



Observer memories may not be for everyone

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ABSTRACT

Six studies explored the preponderance of people who experience third-person perspective observer memories during autobiographical memory retrieval. The concept of first-person field versus observer memories has been extensively used in the areas of cognitive, social, and clinical psychology. An implicit assumption is the idea that most people use both of these perspectives. What varies are the circumstances that bias people to use one perspective over another for a given autobiographical memory. We challenge that assumption across six studies by showing that, while there are some people who report to regularly have observer memories, there are also those that report to rarely or never have them. These reports were found to be related to levels of reported dissociative experiences. We discuss how this difference in the experience of observer memories may also reflect other innate characteristics, and may correspond to predispositions for various pathologies, including depression, social phobia, and post-traumatic stress disorder.

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Memory perspective has long been considered fluid and malleable with people reporting the ability to switch between 1st person (*field view*) and 3rd person (*observer view*) perspectives for a given autobiographical event (Nigro & Neisser, 1983; Rice & Rubin, 2011; Robinson & Swanson, 1993), even for the same memory (Rice & Rubin, 2009). This is an issue that has been of concern in studies of autobiographical memory reports since at least the nineteenth century (Freud, 1899; Henri & Henri, 1898), and is a unique and stable factor that contributes to autobiographical memory experience (Boyacioglu & Akfirat, 2015). The influence of these different remembering perspectives has even extended beyond autobiographical memory to studies of memory of narrative texts (Bagri & Jones, 2009), suggesting that perspective is a basic quality of event memory, broadly conceived (Radvansky & Zacks, 2014). That said, the aim of the current study is to illustrate that the use of observer perspectives in autobiographical memory does not universally occur, with a substantial number of people reporting to rarely or never spontaneously have observer memories.

Characteristics of field and observer memories

In general, the implicit assumption has been that most people experience autobiographical memories from both field and observer perspectives. Which one is more likely to be used for a given memory is a function of a number of factors (detailed below). There is some evidence that people can experience both field and observer

perspectives for the same memory (Rice & Rubin, 2009), and the specific perspective taken during an observer memory (in terms of the placement of the imaginary observer) can vary greatly (Rice & Rubin, 2011).

A central finding from prior work on field and observer memories is that the perspective adopted during remembering is a function of the distance of the memory from the present (Nigro & Neisser, 1983; Talarico, LaBar, & Rubin, 2004). That is, how old the memory is, with older memories being more likely to be reported as observer memories. For example, childhood memories are more likely to be reported as observer memories (Lorenz & Neisser, 1985). This may occur because, as a person grows more distant from the original event, they are more likely to take an objective view on it, thereby increasing the probability of an observer memory. Consistent with this is the finding that observer memories become more likely with aging (Piolino et al., 2006). This influence of the distance from “now” is also observed for episodic future thoughts, with projections further in the future being more likely to be experienced from an observer perspective (D’Argembeau & Van der Linden, 2004; Macrae et al., 2015; McDermott, Wooldridge, Rice, Berg, & Szpunar, 2016; Rathbone, Conway, & Moulin, 2011). It should also be noted that, overall, episodic future thoughts are more likely to be reported from an observer perspective than are retrospective memories.

Another important factor for whether an autobiographical memory is experienced from a field or an observer perspective is the emotionality of the event. In general,

less emotional memories are more likely to be reported as observer memories, whereas more emotional events are more likely to be reported as field memories (D'Argembeau, Comblain, & Van der Linden, 2003; Nigro & Neisser, 1983; Siedlecki, 2015; Willander & Larsson, 2007), even for flashbulb memories (Talarico & Rubin, 2007). Thus, the more emotionally involved people are in the event, the more likely they are to report a field memory experience. In comparison, when people are more emotionally detached, they are more likely to report an observer memory. Observer memories are also more associated with emotional closure on some autobiographical event (Crawley, 2010). For example, if people have an emotional break-up, if they have come to terms with those events, they are more likely to report memories from the break-up from an observer perspective. In general, field memories are more likely to be associated with memory of an event itself, whereas events that involve greater self-awareness are more likely to be experienced as observer memories (Libby & Eibach, 2011; Nigro & Neisser, 1983).

In terms of phenomenological metamemory experiences, field memories are more associated with conscious recollection or "remember" processes, whereas observer memories are more associated with unconscious "know" responses (Crawley & French, 2005). This is consistent with the idea that field memories are more strongly associated with re-experiencing the event as it happened. Finally, and consistent with this, real memories are likely to elicit reports of a field perspective whereas deliberately fabricated memories are more likely to elicit reports of an observer perspective (Justice, Morrison, & Conway, 2013), perhaps reflecting the idea that observer memories involve a greater level of memory reconstruction.

The experience of field and observer memories also shows differential neuroimaging patterns. In an fMRI imaging study, Piolino, Desgranges, and Eustache (2009) reported that field memories were associated with more activity in the hippocampus and medial temporal lobe along with the lingual gyrus and temporal pole. In comparison, observer memories were associated with greater cortical activity in the left dorsolateral and superior frontal gyri, and bilateral posterior areas. In another fMRI study, Eich, Nelson, Leghari, and Handy (2009) found that field memories are associated with increased activity in the amygdala, which is consistent with the idea that field memories are more associated with emotional experiences. In contrast, Eich et al. found that there was decreased activity in the insula and sensory and motor cortices for observer memories, consistent with the idea that people are less engaged with the experience of the event itself for these types of memories. Finally, in addition to all of these other findings, Rice and Rubin (2009) reported that there was a trend for observer memories to be more common in females than males.

Field and observer memories and psychopathology

The difference between field and observer memories has been extended to studies of various mental deficits. Not surprisingly, patients with frontotemporal dementia who have difficulty remembering autobiographical events are more likely to give observer memory reports. This likely occurs because their autobiographical memories have become more schematic (Piolino et al., 2007). The reconstructive and interpretative nature of such generated reports are likely to lack an experience of the actual event itself, leading to a more objective interpretation, which is also consistent with an observer memory.

