

# MEMORIES: FACT OR FICTION?

**NEVILLE TOMLINSON** CONSIDERS THE QUIRKS OF MEMORY AND FORGETTING, EXPLORING THE TOPICS OF HOW MEMORIES ARE FORMED AND STORED, REPRESSION, SUPPRESSION AND FALSE MEMORIES

*The palest ink is better than the best memory (Chinese proverb)<sup>1</sup>*

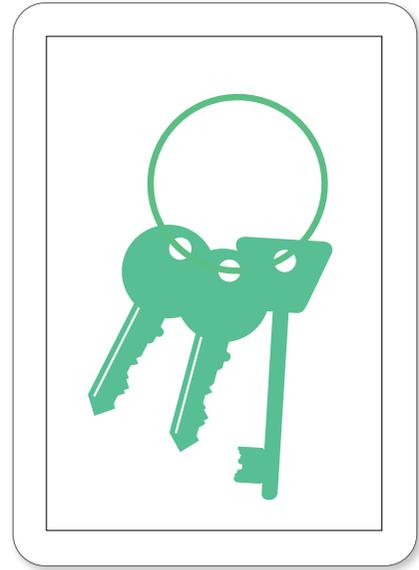
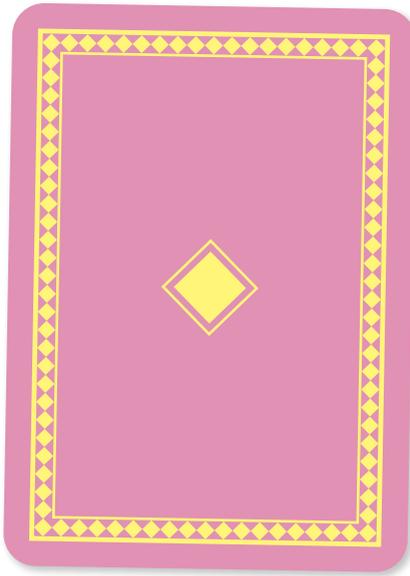
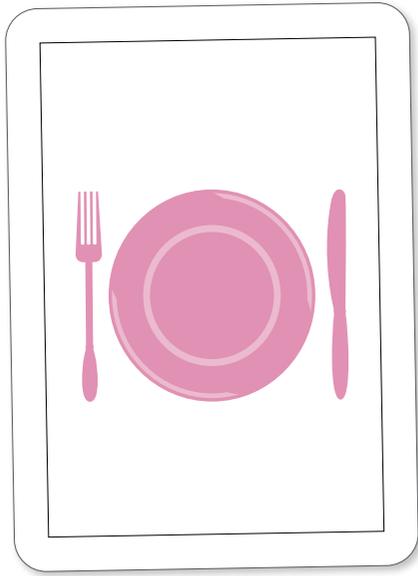
In his compelling account of the period that he was held as a hostage in Beirut, Brian Keenan recounts the day he first met John McCarthy, a fellow hostage with whom he was to share a cell for the next four years.<sup>2</sup> Keenan describes being blindfolded and taken from his previous cell to another building where one of his captors spoke to him. The captor ‘...said something aggressively into my ear and pushed me back into a sitting position on the bed.’ After a brief silence ‘...another voice spoke in my ear. Jerking the blindfold, saying something I did not understand, and then the door closed.’<sup>2</sup> Keenan goes on to describe how, after the two guards had left, he was uncertain whether anyone else was in the room, before tentatively lifting his blindfold to discover that John McCarthy was there. McCarthy also recalls being blindfolded where he was previously detained and then transferred to a building where he was bundled into a room. Shortly afterwards there was a rumpus ‘...as another man was dragged into the room and thrown on to something that creaked and groaned, perhaps a bed. Nothing was said. Two guards came in and gave us some sandwiches and bottles of Pepsi.’<sup>3</sup> McCarthy recounts that they all then ate in silence before the guards left.

There are only two people, Keenan and McCarthy, whose account of that day we will ever hear, and there are fundamental differences between them. Keenan makes no reference to the food and drink that was apparently provided, and there isn’t a sufficient time gap in his recollection to accommodate the subsequent meal that McCarthy describes. In McCarthy’s account, there was silence after the initial commotion of Keenan’s arrival, and the guards appear to have left the room before returning with the sandwiches and Pepsi. There are further anomalies. However, the purpose of this introduction is not to analyse the finer detail of Keenan and McCarthy’s autobiographical recollections but

rather to highlight how differently each of us may recall a memory of the same event – an event in this instance that only two people experienced. Whose memory is accurate and whose is inaccurate? The answer to these two questions is almost certainly ‘both’.

