Properties of categories in semantic memory

John M. Joelson and Douglas J. Herrmann
Hamilton College

Properties of categories were investigated by analyzing 22 measures of the 56 categories used in the 1969 Battig and Montague norms. A factor analysis of the data indicated that categories in semantic memory possess at least four factors that may affect the use and comprehension of categories. These factors were tentatively interpreted as reflecting the properties of category familiarity, category size, category-label printed frequency, and a category's semantic complexity. Additionally, the correlation matrix and the factor-pattern matrix allow many insights into other semantic properties, such as meaningfullness, abstract-concreteness, and homographic characteristics of category labels.

The present research had the purpose of identifying characteristics that differentiate taxonomic categories in semantic memory, e. g., *Colors, Vegetables, Countries.* The existence of category properties has important implications for category research. The primary implication concerns the advancement of psychosemantic theory. The elucidation of category properties can suggest dimensions of storage and retrieval of verbal items from categories in semantic memory. A secondary implication involves effective control of stimuli in category investigations. Identification of relevant category properties will allow investigators to match categories on properties that might otherwise distort results. Additionally, investigators will be able to experimentally manipulate these category properties and, thereby, enrich theories of semantic memory.

In order to determine what these properties may be, Herrmann, Chaffin, and Corbett (1973) examined six measures of the 56 categories found in the Battig and Montague (1969) category norms. These norms were developed from the responses of two samples of university students who wrote as many examples of a category as possible within 30 seconds. The Battig and Montague norms report, for each of the 56 categories, the responses given and the number of