The prevalence of field and observer memories is also known to vary with different clinical conditions. People who are instructed to experience memories from an observer view report that they are more changed by psychotherapy (Lipton, Brewin, Linke, & Halperin, 2010). Moreover, an increase in observer memories, is associated with depression (Bergouignan et al., 2008; Kuyken & Howell, 2006), particularly for positive memories (Nelis, Debeer, Holmes, & Raes, 2013). The increased likelihood of experiencing observer autobiographical memories may also be associated with genetic markers that predispose people to depression (Lemogne et al., 2009). A similar pattern is observed among individuals with post-traumatic stress disorder (PTSD) (Berntsen, Willert, & Rubin, 2003; Kenny et al., 2009; McIsaac & Eich, 2004) and people with social phobia (Coles, Turk, & Heimberg, 2002; Coles, Turk, Heimberg, & Fresco, 2001; D'Argembeau, Van der Linden, d'Acremont, & Mayers, 2006). This increased use of observer memories may reflect an attempt to avoid the experience of negative memories (Kuyken & Moulds, 2009), or re-experiencing the memory too intensely (Kenny & Bryant, 2007; Williams & Moulds, 2007). Finally, a reduction in the rate of field memories, and an increased use of observer memories, is also associated with schizophrenia (Potheegadoo, Berna, Cuervo-Lombard, & Danion, 2013). In contrast to these conditions, people with obsessive-compulsive disorder (OCD) are more likely to adopt a field perspective (Lipton et al., 2010), perhaps because of the focus of concern on potential harm to one's self.

Overall, the idea that people have both field and observer memory experiences has been used in a range of areas of study in psychology, including cognitive, social, and clinical psychology. If it were to be found that some people report to rarely or never have observer memories, this would have implications for all of these areas.

Present work

The prior work on field and observer perspectives assumes that most people regularly take both types of perspectives, which may be biased by various factors. Is this assumption justified? In the present work, we present evidence that some people report not to have observer memories. The original impetus for this study was that, when the

difference between field and observer memories was described to classrooms of students, there regularly were students who were puzzled by the idea of observer memories and who claimed to never experience autobiographical memories in this way. This is in line with even very early studies of this phenomenon that have noted that the rate of people reporting field memories is higher than observer memories, and that some people never reported observer memories for the particular prompts used in those studies (Nigro & Neisser, 1983). However, there has been no follow up for this aspect of the data.

In Study 1, we collected a base-rate measure of how many people report experiencing memories from an observer perspective. The results revealed a bimodal distribution in responses with most people reporting having observer memories, but a sizable minority reporting that they do not. In Study 2, we examined whether this pattern could be replicated, and if it was related to various characteristics of autobiographical memory. In Study 3, we investigated the potential association between the observer perspective and dissociative experiences. In Study 4, we replicated our results. Finally, in Studies 5 and 6 we explored this finding when we had people explicitly retrieve and rate specific autobiographical memories in response to either word cues (Study 5) or event cues (Study 6).

Study 1

The aim of Study 1 was to assess whether there is a portion of the population that report not to experience observer memories.

Method

Participants

Amazon's Mechanical Turk service was used to collect data from 457 participants. Unfortunately, for this initial assessment, no data was collected regarding age or sex.

Materials and procedure

For this study, after consenting to be in the study, participants were given a single item that was adapted from Rice and Rubin (2009). Namely,

"When remembering an event from their lives, most people imagine the scene in one of two ways. One way that people remember an event is through their own eyes, from roughly the same viewpoint that it was originally experienced. Another way that people remember an event is as an outside observer, or onlooker, looking at the situation from an external vantage point, where the person remembering can see him or herself in the memory.

When remembering events from your life, do you experience your memories from an observer's perspective?"

A response was made by selecting one of seven points on a Likert scale, with one end labelled "not at all" and the other labelled "completely". Responses were made by selecting

one of the seven unlabelled radio buttons between these two extremes. These responses were coded with the value closest to "not at all" as 1, and the value closest to "completely" as 7.

Results and discussion

The results are shown in Figure 1. As can be seen, the distribution of responses is largely bimodal, with a substantial proportion (.40) of responders reporting the lowest two values, and another group more acknowledging of this type of retrieval experience. Thus, there seem to be many people who report to rarely or never have observer memories.

Study 2

The aim of Study 2 was to replicate the basic finding of Study 1, and to further assess whether the degree to which people reported having observer memories (or not) is related to other autobiographical memory characteristics. Although there is some evidence to suggest that memory perspective is a separate factor from other forms of autobiographical memory (Boyacioglu & Akfrat, 2015), we thought it was worth exploring further for this particular issue.

Method

Participants

We collected data from 72 participants from the participant pool in the Department of Psychology at the University of Notre Dame in exchange for partial course credit. They ranged in age from 18 to 22 ($M = 19.5$; $SE = 0.13$).

Materials and procedure

For this study, after consenting to be in the study, participants were first given the memory perspective item for Study 1. They were also asked, in a second question,

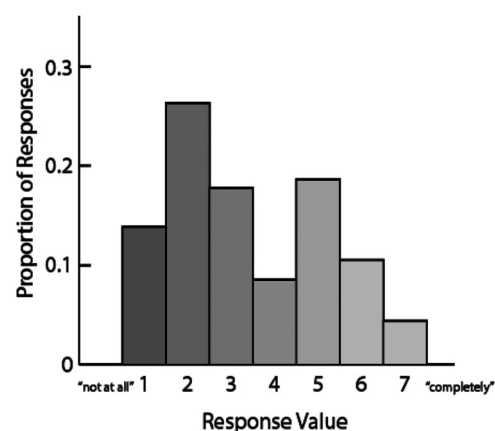


Figure 1. Distribution of responses for Study 1 regarding the question of whether people experience memories from an observer perspective.

which was the converse of this, and targeted whether they remember events from a field perspective. Specifically, "When remembering events from your life, do you see them out of your own eyes rather than those of an outside observer?" For this question, responses were also made by selecting one of seven points on a Likert scale, with one end labelled "not at all" and the other labelled "completely".

