How an Unfamiliar Thing Should Be Called

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An empirical method is described to derive good names for unfamiliar objects. It is based on three principles: (1) The names should be within users' linguistic capacities; (2) names should be informationally efficient; (3) names should form a classification system. The principles lead to a three-step method: (1) Subjects generate names for the objects; (2) a subset of the names, which fulfills the principles, is selected; (3) how good the names are is tested by matching and recall tasks. Steps 2 and 3 are iterated to improve the names. The names that result are natural, short, easily matched with their physical referents, and well recalled. The method is generalizable and ought to be useful in a large variety of situations where names for unfamiliar objects are needed.

INTRODUCTION

This paper describes an empirical method to derive good names for unfamiliar objects. How good the names are is measured by (1) how well people can match the names with the objects they describe and (2) how well they can recall the names.

Previous researchers (e.g., Brown, 1958; Carroll, 1980, 1981; Nelson, 1974, 1977) have investigated naming, including why some names are good and others poor, but the empirical method given here for deriving

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good names, and for measuring how good they are, has not been presented before. The method is generalizable and has already been used successfully in other situations (e.g., Norman, Note 1) where names for unfamiliar objects are needed.

The stimulus materials to be named were pieces from an assembly kit for the construction of objects, but the method of deriving names is not restricted to these materials. The three principles used in deriving the names are as follows: (1) The vocabulary and structure of the names should be within the users' linguistic capacities; (2) the names should be informationally efficient, namely, short, but at the same time unique; and (3) the names should form a classification system. That is, a name should contain a generic term and, when necessary, one or more modifiers. (As will be seen later, the generic terms are nouns and the modifiers are adjectives and prepositional phrases.)

The three principles above lead to the following design for creating good names.

Step 1. Names are generated by a group of subjects.

Step 2. From the names generated by subjects, the experimenter chooses a subset of the names according to the following criteria: (a) The modal name is chosen; namely, if a particular name is generated more often than others, it is chosen; (b) shorter names are preferred; and (c) the names chosen stay within the classification system provided by the subjects.

Step 3. How good the names are is tested by measuring, first, how well people can match the names with the objects they describe, and second, how well they can recall the names, given the physical objects.

Steps 2 and 3 can be iterated: If a given name is poorly matched or recalled, it can be replaced by another generated name and tested again.

The method results in names that form a classification system and that are natural, short, well matched with their physical referents, and well recalled. It ought to be useful in a large variety of situations where names for unfamiliar objects are needed.

METHOD

Subjects

A total of 114 students from introductory psychology classes at the University of Colorado participated as part of a course requirement, 14 in Part 1 and 100 in Part 2.