Tall Tales Across Time: Narrative Analysis of True and False Allegations

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Abstract

Little consensus exists regarding how the details of truthful and false allegations of traumatic victimisation may change over short and long time intervals, yet this cue is utilised in the assessment of witness, victim and suspect credibility. The present study involved a narrative analysis of the details written within 147 sets of allegation statements across both short-term (~3 months) and long-term (~6 months) intervals. Overall results indicated that true allegations contained more consistent details, omissions and commissions, although the rates of change over time were variable. These changes appear to result from natural variations in memory and recall over time. However, direct contradictions (inconsistent details) were more prevalent in false allegations, and these claims were more stable over time, suggesting ‘script-like’ processing. These results have implications for our understanding of testimonial alterations and how determinations of veracity are influenced by statement details. Copyright © 2014 John Wiley & Sons, Ltd.

Key words: false allegations; narrative analysis; deception; memory; credibility

In forensic contexts, perceptions of truth are often shaped by factors not associated with the veracity of the event itself. In particular, statements produced by victims, witnesses and suspects on multiple occasions (and how these may change over time) often are critical in determining the credibility of an allegation (Fisher, Vrij, & Leins, 2013; Peace & Porter, 2011). There are often lengthy delays between the experience or allegation of a criminal event and the testimony at trial (Euale & Turtle, 1999), and substantiating evidence may be lacking (Porter, Campbell, Birt, & Woodworth, 2003), resulting in even greater emphasis on the features of narrative recall. Such cases present significant challenges to the criminal justice system (Porter, Peace, Douglas, & Doucette, 2012). In reality, the ‘that’s not what you said before’ phenomenon occurs when contradictions, as well as added (commissions) or left out details (omissions), are interpreted as indicative of deception, and the credibility of the individual testifying is subsequently reduced (Fisher & Cutler, 1995;...
Fisher et al., 2013; Malloy & Lamb, 2010). Research has demonstrated that jurors are less likely to believe statements found to have any type of inconsistency (Brewer, Potter, Fisher, Bond, & Luszcz, 1999) and that testimonial inconsistency undermines credibility (Brewer & Burke, 2002). Given that false allegations of criminal events fluctuate in prevalence and form (Lisak, Gardinier, Nicksa, & Cote, 2010), research must better address the characteristics of truthful and deceptive allegations over time and how these vary in regard to their consistency (Peace & Porter, 2011) and narrative form to prevent miscarriages of justice. As such, the focus of the present study was to provide a narrative analysis of true and false allegations of victimisation over both short-term and long-term time intervals.

In general, the levels of consistency for genuine accounts of trauma have ranged from 48% to 85% (Christianson & Engelberg, 1999; Peace & Porter, 2004, 2011; Southwick, Morgan, Nicolaou, & Charney, 1997). Further, memories of traumatic events may involve commissions (details not previously mentioned) and omissions (details left out) upon subsequent recalls (Southwick et al., 1997). However, these findings and estimates often are based on whether a victim responds in the same manner to questioning on multiple occasions, rather than the content of their statements and recollections concerning a criminal event. In addition, longer intervals between traumatic experiences and recall typically have been associated with memory impairment and subsequent decreases in consistent reporting of memory details (Schmolck, Buffalò, & Squire, 2000; Talarico & Rubin, 2003). However, some studies have demonstrated that traumatic events may be retained relatively consistently over time (Peace & Porter, 2004; Porter & Peace, 2007). For example, Yuille and Cutshall (1986) conducted a rare in situ investigation of the nature of eyewitness accuracy and consistency of details with a sample of witnesses to a robbery and homicide. In comparing initial police reports with researcher interviews regarding the criminal events, eyewitnesses provided highly consistent and accurate information over a 4- to 5-month time interval. Specifically, participants were able to recall action, person and object details at an overall consistency rate of 81.56%. These reports also were associated with many omissions and commissions, which reduced the overall appearance of consistent recall despite a relatively high level of remembrance (Yuille & Cutshall, 1989). Collectively, studies indicate that genuine traumatic experiences have a demonstrable resiliency to drastic impairments in recall; however, details may fade (omissions) or vary over time (commissions) leading to variations in recall and perceived inconsistencies (Alexander et al., 2005; Porter & Peace, 2007; Yuille & Cutshall, 1986, 1989).