Finally, people were asked eleven questions about autobiographical remembering experiences to assess whether the propensity to have observer memories corresponded to any of these other autobiographical memory experiences. These additional questions are listed in the Appendix and were based on the Autobiographical Memory Questionnaire (Rubin, Burt, & Fifield, 2003). For all of these questions, responses were also made by selecting one of seven points on a Likert scale labelled as indicated in the Appendix.

Results and discussion

The results of the observer memory question are shown in Figure 2A. As can be seen, the distribution of responses was again bimodal, with a substantial proportion (.38) of responders reporting the lowest two values, and another group acknowledging this type of retrieval experience. Thus, again, there are a substantial proportion of people who report to rarely or never have observer memories. Similarly, the field memory question, as seen in Figure 2B, showed the opposite of this. Specifically, there was again a bimodal distribution, although less pronounced, with a substantial portion of responders (.35) reporting the highest two values.

In terms of the 11 autobiographical memory experience questions, the response data for each question are presented in Table 1. We assessed the correlations of responses to these questions, using a Bonferroni correction (critical $p < .0047$), with responses on observer and field memory questions. For the *observer memory question*,

Table 1. Response data for the 11 autobiographical memory experience questions for Study 2 and Study 3.

Question	Study 2		Study 3	
	Mean	SE	Mean	SE
1. Spontaneity	4.11	.17	4.09	.21
2. Relive emotions	4.09	.16	4.05	.22
3. Relive intensity	3.78	.19	4.21	.19
4. Remembering in pieces	4.74	.17	4.34	.18
5. Talk about events	5.01	.16	3.90	.20
6. Think and reflect	5.14	.14	3.89	.23
7. Belief in memory	3.86	.19	4.50	.20
8. Narrative memory	4.54	.18	4.30	.21
9. Time travel	4.10	.22	3.94	.23
10. In words	2.78	.17	3.33	.19
11. Remember / Know	4.69	.17	3.55	.19

there was a negative correlation with question 9 (mental time travel), $r = -.38$, $p = .001$ such that people who reported more experience of time travel when they thought about their autobiographical memories were less likely to report experiencing observer memories. This is consistent with the idea that when people engage in observer memories, they need to interpret a prior event from a different perspective, which is a more reconstructive process. No other correlations reached significance.

For the *field memory question*, the strongest relationship was with Question 9 (mental time travel), $r = .61$, $p < .001$, which had the opposite sign of the correlation with the observer question. Here, when people reported experiencing mental time travel while remembering autobiographical events, they were also more likely to report having field memory experiences. This is consistent with the idea that when people engage in mental time travel, they may be reinstating their prior experience, which may be more reproductive than reconstructive. No other correlations reached significance.

Finally, as a reminder, Rice and Rubin (2009) reported that there was a bias for observer memories to occur more often for females. For this study, although the observer memory question was rated nominally higher for females ($M = 4.1$, $SE = .28$) than males ($M = 3.6$, $SE = .44$), this difference was not significant, $F < 1$.

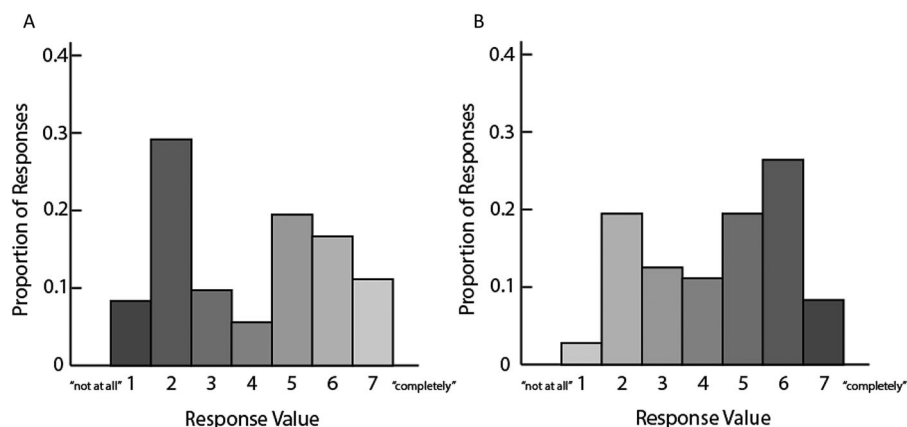


Figure 2. Distribution of responses for Study 2 regarding the question of whether people experience memories from (A) an observer perspective or (B) a field perspective.

Study 3

The aim of Study 3 was to replicate the basic finding of Studies 1 and 2, as well as to explore whether the propensity to report experiencing observer memories is related to reports of dissociative experience. This may be a possibility because when a person remembers an event from an observer perspective they are, in some sense, dissociating themselves from the event as it was experienced. To our knowledge, we are the first to directly explore this idea. To this end, in addition to collecting information about the experience of observer autobiographical memories, we also administered to people the dissociative experiences scale (DES) (Bernstein & Putnam, 1986). This was done because taking an observer perspective in an autobiographical memory, in some sense, requires people to disengage from events as they were experienced, and process them from a different perspective. That is, people would need to dissociate from the experience itself.

The DES is a 28-item self-report instrument that measures how people experience events in their lives, including absorption, imaginative involvement, depersonalisation, derealization, and amnesia. The scale has been used for clinical diagnoses for disorders such as dissociative identity disorder, and has been implicated in dissociative experiences that follow trauma (Bernstein & Putnam, 1986). As such, associations between the DES and observer perspectives in memory could have clinical implications.

Method

Participants

Amazon's Mechanical Turk service was used to collect data from 92 participants (46 female, and two not reporting). They ranged in age from 20 to 81 ($M = 38.9$; $SE = 1.55$).

