Delayed Recall

The overview that follows is offered to help the trier of fact understand what happens to a witness's memory during the interval between an event and the moment it is reported, and how courts should think about an account given weeks, months, or years after the fact. Delay is unavoidable in litigation: a witness may be interviewed days after a crime, deposed months later, and cross-examined years after that. Its purpose is to define the terms a court is likely to encounter, to summarize the research on forgetting and on the changes that accompany the passage of time, and to do so in plain language and without favoring any party.

Forgetting and the Passage of Time

That memory for a witnessed event declines with time is one of the oldest and best-established findings in psychology. What is less widely understood is the shape of that decline. Memory does not drain away at a steady rate; forgetting is rapid at first and then slows dramatically. Pooling more than two hundred studies, Rubin and Wenzel (1996) found that retention is best described by a curved function in which most of what will be lost is lost early, after which the additional amount forgotten per unit of time becomes small (see also Wixted, 2004). Information that survives the early drop-off can be comparatively durable, and the general gist of an event is often far more resistant to time than its specific particulars.

The eyewitness research bears this out across ages and event types. Adults in one study recalled roughly 43% fewer details of a witnessed scenario after a three-week delay than in an immediate interview (Turtle & Yuille, 1994). In a staged-event study, cued-recall accuracy fell over five months from 66% to 38% for six-year-olds, from 70% to 54% for nine-year-olds, and from 71% to 62% for adults — the loss being steeper for younger witnesses (Flin, Boon, Knox, & Bull, 1992). And after a six-month interval, young children's accurate recall dropped substantially while their errors multiplied (La Rooy, Pipe, & Murray, 2005). A related principle, sometimes called Jost's law, is that the better an event was encoded in the first place, the more slowly it is forgotten; a well-attended, well-encoded memory withstands delay better than a poorly encoded one (Wixted, 2004). The practical upshot is that a short delay is unlikely to damage a well-encoded memory of central facts, while longer delays — and weaker initial encoding — carry progressively greater risk.

Not All Details Fade Alike

Time is not equally hard on every part of a memory. Details that are central to a person's understanding of an event — those that carry its meaning — tend to be retained, while peripheral details are far more likely to be lost. High levels of arousal, fear, or stress can sharpen this divide: as attention narrows onto what is most threatening or salient, peripheral information may receive little encoding to begin with and is therefore permanently unavailable later, regardless of delay (Deffenbacher, Bornstein, Penrod, & McGorty, 2004). Two cautions follow for legal use. First, what is psychologically peripheral is not necessarily forensically unimportant: a fleeting feature of a perpetrator's appearance may be central to identifying him yet have carried little meaning for the witness at the time, and so be among the first things lost. Second, the line between central and peripheral is subjective and can shift: a detail that seemed unimportant immediately after an event may come to feel central as the case develops, and it is not known whether a detail that becomes important only later enjoys the same memory advantage as one that was central from the start.

What Happens in Time Matters More Than Time Itself

The interval between event and recall is not empty. It is filled with mental activity — rehearsal, rumination, conversation with others, and, for notable events, exposure to media coverage — and

this activity, not the bare passage of time, largely determines what the later memory looks like. Such post-event processing is double-edged. Thinking and talking about an event can strengthen and preserve the memory, especially its central features; but the same activities can introduce new information that becomes woven into the recollection, so that the account drifts from what the witness actually perceived. Because remembering is reconstructive — assembled at retrieval from stored fragments plus current knowledge, beliefs, and goals (Bartlett, 1932; Conway & Pleydell-Pearce, 2000) — the longer the interval, the more opportunity reconstructive forces have to reshape the memory to fit the rememberer's later understanding.

A striking illustration comes from children who lived through Hurricane Andrew: six years later their narratives were, on average, more than twice as long as their original accounts, containing many new details — some accurate, some not — that reflected years of intervening discussion rather than fresh recovery of the original experience. The lesson is that a memory can appear richer after a delay than it did at first report, and that growth in detail over time is not evidence of growth in accuracy. Long-term recall depends less on the passage of time than on what happens during that time.

