

## Commentary

# Disputes over memory ownership: What memories are disputed?

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**The ownership of memories is sometimes disputed, particularly by twins. Examination of 77 disputed memories, 71 provided by twins, showed that most of the remembered events are negative and that the disputants appear to be self-serving. They claim for themselves memories for achievements and suffered misfortunes but are more likely to give away memories of personal wrongdoing. The research suggests that some of the memories in which we play a leading role might in fact have been the experiences of others.**

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My own twin and I dispute a memory over a first kiss at summer camp when we were 12. The boy in question was the 'camp catch', and although we both vehemently believe we were the one who was there, the event (one would hope) only happened to one of us. (Sheen 2002)

This paper concerns memories whose ownership is disputed. We briefly review some of the previously published results concerning such memory disputes and consider what kinds of memories are likely to give rise to them.

In recent years, the accuracy with which people remember their autobiographical memories, that is, their memory for events in their own lives, has increasingly come under scrutiny. One reason for this scrutiny has been the increased attention paid by psychologists to autobiographical memory and the development of methods for studying it (see, e.g. Rubin 1986, 1995 for overviews). Another may be found in the controversy about the reality of adults' recovered memories for being sexually abused as a child (e.g. Loftus 1993). In any event, it is now well-established from both case studies (e.g. Neisser 1981; Neisser & Harsch 1992) and laboratory

work (e.g. Burt *et al.* 1995; Loftus *et al.* 1978) that people's autobiographical memories are not always accurate.

These examples of mnemonic fallibility did not directly question whose actual experience was being remembered, but this has also recently been investigated. Because twins have more in common than most people, it is logical to investigate them for evidence that memory ownership might be disputed. In Sheen *et al.* (2001, study 1), 20 sets of same-sex twins (11 monozygotic, nine dizygotic) were interviewed together and asked to produce autobiographical memories in response to 45 cue words (e.g. *bicycle, birthday, holiday*). In the course of the 20 interviews, a total of 36 memories emerged whose ownership was disputed, including 21 which were discovered to be disputed in the course of the interview. The discovery that ownership of the memories was challenged often seemed to come as a surprise to the participants, and many tried to assert their own right to the memory. For instance, one pair of (54-year-old monozygotic female) twins' response to the cue-word *accident* was as follows:

Twin 1: I remember falling over and really hurting my elbow and knee when a wheel came off my roller skate

Twin 2: Hang on a minute, are you talking about those roller skates we got for our eighth or ninth birthday?

Twin 1: Yeah, so what?

Twin 2: Well that actually happened to me if you don't mind.

Twin 1: What do you mean, it was me! I was skating with you and ...

Twin 2: Yeah, with Marie on the old tennis court.

Twin 1: Yeah, but it was me not you, I remember it being really bumpy with grassy bits in it.

Twin 2: I think you'll find if you think really hard it was me.

Twin 1: Well I remember it so clearly, and you skated home to get mum.

Twin 2: No, you skated home to get mum, because I was hurt and crying and couldn't move.

Twin 1: Oh well, I guess we get confused; it happened so long ago. (Sheen 2002; p. 89)

Two features of this dispute are noteworthy, because they are found in others as well. First, while the ownership of the memory was in dispute, there was considerable agreement about the detail. For example, they agreed that they were on an old tennis court and that one of them skated home to their mother. Second,

both staked a claim to the memory by producing relevant perceived details. In this respect, their behaviour was consistent with a general tendency to take the vividness or imagery present in a memory as proof of its authenticity (Rubin 1998), although laboratory studies have shown that false reports of visual imagery are not difficult to induce (e.g. Hyman & Pentland 1996).

In Sheen *et al.*'s (2001) second study, 40 sets of same-sex twins were simply asked if they could remember any such disputed memories, and 26 responded positively, producing a total of 33 disputed memories. As in the previous study, there was no effect of zygosity on the number of disputed memories each pair of twins could recall. A comparison of the rated qualities of the disputed memories with the qualities of other non-disputed autobiographical memories indicated that the former were likely to be recalled with a high degree of sensory imagery, as more emotional, and as more real. Note that in this study the disputes were not discovered at the time of the investigation, although, of course, the twins must have discovered in an earlier conversation that the ownership of the memory was in dispute.