Materials and procedure

For this study, after consenting to be in the study, participants were first given the observer memory item from Study 1. Also, like Study 2, they were asked about field

perspective and the eleven questions about autobiographical remembering experiences to assess whether the propensity to have observer memories corresponded to any of these other experiences. Finally, the unique aspect of this study was that people were given the dissociative experiences scale (Bernstein & Putnam, 1986). For these questions, responses were also made by selecting one of 11 percentage of times people had the described experience on a Likert scale (0, 10, 20, ..., 100).

Results and discussion

The results of the observer memory question are shown in Figure 3A. As can be seen, the distribution of responses was again bimodal, with a substantial portion (.52) of responders reporting the lowest two values. Thus, again, there are a substantial number of people who report to rarely or never have observer memories. However, for the field view question, as shown in Figure 3B, the vast majority of responders reported having these experiences, and there was no clear evidence of a bimodal distribution. This may have occurred because field view memories are likely to be the default type of memory, and most people experience them regularly.

For the 11 autobiographical memory experience questions, the data for each question are presented in Table 1. We again assessed the correlations of responses to these questions with responses on observer and field memory questions, again using a Bonferroni correction. For the observer memory question, unlike Study 2, none of the correlations were significant.

For the field memory, there was a marginally significant correlation with question 9 (mental time travel), $r = .29$, $p = .005$. As with Study 2, the more a person reported experiencing mental time travel with autobiographical memory, the more likely they were to report having field memories. This is consistent with the idea that when people engage in mental time travel, they may be reinstating the prior experience, which may be more reproductive than reconstructive, and which is consistent with a field

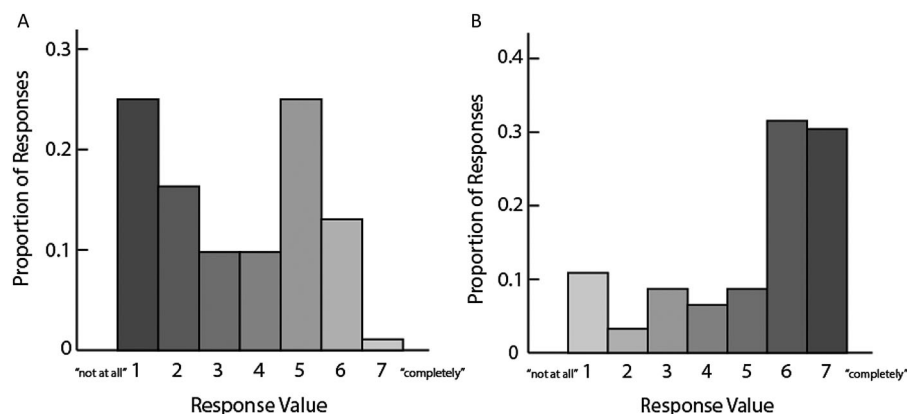


Figure 3. Distribution of responses for Study 3 regarding the question of whether people experience memories from (A) an observer perspective, or (B) a field perspective.

perspective. None of the other correlations reached significance.

Finally, for the DES, people scored anywhere from 0 to 80.4 (out of a possible 280), with a mean of 25.5 ($SE = 2.19$). Thus, while many people reported some dissociative experiences, they did not dominate their lives. This was expected because this was not a clinical sample. Importantly, in contrast to the autobiographical experience items, for the dissociate experiences scale, this measure was strongly correlated with performance on the observer memory question, $r = .51$, $p < .001$, but not with the field memory item, $r = -.11$, $p = .31$. That is, people who had higher scores on the DES gave higher ratings to the idea that they experienced observer memories, but there was no relationship with the reported experience of field memories. This is consistent with the idea that taking an observer view on an autobiographical memory requires a more reconstructive and interpretive process. People who more readily dissociate from the current setting are more likely to also take a different perspective during autobiographical remembering.

Finally, as a reminder, Rice and Rubin (2009) reported that there was a bias for observer memories to occur more often in females. For this study, the observer memory question was actually rated lower in females ($M = 3.2$, $SE = .30$) than males ($M = 3.5$, $SE = .26$). Like Study 2, this difference was not significant, $F < 1$. Also, there was a significant negative correlation of responses on the observer item with age, $r = -.24$, $p = .02$. Note that, while it has been suggested in prior work that observer memories are associated with increased age, this finding suggests that people in our study who are older are actually less likely to report having observer memories.

Study 4

The aim of Study 4 was to once again replicate the finding of Studies 1, 2, and 3 in terms of the lack of observer memory responses for some responders, and more importantly, to replicate the relationship between these

responses and dissociative thinking. Because the relationship between observer memories and other autobiographical characteristics were inconsistent, these questions were not included in this study.

Method

Participants

Amazon's Mechanical Turk service was used to collect data from 84 participants (30 female). They ranged in age from 21 to 65 ($M = 35.9$; $SE = 1.19$).

Materials and procedure

For this study, after consenting to be in the study, participants were first given the observer and field memory items from Studies 2 and 3. After this, they were given the 28 items of the dissociative experiences scale.

Results and discussion

The results of the observer memory question are shown in Figure 4A. As can be seen, the distribution of response was again bimodal, with a substantial portion (.48) of responders reporting the lowest two values. Again, there were many people who reported to rarely or never have observer memories. In contrast, for the field view question, as can be seen in Figure 4B, the vast majority of responders reported having these experiences, and, like Study 3, there was no clear evidence of a bimodal distribution.

For the DES, people scored from 0 to 80.0, with a mean of 17.4 ($SE = 1.87$). Like Study 3, the scores on this measure were correlated with performance on the observer memory question, $r = .28$, $p = .009$, with people who had higher scores on the DES being more likely to report having observer memories. Although this correlation value is smaller than that for Study 3, it is still significant. Further, as with Study 3, the correlation of the DES with the field memory item was not significant, $r = -.07$, $p = .55$.

