I Haven’t Thought About This for Years!
Dating Recent Recalls of Vivid Memories

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SUMMARY
In three studies, we examined memories for previous recall. In Studies 1 and 2, undergraduates were asked whether they had vivid memories about various childhood events. After a one-hour (Study 1) or 2-week (Study 2) interval, they completed a second questionnaire containing new, but also previously presented childhood items. Participants estimated how recently they had thought about old and new items. A non-trivial proportion of recent recalls of vivid childhood memories was dated incorrectly. In Study 3, women with recovered and continuous memories of childhood sexual abuse (CSA) completed the childhood events questionnaires used in studies 1 and 2. After a one-hour interval, they indicated how recently they had thought about new, but also previously presented childhood items. Compared to women with continuous CSA memories, women with recovered memories underestimated their prior remembering. Copyright © 2005 John Wiley & Sons, Ltd.

Relatively few studies have looked at people’s ability to recall prior remembering and yet this issue bears strong relevance to ongoing discussions about the authenticity of recovered memories of childhood abuse. As Schooler (1999, p. 205) pointed out, a person who says that he/she recovered a memory of childhood abuse ‘is really indicating two sentiments: (a) that abuse occurred and (b) that there was a period of time in which the memory was not available’. Discussions about the authenticity of recovered memories have largely focused on the first element in Schooler’s definition, whereas little attention has been paid to people’s ability to correctly identify previous periods of non-recall. In a pioneering study, Parks (1999) asked undergraduate students whether they remembered various events and facts from their childhood (e.g. ‘Do you recall your favorite game as a child?’). During the second part of the study, they were asked how recently they had thought about 20 childhood events (e.g. ‘When was the last time you recalled your favorite game as a child?’). Two items were drawn from the first list and referred to events that participants minutes ago claimed to remember. Participants were explicitly told that they should take recent recalls of childhood memories during the experiment into account. Nevertheless, the large majority of them (63%) made a dating error on at least one of the two critical items, which led the author to conclude that people’s meta-recall abilities are poor and ‘that an attitude of healthy caution should be adopted towards first-person reports that a past event has not been recalled previously’ (Parks, 1999; p. 369).

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Parks’s (1999) conclusion fits nicely with several case studies about adults who claim to have recovered memories of childhood abuse. For example, Schooler, Ambadar, and Bendiksen (1997) described two victims who said that they had recovered memories of a traumatic event, when in fact, they had talked about this event in the preceding period. Apparently, they mistakenly believed that they had not remembered the event in the past (see also Shobe & Schooler, 2001). Schooler (1999) termed this underestimation of prior remembering the ‘forgot-it-all-along’ effect (see also Hyman & Loftus, 1998; Joslyn, Loftus, McNoughton, & Powers, 2001; Loftus, Joslyn, & Polage, 1998).

Recent studies have provided elegant laboratory analogues of the forgot-it-all-along phenomenon. For example, Padilla-Walker and Poole (2002) had their participants freely recall sentences they had heard earlier. During a subsequent test, participants retrieved the sentences once more, either under free recall or recognition or cuing conditions. Participants also had to indicate whether they had recalled the sentences during the previous test occasion. The authors found that under recognition or cuing conditions, participants more often falsely claimed that they previously had not freely recalled the critical sentences. Padilla-Walker and Poole (2002) argued that changes in the conditions under which people retrieve memories (e.g. from free recall to recognition) may promote inaccuracy of memory for previous recall, an interpretation that is reminiscent of the older work of Gardiner and Klee (1976). Further support for this interpretation comes from a series of experiments by Arnold and Lindsay (2002). Briefly, these authors had their participants first study combinations of cue-target words (e.g. hand-palm) and then a first recall test was given during which cues remained the same (e.g. hand) or were changed (e.g. tree). During a final recall test, participants were given the original cues (e.g. hand) and were also asked whether they had recalled the item during the first recall test. Arnold and Lindsay (2002) showed that participants exhibited poor memory for previous recall when there had been a change in cue words. The authors suggested that ‘changes in the way an event is thought about on different occasions can contribute to forgetting of prior episodes of recollection’ (p. 528).

The work by Padilla-Walker and Poole (2002) and by Arnold and Lindsay (2002) documented forgot-it-all-along phenomena for semantic material (i.e. words and sentences). In the current studies we were primarily interested in vivid autobiographical recollections. More specifically, our studies aimed at replicating and extending Parks’ (1999) findings. Study 1 addressed the issue of whether unambiguous instructions to take recent recall into account would improve meta-recall judgments. The second study addressed meta-recall performance in a situation in which the time-scale was more extensive than that in the original Parks’ (1999) study or our study 1 (i.e. 2 weeks versus several minutes or one hour respectively). In study 3, we explored whether underestimation of prior remembering, i.e. the forgot-it-all-along phenomenon, is particularly typical for women who say that they have recovered memories of childhood sexual abuse.