Consistency and credibility

Although research on memory consistency has reinforced the notion that ‘perfectly correct remembrance is not the rule but the exception’ (Stern, 1902, p. 327), the criminal justice system tends to respond differently when evaluating victim, witness and suspect statements (Brewer et al., 1999; Fisher et al., 2013). For example, Bell and Loftus (1989) had mock-jurors attempt to determine the veracity of witness testimonies based on court transcripts and summaries and reported that testimonies containing more inconsistencies within and across interviews were judged as the least credible. Conversely, the most believable testimonies were those that were rich in detail (for both relevant and non-relevant information), as well as consistent across previous periods of questioning. This finding is congruent with other research that has focused on the credibility of individuals in forensic settings (Berman & Cutler, 1996). For example, Brewer et al. (1999) found that higher levels of inconsistencies (contradictions, omissions and commissions) between initial
reports and the most recent recollections (i.e. within the courtroom) were associated with increased ratings of witness inaccuracy. That is, higher levels of inconsistent responses at the trial, compared with the responses at the time of initial questioning, were perceived by mock jurors as indicative of eyewitness errors and decreased the credibility of the witness (Brewer et al., 1999). Collectively, these and other studies demonstrate that how an individual reports criminal events across occasions influences perceptions of how credible a witness is (Fisher et al., 2013), yet few studies have directly examined how truthful and false allegations of trauma are reported over short-term and long-term intervals (Peace, Brower, & Shudra, 2012).

Despite the lack of empirical research in this area, several perspectives have been suggested on the retention and reporting of truthful and deceptive experiences. For example, Polage (2004) argued that the consistency of deceptive testimony should decrease over time in comparison with truthful statements, reflecting a sort of ‘fabrication deflation’. These deflation effects appear to be especially true for central, salient details within the fabrications, resulting in less believable depictions (Undeutsch, 1989). For someone fabricating a traumatic event, repeated retellings may result in increasing elaborations over time, such that recent reports would no longer resemble the initial claim and contain inconsistencies in the form of both contradictions and commissions (Mazzoni & Memon, 2003; Peace, 2006). In a review of the literature on source monitoring, Johnson, Hashtroudi, and Lindsay (1993) noted a number of studies where allowing a person to ‘fine-tune’ their lies can result in increasingly exaggerated descriptions with more recollections of the story. Furthering this idea, Porter, Peace, and Emmett (2007) examined the characteristics of truths and lies and found that liars tended to exaggerate the severity of their traumas, leading to inconsistencies across reports. More recently, Peace and Porter (2011) reported that overall levels of consistency (as assessed by direct responses to several consistency questions) for fabricated claims of trauma decreased over time, whereas consistency in truthful trauma statements remained relatively the same across subsequent recalls. Another perspective is that true and false allegations should be equally consistent over time (Granhag, Strömwall, & Jonsson, 2003). Vrij (2008) explains how there is a large cognitive load associated with lying and that the liar must be able to keep all of the details organised in memory. Given the complexity of this task, he postulated that liars will show an initial decrease in consistency because of the cognitive load, followed by a gradual levelling-off with repeated rehearsals and practice. For genuine traumatic experiences, the reconstructive nature of memory may correspond to increases or decreases in the amount of details, or even complete changes amongst the details (Laney & Loftus, 2013; Loftus, 2003; Turtle & Yuille, 1994). As such, these changes would also lead to eventual decrements in the level of consistent details, and alterations in omissions and commissions for truthful traumatic memories. For example, in a study by Granhag and Strömwall (2002), deception was examined through verbal and nonverbal cues across multiple recall sessions. After viewing a mock crime, participants were instructed to give truthful or deceptive reports of the incident during three separate ‘interrogations’ over 11 days. Although truthful reports were associated with more words and richness of detail initially, there was no difference between truthful and fabricated reports in terms of consistency, indicating similar rates of change. It is possible that a ‘synthesis of experiences’ over time is the mechanism responsible for the gradual decline in differences between truthful and fabricated reports (Loftus, 2003). The final perspective is that deceptive events may be reported more consistently than genuine events; thus, statement quality would vary accordingly. In fact, liars may pay more attention to the content of what they are saying
when making a false allegation, knowing that they will need to recall these details again. This could result in a script-like or rote recitation of the deceptive event (Anderson, Cohen, & Taylor, 2000; Granhag & Strömwall, 2002). Further, liars labour under the challenge of trying to appear truthful (Vrij, 2008), where providing consistent recalls is one of the widely believed signs of truthfulness and memory accuracy (Brewer et al., 1999; Desmarais & Read, 2011). In contrast, narratives of truthful events are based on memory and may change more in structure because of natural variations in recall (Parker & Brown, 2000).