In the modern world, polarised views prevail and a life event is either fact or fallacy; there is no middle ground. But our personal account of such events will be based on what we remember of them, which may not always coincide with the memories of others who experienced or witnessed them. Whose memory is most reliable, if indeed any memory can ever be? This article considers the quirks of our memories and how difficult it is to find the ‘facts’.

As with much of what is written about the workings of the human brain and its inherent emotions, while there is significant common ground, theorists continue to develop and adapt their own interpretations of the research and neuroscience regarding memory and forgetting. The following is a brief summary of how our autobiographical memories are formed and stored, for which there is unanimous consensus. At every moment our subjective world is a miscellany of experience, and our memory lies at the heart of how we perceive and engage with those moment-to-moment experiences. However, as capacious as our brains are, it is generally accepted that the majority of these experiences ephemerally dwell in our short-term (working) memory<sup>4</sup> but are rarely encoded and committed to long-term memory, as the Disney Pixar film *Inside Out*<sup>5</sup> adeptly highlights. In other words, they have not been encoded or stored, or are incapable of retrieval, the accepted triumvirate of processes involved in establishing long-term memory.<sup>6,7</sup> There is also overwhelming agreement that our memories do not reside within a unitary store in the brain.<sup>8,9</sup> Moreover, they comprise a series of complex and sometimes disparate activities, spread throughout the brain.<sup>1,4</sup> Memory researchers also commonly distinguish between explicit and implicit memory. Explicit memory involves a conscious and



intentional recollection of information from long-term memory, whereas implicit memory is influenced by previous behavioural and emotional experiences and does not depend on conscious recollection.<sup>6,10</sup> It is also commonly accepted that our memories are not veridical copies of previous events and experiences. They are mutable and cannot be retrieved without being altered in the process, ultimately becoming a complex mix of fantasy and reality.<sup>11-13</sup>

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The 19th century philosopher, Friedrich Nietzsche, suggested that ‘the existence of forgetting has never been proved; we only know some things don’t come to mind when we want them to.’<sup>14</sup> More than a hundred years after Nietzsche’s dictum, despite copious amounts of research into the processes which create our memory and its apparent nemesis, forgetting, it would still be practically impossible to prove that an encoded memory has been lost from storage. However, the perceived wisdom, when considering the vast number of events in one’s life, is that there is little likelihood that they have all been retained in some form.<sup>7,10</sup> Accordingly, we must accept that not everything we experience will be remembered, and for good reason, as the alternative – a life in which even the minutiae of our daily existence is retained – is not the utopian state it might seem. Parker, Cahill and McGaugh<sup>15</sup> report the case of an American woman, AJ, who has exceptional autobiographical

memory. Rather than considering it an advantage, AJ rates it as anything but: ‘Most have called it a gift but I call it a burden. I run my entire life through my head every day and it drives me crazy!!!’ Curiously, AJ does have memory weaknesses. On one occasion, for example, after several hours of interviews, she was asked to close her eyes and describe what her interviewers were wearing, and could not do so. She also had a keyring with five keys on it and reported constant struggles to

remember what they were for. Therefore, although forgetting in modern culture is considered a human frailty to overcome,<sup>16</sup> it is an important foil to our memory, and neither exist in isolation from each other.<sup>17</sup>

By contrast, what if we have no autobiographical memory of events and periods of our lives that others can apparently access without inhibition? What if there are significant gaps in our life narrative? How does such a state impact on our sense of who we are? The most extreme form of memory loss of which I am aware is Clive Wearing, a very talented musician whose hippocampus was almost completely destroyed after he contracted viral encephalitis. The emotional impact of his memory loss was huge, as can be seen in the documentary, *Life without memory: the case of Clive Wearing*.<sup>18</sup> It is apparent from the documentary that living without a capacity to form new memories and engage with the past has had a devastating impact on Clive Wearing’s emotional wellbeing. Clive lives a moment-by-moment existence, greeting his wife with loving gusto every time she visits him, believing it always to be the first time that he has seen her since regaining consciousness. He keeps a



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journal, recording his first awakenings and games of cards, but as soon as it is written, he cannot remember writing it and crosses most entries out; only for them to be repeated moments later. When his wife shows him his journal and gently challenges whether this is the first time they have met since his illness, he becomes very agitated. However, when sat in front of a piano, Clive is able to play sublime music. Even though he expresses dread at what might happen, he seemingly instinctively knows what he should do. The emotional cost, though, is huge: when he has finished playing, he immediately begins fitting and convulsing, catapulted back into a moment-by-moment existence. One assumes that his implicit, instinctual memory for playing the piano has somehow survived.

