NUMBER OF AVAILABLE ASSOCIATIONS AND RATE OF ASSOCIATION FOR CATEGORIES IN SEMANTIC MEMORY*[1]

Hamilton College and Buena Vista College

Douglas J. Herrmann and Roger J. S. Chaffin

Summary

Bousfield and Sedgewick showed that the cumulative number of associations produced to a category as a function of time could be described by an exponential function having the parameters m (rate of association) and C (total number of associates produced). In two experiments using male and female college students ($N = 16$ and $N = 14$, respectively), the present study investigated the hypothesis suggested by previous research, that the values of m and C for different categories are negatively correlated. Ss produced examples of different categories in four-minute periods per category on mimeographed sheets. The predicted negative correlation across categories was found (Experiment I, $r = .54$, $p < .05$, one-tailed test; Experiment 2, $r = .75$, $p < .01$). Categories with a low m value had a high C value and *vice versa*. The effect can be explained by a model which assumes exemplars are stored more or less densely in semantic memory.

A. Introduction

A task which has intrigued psychologists for years is the restricted continuous-association task in which an S produces as many associations of a particular kind—e.g., animals—as quickly as possible. The task is typically terminated in 30 minutes or less. Data from this task are commonly presented as a cumulative plot of the number of associations as a function of time. In 1944 Bousfield and Sedgewick (2) reported that the cumulative plot of associations against time for the restricted continuous association task

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