Processing of proper names in Mandarin Chinese

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Introduction

The distinction between concrete and abstract nouns has been postulated since several thousand years in ancient Greek and in Chinese language philosophy, (e.g., Kripke, 1972; Jiang, 1993). Furthermore, within the category of concrete nouns the proper names are considered as a distinct subgroup. Such linguistic categories may reflect cognitive structures since they are common in all languages - or they may be completely artificial (Müller & Kutas, 1996). The theoretical assumptions that proper names have a cognitive reality are supported by recent case studies (e.g., Fukatsu et al., 1999) and experimental studies in English and German (Schuth, Werner & Müller, 2002; Weiss & Müller, 2003).

To investigate processing of proper names and common nouns in a non Indo-European language, we conducted an experiment with Mandarin Chinese (lexical decision task).

Subjects and Methods

Participants were 40 Mandarin Chinese native speakers (20 f, 20 m), between 21 and 35 years (27.6 y), right-handed according to the Edinburgh Handedness Inventory and with normal hearing threshold according to their own statements.

Auditory condition: All target words were spoken by a young woman and edited with a computer. 40 single common nouns (CN) and 100 proper names (40 persons' first names (FN), 40 geographic names (GN) and 20 brand names (BN)) were presented by loud speakers. The mean acoustic length of the stimuli was 441 ms (± 94 ms).

Visual condition: Different words were used (40 CN, 40 FN, 40 GN, 20 BN) and displayed on a computer screen in standard Chinese logographic characters.

While the subjects had to make a lexical decision whether the target word was a proper name or not by pressing two buttons (CN *vs*. PN), the reaction time was measured.

Results

In both the auditory and the visual condition, a significant difference in lexical decision time for PNs and CNs could be observed. *t*-Tests showed that subjects responded significantly faster to PNs than CNs ($t = -5.127$, p 0.001, see figure). A similar significant difference was found between the decision times of the auditory condition: PNs 959 ms, CNs 1058 ms, GNs 942 ms and BNs 1071 ms (t -3.361, p 0.001). No significant differences were found between the sexes when processing male or female first names.

Conclusions

Mandarin Chinese speakers are able to process proper names faster than common nouns in a lexical decision task. This is true for persons' first names and geographic names,

but not for brand names. This finding is modality independent. In terms of reaction time, brand names are more similar to common nouns. Despite of major differences between Chinese and Indo-European languages (e.g., tone language and logographic system), the same dissociation between proper names and common nouns has been found as in German and English. This can be seen as an additional hint for the existence of cognitive universals.
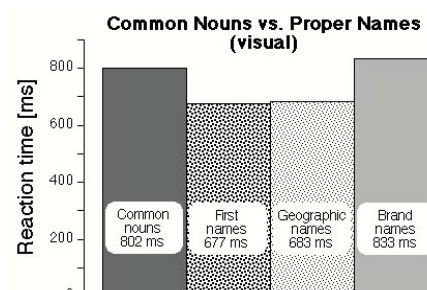
Acknowledgments

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