

Apart from that, this book is a good mix of anecdotal comments, theory, concepts and academic research and I'm sure it would be a useful read for anyone wanting to find out more about the use of coloured overlays and lenses for reading rehabilitation.

REFERENCES

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D. L. Schacter (2001). *The seven sins of memory: How the mind forgets and remembers*. Boston, MA: Houghton Mifflin. 270 pp, \$14.00, ISBN 0618040196 (pbk).

As every student of neuropsychology knows, a great deal may be learned about a system from the characteristic ways in which it fails. In this engaging book, written for the general reader, Daniel Schacter takes such an approach to the study of human memory, categorising its everyday failures into seven “sins”. The book is organised into seven chapters dealing with each sin in turn. An eighth chapter then argues that the seven sins are all by-products of otherwise adaptive features of human memory.

The first three sins are sins of omission. “Transience” refers to the tendency for memory to fade over time. “Absent-mindedness” refers to failures of memory caused by inattention, either at the time of encoding (so that a memory is not properly stored in the first place) or at retrieval (so that a memory is not sought after at the moment it is needed). “Blocking” occurs when a sought-for word or name fails to come to mind, even when it is well known, and perhaps despite strenuous efforts at retrieval. The next four sins are sins of commission: Some form of memory is present, but it is either incorrect or unwanted. “Misattribution” involves assigning a memory to the wrong source. “Suggestibility” refers to the way in which memory may be distorted by the way in which it is probed, for example through leading questions. “Bias” reflects the influence of our current beliefs and knowledge on the way in which the past is remembered. Finally, “persistence” entails the repeated recall of intrusive memories.

These seven chapters cover an enormous amount of material. For instance, the first chapter alone (transience) discusses the work of Ebbinghaus and subsequent researchers on forgetting curves; the distinction between reproductive and reconstructive memory processes; the effects of ageing on transience; the case of HM; neuroimaging investigations of subsequent memory effects; working memory and the role of the phonological loop in vocabulary acquisition; the use of memory strategies and nutritional supplements to reduce transience; research with transgenic mice into the genetic enhancement of memory; and some of the moral and social implications of this research. Schacter also finds the space, within this 30-page chapter, to illustrate his points with examples from the O. J. Simpson murder trial and the 1998 grand jury investigation of President Clinton over the Monica Lewinsky affair. Subsequent chapters cover such diverse topics as prospective memory (absentmindedness), tip-of-the-tongue phenomena (blocking), eyewitness memory (misattribution), recovered memories of childhood abuse (suggestibility), the origins of racial prejudice (bias), and post-traumatic stress disorder (persistence). To the book's credit, this breadth of coverage is not bought at the cost of clarity, and nor does it rely excessively on oversimplification. Where controversy exists, it is generally acknowledged and the reader is directed, via excellent notes at the end of the book, to the relevant literature.

The final chapter contains the book's most controversial material. Here, Schacter takes an evolutionary approach, arguing that the sins discussed earlier should all be seen as inevitable by-products of adaptive features of human memory, rather than as flaws. For instance, transience, absentmindedness, and blocking can be seen as the consequences of a memory system that protects against "mass confusion produced by an incessant coming to mind of numerous competing traces". Misattribution errors are seen as arising from a system that effectively extracts gist information from a series of particular incidents, an important prerequisite for categorisation and comprehension. Having illustrated the benefits conferred by a system predisposed to each of the seven sins, Schacter takes his argument one step further. He seeks to distinguish between sins that are caused by evolutionary adaptations (i.e., processes that are themselves directly selected for by evolution), and sins that are caused by evolutionary "spandrels" (i.e., accidental by-products of selection for something else). This section is rather unconvincing. As Schacter himself points out, "we don't have a great deal of evidence on which to base strong claims about evolutionary origins". It is also questionable whether the sins may be attributed to processes with independent origins, since it is certainly implausible that they always act independently of one another, a fact readily acknowledged by Schacter.

Although some of the chapters offer practical advice on how best to overcome the sins of memory (especially transience), more commonly the book

simply reassures the reader that memory failures are inevitable and universal, since they are “a price we pay for processes and functions that serve us well in many respects”. This Panglossian optimism may represent sound advice to the general reader, concerned with his or her occasional forgetfulness. However, Schacter does not address the question of what can be done to counter more serious cases of memory dysfunction. Consequently, the book may not be of direct relevance to the readers of this journal. Nevertheless, it may be recommended as an enjoyable, accessible, and stimulating read, which deserves to reach a wide audience of non-specialists and specialists alike.

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