The current study

The present study was designed to provide a narrative analysis of statements of genuine traumas and false allegations of victimisation across both short and long reporting intervals. Although many studies have examined consistency via assessing responses to specific questions (Peace & Porter, 2011; Southwick et al., 1997), few provide such a detailed assessment of statement content. On the basis of previous research (Alexander et al., 2005; Peace & Porter, 2011; Porter & Peace, 2007; Vrij, 2008), we predicted the following: (1a) truthful narratives of trauma would contain more detail overall than fabricated trauma narratives, although (1b) the total amount of detail of both should decrease between the short and long intervals because of natural forgetting (Loftus, 2003); (2a) truthful allegations would contain more consistent details than deceptive claims across both intervals, but (2b) the level of consistent details for truths will decrease between the short and long intervals more so than for lies; (3a) fabricated narratives will show higher levels of inconsistent/contradictory details overall relative to truths based on evidence that fabricated events place a large burden on cognitive capacities (Vrij, 2004), and (3b) contradictions will increase between the short and long intervals more for lies than for truths; (4a) omissions will be more prevalent in fabricated narratives and (4b) will increase between the short and long intervals for both report types; and finally, (5a) commissions will be more prevalent in truthful claims overall and (5b) will increase for both truthful and deceptive narratives between the short and long intervals because of memory malleability (Polage, 2004; Porter et al., 2007; Southwick et al., 1997).

METHOD

Participants

The present study involved coding narratives (N = 147) that were produced for the purposes of previous research (see Peace & Porter, 2011).¹ The original sample involved undergraduate participants who were recruited to provide both truthful and fabricated accounts of traumatic victimisation at three time intervals. Participants reported truthful traumatic experiences that had occurred within 1 year prior to participation (to avoid childhood memory biases and confounds) and were instructed to fabricate a claim of traumatic victimisation from during the same period. Participants were recruited on the basis of their experience of negative/traumatic events and pre-screened for a moderate to high level of traumatic impact

¹Note: Analysis of consistency in the original manuscript was based on responses to direct questions on a 23-item consistency questionnaire and coded on a 4-point Likert scale ranging from fully inconsistent to fully consistent. These data were not analysed in the present study; rather, the details of the narrative allegations were analysed according to whether they were consistent, inconsistent, omitted or added between retellings over a short versus long interval.
from the genuine event (see Peace, 2006). Whilst ground truth could not be definitively established and corroboration was not sought, given that participants were recruited on the basis of traumatic events, we have no reason to doubt these experiences as legitimate. Deceptive experiences were explained to participants in that they cannot be based on real events experienced by themselves or people they know and that their task was to produce plausible but fabricated claims that would be assessed by legal professionals (see Peace & Porter, 2011).

Of the original sample, 147 sets of narratives were selected on the basis of proper completion of all three phases of the initial experiment (including reports longer than 100 words) in order to enable researchers to evaluate the short-term (time 1 [T1] to time 2 [T2]) and long-term (T1 to time 3 [T3]) intervals. Each set contained narratives written at all three time intervals, and of both narrative types (truthful and fabricated), for a total number of 294 narratives coded for the present study. The mean number of days for the short interval was 91.60 days ($SD=12.46$), and the mean number of days for the long interval was 163.03 days ($SD=10.86$). The narratives were produced by 113 (76.9%) women and 34 (23.1%) men, with a mean age of 19.74 years ($SD=2.37, range=17–33$).

The types of traumatic victimisation reported (independent of veracity) involved criminal events such as thefts or physical violence, accidents/injuries, death of a loved one, relationship issues, and medical conditions and serious injuries.