Repeated Recall and the Myth of Consistency

Witnesses in real cases recall the same event many times — to police, in statements, in depositions, and in testimony — and each retelling is itself a memory event with consequences. Repeated recall typically produces two patterns. Across separate tellings, the particular details mentioned vary; yet the cumulative total of correct information recalled often grows as repeated retrieval surfaces items not previously reported (phenomena called reminiscence and hypermnesia), with diminishing returns as the number of interviews increases. At the same time, the newly added information carries a rising proportion of error, modest in adults but substantial in children, and greater as the delay lengthens. These gains appear with open-ended free recall but not with narrow, specific questioning.

This has a direct bearing on a routine courtroom inference. Inconsistency between a witness's accounts is commonly treated — in cross-examination and by jurors — as proof that the witness is unreliable or untruthful. The research does not support that equation: the statistical relationship between the consistency of testimony and its overall accuracy is weak (Brewer, Potter, Fisher, Bond, & Luszcz, 1999). Some variation across retellings is the normal signature of ordinary memory and does not, by itself, indicate fabrication. A further caution runs the other way: because every act of recall reinforces whatever is retrieved — accurate or not — a perfectly consistent, confidently repeated account may reflect rehearsal as much as accuracy, and confidence tends to rise with repetition whether or not accuracy does.

The Value of the First Account

One of the most important protective factors is an early, clean account. Because the first report is taken before much forgetting and before most opportunities for contamination, its content — though it may be incomplete — is, on average, more likely to be accurate than the content of later reports, and it can help stabilize the memory against later loss. This is why investigators are encouraged to obtain an account as soon as practicable, through open-ended and non-leading questioning, and to canvass the witness about intervening conversations, co-witness contact, and media exposure. It is also why more interviewing is not better: a small number of complete, well-conducted interviews close in time is preferable to many repeated ones, which tend to add error rather than accuracy — a concern that is especially acute with children.

Delay and Eyewitness Identification

Identification evidence deserves separate mention because the effect of delay on picking a face from a lineup is both real and harder to quantify than common intuition assumes. Studies of actual police cases show that witnesses choose the suspect less often as time passes — for example, an archival analysis found suspect identifications dropped after about a week (Behrman & Davey, 2001) — and that the proportion of known-erroneous filler choices rises with delay (the archival literature generally agreeing that errors increase even where correct-identification rates are hard to measure). Because the true perpetrator's identity is unknown in real cases, however, lower choosing after long delays cannot be read directly as failing memory; it may also reflect more cautious witnesses or fewer culprit-present lineups.

Controlled experiments confirm that longer retention intervals are reliably associated with poorer memory for a once-seen face (Deffenbacher, Bornstein, McGorty, & Penrod, 2008), and meta-analyses link delay to increased identification error (Shapiro & Penrod, 1986; Steblay, Dysart, Fulero, & Lindsay, 2001). But the data do not yet permit precise prediction of how much error a given delay will produce, because studies have had to lump together wide ranges of time. The defensible summary is that delay probably increases identification errors, that very prompt one-person show-ups can be hazardous even within a day or two, and that the science counsels restraint: it can describe the direction of the effect far better than its exact magnitude in any particular case.

Long-Delayed Reports

Long-term autobiographical memory has acquired special forensic importance as adults increasingly report events from the distant past, including childhood sexual abuse (Connolly & Read, 2006). In most such cases the complainant reports having always remembered the essential events; in a smaller subset the memory is said to have been unavailable for a time and then recovered, a separate and more contested phenomenon. For continuously remembered events, the research gives no reason to expect memory to behave differently in kind over very long intervals than over the shorter intervals studied in the laboratory: the same strengths — durability of well-encoded central gist — and the same frailties — loss of peripheral detail, vulnerability to reconstruction and post-event contamination — are expected to apply, only with more time for both to operate.