**STUDY 1**

**Participants**

The sample consisted of 46 female undergraduate psychology students who participated in the study in return for a small financial compensation. Their mean age was 19.4 years.
The study was approved by the standing ethical committee of the Psychology Faculty of Maastricht University.

Materials and procedure

Participants were assigned to two groups. The no-instruction group \( (n = 20) \) completed two questionnaires, with a one-hour interval in between. The second questionnaire (see below) asked participants to recall date of childhood events, and no further instructions were given. The instruction group \( (n = 26) \) underwent a similar procedure, except that they were given explicit instructions about one specific answer-option that they might consider when dating recall of childhood events.

Participants first completed a 23-item ‘yes–no’ questionnaire about specific childhood events or facts. They were either taken from Parks (1999) or formulated along the lines of his items. Illustrative items are ‘Do you have vivid memories of your favorite toy as a child?’ and ‘Do you have vivid memories of the first time you were on a plane?’ Participants were told to think for 3 seconds about each item, before indicating whether they had or had not vivid memories about these events. Next, participants completed a number of questionnaires that served as a filler task. These questionnaires were not related to autobiographical memory. Finally, participants completed a second autobiographical questionnaire containing 18 items (see Appendix). Nine items were drawn from the first autobiographical questionnaire (i.e. the target items) and were described in exactly the same way as in the first questionnaire, although they were listed in a different order. The other half of the items pertained to not previously mentioned events (i.e. control items).

For both target and control items, participants had to indicate ‘to your best estimate’ the last time they recalled ‘even if it was only briefly’ the events or facts described by the items. To this end, participants had to blacken a circle on the following scale: 0 = one hour or less ago; 1 = several days ago; 2 = several weeks ago; 3 = several months ago; 4 = about a year ago; 5 = several years ago. Participants were told to give an estimate even when they felt that an item did not apply to them (but see below). Participants in the instruction group received written instructions stressing that when dating their recent recalls, they should explicitly take into account recall attempts during the experiment. After each block of 3 items, this instruction was repeated.

Results

Analyses were restricted to those target events for which participants claimed to have vivid memories (i.e. yes-answers on the first questionnaire). Thus, items referring to events that did not happen to participants or for which participants did not have vivid memories were excluded from the analyses. No-instruction and instruction participants reported similar numbers of vivid target items, means being 5.20 \( (SD = 1.44) \) and 5.31 \( (SD = 1.56) \) respectively \[ t(44) = 0.24, p = 0.88 \]. One way to evaluate dating estimates of both groups is to focus on the proportion of vivid memories that were correctly dated (i.e. items that were given a rating of 0). In the no-instruction, this proportion was 0.15 \( (SD = 0.26) \), whereas in the instruction group it was 0.55 \( (SD = 0.46) \). This difference is statistically significant [95% CI of difference between groups 0.17 to 0.63, \( t(44) = 3.49, p = 0.001 \); two-tailed] and the effect size in terms of Cohen’s (1992) is large \( (d = 1.06) \).\(^1\)

\(^1\)To correct for non-normality, we also conducted an angular transformation (Howell, 2001) on the proportion data before we subjected them to the critical \( t \)-test. The difference between the two groups remained statistically significant: \( t(44) = 3.28, p = 0.002 \).
Another way to compare no-instruction and instruction groups is to calculate mean dating estimates that both groups gave to their vivid memories. This showed that the no-instruction group more strongly overestimated the time elapsed since their most recent recall of vivid target items than did the instruction group, mean estimates being 2.44 (SD = 1.19) and 1.47 (SD = 1.66) respectively [95% CI from 0.12 to 1.85, \( t(44) = 2.20, p = 0.03 \), two-tailed; \( d = 0.67 \)]. It was not the case that instructions elicited a general tendency to date recalls more recently. Thus, no-instruction and instruction participants did not differ in terms of their estimates for the 9 non-target childhood memories of the second questionnaire, means being 4.31 (SD = 0.45) and 4.50 (SD = 0.49), respectively [\( t(43) = 1.35, p = 0.18 \), two-tailed].

Still another way to look at the data is to focus on participants who gave at least one correct estimate (0), but also made dating errors for other vivid memories (see for a similar approach Parks, 1999). In total, there were 12 (26%) such individuals: 6 from the no-instruction group (30%) and 6 from the instruction group (23%). The two groups did not differ in this respect [Chi-square (1) = 0.28, \( p = 0.60 \)].

