

Dyer F.N. The Stroop phenomenon and its use in the study of perceptual, cognitive, and response processes. *Mem. Cognition* 1:106-20, 1973.  
[Experimental Psychology Division, US Army Medical Research Laboratory, Fort Knox, KY]

The paper reviewed and summarized experimental findings (mainly produced since 1966) related to the Stroop color-word test. [The *SSCI*® indicates that this paper has been cited in over 160 publications.]

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I wrote this article on the Stroop phenomenon while I was a research psychologist at the Army Medical Research Laboratory at Fort Knox, Kentucky. The Stroop color-word test requires one to name colors when cards of color patches are shaped to spell words designating incongruent color names; Stroop interference is the delay that occurs in naming these special color patches compared to naming nonword color patches. The test was initially developed and described by J. Ridley Stroop in the 1930s.<sup>1</sup> In 1966 A.R. Jensen and W.D. Rohwer provided a review of personality, drug, and other factors influencing performance on the test.<sup>2</sup> My goal was to summarize findings from *experimental* research in contrast to results of correlational studies. I also wished to communicate how this disruption of color naming by integrated words (or by temporally or spatially adjacent words) can provide important information about naming, reading, and attention in the same way that disruptions in the earth can tell us about geology and that disruptions in sanity can tell us things about normal personality processes.

My own research on Stroop interference began while I was waiting for equipment that would enable me to do research on ocular accommodation. The accommodation research was largely sidelined once I became involved in the various experimental studies of Stroop analogs, spatial and temporal limits to the color-word displays that produce interference, and analyses of the central codes that cause reading to strongly interfere with naming as

it does in the Stroop test. These studies were easily published in scientific journals, and journal publication was the major criterion of my immediate supervisors for successful research. On the other hand, some of my colleagues saw the research as having little relevance to the Army's mission during the Vietnam War, and they probably communicated their concern to Washington or wherever our headquarters were. With just a little paranoia, one can imagine that it was easier for the Army to terminate the Experimental Psychology Division of the laboratory (as they did) than to fire a civilian employee who was receiving satisfactory performance ratings.

*Memory & Cognition* was the second choice for publication of the paper. It was initially turned down by *Psychological Bulletin*. Unfortunately, I do not remember and cannot find the communication that tells why it was not suitable for publication in that journal (there may be a tendency to forget unpleasant experiences). Had it been published in the large-circulation *Psychological Bulletin*, it would undoubtedly have achieved *Classic* status even sooner.

Hundreds of experimental studies have been published on the Stroop phenomenon since 1973. Many of these have been aimed at increased understanding of automatic perceptual processing and failures of selective attention. Others have used the Stroop phenomenon as a tool to explore other cognitive processes. In 1984 W.R. Glaser and F.-J. Dunglehoff published an experimental study<sup>3</sup> that reviews much of the recent experimental literature.

The strong interest in the Stroop phenomenon and in my review paper is probably related to the disruption of color naming. Anomalous situations and things are not only keys to scientific understanding of their normal counterparts, but they are also intrinsically interesting. (Lots of nongeologists visit the Grand Canyon, and crazy people get a lot of attention from people who are not mental-health professionals.) Print up a list of color names in incongruent colors and try to name the colors quickly. You will probably find that the delays and other problems you experience are worth sharing with colleagues, spouses, and children.

1. Stroop J.R. Studies of interference in serial verbal reactions. *J. Exp. Psychol.* 18:643-62, 1935.  
(Cited 640 times since 1966.)

2. Jensen A.R. & Rohwer W.D. The Stroop color-word test: a review. *Acta Psychol.* 25:36-93, 1966. (Cited 225 times.)  
[See also: Jensen A.R. Citation Classic. (Barrett J.T. ed.) *Contemporary classics in the social and behavioral sciences*. Philadelphia: ISI Press, 1987. p. 3.]

3. Glaser W.R. & Dunglehoff F.-J. The time course of picture-word interference.  
*J. Exp. Psychol.—Hum. Percep. Perf.* 10:640-54, 1984.