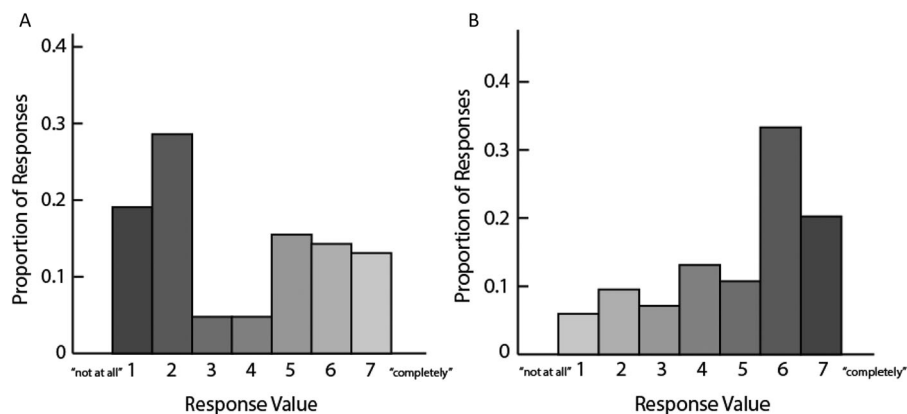


Figure 4. Distribution of responses for Study 4 regarding the question of whether people experience memories from (A) an observer perspective or (B) a field perspective.

Finally, in terms of the relationship between sex and observer memories, for this study, the observer memory question was actually rated higher in females ($M=4.0$, $SE=.45$) than males ($M=3.4$, $SE=.27$). Like Studies 2 and 3, this difference was not significant, $F(1,82) = 1.26$, $MSE = 4.72$, $p = .27$. Also, unlike Study 3, there was no correlation with age, $r = -.07$, $p = .72$.

Study 5

One characteristic of Studies 1–4 is that they assessed the degree to which people report having observer memories by using a single general question about the propensity of doing so. However, in contrast this, many autobiographical memory studies that assess field versus observer memories typically have people recall a number of personal memories, and then report whether each was a field or observer memory. To this end, Study 5 also elicited a number of autobiographical memories from participants, and then asked them to evaluate the degree to which they were observer memories. Like Studies 3 and 4, participants were also asked to report an assessment for their autobiographical memories more generally, as well as provide ratings on the DES.

Method

Participants

Amazon's Mechanical Turk service was used to collect data from 96 participants (56 female). They ranged in age from 21 to 71 ($M = 36.6$; $SE = 1.19$).

Materials and procedure

For this study, after consenting to be in the study, participants were asked to retrieve memories in response to five cue words. Five standard cue words were selected from a set of ten, namely: CHAIR, TREE, BALL, CUP, APPLE, RIVER, BREAD, RADIO, PIANO, and PENCIL. The specific instruction participants received was

Please report the first event that comes to mind that is from your life and that in some way involves the following cue word. The event should be from a specific time and place, and it should be at least one week old.

After recalling each event, participants were asked to rate the degree to which it was experienced as an observer memory. This was done using a seven-point Likert scale, with one end labelled "not at all" and the other labelled "completely".

After recalling and rating the five memories, participants were given the 28 items of the dissociative experiences scale. After the DES questions, participants were first given the general observer and field memory items from Studies 2–4.

Results and discussion

We start our exposition of the results by considering the observer memory ratings of the individual autobiographical memories. The distribution of observer memory ratings for the individual events were .38, .10, .05, .09, .12, .08, and .16 for ratings of 1–7. Thus, nearly half of the events were rated as not being observer memories (1 or 2). Averaging across the cue probes, the results are shown in Figure 5. Although the distribution of response was not bimodal, a substantial portion (.40) of responders had an average reporting value less than 2.5. Thus, many people do not report observer memories.

While the assessment of averages across events can be insightful, for our purposes it may be more informative to assess the highest observer memory rating value for the individual participants. That is, for our rating scale, what was the highest value a participant gave to any of the five memories that were retrieved? The results of this assessment are shown in Figure 6. As can be seen, the distribution is bimodal, with a number of responders (.24) never giving reports beyond the lowest two values.

Turning our attention now to the general observer memory question, the results are shown in Figure 7. First, it should be noted that responses on the general observer memory question were strongly correlated with both the average response across the five cued events, $r = .79$, $p < .001$, and the maximum observer memory rating score, $r = .63$, $p < .001$. As can be seen in Figure 7A, there was still a substantial portion (.45) of responders reporting the lowest two values. Thus, again, there are many people who report to rarely or never having observer memories. In contrast, for the field view question, as can be seen in Figure 7B, the vast majority of responders reported having these experiences, and, there was some small indication of a bimodal distribution.

For the DES, people scored from 0.36–72.1, with a mean of 19.4 ($SE = 1.84$). First, scores on this measure were correlated with performance on the average observer memory ratings for the five cued events, $r = .55$, $p < .001$, with people who scored higher on the DES being more likely to report having observer memories. Moreover, DES

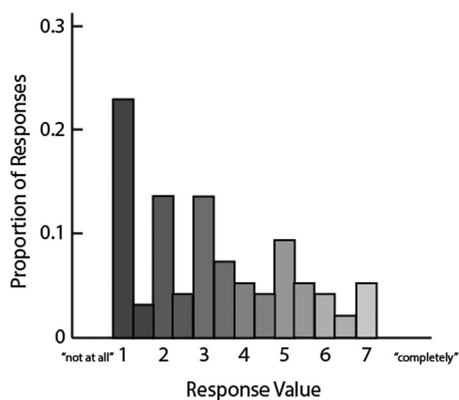


Figure 5. Distribution of responses for Study 5 for individual event memories concerning whether people experience those memories from an observer perspective.