**Design**

The design of this study was a 2 (narrative type: truthful versus fabricated) × 2 (time interval: short and long) within-subjects repeated measures multivariate design, with the main dependent variables being measures of total details, consistent details, inconsistent/contradictory details, omissions and commissions.

**Materials and procedure**

The **memory assessment procedure (MAP)** has been used in previous research as an objective coding measure of autobiographical memories and narratives (e.g. Peace & Porter, 2004, 2011; Porter et al., 2007; Porter, Yuille, & Lehman, 1999). The MAP quantifies the content of narratives according to a set of arbitrary criteria, such as the amount of detail, emotional details, coherence, and time and place details. Initial assessment of the narratives involved utilising the amount of detail criterion to code for specific details present in each narrative (truthful and fabricated) at each time interval. This criterion involves determining each distinctive piece of information provided in the statements. For example, the sentence ‘I walked in the woods behind the red house’ contains five details.

In order for each statement to be coded in a detailed fashion, not only were the total number of details in all reports tallied, but also individual details were listed in a spreadsheet file and later compared with those mentioned at T2 (short interval: 3 months later) and T3 (long interval: 6 months later) for each narrative. Our focus was comparison between initial and long-term reports in the present study, rather than changes in retellings in the interim as these are of less focus for judges and jurors in court (Fisher et al., 2013). Each detail was compared utilising our **consistency coding scheme (CCS)**, which broke down reports into categories of consistent details, inconsistent details (contradictions), omissions and commissions (added details). Details were coded as being consistent (and scored as 1 point) if the same information, or semantic representation of that information, was presented during both recalls for the short or long intervals. These were then tallied...
according to the raw number of details that were labelled as ‘consistent’. Inconsistent details were scored (1 point each) when information from two of the recall sessions was contradictory (i.e. conflicting information or discrepancy such as ‘it was a Tuesday night’ versus ‘it occurred on a Wednesday night’). Narrative details from each time were coded as omissions (1 point per detail) when information provided at the initial recall was not present during either short-term or long-term follow-up session. Finally, commissions were coded (1 point each) when participants mentioned information during the short-term or long-term follow-up recalls that were not present in the original narrative. Similar coding procedures that examine consistent and inconsistent details (or contradictions), as well as omissions and commissions, have been reliably used in previous research (e.g. Alexander et al., 2005; Talarico & Rubin, 2003; Yuille & Cutshall, 1986).

All coders were undergraduate research assistants trained across several sessions on utilising the MAP criteria as well as the CCS, including detailed instructions, examples, review and dual coding to resolve any inconsistencies and address any questions. Coders were blind to the narrative type (truth versus lie) that they were assessing, as well as the hypotheses of the current study. Interrater reliability using Cohen’s kappa for the MAP coding was $K=0.83$ and $K=0.87$ for the CCS, both of which were highly acceptable for the purposes of comparison and in line with previous studies utilising similar measures (Peace & Porter, 2011).

RESULTS

Allegation detail

In order to examine differences in truthful and fabricated narratives as a function of time, the total number of details in reports at each time interval was tallied. Within truthful narratives, the mean number of details across time was 225.22 details ($SD=118.38$) at T1, 156.76 details ($SD=97.49$) at T2 and 134.54 ($SD=82.18$) at T3. For fabricated narratives, the mean number of details at T1, T2 and T3 were 179.54 ($SD=97.81$), 117.10 ($SD=65.98$) and 107.39 ($SD=59.00$), respectively. To test for any main effects or interactions on the number of details reported over time and across memory types, a 2 (narrative type: truthful versus fabricated) × 3 (time: T1, T2 and T3) repeated measures analysis of variance (ANOVA) was conducted. This analysis revealed a main effect of narrative type, $\lambda=0.83$, $F(1, 146)=29.69$, $p<0.001$, $\eta^2_p=0.17$; a main effect of time, $\lambda=0.46$, $F(2, 145)=86.94$, $p<0.001$, $\eta^2_p=0.55$; and a narrative type × time interaction, $\lambda=0.94$, $F(2, 145)=4.52$, $p<0.05$, $\eta^2_p=0.06$. Simple effects analyses indicated that truthful narratives ($M=172.18$, $SE=7.13$) contained a greater number of overall details relative to fabricated narratives ($M=134.68$, $SE=5.24$; $p<0.001$). Further, the total number of details decreased significantly (all $p$’s < 0.001) across T1 ($M=202.38$, $SE=7.32$), T2 ($M=136.93$, $SE=5.73$) and T3 ($M=120.96$, $SE=4.87$), with the greatest difference between total details reported at T1 versus T3 ($F(1, 146)=174.57$, $p<0.001$, $\eta^2_p=0.55$). The interaction term revealed that whilst both truthful and fabricated narratives decreased the most in detail between T1 and T2, fabricated narratives ($t(146)=3.02$, $p<0.005$) tended to ‘level off’ over the next interval (i.e. only decreasing 10 details on average) more so than truthful narratives ($t(146)=4.80$, $p<0.001$) over the extended interval ($F(1, 146)=7.66$, $p<0.005$, $\eta^2_p=0.05$; see Figure 1).
Consistent and inconsistent details