Our implicit memory is what enables us to ride a bicycle or climb the stairs without consciously thinking about every part of the complex physical processes that each entails. The capacity of our implicit (procedural) memory is vast and not only enables us to undertake motor tasks with little conscious thought. For example, Levine<sup>11</sup> suggests we may store, within our psyches, implicit memories of many people who we have encountered on our life journey, for a host of reasons. He describes a personal experience of seeing a man who appeared vaguely familiar to him on a packed train in New York. They both alighted the train at the same stop and Levine, acting on an impulse, walked up to the man. He writes: "The name "Arnold" fell unexpectedly from my lips... then I realised that Arnold and I were classmates in the first grade – some forty years before this chance encounter on the train."<sup>11</sup> It transpires that Arnold had been the only child in the class not to have mocked Levine, then aged six, about his large ears. In this instance, the latent power of this procedural memory was fuelled by positive emotions. However, Levine concludes that although we may be unaware such memories exist, '...these implicit

memories are generally activated below the radar of our conscious awareness, often when we least expect or desire them to show up."<sup>11</sup> This raises the question that if our 'implicit trigger', as Levine describes it, is activated by a less palatable experience, has the memory of it been intentionally repressed or suppressed?

This is where the debates and arguments regarding our memories are at their most vociferous. Indeed, as Smith writes, 'repression has long been the battleground in psychology's family feud.'<sup>19</sup> There is a plethora of literature regarding the concept and there are tensions and often openly hostile debates between cognitive memory theorists and those who are cautiously sympathetic to the Freudian concept of repression. Erdelyi<sup>20</sup> argues that Sigmund Freud always considered repression and suppression to be in essence interchangeable. He goes on to assert that it was Anna Freud who insisted that they were distinctive conscious (suppression) and unconscious (repression) processes.

Anderson and Levy<sup>16</sup> liken the neurological processes which suppress unwanted memories to those deployed to reverse instinctive motor functions (for example, when we knock over a cactus and our instinctive reaction is to catch it). They suggest that, just as we can override automatic bodily reactions to save us from physical pain, we can also curb unwarranted memories, thus saving us from emotional distress.

Impassioned debates ensue over whether traumatic events can really be forgotten and subsequently recovered. Pope and Hudson propose that, by their nature, traumatic incidents such as personal assault and natural disasters are memorable, and challenge those who consider that memories can be repressed and later recovered, to produce evidence that can be substantiated. They do concede, however, that '... it might be argued that we have imposed impossibly high

standards for a demonstration of repression of childhood sexual abuse'.<sup>21</sup>

This brings us to the spectre of false memory. Elizabeth Loftus has been investigating and researching false memory since the 1970s and her passion for the subject is fuelled by miscarriages of justice, such as that suffered by Steve Titus.<sup>22</sup> Because Titus's car was similar to the one driven by the rapist of a female hitchhiker, investigating officers included a picture of him in a photo line-up, where he was identified as the one who looked 'closest' to the rapist. Ultimately, he somehow found himself on trial for the rape, and in court the rape survivor declared that she was 'absolutely positive' that Titus had raped her, and he was convicted. However, the true perpetrator was later arrested, following an investigation by a local journalist hired by Titus. He confessed to the rape for which Titus had been convicted and was also thought to have been responsible for 50 other rapes. Steve Titus was immediately released from prison, but days before he was due in court to claim

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recompense for the miscarriage of justice which had imprisoned him, he died of a stress-related heart attack; he was 35 years old. This is a desperately sad story and one which researchers such as Loftus consider highlights how mutable our memories are. But was this a false memory, a deliberate confabulation, or the cumulative product of a traumatised victim and an overzealous criminal investigation?

There is an abundance of research that supports the premise that false memories can be supplanted. For example, Pezdek and Hodge sought to test whether bogus events could be implanted into a child's memory and ultimately determined that, although in the majority of cases they could not, the key determinant was the plausibility of the fictitious memory.<sup>23</sup> The researchers attempted to convince children that two fictitious scenarios had actually occurred. The first was that the children had, at some point in their lives, been lost in a shopping mall (plausible), while the second was that they had had the medical procedure of a rectal enema (implausible). Perhaps not unsurprisingly, their findings indicated that it was far less likely that the children would accept the latter implausible memory as fact.