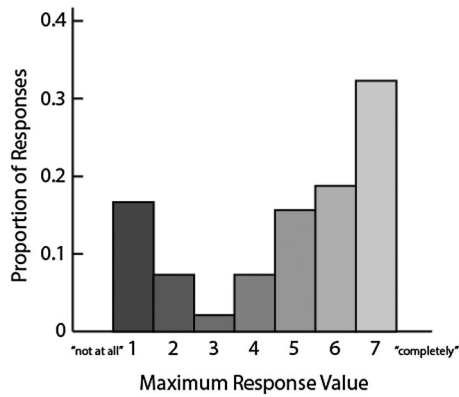


Figure 6. Distribution of maximum responses for Study 5 for individual event memories concerning whether people experience those memories from an observer perspective.

scores were also correlated with the maximum observer memory rating, $r = .40$, $p < .001$. Like Studies 3 and 4, scores on this measure were correlated with performance on the observer memory question, $r = .50$, $p < .001$. Finally, the correlation of the DES with the field memory item was negative and just significant, $r = -.21$, $p = .04$, with people who scored higher on the DES giving a lower rating for experiencing field memories.

Finally, in terms of the relationship between sex and observer memories, for this study, the average across the five events was actually higher for males ($M = 3.6$, $SE = .30$) than females ($M = 3.2$, $SE = .25$), but this difference was not significant, $F(1,94) = 1.44$, $MSE = 3.53$, $p = .23$. The maximum observer event rating was higher in females ($M = 4.9$, $SE = .31$) than males ($M = 4.8$, $SE = .34$), and this difference was not significant, $F < 1$. Finally, the general observer memory question was rated higher in males ($M = 3.3$, $SE = .31$) than females ($M = 3.1$, $SE = .24$), and, like Studies 2, 3, and 4, this difference was not significant, $F < 1$. Also, for the average, maximum, or general rating there was no correlation with age, $r = -.11$, $p = .31$, $r = -.13$, $p = .22$, $r = -.11$, $p = .31$, respectively.

Study 6

The aim of Study 6 to replicate the findings of Study 5. However, rather than eliciting memories using words, event descriptions were used.

Method

Participants

Amazon's Mechanical Turk service was used to collect data from 89 participants (51 female). They ranged in age from 21 to 71 ($M = 34.7$; $SE = 1.14$).

Materials and procedure

Similar to Study 5, for Study 6, after consenting to be in the study, participants were asked to retrieve memories. This time, this was done in response to five event descriptions. Following Nigro and Neisser (1983), for each participant, the five cue events used were selected from a set of ten, namely: STUDYING, WATCHING TV, RUNNING, SWIMMING, BEING FRIGHTENED, BEING ELATED, BEING EMBARRASSED, BEING ANGRY, HAVING A CONVERSATION WITH A FRIEND, and GIVING A PUBLIC PRESENTATION. After recalling each event, participants were asked to rate the degree to which it was experienced as an observer memory. Again, this was done using a seven-point Likert scale, with one end labelled "not at all" and the other labelled "completely".

After recalling and rating the five memories, participants were given the 28 items of the dissociative experiences scale. After the DES questions, participants were first given the general observer and field memory items from Studies 2–5.

Results and discussion

Starting with the ratings of the individual autobiographical memories, we see that the distribution of ratings for the individual events, similar to Study 5, were .32, .09, .07, .11, .16, .13, and .12 for ratings of 1 through 7. Thus, a

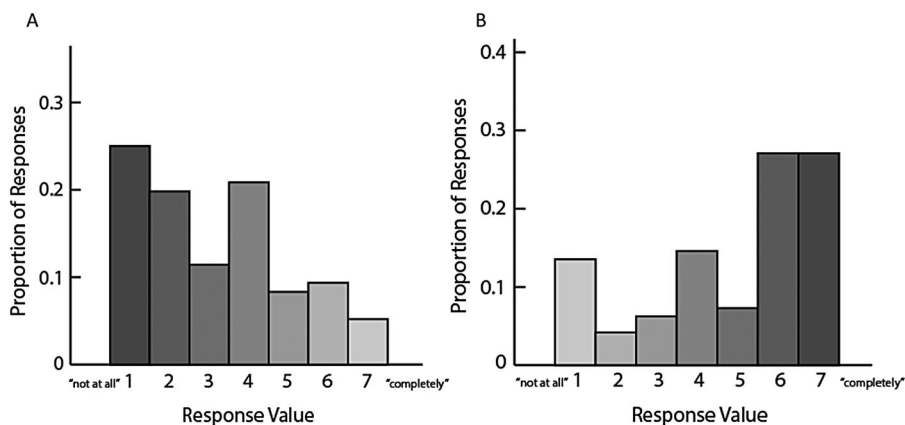


Figure 7. Distribution of responses for Study 5 regarding the question of whether people experience memories from (A) an observer perspective, or (B) a field perspective.

large portion of the events (.41) were rated as not being observer memories (1 or 2). Averaging across the cue probes, the results are shown in Figure 8. As can be seen, the distribution of response was more bimodal, with a substantial proportion (.27) of responders with an average reporting value less than 2.5. Again, there were many people who did not report observer memories.

When looking at the highest observer memory rating value for the individual participants, the results, shown in Figure 9, are bimodal, with a number of responders (.18) never giving reports beyond the lowest two values.

Turning our attention now to the general observer memory question, the results are shown in Figure 10A. Again, this general observer memory rating correlated strongly with the average of the cued memories, $r = .79$, $p < .001$, as well as the maximum observer memory rating, $r = .69$, $p < .001$. As can be seen in Figure 10, there was a substantial portion (.35) of responders reporting the lowest two values. Thus, again, there are many people who report to rarely or never have observer memories. In contrast, for the field view question, as can be seen in Figure 10A, the vast majority of responders reported having these experiences, and, there was some indication of a bimodal distribution.

For the DES, people scored from 0.36–69.6, with a mean of 21.1 ($SE = 1.94$). As with Study 5, scores on this measure were correlated with performance on the average observer memory ratings for the five cued events, $r = .50$, $p < .001$, with people who scored higher on the DES being more likely to rate those memories as having been experienced from an observer perspective. Moreover, also like Study 5, DES scores were correlated with the maximum observer memory rating, $r = .37$, $p < .001$. Consistent with Studies 3, 4, and 5, the scores on this measure were correlated with performance on the general observer memory question, $r = .36$, $p < .001$. Finally, the correlation of the DES with the field memory item was not significant, $r = -.07$, $p = .54$.