In order to evaluate the extent to which the details remain consistent over time, a 2 (narrative type: truthful versus fabricated) × 2 (time interval: short and long) repeated measures ANOVA was conducted on the overall number of consistent details (see Table 1 for means and standard deviations across the time intervals). The analysis yielded a main effect of narrative type, $\lambda = 0.74, F(1, 146) = 52.31, p < 0.001, \eta^2_p = 0.26$; a main effect of time interval, $\lambda = 0.87, F(1, 146) = 20.94, p < 0.001, \eta^2_p = 0.13$; and a significant narrative type × time interval interaction, $\lambda = 0.92, F(1, 146) = 13.22, p < 0.001, \eta^2_p = 0.08$. Follow-up simple effects tests revealed that there was a greater number of consistent details for truthful ($M = 58.12, SE = 2.85$) relative to fabricated ($M = 38.07, SE = 1.72$) narratives during both the short ($t(146) = 7.73, p < 0.001$) and long ($t(146) = 6.19, p < 0.001$) intervals. Further, the number of consistent details overall was greater during the short interval ($M = 50.12, SE = 1.96$) than over the extended long ($M = 46.07, SE = 1.94$) interval ($t(146) = 10.32, p < 0.001$). Finally, the narrative type × time interval interaction indicated that the number of consistent details for truthful narratives decreased more over the time intervals relative to fabricated narratives (Figure 2). Specifically, although truths decreased in consistent details significantly between the short and long intervals ($t(146) = 5.20, p < 0.001$), the number of consistent details within lies did not change substantially during this time ($t(146) = 1.31, p > 0.05$).

Similarly, a 2 (narrative type) × 2 (time interval) repeated measures ANOVA also was conducted on the details that were coded as inconsistent (or contradictory) in narratives across the intervals (Table 1). The ANOVA revealed a main effect of narrative type.

![Figure 1](image-url)  
Figure 1. Mean number of details for truthful and fabricated trauma narratives across three recall sessions: initial (time 1), 3 months (time 2) and 6 months (time 3).

| Table 1. Means (and standard deviations) for all detail coding variables for truthful and fabricated narratives across the short (~3 months) and long (~6 months) intervals |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| Detail coding variables | **Truthful** | | **Fabricated** | |
| | Short interval | Long interval | Short interval | Long interval |
| Consistent | 61.51 (36.55) | 54.72 (34.34) | 38.72 (20.88) | 37.41 (22.49) |
| Inconsistent | 4.61 (7.08) | 3.98 (6.89) | 13.56 (17.71) | 13.33 (18.82) |
| Omissions | 159.79 (95.92) | 167.21 (101.48) | 127.32 (82.43) | 128.80 (82.79) |
| Commissions | 90.67 (78.25) | 77.13 (65.66) | 64.88 (49.48) | 57.33 (41.42) |

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$\lambda = 0.78$, $F(1, 146) = 40.52$, $p < 0.001$, $\eta^2_p = 0.22$, but no main effect of time and no significant interaction term. In particular, this analysis reveals that fabricated narratives ($M = 13.45$, $SE = 1.47$) contained significantly more inconsistent details relative to truthful narratives ($M = 4.30$, $SE = 0.54$) at both the short ($t(146) = 6.01$, $p < 0.001$) and long ($t(146) = 6.24$, $p < 0.001$) intervals, and that these did not change substantially with time for truths ($t(146) = 1.58$, $p > 0.05$) or lies ($t(146) = 0.34$, $p > 0.05$).

