

Neurological signs: hypermnesia

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Anniversaries are times for remembering, if not always for celebrating. However, the chances are that few readers will be able to recall any of the contents of the very first issue of ACNR, published 20 years ago (or maybe even the most recent issue!). After some pondering, I did eventually recollect that the inaugural ACNR issue included an excellent piece by Alasdair Coles on the oculomotor nerve.

Awareness of failure to recall may prompt a complaint of poor memory function without there necessarily being any pathological substrate, and certainly this kind of functional disorder is the bread-and-butter work in the cognitive function clinic. Amnesia in its various forms is less frequently encountered. Some literary accounts of impaired memory have already been presented in the journal.¹ Indeed there are many more, so much so that “the amnesia story” has been claimed as a specific genre of literature.²

Conversely, I do not recall ever encountering in clinical practice a complaint of memory being too good, or hypermnesia. This general term, like amnesia, may be further qualified, dependent upon the particular nature of exceptional memory or functional excellence. Hyperthymesia, or the hyperthymestic syndrome, is the ability to remember an abnormally large number of life experiences in vivid detail, and is also known as highly superior autobiographical memory (HSAM).³ Eidetic, or “photographic”, memory is the ability to recall precisely images from memory after a brief or single viewing. Some definitions of eidetic memory exclude use of mnemonic devices, as used by trained mnemonists. However, synaesthesia may be linked to eidetic memory, with synaesthetic experience possibly being used as a mnemonic aid.

The classic account of hypermnesia is that of AR Luria (1902-77), who in *The mind of a*

mnemonist described his patient, Solomon Shereshevsky, a journalist with fivefold synaesthesia whose memory was apparently “for all practical purposes ... inexhaustible”. Studied over a period of thirty years beginning in the 1920s, Luria noted that Shereshevsky was able to convert information into visual images. In his introduction to the 1968 reprint, Jerome Bruner credited Luria with founding a new literary genre with this book.⁴

Another noted hypermnesic was the Hungarian-US mathematician John von Neumann (1903-57), said by his wife to have an “almost photographic memory”,⁵ a report corroborated by his colleagues: he could apparently memorise names, addresses, and telephone numbers from a phone book on sight.⁶ His work on computers was initially justified by means of biological analogy with the working of neurones (only latterly did the analogy reverse to “brain as computer”) although subsequently he came to doubt the parallel, as shown in his posthumously published Silliman lectures of 1957.⁷ I do not know whether or not von Neumann’s own prodigious memory stimulated his interest in the potential similarities and differences between computers and brains.

The “photographic memory” is also, of course, a trope much resorted to in film and TV. Examples, conjured fairly randomly from my memory, include the film *Carry on Spying* (1964) in which Barbara Windsor (1937-2020), who later developed dementia, plays Agent Daphne Honeybutt; and Sheldon Lee Cooper in the long running TV serial *The Big Bang Theory* (2007-2019).

There are also some literary accounts suggestive of hypermnesia. Perhaps the most notable is that by the Argentine author Jorge Luis Borges (1899-1986) in his short story, *Funes el memorioso*, usually translated as *Funes, the memorious* but also as *Funes, his memory*, which appeared in a collection entitled *Artífices* first published in 1944. In his foreword to this collection, the author calls this story “one long metaphor for insomnia”.⁸ Set in Uruguay in the 1880s, it describes Ireneo Funes who, having been “hopelessly crippled” after being knocked unconscious when bucked by a half-broken horse, finds that now, in his late teenage years, “his perception and his memory were perfect”. However there is evidence that his perception of time and memory for proper names was “precise” even before the injury. Now “the most trivial of his memories was more detailed, more vivid than our own perception of a physical pleasure or a physical torment”.

He had effortlessly learned English, French, Portuguese, Latin. I suspect nevertheless that he was not very good at thinking. To think is to ignore (or forget)

differences, to generalize, to abstract. In the teeming world of Ireneo Funes there was nothing but particulars – and they were virtually immediate particulars.

Oddly enough, given these exceptional memory faculties, Funes also crops up in the aforementioned anthology devoted to amnesia.² Oliver Sacks made several references to Funes, finding him to be “uncannily similar” to Luria’s patient, and wondering whether he may have been based on a personal encounter between the author and a mnemonist.⁹ Unlike the situation of Funes and of Shereshevsky, for von Neumann “the trees did not conceal the forest from him”.⁶

The history of prodigious feats of memory is, in fact, ancient. One of the books which Funes reads is the *Naturalis Historia* of Pliny the Elder (AD 23-79) which catalogues (in Book VII, Chapter XXIV) cases of prodigious memory, for example (in the translation of Philemon Holland, 1601):

One Charmidas or Carmadas, a Grecian, was of so singular a memorie, that he was able to deliver by heart the contents word for word of all the bookes that a man would call for out of any librarie, as if he read the same presently within a booke.

A more recent example is to be found in Pascal Mercier’s novel *Night train to Lisbon*, set partially in the time of the Portuguese dictatorship in the early 1970s. Estefania Espinhosa “had this unbelievable memory. Forgot nothing, neither what she had seen nor what she had heard. Addresses, phone numbers, faces. We used to joke that she knew the phone directory by heart” (shades of von Neumann?). This “phenomenal memory” is used to retain all the secrets of the *Resistência*: “We didn’t have to write anything down, didn’t have to leave a paper trail. The whole network was in her head” (in the film version, which differs in many details from the book, Estefania is shown reciting names and telephone numbers of supporters of the resistance). However, the possession of these abilities renders Estefania a liability when the secret police seek to track her down, necessitating her flight from Portugal. As she recalls: “it was about keeping me safe ... but it wasn’t only me, it was mainly my memory”.¹⁰

Detrimental effects of these exceptional memory functions are reported. For example, Shereshevsky appeared unable to hold down any job for a prolonged period. There is a quote attributed to Friedrich Nietzsche (1844-1900) to the effect that “Many a man [*sic*] fails as an original thinker simply because his memory is too good”. So, perhaps we should not be too harsh on our own memory lapses!

References are overleaf