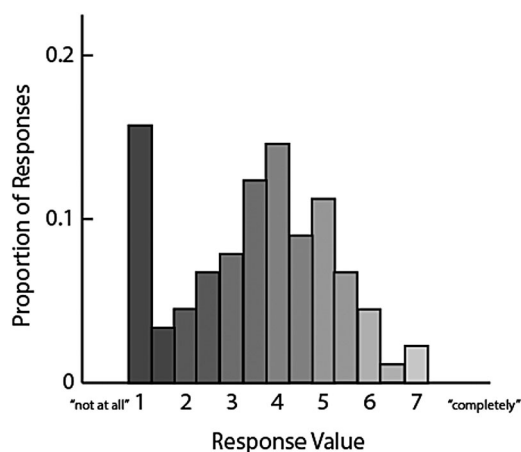


Figure 8. Distribution of responses for Study 6 for individual event memories concerning whether people experience those memories from an observer perspective.

In terms of the relationship between sex and observer memories, for this study, the average across the five events was higher for males ($M = 3.7$, $SE = .31$) than females ($M = 3.5$, $SE = .22$), but this difference was not significant, $F < 1$. The maximum observer event rating was slightly higher for females ($M = 5.1$, $SE = .27$) than males ($M = 5.0$, $SE = .37$), and this difference was not significant, $F < 1$. Finally, the general observer memory question was rated higher in females ($M = 3.7$, $SE = .15$) than in males ($M = 3.3$, $SE = .30$), and, like Studies 2, 3, 4, and 5, this difference was not significant, $F < 1$. Also, while the average rating was marginally significantly correlated with age, $r = -.21$, $p = .05$, the maximum, and general observer ratings were not, $r = -.12$, $p = .25$, $r = -.16$, $p = .13$, respectively.

General discussion

The results of the current study revealed that, rather than all people reporting that they experience observer memories, we found that there were many people who reported rarely or never having observer memories. Importantly, this finding was replicated six times. Thus, some people do not appear to spontaneously or regularly experience observer autobiographical memories. In Studies 2–6, we added a second question that assessed reports of field memories. The results for this item did not show clear evidence of a subpopulation that lacked memories of this type. Thus, the field perspective seems to be the default form of experiencing autobiographical memories.¹ Note that what we are suggesting here is that some people do not spontaneously and automatically take observer perspectives during autobiographical memory retrieval. We are not suggesting that people who report rarely or never doing so lack the ability to form these types of memory experiences. People can take multiple perspectives when explicitly asked to do so. Many studies of field/observer memories explicitly have people take one view or the other (e.g., Mclsaac & Eich, 2004). Thus, we think that most people have the ability to take an observer perspective. What they differ in is the likelihood of doing so in their everyday lives.

A potential limitation of our work is that our instructions that described observer memories, although derived from another well-known published study by Rice and Rubin (2009), may have been too brief to adequately convey to participants just what an observer memory experience would be.² That said, the consistent relation of performance on observer memory questions and scores on the DES suggests that most people interpreted our instructions in such a way to be consistent with an established measure of mental function.

When compared with standard assessments of autobiographical memory experience in Studies 2 and 3, there was a fairly consistent relationship between reports on our field memory question with the mental time travel item, but none of the other items. However, and more importantly,

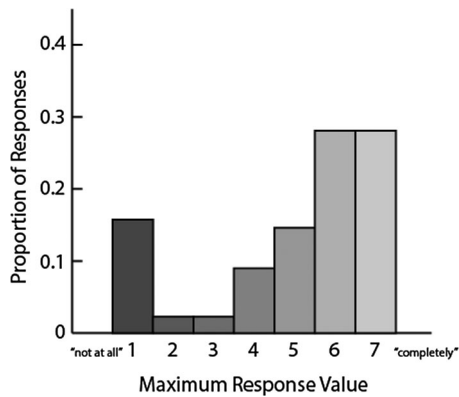


Figure 9. Distribution of maximum responses for Study 6 for individual event memories concerning whether people experience those memories from an observer perspective.

while there were a relationship found in Study 2 with observer memories with this item, when this assessment was repeated with a larger and more diverse sample, this finding did not replicate. Thus, we are left with the conclusion that reports of regularly experiencing autobiographical memory from an observer perspective do not correspond to other autobiographical memory experiences.

Although observer perspectives may not form a regular part of autobiographical memory experience, they may be more integral and common to other types of event memories, such as vicarious memories (Pillemer, Steiner, Kuwabara, Thomsen, & Svob, 2015), biographical memories (Svob & Brown, 2012), historical memories (Brown, Schweickart, & Svob, 2016), episodic future memories (Bohn & Berntsen, 2011; D'Argembeau & Van der Linden, 2004), and event memories in general (Rubin & Umanath, 2015), such as memory for narratives (Radvansky & Zacks, 2014) and public events (Brown, 1990). The exploration of this idea is left to future research.

The findings from Studies 3–6 reveal that the strongest contributor to whether people report having observer memories was our measure of dissociative experiences.

Essentially, people who are more likely to report having dissociative experiences in their lives are also more likely to report having observer memories. Our thinking here is that when a person has an observer memory experience, they are, in some sense, dissociating themselves from the event as it was originally experienced. As such, it seemed reasonable to think that people who are more likely to engage in such dissociative thinking in their everyday lives are also more likely to report having observer memories, and this is what we found. A question for future research is to what degree this maps onto other mental activities that involve some element of detachment from the current situation, or one's current perspective. For example, are people who more readily adopt observer memories also better able to take the leap into imagined worlds when reading fiction? Do people who more readily experience observer memories also find it easier to engage in theory of mind tasks? What other personality characteristics may be related to the propensity to engage in dissociative experiences and observer perspectives (e.g., openness to experience, neuroticism, empathy, creativity)?