**Errors of omission and commission**

Additional analyses were conducted to determine the extent to which details were omitted between the time intervals (omissions), as well as how many were added in over time (commissions). To examine errors of omission, a repeated measures ANOVA was performed as a function of narrative type (truthful versus fabricated) and time intervals (short versus long). This analysis yielded a main effect of narrative type, $\lambda = 0.90$, $F(1, 146) = 16.34$, $p < 0.001$, $\eta^2_p = 0.10$; a main effect of time interval, $\lambda = 0.87$, $F(1, 146) = 21.53$, $p < 0.001$, $\eta^2_p = 0.13$; and a narrative type $\times$ time interval interaction, $\lambda = 0.93$, $F(1, 146) = 11.78$, $p = 0.001$, $\eta^2_p = 0.08$. Overall, truthful narratives ($M = 163.50$, $SE = 8.11$) contained a greater number of omissions relative to fabricated narratives ($M = 128.06$, $SE = 6.79$; $p < 0.001$) during both the short ($t(146) = 3.74$, $p < 0.001$) and long ($t(146) = 4.29$, $p < 0.001$) intervals. Further follow-up analyses indicated that the number of omissions increased between the short-term ($M = 143.55$, $SE = 8.11$) and long-term ($M = 148.01$, $SE = 6.19$) intervals overall ($p < 0.001$). However, the interaction term indicated that truthful narratives increased significantly more in the number of omissions across the time intervals ($t(146) = 5.12$, $p < 0.001$), whereas fabricated narratives changed little over time ($t(146) = 1.33$, $p > 0.05$; see Figure 3).

Errors of commission were evaluated using a repeated measures ANOVA, which revealed a main effect of narrative type, $\lambda = 0.86$, $F(1, 146) = 23.17$, $p < 0.001$, $\eta^2_p = 0.14$, and time interval, $\lambda = 0.91$, $F(1, 146) = 14.13$, $p < 0.001$, $\eta^2_p = 0.09$, and an interaction between the two variables that approached significance, $\lambda = 0.98$, $F(1, 146) = 2.94$, $p = 0.08$, $\eta^2_p = 0.02$. Follow-up simple effects tests indicated that truthful narratives ($M = 83.90$, $SE = 5.64$) contained more commissions than fabricated narratives ($M = 61.10$, $SE = 3.51$) during both the short ($t(146) = 4.88$, $p < 0.001$) and long ($t(146) = 4.13$, $p < 0.001$) intervals. In addition, both narrative types decreased in the
number of commissions between the short \((M = 77.77, SE = 4.72)\) and long \((M = 67.23, SE = 3.84)\) intervals, although commissions in truthful narratives \((t(146) = 3.55, p = 0.001)\) decreased more relative to fabricated narratives \((t(146) = 2.79, p < 0.01)\) over the intervals (Figure 4).

**DISCUSSION**

Research has reliably demonstrated that our ability to determine the veracity of a statement is inherently poor (Vrij, Granhag, & Porter, 2010). In a courtroom context, this inability often results in reliance on inaccurate cues to deception, such as testimonial inconsistencies—whether these are contradictions, omissions or added details (Fisher et al., 2013; Peace, Brower, et al., 2012). Although studies have demonstrated that inconsistent testimony by witnesses and victims decreases the perceptions of credibility and increases the belief that the person is lying (e.g. Brewer et al., 1999; Malloy & Lamb, 2010), few studies have conducted a narrative analysis of true and false allegations to determine if these perceptions reflect reality (i.e. Parker & Brown, 2000; Fisher et al., 2013). The present study was designed to address this research question by evaluating the total detail,
consistent and inconsistent/contradictory details, as well as omissions and commissions present in allegation narratives across time.