Delayed Recall and the Law

The ordinary effects of delay go to the weight of testimony, not to whether a witness may testify; under Federal Rule of Evidence 601 every person is presumed competent. The science is most directly relevant to a staple of trial practice: impeachment by prior inconsistent statement under Federal Rule of Evidence 613. The research explains both why some variation across a witness's accounts over time is expected and innocent — and why inconsistency is a weak guide to accuracy — and, conversely, why details that surface for the first time long after the event, particularly after suggestive influence or exposure to other accounts, warrant close scrutiny as possibly added in the interval.

Where the testimony is an eyewitness identification, the time between the crime and the identification is one of the reliability factors courts already consider under Neil v. Biggers (1972) and Manson v. Brathwaite (1977). Due process requires a court to screen an identification for reliability only when police used unnecessarily suggestive procedures; absent that, the effect of delay on the identification is for the jury to weigh through cross-examination, argument, and, where permitted, expert testimony (Perry v. New Hampshire, 2012), and courts have increasingly recognized that a confident but delayed identification can still be mistaken (State v. Henderson, 2011). Whether an expert may explain this research is governed by the rules on scientific evidence

— Daubert v. Merrell Dow Pharmaceuticals (1993) and Kumho Tire Co. v. Carmichael (1999) in federal court and the states that follow them, and the general-acceptance test of Frye v. United States (1923) elsewhere. Under any standard, such testimony is offered to inform the trier of fact about how delay affects memory — not to opine on whether a particular witness is accurate — and the science itself counsels restraint about claiming more precision than the data support.

Special Issues in Legal Practice

The principles described above apply with equal force to every party in a legal proceeding. Memory operates the same way regardless of who is asking the questions, and the science summarized here favors no side. What differs between the parties is not the science but the vantage point — the particular places where memory issues tend to surface, and the particular errors each party is best positioned to guard against. The two summaries below identify those recurring issues. They are offered for orientation, not as litigation strategy; in every case the controlling question is what the evidence in that case will, and will not, support, and the expert's role is to inform the trier of fact rather than to advocate for either side.

Special Issues for Prosecutors

For the State, memory evidence affected by delay is most defensible when an early, clean account exists and the conditions surrounding it are documented. A first report taken promptly, through open-ended and non-leading questioning, and before the witness spoke with others or absorbed media coverage, carries affirmative indicators of reliability the State is well positioned to establish, and the durability of well-encoded central detail means that a short delay need not undermine the core of an account. The errors the prosecution is best positioned to guard against are largely procedural and accumulate over time: failing to canvass the witness about intervening conversations and media exposure, conducting unnecessary repeated interviews that add error rather than information, and delaying identification procedures or relying on show-ups after the early window has passed. An interpretive caution also works in the State's favor: because inconsistency across retellings is a weak predictor of accuracy, ordinary variation in a witness's accounts over time should not be mistaken — by the State or the jury — for dishonesty, and the cumulative growth of an account across interviews is not, by itself, a sign of improving accuracy.

Special Issues for Defense

For the defense, the recurring task is to show how the specific delays and intervening events in the case map onto the factors known to degrade or alter memory — recognizing that a witness can be entirely sincere and still be mistaken. Some concerns are about loss: long intervals, weak initial encoding, and high stress at the scene make peripheral but forensically critical details — including features needed to identify a stranger — likely to have faded or never to have been encoded. Others are about change: rumination, conversations with co-witnesses, media exposure, repeated interviewing, and confirming feedback during the interval can add or reshape details through reconstruction, so that a later, fuller, more confident account is not necessarily a more accurate one. Delay also bears on identification, where longer intervals are associated with increased error and where show-ups conducted after even a short delay are of particular concern. The law contemplates that these matters be placed before the trier of fact through cross-examination, through challenge to the manner and timing of questioning and identification, and, where the governing standard is met, through expert testimony (Daubert v. Merrell Dow Pharmaceuticals, 1993; Frye v. United States, 1923). The aim is not to suggest that delayed memory is unreliable as a class — well-encoded central detail can be durable — but to ensure that the particular intervals and intervening events of the case are weighed.