**STUDY 2**

Study 1 replicated the findings reported by Parks (1999) in that it showed that a substantial percentage of participants come up with inaccurate estimates when they are asked to date vivid childhood memories that they recalled one hour ago. However, our findings also indicate that explicit instructions may exert a correcting influence on participants’ tendency to overestimate periods of non-recall. In Study 2, we examined people’s metarecall abilities when the time-scale is more similar to everyday life. Thus, undergraduates were administered the first questionnaire and then participated in an unrelated experiment. After two weeks, they returned to the lab and completed the second questionnaire. Like participants of the instruction group in Study 1, participants in Study 2 were explicitly and repeatedly told that they should consider earlier lab visits when dating their vivid memories.

**Participants**

The sample consisted of 50 undergraduate psychology students (43 women) who participated in return for a small financial compensation that they received when they returned to the laboratory for a second time. Their mean age was 20.6 years (SD = 2.5). The study was approved by the standing ethical committee of our faculty.

**Materials and procedure**

Questionnaires used were the same as those employed in Study 1. Thus, the first questionnaire asked whether participants had or had not vivid memories about various childhood events, whereas the second questionnaire asked participants to estimate the last time they recalled childhood events, including 9 items that were taken from the first list. There was a 2-week period between both the questionnaires. As for the second questionnaire, participants were repeatedly given written instructions that they should take recent recalls during previous lab visits into account. The rating scale used for this
second questionnaire was slightly different from that employed in Study 1 in that the anchor 0 was now defined as ‘several hours (or less) ago’.

Results

Overall, participants said that they had vivid memories for 5.62 (SD = 1.35) of the 9 target items. The proportion of accurate estimates (i.e. 0, 1 or 2) for vivid memories was 0.51 (SD = 0.31). The mean estimate of recent recall for these vivid target memories was 3.07 (SD = 0.98), which is in the range of ‘several months ago’ (cf. supra). Eleven participants (22%) had a mean estimate of ‘one year ago’ or longer. Thirty-nine (78%) participants had at least one accurate estimate (<3) in combination with overestimation of non-recall for other vivid memories.

STUDY 3

Although the time scale in Study 2 was different from that in Study 1, the proportion of accurate estimates in Study 2 was comparable to that found in Study 1 for instructed (i.e. warned) participants. These proportions show that in general, participants underestimate prior remembering. An alternative interpretation would be that in spite of the instructions they received, participants in our studies believed that they should only provide estimates of pre-experimental recall of targets events. However, as was the case in the original Parks’s (1999) study, a substantial percentage of participants in Studies 1 and 2 had at least one accurate estimate in combination with other, incorrect estimates. This pattern shows that these participants understood the task at hand and yet underestimated prior recall.

Studies 1 and 2 also demonstrate that individuals differ in their estimates of recent recalls, with some being wildly inaccurate (‘I haven’t thought about this for years’). Schooler (1999) argued that underestimation of prior remembering—the forgot-it-all-along phenomenon, as he termed it—is typical for at least some cases of recovered memories. With this in mind, Study 3 tested whether women who claimed to have recovered memories of childhood sexual abuse (CSA) exhibit an especially strong tendency to underestimate prior remembering.

Participants

Inspired by the work of McNally, Clancy, and their colleagues (Clancy, McNally, & Schacter, 1999; Clancy, Schacter, McNally, & Pitman, 2000; McNally, 2003), we recruited women with recovered and continuous memories of CSA through advertisements in local newspapers. In these advertisements, women were invited to participate in our ongoing research project on CSA in return for a small financial compensation. The project was approved by the standing ethical committee of our faculty. Women who contacted us by phone, were provided with more information about the research project. If they wanted to participate, an interview was scheduled. In this interview, one of us (EG) asked the women about their CSA memories, whether the memories had always been accessible, and whether they were or had been in therapy. During a next session, participants completed the two questionnaires used in Studies 1 and 2.

The recovered memory group consisted of 15 women (mean age = 38.4 years; SD = 10.9) who said that they had previously forgotten and later recalled memories of
CSA. Thirteen participants (86%) said they had recovered their CSA memories during psychotherapy. Most women reported that their recovered memories had had a significant impact on their lives. In many cases, women lost contact with their families after having confronted them with their recovered memories. The continuous memory group comprised 15 women (mean age $= 37.3$ years; $SD = 11.9$) who said that they had never forgotten their abuse. Five of them (33%) had received psychotherapeutic treatment related to their CSA experiences. The two groups did not differ with regard to age or educational level [both $t$’s (28) $< 0.28$, both $p$’s $> 0.78$], but more women in the recovered memory group had received psychotherapeutic treatment [Chi-square (1) = 8.88, $p = 0.01$].

