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The Grammatical Basis of Stereotypical Construction

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Abstract

A hypothesis regarding the likely roots of stereotypical cognition is proposed and examined based spontaneous word association to the prototypical word: woman. The study looked at the similarities between natural language grammar and the structure of thoughts relating to concepts defined by psychologists as stereotypes. This study showed a remarkable consistency between the structures of natural languages and cognition.

The Grammatical Basis of Stereotypical Construction

A natural language can be defined as a spoken communication protocol that originates spontaneously as human beings attempt to exchange messages among themselves. While the roots of natural language are the current subject of heated debate among linguists, anthropologists, philosophers and psychologists, there is a generalized consensus among theorists in reference to its basic structure. It has been pointed by linguist Noam Chomski (1968,1970) that natural languages contain certain elements in common, for example nearly all human languages have nouns, verbs, and adjectives. Noting these structural similarities among natural languages, Chomski and others (Bates & Elman, 1996) argue that the basic grammatical structure of language is an element of human cognition. Taking this idea a step further, it could be inferred that the storage and retrieval of experiential data from memory is likely to utilize the same grammatical encoding which is used in communication among human beings; that is to say that since most, if not all, natural languages use a basic grammatical structure based on nouns, verbs and adjectives, it is likely that the mind utilizes an anlogous structure to store concepts in cognition.

It is therefore the purpose of this study to establish the likelihood of the following hypothesis: That the mind stores stereotypical conceptions in grammatical format, analogous to natural language grammar. Essentially, it is claimed that stereotypes are stored in one-sentence arrays which contain at least one noun, one verb, and one or more adjectives.

Method

In order to evaluate the likelihood of the word array hypothesis, an experiment designed to elicit the stereotype associated with the word: woman was performed during the Fall Semester

at the University of Houston with the assistance of Professor Kristen Petty, and the students of Social Psychology PSYC 2380. The class sample is representative of the University's undergraduate psychology student population, namely largely female and young; but otherwise representative of the overall ethnic, racial and socioeconomic diversity of the city of Houston.

The study was initiated by emailing a standard questionnaire to all 102 registered students in Ms. Petty's class. The questionnaire, which was evaluated for language neutrality and clarity, contained a single question: "What are the first five words that come to mind when you think of the word: woman?" Space was provided for 5 responses and instructions were given for returning the answers via reply email. Because the study required spontaneity which may have been compromised if the purpose of the study was revealed, respondents were led to believe that the study was regarding gender issues.

After collecting responses for one week, 13 questionnaire responses were received, entered in a spreadsheet and a distribution was established. From the sample distribution the five most common responses were established. It is from these that the results of the study were derived.

Results

From the13 responses, 70 individual words were received and tabulated, all of which were in the form of a noun, an adjective or a verb (or verbal variation). There were no responses in the form of secondary grammatical components such as adverbs, prepositions or conjunctions. The word "woman" was associated to five-word arrays that contained for the most part, but not always nouns, verbs, nouns and adjectives. From the sample distribution, the incidence of words was determined, and the five most commonly used words were: strong (6), mother (5), caring

(5), nurture (5), beautiful (5). In terms of grammatical composition, the results yielded one noun (mother), one verb (nurture) and two adjectives (beautiful and caring). From the data received, it is safe to infer that for this particular sample population, the "woman" stereotype can be clearly and unambiguously encapsulated in the following sentence: "a woman is a strong, caring, and beautiful mother whose purpose is to nurture."

Discussion

Before the findings of this study are properly discussed, a word or two of caution regarding the ecological validity of a limited and gender-imbalanced sample such as the one utilized here. It should not be inferred therefore that the results shown here are representative of any population beyond that which is defined by the PSYC 2380 registered students. Moreover, this study is not intended to establish causality or to specify discrete cognitive encoding methodology, but simply to establish a similarity between language and cognition with the purpose of eliciting further research in this area of inquiry.

It is clear nonetheless that similarities among members of PSYC2380 regarding the conceptual array which is brought forth by the word "woman" points toward the conclusion that stereotypical concepts are likely to be established and stored in the form of grammatical structures which are analogous to the communication grammar that is found in natural languages such as English. This observation has some important implications in the understanding of stereotypical formation at the cognitive level; specifically in reference to the relevance of vocabulary in the development of stereotypical thought.

This study proposes only questions and is intended to set the likely parameters for further exploration; therefore, the discussion of its findings must be left unfinished in the hope that

additional, more scientific studies may be performed along the general line of inquiry established herein.

References

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