Although we did not explicitly control for clinical histories or symptomologies, our findings have some important clinical implications. As outlined at the beginning of the paper, there is a larger preponderance of observer memories with various forms of psychopathology, including depression, PTSD, and social phobia. One possibility is that the *a priori* likelihood of being predisposed to one or more of these conditions may be co-morbid with the likelihood of having these experiences. That is, people who are more likely to report observer memories may also be more susceptible to depression, PTSD, social phobia, and the like. As such, reporting a great proportion of observer memories may be a predictive marker for the development of some of these conditions. Alternatively, having more experience with these conditions in some form, even at pre-clinical levels, may make it more likely to adopt observer perspectives in remembering. If this is the case, it may be beneficial to encourage people suffering with various mental disorders to recall events

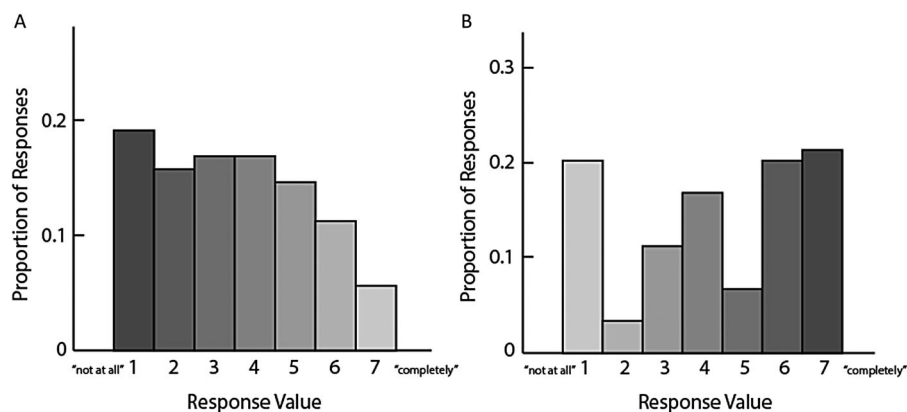


Figure 10. Distribution of responses for Study 6 regarding the question of whether people experience memories from (A) an observer perspective or (B) a field perspective.

from both field and observer perspectives, as is sometimes done in various perspective-taking psychotherapeutic techniques (Coles et al., 2002).

Given the nature of the distribution of observer memory reports, it is also tempting to suggest that there may be a genetic basis for this. This idea is supported, to some degree, by work showing that there is a genetic relationship between the experience of observer memories and people with pre-clinical depression (Lemogne et al., 2009). This idea is left to future research.

Finally, it should be noted that the data from our studies seem at odds with two other effects that have been reported in the literature. First, there is the idea that there may be a sex bias in the experience of field and observer memories (e.g., Rice & Rubin, 2009), with females being more likely to report observer memories than males. Second, there is the idea that as people age, there is an increased likelihood of reporting observer memories (Piolino et al., 2006). In both cases, the data we report here failed to find consistent relationships of these sorts. However, we also do not think that our findings invalidate these ideas. Specifically, our studies were focused on whether people report having observer memory experiences. It is still possible that these previously reported biases do occur for the memories retrieved by people who do regularly experience observer memories, and that this may be what is being assessed in those studies.

Conclusions

Taken together, our study challenges the assumption that people naturally and regularly recall autobiographical memories from an observer perspective. That is, a large proportion of people across our six studies reported to never, or very rarely, recall personal life events from an observer perspective. Thus, this issue may need to be taken into account in cognitive studies of autobiographical memory that explore the experience of thinking about life events. Moreover, although these people may have the ability to recall life events as an observer when asked to do so, our study suggests it may not be something that some people do spontaneously or as often as most other people. Furthermore, given the distribution of the responses, it is possible that there are some underlying innate characteristics supporting this predisposition. Although a significant relationship with dissociative thinking was found, other traits (e.g., personality traits) should be considered in future research. Finally, because of the strong relationship that has been reported between the experience of observer memories and several pathologies, this work may have implications for clinical populations.

Notes

1. Note that there were some people that reported not experiencing field memories. We note that these are typically a small number of people. This could reflect either (a) an even rarer

set of people who rarely or never have field memories, or, more likely, the inclusion of people in our data set that consistently produced responses at the low end of rating scales or misinterpreted the question.

2. We would like to thank an anonymous reviewer for this suggestion.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix

Additional autobiographical memory experience questions used in Experiments 2 and 3. The labels for the low and high ends of the seven-point rating scale are also indicated.

- (1) When remembering events from your life, do they come to you out of the blue, without your trying to think about them? (1 = not at all; 7 = completely)
- (2) When remembering events from your life, do you feel the same emotions as you felt at the time of the events themselves? (1 = not at all; 7 = completely)
- (3) When remembering events from your life, do you feel the emotional intensity of the events to the same degree that you felt them then? (1 = not at all; 7 = completely)
- (4) When remembering events from your life, do they come to you in pieces with missing bits? (1 = not at all; 7 = completely)
- (5) How often do you talk about events from your life with others? (1 = never; 7 = all the time)
- (6) How often do you think about and reflect on events from your life? (1 = never; 7 = all the time)
- (7) Do you believe that your memory of events from your life really occurred in the way you remember, and that you have not imagined or fabricated anything that did not occur? (1 = 100% imaginary; 7 = real)
- (8) When remembering events from your life, do they come to you in words or in pictures as a coherent story or episode, as opposed

to isolated facts, observations or scenes? (1 = not at all; 7 = completely)

- (9) When remembering events from your life, do you feel yourself travel back to the time when they happened, as though you are a participant in them again, rather than an outside observer tied to the present? (1 = not at all; 7 = completely)

(10) When remembering events from your life, do they come back to you in words? (1 = not at all; 7 = completely)

- (11) Sometimes people know events happened without being able to actually remember them. When remembering events from your life, do you actually remember them rather than just know that they happened? (1 = remember; 7 = know)