police officers, people who planned to become police officers and laypeople, judged the suspect guilty more often and rated the likelihood that he had committed the crime as higher. Thus people appear to value consistency above all else when it comes to an alibi.

However, the accumulated evidence suggests that forming a believable alibi is difficult for “innocent” people, even for a recent time period (Culhane, Kehn, Horgan, Meissner, & Hosch, 2008; Olson & Charman, 2012; Olson & Wells, 2004) and inconsistencies appear to be relatively normal. For example, Olson and Charman (2012) asked their participants to provide four alibis: two for a distant time frame (14 weeks earlier) and two for a near time frame (3 days earlier). They asked the participants to investigate those alibis during an intervening 48-hr period before returning to the laboratory and presenting their evidence and offering their alibi a second time. While they were not specifically interested in the types of errors people made, they did ask participants to state whether they had had to change their alibi. Altogether 36% of the alibis changed over time. Similarly, Culhane, Kehn, et al. (2008)

found that over half their participants altered some aspect of their alibi story.

Moreover, finding evidence to support an alibi can also be exceptionally difficult. Olson and Wells (2004) introduced a taxonomy of alibi believability that distinguishes between two forms of corroborating evidence: person and physical. Person evidence was classified into four groups: *none*, *motivated familiar other* (e.g., family members, girlfriend/boyfriend), *non-motivated familiar other* (e.g., a store clerk where a person is a regular customer), or *non-motivated stranger* (e.g., a store clerk where a person has never before shopped). While, physical evidence was classified into three categories: *none*, *easy to fabricate* (e.g., e-mails, letters, things without a time or a date stamp), and *difficult to fabricate* (e.g., a photo/video footage, items with a time or a date stamp). Not surprisingly, Olson and Wells (2004) found that, alibis with higher levels of person and physical evidence were considered more believable. Interestingly, however, they identified an overwhelming sense of scepticism among the evaluators: an alibi where the suspect was captured on a security video, accompanied by stranger corroboration scored only 7.4 on a 10-point belief rating scale.

Further research employing the taxonomy has revealed that *motivated familiar others* are thought to be more likely to lie for the suspect and consequently are seen as less trustworthy than those who are not so apparently motivated to lie (e.g., Culhane, Hosch, et al., 2008).

The Present Study

Considering that alibi consistency errors appear to be common, and yet they are regarded with suspicion by police officers and potential jurors alike, we wondered (a) whether particular features of an alibi are more likely to produce errors than others; and (b) whether consistency in alibi stories is correlated with particular phenomenological characteristics of the alibi that might be easily measured at the time an alibi is offered. Thus, we asked participants to imagine that they were identified as a suspect in a crime and were queried about their alibi by police. We asked them to provide their alibi for the particular time period, to rate the phenomenological characteristics of their memory (e.g., the vividness of the memory), and to find evidence of their actual whereabouts. A week later, they returned and offered their alibi and rated the phenomenological characteristics of their memory a second time. We were particularly interested in examining the frequency with which participants were judged to be consistent, partially consistent, or inconsistent, whether consistency was correlated with the phenomenological characteristics of their memory, and whether the types of evidence (person and physical) participants would be able to provide would predict believability ratings made by independent raters in a second phase of our study.

Method

Participants

We recruited 70 participants (63% female) from John Jay College of Criminal Justice who received partial course credit as compensation for their participation. The study was part of a class project. Students had the opportunity to opt out and complete a written assignment for equal credit. Thus, those that did participate were engaged and motivated. As background, it is important to note that the vast majority of students at this institution work either part-time or full-time throughout the academic year. In addition, the institution does not have dormitories and the average student commute to the university for students is 40 miles. Thus, the students in this sample may not correspond to the average college student and are perhaps more akin to a community member sample. The study was approved by the College's Institutional Review Board.

Design

All participants were asked to provide a written alibi for an afternoon 3 weeks earlier. They spent time during the following week trying to find evidence to support their alibi story, and returned to (a) provide their alibi story a second time and (b) to present the evidence they were able to collect.