It is difficult to see how many of these memory disputes could be resolved. One possibility was to see if parents could do so. Accordingly, Sheen (2002, study 4) asked six parents of twins to each provide 10 instances (five for each child) of past events that had occurred to one (and only one) of the twins. Cue words were used to help elicit the parents' memories. When the twins were later interviewed about these events, the ownership of two memories was disputed by them. By contrast, the twins agreed between themselves but disagreed with their parent as to who had featured in the event for 10 of the 60 events.

Sheen *et al.*'s (2001) study 3 showed that memory ownership disputes were not restricted to twins but also occurred, although much less frequently, between pairs of siblings and even pairs of friends. Ikier *et al.* (2003) have also reported disputes over the ownership of memories between twins and, more rarely, between siblings.

### Study: What kinds of memories are disputed?

An obvious question to ask, and one not answered in the previously published research, is: What kinds of memories are likely to be disputed?

### Method

The basis of the method was the examination of the records of disputed memories collected by Sheen (2002). Brief descriptions of 69 of these memories were published in Sheen *et al.* (2001, Tables 1 and 3). A further six descriptions were obtained from the records of Sheen *et al.* (2001, Experiment 3), and two were obtained from Sheen's (2002; study 4). Brief descriptions of these eight memories are given in the Appendix.

Of the 77 disputed memories, 71 resulted from questioning 42 same-sex pairs of twins, each of whom contributed at

least one disputed memory. Thirty-six pairs of twins were female and six male; 23 of the pairs claimed to be monozygotic and 19 dizygotic. Six disputed memories were contributed by non-twins. These six respondents were female, and for all but one the opposing disputant was also female. In total, 70 disputed memories were produced by female and seven by male respondents.

### Results

The ages of the disputants at the time of the inciting event ranged from 5 to 22 years old, with an average of 9.7 years. Thus, the memories were predominantly of childhood experiences. A similar result was noted by Ikier *et al.* (2003), whose respondents averaged 10 years old at the time of the remembered experience.

A content analysis of the 77 events was undertaken by one of the authors and an independent coder. They achieved 86% agreement in categorizing the events on the first attempt and resolved disputes by discussion.

The analysis indicated that 67 events could be placed into one of five categories

*Wrongdoing.* One of the disputants did something wrong or behaved clumsily, for example, spilt a drink or stole sweets.

*Misfortune.* Something bad happened to one of the disputants, for example, trod on a nail or was pushed off a bicycle.

*Achievement.* One of the disputants achieved something, for example, winning a spelling prize at school.

*Gift.* One of the disputants was given a particularly memorable gift, for example, a hot water bottle with rabbits' ears.

*Daring.* One of the disputants showed fortitude or courage, for example, stayed alone in a tent on a cold night.

Six events were classified as *both* misfortune and wrongdoing. For example, one child ate half the contents of a mustard jar and was sick.

The remaining 10 miscellaneous events could not be simply coded into these five categories, either because none of the issues were present (e.g. 'it was me who had the yellow raincoat, she had the blue one') or because the issues were muddled. For example, one pair of twins of Chinese origin disputed who had flouted superstition and pointed at the moon. Does this feature wrongdoing or daring?

