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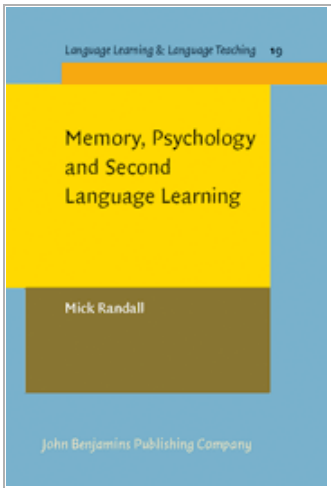
Memory, Psychology and Second Language Learning			
Author:	Mick Randall (2007)		
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Any book attempting to unravel the mysteries of the human brain is setting itself a formidable task, as Pinker (1997) admits in his cheekily titled *How the Mind Works*. In *Memory, Psychology and Second Language Learning*, Randall is conscious of his subject matter's complexities and the challenge of synthesizing and explaining highly technical concepts from linguistics and psychology to an audience largely concerned with the practical business of language teaching. Nevertheless, the increasing relevance of psycholinguistics to second language acquisition, powered by advances in technology, makes such a book very important to the professional development of well-informed teachers.

The structure of the book is logical and coherent. It begins with a historical overview of the emergence of psycholinguistics. Then chapters 2–6 detail a cognitive model of the brain and explore the implications of this model for processes such as sound differentiation, reading comprehension and vocabulary retrieval. Language teaching is never far from the forefront but chapter 7 concentrates on classroom applications and critiques specific methodologies. There is thus a smooth move from theory to practice, which is critical, for this is not a book the reader can dip in and out of: understanding the analysis of current best practice relies on assimilating the framework unraveled in the earlier chapters.

The brain, of course, is not just an organ of language—humans have existed without the language faculty for most of their history (Aitchinson, 2000)—so the topic owes much to progress in fields that deal with general cognition and the brain's structure.

Hence, a problem Randall has to deal with is the often conflicting evidence from different disciplines and methodologies. Randall treads very carefully through this tangled, often seductive garden. He gives a helpful and accessible overview of the main delights, occasionally stopping to sniff a particularly fragrant flower but not dwelling so long as to miss rival charms. To illustrate, the table on pages 28–29 comparing approaches to language processing and their evidential bases is balanced and informative. It acknowledges areas which language teachers may be less familiar with, notably language impairment and neurology. The latter provides essential evidence for connectionism, an approach Randall credits as critical to his thesis and so deserves some elaboration here.

There is no unified model of connectionism, but the system essentially features interacting nodes which combine to process information. Highly recurrent patterns, for example, the co-occurrence of the pronoun *I* with *am* and *he* with *is*, build neural networks strengthened and reinforced by positive input from the environment, that is, other language users. Chapter 3, the most technical part of the book, illustrates connectionism with reference to reading skills. For instance, Randall identifies three levels in word recognition: a feature level, the direction and slope of the lines which make up letters; a letter level, their shape and form; a word level, the assembly of letters into permissible orthographic sequences. The presence of lower-level features suggests, or 'excites' to use connectionist terminology, higher-level features, narrowing down the reader's options.

Randall exemplifies with the word TAKE:

> Looking at the first letter, a high [horizontal/curved] line will excite T, G and S, but inhibit A and N. . . . A vertical line in the middle will excite T but inhibit all the others until a letter is recognized (in this case T). This will raise the potential of a whole set of words beginning with T (TRAP, TRIP, TAKE, TIME) but inhibit other words (ABLE, CART). Once the second letter is recognized, then other words within the cohort will be inhibited, but will in turn activate words containing the activated letters. The innovatory approach with this model is that each node [decision-making point] at each level will produce inhibitory as well as excitatory connections. Thus the model allows for new information to either raise or lower the activity of other nodes at the same level, at the level above or at the level below. This process is therefore iterative and interactive; it makes on-going approximations as the information evolves and feeds back information once new information is received. (p. 59)

This chapter is the most meticulous, doing full justice to its subject matter. Randall's own enthusiasm comes in part from his interest and involvement in the area: the bibliography records that his doctoral thesis was on word recognition. Nevertheless, a minor frustration with the book, inevitable given its scope and audience, is that it does not allow a similarly full treatment of other major issues from the literature. A case in

point is the Critical Age Hypothesis (pp. 12–13), the debate over whether there is a cut-off time for native-like language acquisition. Randall introduces the two factors pointing to a critical time period. The first, neurological, the decreased plasticity of the brain as we approach adulthood, is backed up by reference to work in phonology. However, the second factor, the activation of Universal Grammar, in particular the possibility of parameter setting in later life, if indeed at all in a second language (see White, 2003 for a book length review of the topic), is not explored. This is an omission, as given the dominance of generative grammar in post-structuralist linguistics, the crucial question of the psycholinguistic validity of Universal Grammar, a point raised by the author himself in an endnote (p. 180), needs to be significantly addressed.

While connectionism is an important strand holding together the author's argument, the theory is not taken on board without reservation. Connectionism sees language behaviour as the result of associative networks between words, with frequency of occurrence building stronger patterns. However, as Randall sagely notes (p. 106), this process cannot account for creativity. Connectionism would allow us to formulate only strings which we had encountered before in the input, whereas in reality we can innovate language. Chomsky's *Colourless green ideas sleep furiously* famously demonstrated how humans can create language which is unique yet consistent with the rules of universal grammar. Such sentences are impossible to account for without recourse to a rule-based system of composition. Of course, we are highly sensitive to the linguistic environment around us, which is why highly frequent words and phrases are memorable and productive, but we are not conditioned by this input. Randall cautions us that connectionism may overplay the significance of associative learning, especially for more proficient users.

The final chapter is perhaps the most valuable for practitioners reading this journal, as it pulls together the theoretical discussion into reflections on the adequacy of contemporary methodology. As someone brought up on a diet of communicative language teaching, I found two sections gave me particular food for thought. The first, championing the value of translation, was refreshing. Indeed, psycholinguistic considerations aside, the pervasiveness and naturalness of translation as a learning strategy makes its exclusion from the curriculum simply perverse. While there is growing recognition of the value of translation (e.g., Cook, 2008), the second of the points raised by Randall, the benefit of reading aloud, elicits much more reactionary responses. Randall advocates reading aloud as a cognitively demanding activity with a long-term payoff not just for reading skills but for general acquisition. This may be reassuring for many, for while reading aloud is castigated by purists of communicative language teaching, it surely enjoys widespread, if covert, popularity.

The defence of discredited teaching activities is only one of the many surprises in this absorbing volume. It is a very good sign that the reader, notwithstanding the helpful suggestions for further reading at each chapter's end, is left wanting more. For readers wanting to try out some of the psycholinguistic theories on themselves or colleagues, there is an intriguing collection of workbook activities at the end of the book which

consolidate the reading, and provide some entertainment. Overall, Randall succeeds in his task of exploring a complex area in a disciplined and accessible manner. This is a book which really makes you think about thinking.

References

Aitchison, J. (2000). *The seeds of speech*. Cambridge: Cambridge University Press.

Cook, G. (2008). Plenary: an unmarked improvement: using translation in ELT. In B. Beaven (Ed.), *IATEFL 2007 Conference Selections* (pp. 76–86). Kent: IATEFL.

Pinker, S. (1997). *How the mind works*. New York: Norton & Company.

White, L. (2003). *Second language acquisition and universal grammar*. Cambridge: Cambridge University Press.

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