In line with our first set of predictions, truthful allegations contained more detail relative to false allegations at each of the assessment intervals (1a). Further, the total amount of detail for each type of allegation decreased over time (1b). However, our prediction that decreases in detail would be similarly reflected across truths and lies was only partially correct. Specifically, the number of details present in genuine reports continued to decrease over time whereas fabricated stories ‘levelled off’ in detail, so to speak. Such results reflect the imperfect nature of memory and natural forgetting/fading effects (Loftus, 2003) and confirm previous studies demonstrating that truthful statements tend to be more richly detailed relative to fabricated statements (Peace, Brower, et al., 2012). That said, the amount of detail in fabricated reports likely ‘levelled off’ because of rehearsal strategies used for lies (Vrij, 2008) relative to reliance on memory for recall (and subsequent variations) used for genuine events. These findings also pertain to studies that have reported mock-juror judgments of veracity to be influenced by the richness/completeness of detail provided in witness accounts (Bell & Loftus, 1989). That said, the total amount of detail is only one part of the testimonial story. Although recent research has demonstrated that judges and juries may intuitively understand that memory recollections of criminal events may not always be complete or highly detailed (Desmarais & Read, 2011; Houston, Hope, Memon, & Read, 2013; Steblay & Loftus, 2013), they still rely on inaccurate cues to deception such as testimonial inconsistency (Fisher et al., 2013).

In the present study, examination of the level of consistent and inconsistent details within each type of allegation yielded several interesting outcomes. In support of our next set of predictions, the overall number of consistent details was higher in truthful relative to false allegations across the short and long time intervals (2a). Although these findings correspond to previous research (e.g. Peace & Porter, 2011), our results also indicated that true allegations decreased in the number of consistent details recalled over time, whereas false allegations remained relatively stable (2b). False allegations contained similar levels of consistent details across successive retellings, whereas truthful allegations dropped in their level of consistently mentioned details. This malleability can be explained, in part, by the overwhelming amount of detail recalled in relation to true victimisation in the first place, which was significantly greater than that provided for false allegations (see previous discussions). In short, the more you initially recall, the more room for error/forgetting on subsequent recalls (Turtle & Yuille, 1994). The form of specific coding (i.e. word-semantic based) utilised in this study also could have yielded this effect, where reports seemed ‘less consistent’ because the same details were not mentioned over time (see Fisher et al., 2013, for a discussion of measurements of consistency). In this respect, evaluation of the number of omissions (forgotten details over time) should account for the drop in consistent details. Our results support this interpretation, where true allegations were associated with more omissions relative to false allegations. Therefore, it appears that although true allegations contain more consistent details overall, they are more likely to drop in their level of consistency over time as the number of forgotten details increases. As argued by DePaulo et al. (2003), ‘truth tellers more often take their credibility for granted’ (p. 78); therefore, they may have been less concerned with mentioning the same details each time but reported more facts as recollected from the original experience.

That said, our results were mixed concerning our predictions about inconsistent/contradictory details. False allegations contained more contradictions (inconsistent details) relative to true allegations of victimisation (3a), although neither of these changed over
These findings provide support for Vrij’s (2008) notion that keeping information organised and consistent for fabricated events is a cognitively complex task. Interestingly though, false allegations contained similar levels of inconsistent details independent of recall time (i.e. once introduced, the contradictory information was reported across both the short and long intervals). Although it is possible that participants merely neglected to give mention to any ‘questionable’ details that they were unsure of, and only disclosed those details for which they were more certain they had mentioned during their initial false allegation, the lack of change in inconsistent details does not support this interpretation. If anything, we should see greater omissions evidenced in this case (i.e. participants leave out details that they are not confident in lying about in order to avoid contradicting themselves). However, this pattern was not revealed in our results. In fact, contrary to our prediction, truthful narratives contained more omissions overall (4a), and these increased over time but more so for truths (4b). Taken together with the aforementioned results that consistent details did not vary across time for false claims, this pattern of results suggests that the ‘trauma-script’ interpretation of how deceptive stories are told over time is applicable (Anderson et al., 2000). In particular, it appears that false allegations contain a more rehearsed quality, where the seed of the lie is consistently told although some of the surrounding details may change over time, leading to inconsistently reported information and some omissions but not more so than those sourced from pure recollection versus memory of a previous episode of lying.