Materials and Procedure

Session 1

We asked participants to imagine that they were the suspect in a crime and were being questioned by police concerning their alibi. Specifically, we asked participants to think about where they were and what they were doing during a 6-hr time period of an afternoon/evening 3 weeks earlier (note that this approach was based on the typical phrasing police use in our jurisdiction when investigating a suspect's alibi). There were four different time periods equally and randomly distributed among participants (Mon 12–6 pm, $N = 17$; Tues 1–7 pm, $N = 18$; Wed 3–9 pm, $N = 18$; Thurs 2–8 pm, $N = 17$). Specifically, participants were asked to respond honestly to seven questions assessing different features of their memory: 1. What did you do? 2. What time did each event occur? 3. Who was there? 4. Where were you? 5. What happened before? 6. What happened after? 7. Are there any other distinctive details about the day that you can account for? Participants wrote their answers in a booklet we prepared for the task. They were instructed that if they could not recall the answer to a question they were to state, "I don't know."

Next, we asked participants to complete a brief series of questions extracted from the Memory Characteristics Questionnaire, which is frequently used in Autobiographical Memory research to explore the phenomenological charac-

teristics associated with a given memory (see Rubin, Schrauf, & Greenberg, 2003; Talarico & Rubin, 2003; Takarangi & Strange, 2010). We measured confidence, vividness, perspective, and reliving with single items: "how *confident* are you that you are accurately recalling the details of that afternoon?"; "how *vivid* and clear is your memory for that afternoon" (1 = not at all; 7 = completely); "as I remember the afternoon, I see it out of my own eyes rather than those of an outside observer" (1 = not at all, to 7 = as much as any memory); and "as I remember the afternoon I feel as though I am reliving it" (1 = not at all, 7 = as clearly as if it was happening right now). To estimate participants' degree of recollection we used the Remember/Know item: "As I think about the event I can actually remember it rather than just knowing it happened" (1 = not at all, 7 = as much as any memory). To create a measure of the quality of participants' *narrative* of the afternoon we collapsed across three items: the extent to which their memory for the afternoon "comes to me in words"; "my memory comes in words or in pictures as a coherent story or episode and not as an isolated fact, observation or scene," and "my memory comes in pieces with missing bits" (from 1 = not at all, to 7 = as much as any memory).

When participants had completed the questionnaire, we explained that their next task was to find evidence to support their story. We noted that it was possible that they had made some errors and that, if they found that to be the case, they were to try and find evidence to support what they were actually doing (not what they had previously said they were doing). Participants were given 1 week to complete this task. Importantly, we made no mention of the kinds of evidence (e.g., person or physical evidence) they should look for.

Session 2

One week later, participants returned and completed the seven alibi questions a second time in a second booklet. Participants also completed the same scales from Session 1, which assessed various aspects of their memory for the alibi afternoon. In addition, we asked a series of other questions: (1) How difficult/easy was it to generate an alibi? (1 = extremely difficult; 7 = extremely easy); (2) How likely is it that people will believe your story? (1 = not at all likely; 7 = extremely likely); (3) Think about the evidence that you have provided, how easy or difficult do you think it would be for someone to fake the exact same evidence? (1 = extremely difficult; 7 = extremely easy); (4) Are you more or less likely to trust alibi witnesses now that you have had this experience? (1 = much less likely; 7 = much more likely).

Coding for Consistency

To determine the consistency of participant's reports between Session 1 and Session 2 we adapted a coding scheme employed by Neisser and Harsch (1992).

Table 1. Examples of participants' alibis for each consistency category

	Session 1	Session 2
Inconsistent	I woke up at 10:30, watched "Say Yes To The Dress" and ate. I did my daily half hour of exercise, showered and got dressed for my first day at a new job. I had to be there at 1 p.m. so I left by 12:30, got to work at 1 and left at 6 p.m. I walked home and got Dunkin Donuts for my parents. I got home and ate dinner.	I actually started my new job the week after Tuesday Sept 29. So I'm not sure exactly what I was doing. I do have Tuesdays off so I was definitely home, but what I was doing exactly I am not sure.
Partially consistent	I was at work between 2 and 6:30 p.m. My work is childcare so I babysit children for an agency. Between those hours I gave the child a snack, we went outside to the park, we came back home to have dinner and read stories until the mom came home. The family's home is located on 84th St and West End Ave in Manhattan.	I was working but from the hours of 4–8 p.m. Between 1–3 p.m. I was in my house getting ready for work. At work, it was like I said, I took the child to the park, gave her dinner, a bath and read her stories until the mom came home.
Consistent	I was at the hospital with my cousin. He had gotten in to an accident and was flown in [to Manhattan] the day before. He was in ICU Trauma for that whole week.	I was in the ICU with my cousin. He was in an accident. He was there the whole week.