Table 1 summarizes the frequencies of the categories and whether the role is claimed for oneself or for the other disputant. We conducted a  $\chi^2$  analysis to investigate whether, overall, there was a relationship between the type of event and whether the event was claimed for oneself or the other. For this analysis, we excluded the 10 miscellaneous memories, the six memories that were dual coded as both misfortune and wrongdoing (four of these featured mixed claims, e.g. you did wrong and I had consequent misfortune) and the uncertain memories. The daring and achievement categories were combined (the low number of daring memories render the category unsuitable for  $\chi^2$

**Table 1:** Numbers of disputed memories in five categories of event according to whether the disputants claim the protagonist was oneself or the other party

	Oneself	Other	Uncertain or both	Total or both
Misfortune	27	4	3	34
Wrongdoing	3	15	3	21
Achievement	10	0	0	10
Gift	4	0	1	5
Daring	3	0	0	3
Miscellaneous	7	1	2	10
Totals	52	14	11	77

Note. Rows do not sum, because six memories were classified as both misfortune and wrongdoing. Two such memories were claimed as misfortune by one twin and wrongdoing by the other and appear in the 'Uncertain or both' column of the totals.

analysis). The eventual analysis showed that, indeed, there was a significant association between the type of memory and whether it is likely to be claimed for oneself or for the other [ $\chi^2$  ( $df = 3$ ,  $n = 56$ ) = 30.0,  $P < 0.001$ ].

There are several important features to be noted from the table. First, the majority of the disputed memories are claimed for oneself (52 vs. 14, leaving aside memories that are uncertain or claimed by both). Second, the memories are predominantly bad (wrongdoing or misfortune) rather than good (achievement, gift or daring). Overall, 49 memories were bad and 18 good (six bad memories are double counted). Third, the reporter is more likely to claim good memories for herself or himself (17 of 18) than to claim bad ones (28 out of 43; test of proportion,  $P < 0.05$ ). Finally, of the bad memories, there is a very much stronger tendency to claim misfortunes as one's own (27 out of 34) than wrongdoings (three of 21; test of proportion,  $P < 0.001$ ). In many respects, then, the disputants' memories could be described as self-serving.

Another feature of the 77 memories is apparent from their descriptions. Generally, they are for matters of intermediate importance. Hence, on the one hand, no one disputed memories of really trivial matters, like who said 'pass the salt' when grandma came to dinner one Sunday, possibly because such matters are not recollected at all. But on the other hand, and perhaps more surprisingly, the disputed memories are not of very important events either. Only one crime is reported among the 77 disputed memories – that of stealing sweets from a shop. There were no disputed memories of, for example, seeing someone die or an accident serious enough to require hospitalization. One likely reason for the omission of major events is that corroborating evidence is often available for memories of serious matters. For example, one disputant could show the other a scar to prove that she or he had had a serious accident. Parents, who are usually ineffectual referees for disputed memories, might well be able to provide reliable evidence in the case of major events.

## Discussion

Our finding that claims to the ownership of memories are frequently self-serving is perhaps retrospectively unsurprising given that people are self-serving in other ways. For example, there is good evidence from a number of domains for a self-serving attributional bias by which people attribute their successes to themselves and their failures to external causes (Mezulis *et al.* 2004). Sedikides and Green (2000) showed that people who were confronted with positive and negative information about themselves later tended to recall the positive information and neglect or forget the negative. Ross and Buehler (1994) suggest that people's autobiographical memories might occasionally be self-serving, although Wagenaar (1994) found that he remembered recorded instances of his own misbehaviour rather well. However, to the best of our knowledge, there has been no previous research showing that people might unconsciously appropriate for themselves (or give away) memories that originate in the experience of others.

The pattern of findings of memories of disputed ownership bears some similarity to that obtained from the investigation of people's memories for events that they cannot firmly resolve as either originating in dreams or reality. These memories of uncertain origin are likewise rather rare and generally for events of intermediate importance (Kemp *et al.* 2003). Moreover, those who have such memories often try hard to resolve their origin in dreams or reality, just as our disputants expended effort in defending their right to 'their' memories.

Another parallel can be seen with studies of the imaginary companions that are sometimes enjoyed by children. Manosevitz *et al.* (1973) and Gleason *et al.* (2000) found that, although the preschool children who were reported to have such companions normally appear to interact well with their imaginary friends; they also frequently blame the imaginary playmate when minor things go wrong. Gleason *et al.* (2000) also reported that, while imaginary companions are often involved in the child's behaviour, they are rarely praised for their accomplishments.

