

This Week's Citation Classic™

Broadbent D E. *Perception and communication.*

London: Pergamon Press, 1958. 338 p.

[Applied Psychology Research Unit, Medical Research Council, Cambridge, England]

This book set out a model of human performance in terms of the processing of information, using the data available at the time. It particularly emphasised task combination and selective intake of information as methods of clarifying the nature of internal events. [The *Science Citation Index*® (SCI)® and the *Social Sciences Citation Index*® (SSCI)® indicate that this book has been cited in over 1,375 publications since 1958.]

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"This book was written in odd evenings, in aircraft, on trains, and during weekends, while I was working during normal hours on human factors problems in Cambridge, England. At that time, those of us studying man-machine interfaces had a problem. We found we needed a particular kind of psychology to make sense of our results. But the academic journals were dominated by a different kind of thinking. As Paul Fitts showed, one could get an audience by starting a paper in the conventional language of stimulus and response (S-R), and then slowly modulating into a more useful vocabulary of information processing. With the increase of knowledge throughout the 1950s, however, this got harder and

harder, because it meant doing the whole job within each paper; we needed some general statement of the whole background. I thought, therefore, that I would write a kind of survey of the scattered papers and technical reports that were being inspired by the newer language, point out that they were all coming from a consistent point of view, and relate them to the interests of the more dominant schools of psychology. The view itself, of course, had already been formulated by Craik, Bartlett, Fitts, Garner, and others.

"As luck would have it, many other people were discontented with the S-R associationist framework, and the book appeared just at the right moment to be used as a citation with which to club harmless behaviorists over the head. That probably is the reason for its frequent citation. In addition, some parts of the book could be read in a way that did not require *too* much of a change of mind in psychologists of a different tradition. It therefore won a few converts. The cost, however, was that it was often misquoted with approval. Bits of it (such as the problems of the word 'consciousness,' the reasons two tasks can often be done simultaneously, or the treatment of practice) escaped notice and can still be read with profit today.

"Since those innocent days, the world has become more complex, so that it is difficult to point to a single summary of the same entire area. The more academic aspects of cognitive psychology appear in texts such as that of Anderson,¹ more applied topics in books on specialised subjects,^{2,3} and so on. One widespread view, which I support, is that the framework of the 1958 book now requires shifting to a different kind of simplistic conceptual framework."⁴

1. **Anderson J R.** *Cognitive psychology and its implications.* San Francisco: Freeman, 1980. 503 p.
2. **Davies D R & Parasuraman R.** *The psychology of vigilance.* London: Academic Press, 1982. 288 p.
3. **Hockey G R J,** ed. *Stress and fatigue in human performance.* New York: Wiley, 1983. 396 p.
4. **Broadbent D E.** Maltese Cross: a new simplistic model for memory. *Behav. Brain Sci.* In press, 1984.