Nourkova, Bernstein and Loftus attempted to convince 80 Russian research participants that they had seen a wounded animal in footage of two terrorist attacks; namely the 1999 attack on Moscow apartment buildings and the 2001 attacks on the World Trade Center in New York.<sup>24</sup> These were both highly reported events, which

might have generated especially vivid 'flashbulb memories'. Only five of the Moscow group and none of the World Trade Center group could be convinced they had seen a wounded animal; a success rate of only 6.25 per cent. This did not stop the researchers from asserting that their study proved that the content of traumatic memories can be influenced by suggestion. I consider that this research does emphasise the basic tenet that memory is often inaccurate and malleable, which we have always known. But do such distortions in the irrelevant detail of these events have any bearing on what we can recall most accurately, namely their meaning?<sup>25</sup> In the vignettes offered in this article, it is the details which are fallible, not the meaning of the experience or the experience itself. Keenan and McCarthy were kidnapped and endured a long and brutal incarceration, the lady who misidentified Steve Titus was raped, and nobody questioned that the apartment blocks in Moscow had been attacked. Indeed Wells, Morrison and Conway<sup>25</sup> have suggested that, where memory is

produced as evidence (for example, in a court of law), awareness is needed that overly specific details are unlikely to be factual. Accordingly, if we accept the universal consensus that the first commandment of memory is that it is mutable, does the ongoing research into false

memories miss a salient point? As Levine states: 'The real question is: To what end and by whom are the memories being rewritten?'<sup>21</sup>

My interest in the fascinating subject of memory was instigated by my own poor autobiographical memory. I undertook a small piece of qualitative research for a dissertation, which sought to investigate the impact of poor autobiographical memory on our sense of self. There is a significant weight of opinion that emphatically supports the view that memories are essential in establishing our personhood, self and identity,<sup>1</sup> an integrated personality,<sup>26</sup> our individuality and our consciousness.<sup>27</sup> While undertaking my research, I discovered a proposition in memory literature that the '...tendency for depressed patients to have less rich autobiographical memories is linked to their preoccupation with negative thoughts.'<sup>10</sup> My counterproposal considered whether there was, in effect, a 'chicken and egg' process. In other words, should we accept the notion that poor autobiographical memory is merely a symptom of a depressive persona, or could it be a consequence of prior emotional traumas that we have no appetite to consciously remember? Is there a subconscious trade-off to accept the narrative of our 'normal' lives in order to maintain the connection with familial and social groups on whom we depend?

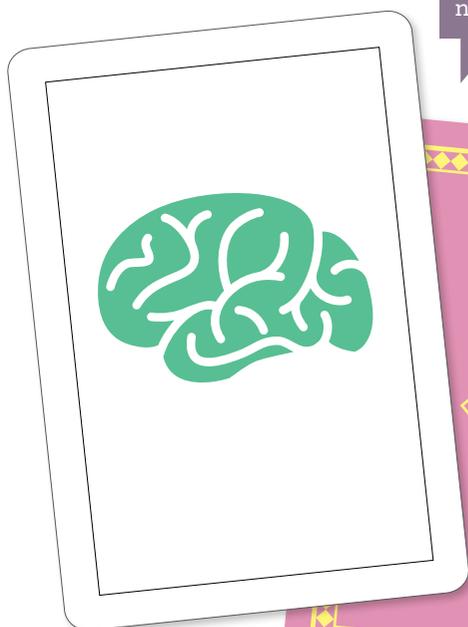
In conclusion, it is a personal disappointment that professionals enthused by the subject of memory do not more frequently embrace what I consider to be the richest

source of information that we can muster, namely narratives of human experience. Laboratory-based research is dispassionate and clinical, which many consider gives its results greater scientific certainty. However, Van der Kolk, for example, acknowledged that there were shortcomings in deploying laboratory tests to gauge the impact of traumatic memory, which he posits can never replicate the emotionally intense stimuli of real-life events.<sup>12</sup> I believe memory researchers should give greater credence to the human story. Scanning brains, testing observational skills and assessing the ability to retain factual knowledge while being distracted will continue to produce data that will guide further understanding of the machinations of our memories. However, this research cannot account for the vagaries that enable, for example, AJ to remember exactly when, where and at what cost every domestic appliance in her house was purchased, while being unable to remember the purpose of each key that she carried. My final wish, therefore, is for human experiences to be woven into the research with equitability. After all, '...a purely cognitive memory must belong either to a robot or to an inert database.'<sup>28</sup> ■

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#### READER RESPONSE

The author would welcome feedback on this article. To contact him, please email: [nevillet@hotmail.co.uk](mailto:nevillet@hotmail.co.uk)



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