Clearly, twins often have at least one memory which is distorted as to who was the chief character in the story, and these distortions occur in predictable directions. Also, the work of both Sheen *et al.* (2001) and Ikier *et al.* (2003) indicates that such distortions are more commonly discovered in twins than in other people. However, it is uncertain whether these distortions are actually rare in other people or whether they are common but rarely detected as such. Either possibility seems consistent both with the work done to date and with wider theorizing. For example, it is quite plausible that twins are more prone to such distortions because of the close upbringing they share, and because they are likely to enjoy an unusually high degree of empathy with each other (La Buda *et al.* 1997). But twins are also more likely to talk to each other about their shared past than ordinary folk and hence discover that they dispute ownership of a memory. Most of us do not

have such good opportunities to reminisce with the companions of our childhood. It is worth noting in this respect that the majority of our disputed memories were produced by female respondents, and it is likely that this occurs, because women share memories more than men (see Sheen *et al.* 2001 for further discussion of this point).

This brings us to the central implication of this research, which is to question whether many of us might have memories that have been stolen from others (or sometimes given away to them) for self-serving reasons. For example, suppose that you have a memory of walking home with a friend from school one day and being confronted by three older children. Your friend was able to retreat to a safe distance but you remember being punched to the ground. An adult stranger rescued you before you suffered serious harm. Now, is your memory of being the victim of the attack really your own, or could you have unconsciously exchanged remembered roles with your friend?

Note, firstly, that you are unlikely to now have enough social contact with your school friend for your ownership of the memory to be challenged. There is no reason for us to question the authenticity of most of our memories, and as a rule we do not. Also, as discussed above, although the stealing of memories by non-twins occurs, the phenomenon may be extremely rare.

Secondly, if you do question the authenticity of your memory of the attack, perhaps in consequence of reading this article, there is no obvious way to resolve your doubt. You were not injured enough to produce medical records. Your parents are unlikely to be able to provide firm confirmation (cf. Sheen 2002, study 4). Deprived of the possibility of external confirmation, you may still be convinced of the authenticity of your memory, because, for example, you vividly recall your fear at the time and that one of your attackers had red hair. However, as we saw earlier, the ability to remember detail of this kind does not actually help resolve memory ownerships, because often both disputants can make claims of this kind and one of them must be doing so erroneously. Finally, your memory of being a victim rather than a perpetrator raises the (admittedly low) probability that the memory may not have been yours originally.

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**Appendix**

Descriptions of eight disputed memories (the first six from Sheen *et al.* 2001, Experiment 3; the final two from Sheen 2002, study 4)

Age & Gender	Relationship with disputee	Ages of Ss and disputee	Description of incident
Female 21	Sister	4, 6	'One Christmas, a doll was given to one of my sisters and me. The other got a teddy. Both of us think we were given the doll.'
Female 18	Sister	6, 7	'My sister and me both remember having a really bad illness – mild scarlet fever – only one of us really did, the other was at home with a cold.'
Female 20	Female friend	17	'I'm sure that my friend dropped her drink in MacDonalds, but she is convinced that I dropped her drink; it was so embarrassing'
Female 19	Male friend	18	'I was in a nightclub with a friend, and we were arguing about who was to pay for drinks, and he got us kicked out – he says it was me who got us kicked out.'
Female 20	Female friend	14	'my friend and me were sunbathing, and one of us got stung by a bee on the stomach – I'm pretty sure it was me, but she thinks it was her.'
Female 26	Female friend	7	An air-force plane flew very low over their house when they were out on the lawn. 'I was on my bike and fell off because of fright. My friend who was running behind laughed at me. She claims it was the other way around.'
Male 19	MZ twin	5	Each believe the other placed Monopoly money in a collection plate during a minister's talk in church
Female 21	MZ twin	18	Each believe the other spilt a can of cola on a new cream carpet