Materials and procedure

Procedure and materials were the same as those for the instruction group in Study 1. That is, participants first completed a 23-item questionnaire about various childhood events, they then filled a series of unrelated filler questionnaires, and after about an hour they completed an 18-item questionnaire containing 9 items that were also listed in the first questionnaire. The first questionnaire asked whether participants had vivid memories about various childhood events. The second questionnaire contained the ‘When was the last time you recalled X?’ type of items. Before they answered these questions, they received the following instruction: ‘Please, take also all the other questionnaires you just completed into account’. Again, participants gave their estimates on a 6-point scale (anchors: $0 =$ one hour or less ago; $5 =$ several years ago).

Results

As was the case in the other studies, analyses were restricted to those target events for which participants said in the first questionnaire that they had vivid memories about them. Recovered memory and continuous memory participants did not differ with regard to the mean number of target events for which they said to have vivid memories, means being 5.80 ($SD = 1.89$) and 5.33 ($SD = 2.05$), $t(28) = 0.64$, $p = 0.52$. The recovered memory group had a lower proportion of correct estimates (i.e. $0$) for vivid target items than had the continuous memory group, means being 0.04 ($SD = 0.08$) and 0.64 ($SD = 0.37$) respectively [95% CI from 0.39 to 0.79; $t(28) = 6.08$, $p < 0.001$; two-tailed; $d = 2.29$]. Another way to look at this is to evaluate group differences in mean dating estimates for vivid target items and non-target items. As can be seen in Figure 1, recovered memory and continuous memory women did not differ in their estimates of non-target items in the second questionnaire, $t(28) = 1.16$, $p = 0.29$, two-tailed. However, for the target items there was a statistically significant group difference [95% CI from 2.14 to 3.72; $t(28) = 7.59$, $p < 0.01$, two-tailed; $d = 2.87$]. The mean dating estimate of the continuous memory group for their vivid memories of target items was in the ‘some weeks ago’ range (i.e., $M = 1.21$; $SD = 1.23$), which is similar to the pattern found in Study 1. In contrast, the mean dating estimate that the recovered memory women gave for their memories of these target events was 4.14 ($SD = 0.85$), which corresponds to ‘about a year ago’. Thus, it appears that the recovered memory women had a specific tendency to overlook recent recalls.

$^2$The difference between the two groups remained statistically significant after angular transformation of the proportion data: $t(28) = 6.07$, $p < 0.001$. 

DISCUSSION

In keeping with the findings of Parks (1999), Studies 1 and 2 found that people often come up with inaccurate estimates when they are asked to date recent recalls of vivid childhood memories. Thus, in Study 1, 13 participants (65%) in the no-instruction group and 11 participants (42%) in the instruction group gave a mean estimate of ‘several weeks ago’ or longer for vivid childhood memories that they in fact had thought about just an hour ago. Likewise, in Study 2, 22% of the participants gave a mean estimate of ‘one year ago or longer’ for vivid childhood memories that they had retrieved two weeks earlier.

Study 1 also found evidence that explicit instructions to take recent recalls into account do attenuate meta-recall errors. On the other hand, Study 2 showed that when long time intervals are involved, almost half of dating estimates for vivid memories are wrong (e.g. in the range of ‘several months ago’ or longer) despite explicit instructions to take recent laboratory visits into account. Note that target items not only referred to relatively mundane facts, but also to salient events (see Appendix). Thus, at minimum our results indicate that people are often highly inaccurate in dating recent recalls, even when salient childhood events are involved for which they claim to have vivid memories.