Specifically, two independent judges read through each participant's alibi reports from Sessions 1 and 2 and assigned each of the seven alibi features a rating and numerical value: *inconsistent* (0), *partially consistent* (1), or *consistent* (2). Participants were judged to be *inconsistent* when they had been entirely incorrect at Session 1, and *consistent* when they had been entirely correct. The *partially consistent* category was assigned when participants had been accurate about some details of that particular feature but not others. For example, a partially consistent participant might have gotten the sequence of events wrong, but not the actual content of what they were doing.

Judges were extensively trained in the coding procedure by the first author until they were 99% consistent (with each other and the first author) on a subset of the alibi reports. For the remainder of the alibi reports, the judges were in agreement on 97% of the decisions. When there was a disagreement, the statement was assigned to the more conservative category (invariably *partially consistent*). Examples for each category appear in Table 1.

Coding of Person and Physical Evidence

We asked a second set of independent judges (two graduate students trained by the first author) to assess the quality of evidence that our participants provided using the categories identified by Olson and Wells (2004; see also, Burke & Turtle, 2003), that is, the type of *person evidence* – *none*, *motivated familiar other*, *non-motivated familiar other*, or *non-motivated stranger* – and *physical evidence* – *none*, *easy to fabricate*, or *difficult to fabricate*. Judges agreed on 99% of the decisions. However, when there was a disagreement the evidence was assigned to the more conservative category. Note that person evidence typically took the form of a signed statement or an e-mail from the corroborating witness to the lead author. The most common

"difficult to fabricate" evidence was store receipts, ticket stubs for mass transit, and employment login sheets.

Believability Rating

Finally, a third independent judge provided an overall rating of the believability of the alibi story on a scale from 0 (completely unbelievable) to 100% (completely believable).

Results

Consistency

How consistent were alibis offered in the second session compared to those provided initially? To answer this question, we first considered the alibis as a whole at Sessions 1 and 2 and calculated the mean number of details that participants provided for their alibi at each session as well as the proportion of those details that were consistent across both sessions. We found that participants offered more detailed alibi stories at Session 1 than at Session 2, $t(69) = 5.67$, $p < .01$, $d = .64$ (S1: $M = 13.39$, $SD = 4.92$; S2: $M = 9.72$, $SD = 6.43$). However, the proportion of consistent information across both sessions was only .53 ($SD = .34$). Thus, we can infer that much of the "extra" detail at Session 1 was either wrong or forgotten by Session 2.

Next, we examined consistency for each of the seven features we asked participants to consider. Table 2 displays the percentage of participants that were assigned to each of our coding categories (*inconsistent*, *partially consistent*, and *consistent*) for each of the seven features. Two observations stand out. First, people are far from completely consistent. Indeed, the percentage of participants

Table 2. Percentage of participants assigned to each of the consistency categories

	Inconsistent	Partially consistent	Consistent
What did you do?	32	28	40
What time?	44	22	34
Who was there?	23	27	49
Where were you?	19	36	45
Before?	33	18	49
After?	40	22	38
Other significant details (such as reasons for remembering)?	42	8	50

who were judged to be entirely consistent did not rise above 50% for any of the seven features. Second, if we examine the inconsistent column of Table 2, there is clearly some degree of variability across the seven alibi features. In particular, note that 44% of participants were inconsistent about the timing of the events of the afternoon, while only 19% were inconsistent about where they were. Put another way, people are more likely to be wrong about the *when* compared to the *what*.