Finally, our predictions in relation to commissions were only partially supported. Our results did yield a higher number of commissions (added details not previously mentioned) for true allegations across the short and long intervals (5a), although less (relative to more) commissions were evidenced for both narrative types over the long-term interval (5b). Although we predicted that commissions would be prevalent in both allegation types, truthful claims contained significantly more added details. Again, these findings appear to reflect the reconstructive nature of genuine recall across successive episodes (Loftus, 2003). That said, although the details were changing in truthful narratives (similar to memory amplification demonstrated in other studies; Harder & Peace, 2011; Turtle & Yuille, 1994), this does not necessarily mean that these details are inaccurate. Thus, jurors who are looking for the exact same testimony given on multiple occasions will likely misinterpret true allegations as deceptive (Fisher et al., 2013). Further education of legal professionals concerning the nuances and variations in genuine recall may aid in preventing these assumptions from being made (Desmarais & Read, 2011; Houston et al., 2013).

Although the present study has yielded many interesting effects and should prompt the need for further examination of testimonial consistency with respect to narrative analysis of the details of the claims themselves (rather than just the perceptions of such consistency/inconsistency; Brewer et al., 1999), it is not without limitations. The allegations utilised in the present study were generated by undergraduate students for research purposes and may vary drastically from those produced by victims, witnesses and suspects in real-world high-stakes settings (Vrij et al., 2010). That said, studies using allegations or claims produced in criminal contexts have not reported that false allegations are less consistent relative to truthful claims (e.g. Parker & Brown, 2000), although these studies focus on truth criteria and deception cues more generally. Further, the motivation of participants in such laboratory studies often is limited (Yuille, Cooper, Hérve, & Evans, 2013), although measures are frequently taken to remedy this (i.e. in the present study, participants were told that their claims would be assessed by police officers and judges). Finally, it is possible that the false allegations produced by participants were variants of truthful
experiences that they had experienced (Laney & Loftus, 2013), which would alter the interpretation of our results, although this is unlikely given the method of recruitment and instructions. In all of these regards, narrative analysis of a sample of allegations made to police (confirmed to be genuine or deceptive) would be of value in aiding our understanding of testimonial consistency over time. Other factors also would be beneficial to include in such analyses, such as the level of suggestibility of the statement provider (Kaasa, Cauffman, Clarke-Stewart, & Loftus, 2013), the degree of emotionality surrounding the crime or present in the claim (Peace, Porter & Almon, 2012) and the extent to which the reports appear plausible or are bizarre in nature (Peace, Brower, & Rocchio, 2014). Each of these could have significant influences on perceptions of credibility. In addition, examination of narrative reporting as a function of statement provider contexts (i.e. witness/victim/suspect) also may reveal interesting patterns. For example, Malloy and Lamb (2010) reported that inconsistencies and detail or statement retractions made by witnesses or victims lead to diminished believability of their claims. However, when inconsistencies are present in suspect statements (i.e. confessions), these rarely reduce perceptions of guilt. However, the base rates of such inconsistencies are unknown (and whether they are indicative of guilt or memory alterations); thus, the relationship between whether our perceptions of testimonial inconsistency as a sign of deception versus whether testimonial inconsistency actually is a deceptive cue remains unclear (Fisher et al., 2013; Peace, Porter, et al., 2012).

Understanding how witness, victim and suspect statements change or remain consistent over time could play a pivotal role in assessing credibility (Brewer et al., 1999). This may lead to more objective measures for determining the credibility of testimonies involving traumatic experiences. In turn, this could benefit the criminal justice system and jury decision-making, given that jurors often rely on extra-legal factors unassociated with veracity (Brewer & Burke, 2002). The results from this study suggest that true allegations and genuine recalls contain more consistent details, omissions and commissions, although the rates of change over time are variable. These changes appear likely to result from natural changes in memory and recall over time. However, direct contradictions are more prevalent in false allegations, and these claims were more stable or ‘script-like’ over time. Further studies on both the qualities of true and false allegations and how these relate to perceptions of truthfulness are warranted.

REFERENCES


Narrative analysis of allegations


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