References

Bartlett, F. C. (1932). Remembering: A study in experimental and social psychology. Cambridge University Press.

Behrman, B. W., & Davey, S. L. (2001). Eyewitness identification in actual criminal cases: An archival analysis. Law and Human Behavior, 25(5), 475–491. https://doi.org/10.1023/A:1012840831846

Brewer, N., Potter, R., Fisher, R. P., Bond, N., & Luszcz, M. A. (1999). Beliefs and data on the relationship between consistency and accuracy of eyewitness testimony. Applied Cognitive Psychology, 13(4), 297–313. https://doi.org/10.1002/(SICI)1099-0720(199908)13:4<297::AID-ACP578>3.0.CO;2-S

Connolly, D. A., & Read, J. D. (2006). Delayed prosecutions of historic child sexual abuse: Analyses of 2064 Canadian criminal complaints. Law and Human Behavior, 30(4), 409–434. https://doi.org/10.1007/s10979-006-9011-6

Conway, M. A., & Pleydell-Pearce, C. W. (2000). The construction of autobiographical memories in the self-memory system. Psychological Review, 107(2), 261–288. https://doi.org/10.1037/0033-295X.107.2.261

Deffenbacher, K. A., Bornstein, B. H., McGorty, E. K., & Penrod, S. D. (2008). Forgetting the once-seen face: Estimating the strength of an eyewitness's memory representation. Journal of Experimental Psychology: Applied, 14(2), 139–150. https://doi.org/10.1037/1076-898X.14.2.139

Deffenbacher, K. A., Bornstein, B. H., Penrod, S. D., & McGorty, E. K. (2004). A meta-analytic review of the effects of high stress on eyewitness memory. Law and Human Behavior, 28(6), 687–706. https://doi.org/10.1023/B:LAHU.0000046433.95173.b6

Flin, R., Boon, J., Knox, A., & Bull, R. (1992). The effect of a five-month delay on children's and adults' eyewitness memory. British Journal of Psychology, 83(3), 323–336. https://doi.org/10.1111/j.2044-8295.1992.tb02444.x

La Rooy, D., Pipe, M.-E., & Murray, J. E. (2005). Reminiscence and hypermnesia in children's eyewitness memory. Journal of Experimental Child Psychology, 90(3), 235–254. https://doi.org/10.1016/j.jecp.2004.11.002

Rubin, D. C., & Wenzel, A. E. (1996). One hundred years of forgetting: A quantitative description of retention. Psychological Review, 103(4), 734–760. https://doi.org/10.1037/0033-295X.103.4.734

Shapiro, P. N., & Penrod, S. (1986). Meta-analysis of facial identification studies. Psychological Bulletin, 100(2), 139–156. https://doi.org/10.1037/0033-2909.100.2.139

Steblay, N., Dysart, J., Fulero, S., & Lindsay, R. C. L. (2001). Eyewitness accuracy rates in sequential and simultaneous lineup presentations: A meta-analytic comparison. Law and Human Behavior, 25(5), 459–473. https://doi.org/10.1023/A:1012888715007

Turtle, J. W., & Yuille, J. C. (1994). Lost but not forgotten details: Repeated eyewitness recall leads to reminiscence but not hypermnesia. Journal of Applied Psychology, 79(2), 260–271. https://doi.org/10.1037/0021-9010.79.2.260

Wixted, J. T. (2004). The psychology and neuroscience of forgetting. Annual Review of Psychology, 55, 235–269. https://doi.org/10.1146/annurev.psych.55.090902.141555

Legal Authorities

Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).

Frye v. United States, 293 F. 1013 (D.C. Cir. 1923).

Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999).

Manson v. Brathwaite, 432 U.S. 98 (1977).

Neil v. Biggers, 409 U.S. 188 (1972).

Perry v. New Hampshire, 565 U.S. 228 (2012).

State v. Henderson, 208 N.J. 208, 27 A.3d 872 (2011).
Fed. R. Evid. 601.
Fed. R. Evid. 613.

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