Memory Characteristics

We next examined whether participant's degree of consistency was correlated with their Session 1 and/or their Session 2 memory characteristic ratings. To answer this question, we first calculated an overall consistency score by summing participants' scores for each of the seven features of their alibi (range = 0–14). At Session 1 we found no significant correlations with any of the measures (all p 's > .05). However, at Session 2, we found that consistency was correlated with almost all of the memory characteristics we measured. That is, participants who were judged to be more consistent were more confident in their alibi ($r = .39, p < .01$), were more likely to feel like they were reliving the events of the afternoon in question ($r = .37, p < .01$), were more likely to claim to recall the details of their alibi vividly ($r = .40, p = .01$), and showed some tendency to claim that they had a better quality narrative of the events of the afternoon ($r = .19, p = .12$). Indeed, we also found that the more consistent participants

were the more likely they were to say they remembered the event, rather than simply knew the details of what had happened ($r = .43, p < .01$). In addition, we know from prior research that as time passes we tend to “see” our experiences through an observer's perspective, rather than through our own eyes (see, e.g., Sporer & Kuepper, 2004; Sporer & Sharman, 2006). Here, we found that the more consistent people were, the more they tended to see the event through their own eyes ($r = .39, p < .01$), suggesting that little distancing from the event had occurred over time for those participants.

Quality of Evidence

We next turn to our subsidiary questions. Recall that a second set of independent judges rated the believability of the alibi evidence. Table 3 displays the average believability rating for participants whom judges assessed as having each level of person and physical evidence to support their alibi. There are four points to note about these data. First, in row 1, cell 1, participants who could not generate any physical or person evidence were most common (47.1% of participants). For these cases, the judges gave the alibi memory an average believability rating of 24%. Second, simply being able to provide easy to fabricate physical evidence (which happened in seven instances) increased the average believability rating to 39%, however, this increase was not significant, $t(38) = 1.32, p = .09$. Third, no participant was able to provide the support of the ideal “non-motivated stranger” (see Culhane & Hosch, 2004; Culhane, Kehn, et al., 2008). Finally, these data support Olson and Wells (2004) predicted pattern: alibis that contained no person or physical evidence received low believability ratings (row 1, cell 1), while an alibi that contained evidence from a non-motivated familiar other and difficult to fabricate physical evidence (row 4, cell 3) was judged most believable.

We next conducted a logistic regression to determine what type of evidence predicted judges' independent believability ratings. We found that having *people* evidence did not predict believability, $\chi^2 < 1$, however, having physical evidence did, $\chi^2(2, N = 70) = 28.32, p < .01, d = 1.65$. Interestingly, there was no relationship between participants' own estimates of the believability of their alibi and independent judges ratings of the alibi's believability, $r = .16, p = .18$.

Table 3. The average independent believability ratings as a function of the type of evidence participants provided in Session 2 (frequency in parentheses)

People evidence	Physical evidence		
	None	Easy to fabricate	Difficult to fabricate
None	24% (30)	39% (7)	77% (3)
Motivated familiar other	23% (14)	53% (8)	74% (5)
Non-motivated stranger	0% (0)	0% (0)	0% (0)
Non-motivated familiar other	10% (1)	25% (1)	85% (1)

Follow-up Questions at Session 2

Finally, we turn to the additional questions we asked participants at the conclusion of Session 2. First, despite the fact that 45% of participants (33 of 70) provided no evidence to support their alibi whatsoever, participants still tended to claim that it was relatively easy for them to verify their alibi story ($M = 4.65$, $SD = 1.95$). This result suggests participants failed to grasp how important that evidence would be to their perceived believability. Paradoxically, participants also thought it would be somewhat easy to fake the type of evidence that they were able to provide ($M = 4.38$, $SD = 1.91$). Finally, the whole experience left our participants undecided about whether they would be more or less likely to trust alibi witnesses in the future ($M = 3.56$, $SD = 1.37$).