The current results along with those of Parks (1999) and others (Padilla-Walker & Poole, 2002; Arnold & Lindsay, 2002) demonstrate that the forgot-it-all-along bias (Schooler, 1999; Shobe & Schooler, 2001), i.e. the tendency to exaggerate periods of non-recall, is a robust phenomenon. Whereas many participants in Studies 1 and 2 tended to underestimate prior remembering, Study 3 found that women with recovered CSA memories showed this particular tendency strongly. Compared to control women with a similar background, the women with recovered memories exhibited a specific failure to take recent recall into account when they had to give estimates of the last time they thought about vivid target memories. Thus, Study 3 provides indirect support for Schooler’s (1999) suggestion that the forgot-it-all-along bias is typical for at least some individuals who report recovered memories. Of course, our results are silent about whether the recovered memories in our sample followed a forgot-it-all-along pattern. That is, we were not in the
position to explore whether the recovered memory women had talked about their CSA experiences during the period that they claimed to have forgotten their CSA memories. Neither do our findings say anything about the authenticity of the CSA memories in these cases. One possibility is that the these memories are essentially true, but that their accessibility has been underestimated by the women in the recovered memory group. Another possibility is that the robust forgot-it-all-along bias in this group is a manifestation of a source monitoring problem that makes people susceptible to pseudomemories (Hyman & Loftus, 1998; Loftus et al, 1998). That the latter possibility should not be easily discarded is shown by laboratory studies that found women with recovered memories to be more prone to various memory illusions than control women (e.g. Clancy et al., 2000; Geraerts, Smeets, Jelicic, van Heerden, & Merckelbach, in press).

Underestimation of prior remembering might be the result of heuristics that people use when dating recent recalls. Germane to this is the work by Thompson, Gibbons, Vogl, and Walker (1997), who found that individuals use the content of their memories to date events, such that rich memories allow for more precise dating of events. Much the same might be true for memory of previous recall. Perhaps, then, when reconstructing memory for previous recall attempts, people rely on the heuristic that periods of non-recall for childhood events must be more extensive than periods of non-recall for more recent events, simply because childhood memories usually contain less details. The issue of how heuristics and the content of memories (e.g. old versus relatively recent, but also semantic versus episodic) contribute to underestimation of prior remembering warrants further study.

An alternative explanation of our findings is that our procedure elicited a form of reminiscence in participants. In a study by Read and Lindsay (2000), participants were encouraged to think about summer camps and high school graduation ceremonies. These authors noted that the more people remembered details they had not thought about for years, the more they subsequently overestimated their prior forgetting of these events. Read and Lindsay (2000) suggested that retrieving autobiographical memories may change the subjective standards against which prior forgetting is judged. A closely related mechanism has been described by Arnold and Lindsay (2002) who showed that overestimation of previous non-recall occurs whenever people are led to think about previously studied material in a different way. A similar phenomenon might have occurred in our studies. Participants were asked about childhood and/or adolescent memories not only during initial testing, but also during the second test occasion. To the extent that the second test occasion elicited new memory material, this may have contributed to an underestimation of prior remembering. This interpretation is open to empirical testing. For example, one could ask participants during the second test session not only to date recent recall, but also the degree to which they have new memories or new interpretations about the target event.

There are other mechanisms that might fuel inaccurate estimates of prior recall. For example, using semantic material, Padilla-Walker and Poole (2002) showed that offering direct cues during attempts to retrieve previously studied material leads to overestimation of non-recall. One explanation for this is that people assume that they would not have recalled the material in the absence of cues (see also Joslyn et al., 2001).

Whatever the mechanisms behind the tendency to underestimate prior remembering, the phenomenon is relevant for evaluating one particular aspect of recovered memories (Parks, 1999). People who recover memories of traumatic childhood events by definition have the impression that they have not thought about these memories for an extensive
period (Schooler, 1999; Schooler et al., 1997; Shobe & Schooler, 2001). Some clinicians have pathologized this impression of previous non-recall by referring to it as ‘amnesia’ (see for a critical analysis, Read & Lindsay, 2000). Amnesia implies an inability to retrieve memories, but as McNally (2003) pointed out, periods of non-recall should not be equated with an inability to recall. The current findings along with those of others (Arnold & Lindsay, 2002; Parks, 1999; Padilla-Walker & Poole, 2002) demonstrate that there is another and perhaps even bigger problem with the amnesia interpretation, namely that impressions of previous non-recall are often highly unreliable.

**APPENDIX**

When was the last time you recalled …

the first time that you saw really high mountains?

your favourite toy as a child?*

the first time that you told a serious lie to (one of ) your parents?

the family name of your best friend at primary school?*

your first boat trip?

the first time you went to a funeral?*

the subject you found most annoying in primary school?

your first visit to a dentist?*

your bedroom as a little child?

the first time a teacher was really angry at you?*

the time that as a child you were lost and were scared?

the first time you saw your parents having a serious argument?*

the time that as a child you broke something and did not dare to tell your parents?

the street where you used to live as a little child?*

the time it was snowing and that you made a snowman?

the family name of your teacher in the last class of primary school?*

the first time you saw your mother cry?

your final exam in the last class of primary school?*

*Items that were also included in the first (‘do you have vivid memories about …’) questionnaire.

**REFERENCES**