Discussion

Recall that we had two main aims in this study: determining (a) whether there are particular features of an alibi that are more likely to produce consistency errors than others; and (b) whether consistency in alibi stories is correlated with particular phenomenological aspects of the alibi that investigators might easily ask about. Overall, we found that inconsistencies in alibi stories appear to be the norm rather than the exception. That is, regardless of the aspect of the alibi in question, no more than 50% of participants were ever judged to be consistent over our two sessions. However, there was some variation across the different categories. In particular, people were most likely to make errors when asked to estimate exactly *when* events had occurred. Our results here echo a classic autobiographical memory study. For 6 years, Wagenaar (1986) kept records of his life. He wrote down roughly one event a day, paying particular attention to the basic attributes *who*, *what*, *where* and *when*, along with a key detail about the experience. Then after a long delay (between 1 and 5 years) a colleague randomly selected events for Wagenaar to recall, as well as the cue he was to use. For example, given the cue *when* his task was to recall *who*, *where*, and *what*. Ultimately, Wagenaar found that the probability of recall increased the more cues he was given. For our purposes, however, the most important finding was that “*when*” was the least helpful starting point. He was rarely able to recall an event given only information about when it occurred; thus, we should not be surprised at the frequency of consistency errors when people are asked: “What were you doing on the afternoon of July 17?”

Why are these errors so common? Simply put, we are more likely to accurately recall events that were more detailed at the time of encoding. Unfortunately, studies where people are asked to keep diaries of their activities consistently show that people are more likely to encode the details of *unusual events* rather than mundane events (Brewer, 1988; Friedman, 2004; Skowronski, Betz, Thompson, & Shannon, 1991; Thompson, Skowronski, Larsen, & Betz, 1996). Thus, the likelihood of accurately

remembering where you were and what you were doing during a discrete time period is inevitably linked to whether there was anything significant about that time period; and, importantly, we spend much of our time engaged in mundane, unimportant, tasks. Put another way, if the information was never encoded it cannot possibly be recalled regardless of consequences that only become apparent later on.

We also found that participants' consistency affected almost all of the phenomenological characteristics we asked them to consider, but only at Session 2. That is, people who judges evaluated as *more* consistent at Session 2 rated themselves as more confident than those who were evaluated as less consistent. They also recollected the event in more detail, considered their memory to be more vivid, were more likely to claim to remember the event, and were more likely to “see” the events from their own eyes. Put another way, having time to consider the accuracy of their alibi affected their perceptions of their own memory report. These kinds of changes in the phenomenological qualities of memories are normal (see Peace & Porter, 2004; Rubin et al., 2003; Sporer & Kuepper, 2004; Sporer & Sharman, 2006; Takarangi & Strange, 2010; Talarico & Rubin, 2003). Unfortunately, it does suggest that there is no simple means of predicting at the time an alibi is offered whether that alibi is likely to change over time.

There are, of course, limitations to our results. First, since we do not know the ground truth of our participant's experiences we can only assume that participants followed our instructions and that the process of seeking evidence to support their alibi led participants to become more accurate over time. However, it is always possible that they were instead less accurate at Session 2, or were simply more cautious offering barely any detail. Regardless, since investigators, prosecutors, and ultimately jurors tend to use consistency as a proxy for accuracy, what really happened might be less important here (see Culhane & Hosch, 2012). Indeed, our results demonstrate that consistency *should not* necessarily be used as a proxy for accuracy. That is, sometimes a mistake really does not indicate any attempt to obfuscate the truth. Of course, future studies could look at staging an event so that participant's true alibis are known. It might also prove fruitful to examine the phenomenological characteristics of the different parts of the alibi rather than the alibi as a whole. We also think it might be interesting to determine whether audio or video recordings of alibis affect the believability ratings compared to written statements. In addition, based on the results of diary studies examining autobiographical memory we assume that inconsistencies in participants' alibis would be less likely if they were asked about a more recent time period (e.g., Brewer, 1988; Friedman, 2004; Skowronski et al., 1991; Thompson et al., 1996). Indeed, as described earlier, law enforcement officers also believe that time may play a critical role in the accuracy of an alibi (Dysart & Strange, 2012). Future research could consider the relative likelihood that people are inconsistent when asked to provide an alibi for a recent versus a distant time period. Importantly, compared to someone who is actually suspected of committing a crime, our participants may not have been

as motivated to find evidence to support their alibi. While certainly a plausible factor in our results, if people kept comprehensive records of where they were and what they were doing, motivation to find evidence would not be required. Thus our basic point remains: our memories are not perfect and thus inconsistencies should be expected.

In summary, providing an alibi is a simple test of our memory, a test we will often fail because our memory system is not designed to catalog what we do minute by minute, day by day. Our results here, and the wider literature on memory distortion, should lead police, prosecutors, and jurors to think twice before citing inconsistencies in an alibi as incontrovertible proof of lying and thus guilt.

References

- Allison, M., & Brimacombe, C. A. E. (2010). Alibi believability: The effect of prior convictions and judicial instructions. *Journal of Applied Social Psychology, 40*, 1054–1084. doi: 10.1111/j.15591816.2010.00610.x
- Allison, M., Mathews, K. R., & Michael, S. W. (2012). Alibi believability: The impact of salacious alibi activities. *Social Behavior and Personality, 40*, 605–612.
- Benton, T. R., Ross, D. F., Bradshaw, E., Thomas, W. N., & Bradshaw, G. S. (2006). Eyewitness memory is still not common sense: Comparing jurors, judges and law enforcement to eyewitness experts. *Applied Cognitive Psychology, 20*, 427–443.
- Brewer, W. F. (1988). Qualitative analysis of the recalls of randomly sampled autobiographical events. In M. M. Gruneberg, P. E. Morris, & R. N. Sykes (Eds.), *Practical aspects of memory: Current research and issues* (Vol. 1, pp. 263–268). Chichester, UK: Wiley.
- Burke, T. M., & Turtle, J. W. (2003). Alibi evidence in criminal investigations and trials: Psychological and legal factors. *The Canadian Journal of Police & Security Services, 1*, 286–294.
- Burke, T. M., Turtle, J. W., & Olson, E. A. (2007). Alibis in criminal investigations. In M. P. Toglia, J. D. Read, D. F. Ross, & R. C. L. Lindsay (Eds.), *The handbook of eyewitness psychology, Vol. 1: Memory for events* (pp. 157–174). Mahwah, NJ: Erlbaum.
- Culhane, S. E., & Hosch, H. M. (2012). Changed alibis: Current law enforcement, future law enforcement and layperson reactions. *Criminal Justice and Behavior, 39*, 958–977.
- Culhane, S. E., & Hosch, H. M. (2004). An alibi witness's influence on juror verdicts. *Journal of Applied Social Psychology, 24*, 1604–1616. doi: 10.1111/j.1559-1816.2004.tb02789.x
- Culhane, S. E., Hosch, H. M., & Kehn, A. (2008). Alibi generation: Data from U.S. Hispanics and U.S. non-Hispanic whites. *Journal of Ethnicity in Criminal Justice, 6*, 177–199. doi: 10.1080/15377930802243395
- Culhane, S. E., Kehn, A., Horgan, A. J., Meissner, C. A., & Hosch, H. M. (2008, March). *Consistency in alibi generation: Data for true and false alibis*. Paper presented at the annual meeting of the American Psychology-Law Society Jacksonville, FL.
- Dahl, L. C., Brimacombe, C. A. E., & Lindsay, D. S. (2009). Investigating investigators: How presentation order influences participant-investigators' interpretations of eyewitness identification and alibi evidence. *Law and Human Behavior, 33*, 368–380. doi: 10.1007/s10979-008-9151-y
- Dysart, J. E., & Strange, D. (2012). Beliefs about alibis and alibi investigations: A survey of law enforcement. *Psychology, Crime and Law, 18*, 11–25. doi: 10.1080/1068316X.2011.562867
- Friedman, W. J. (2004). Time in autobiographical memory. *Social Cognition, 22*, 605–621. doi: 10.1521/soco.22.5.591.50766
- Kassam, K. S., Gilbert, D. T., Swencionis, J. K., & Wilson, T. D. (2009). Misconceptions of memory: The Scooter Libby effect. *Psychological Science, 20*, 551–552.
- Kassin, S. M., & Gudjonsson, G. H. (2004). The psychology of confessions: A review of the literature and issues. *Psychological Science in the Public Interest, 5*, 33–67. doi: 10.1111/j.1529-1006.2004.00016.x
- Loftus, E. F., & Ketcham, K. (1994). *The myth of repressed memory*. New York, NY: St Martin's Press.
- McAllister, H. A., & Bregman, M. J. (1989). Juror underutilization of eyewitness nonidentifications: A test of the disconfirmed expectancy explanation. *Journal of Applied Social Psychology, 19*, 20–29. doi: 10.1111/j.1559-1816.1989.tb01218.x
- Neisser, U., & Harsch, N. (1992). Phantom flashbulbs: False recollections of hearing the news about Challenger. In E. Winograd & U. Neisser (Eds.), *Affect and accuracy in recall* (pp. 9–31). New York/London: Cambridge University Press.
- Olson, E. A., & Charman, S. D. (2012). “But can you prove it?” Examining the quality of innocent suspects' alibis. *Psychology, Crime, and Law, 18*, 453–471. doi: 10.1080/1068316X.2010.505567
- Olson, E. A., & Wells, G. L. (2004). What makes a good alibi? A proposed taxonomy. *Law and Human Behavior, 28*, 157–176. doi: 10.1023/B:LAHU.0000022320.47112.d3
- Olson, E. A., & Wells, G. L. (2012). The alibi-generation effect: Alibi-generation experience influences alibi evaluation. *Legal and Criminological Psychology, 17*, 151–164. doi: 10.1111/j.2044-8333.2010.02003.x
- Peace, K. A., & Porter, S. (2004). A longitudinal investigation of the reliability of memories for trauma and other emotional experiences. *Applied Cognitive Psychology, 18*, 1143–1159. doi: 10.1002/acp.1046
- Rubin, D. C., Schrauf, R. W., & Greenberg, D. L. (2003). Belief and recollection of autobiographical memories. *Memory & Cognition, 31*, 887–901.
- Sargent, M. J., & Bradfield, A. L. (2004). Race and information processing in criminal trials: Does the defendant's race affect how the facts are evaluated? *Personality and Social Psychology Bulletin, 30*, 995–1008. doi: 10.1177/0146167204265741
- Skowronski, J. J., Betz, A. L., Thompson, C. P., & Shannon, L. (1991). Social memory in every-day life: Recall of self-events and other-events. *Journal of Personality and Social Psychology, 60*, 831–843.
- Sommers, S. R., & Douglass, A. B. (2007). Context matters: Alibi strength varies according to evaluator perspective. *Legal and Criminological Psychology, 12*, 41–54. doi: 10.1348/135532506X114301
- Sporer, S. L., & Kuepper, B. (2004). Reality monitoring and the judgment of the truthfulness of accounts and experimental study. *Zeitschrift für Sozialpsychologie, 26*, 173–193.
- Sporer, S. L., & Sharman, S. J. (2006). Should I believe this? Reality monitoring of accounts of self-experienced and invented recent and distant autobiographical events. *Applied Cognitive Psychology, 20*, 837–854. doi: 10.1002/acp.1234
- Takarangi, M. K. T., & Strange, D. (2010). Emotional impact feedback changes how we remember negative autobiographical experiences. *Experimental Psychology, 57*, 354–359. doi: 10.1027/1618-3169/a000042

- Talarico, J. M., & Rubin, D. C. (2003). Confidence, not consistency, characterizes flashbulb memories. *Psychological Science, 14*, 455–461. doi: 10.1111/1467-9280.02453
- Talarico, J. M., & Rubin, D. C. (2009). Flashbulb memories result from ordinary memory processes and extraordinary event characteristics. In O. Luminet & A. Curci (Eds.), *Flashbulb memories: New issues and new perspectives* (pp. 79–97). New York, NY: Psychology Press.
- Thompson-Cannino, J., Cotton, R., & Torneo, E. (2009). *Picking cotton: Our memoir of injustice and redemption*. New York, NY: St Martin's Press.
- Thompson, C. P., Skowronski, J. J., Larsen, S. F., & Betz, A. (1996). *Autobiographical memory: Remembering what and remembering when*. Hillsdale, NJ: Erlbaum.
- Wagenaar, W. A. (1986). My memory: A study of autobiographical memory over six years. *Cognitive Psychology, 18*, 225–252. doi: 10.1016/0010-0285(86)90013-7
- Wells, G. L., Memon, A., & Penrod, S. D. (2006). Eyewitness evidence: Improving its probative value. *Psychological Science in the Public Interest, 7*, 45–75.

Deryn Strange

John Jay College of Criminal Justice
Department of Psychology
524 West 59th St.
New York, NY, 10019
Tel. +1 212 484 1345
E-mail dstrange@jjay.cuny.edu
