

Running words together: The science behind cross-linguistic psychology

March 25 2008

While communication may be recognized as a universal phenomenon, differences between languages -- ranging from word-order to semantics -- undoubtedly remain as they help to define culture and develop language. Yet, little is understood about similarities and differences in languages around the world and how they affect communication. Recently, however, two studies have emerged that aid in our understanding of cross-linguistic distinctions in language usage.

In a study examining the contrast in cross-cultural languages, known as cross-linguistics, researchers from CNRS and Université de Provence, and Harvard and Trento Universities found direct evidence to support word-order constraints during language production. Specifically, the way in which participants pronounced a set of words was dependent upon the preceding word as it varied across languages.

Psychologists Niels Janssen, F. Xavier Alario and Alfonso Caramazza presented French- and English-speaking individuals with colored objects and noted that, when the sounds were compatible, participants found color easier to pronounce than object names. For example, the object 'rake' in English was easier to pronounce when it was colored red than when it was colored blue, a finding that only held true for English speakers.

For French speakers, 'râteau,' meaning 'rake,' was as easy to pronounce in red as in blue, suggesting that the object-before-color syntax in French played a large part in language production.

These findings, which appear in the March 2008 issue of *Psychological Science*, a journal of the Association for Psychological Science, provide insight into how word-order affects language production: “No matter how complex our thoughts, when we express them in speech, we produce them one by one,” explained Janssen. “And, the order in which these words should be uttered follows tight linguistic rules in many languages. As a result, each word is affected by its predecessor.”

However, language use is not only constrained by word-order but by meaning as well. In collaboration with researchers Mutsumi Imai, Eef Ameel, Naoaki Tsuda and Asifa Majid from universities in Japan, Belgium and The Netherlands, psychologists Barbara C. Malt from Lehigh University and Silvia Gennari from the University of York investigated whether participants speaking various languages identified two different words to distinguish between the acts of walking and running.

English-, Japanese-, Spanish- and Dutch-speaking individuals watched video clips of a student moving on a treadmill at different slopes and speeds. According to past research, English and Dutch verbs tend to express manner of motion, and Spanish and Japanese verbs tend to express direction of motion; these variations assure that any shared patterns in naming could not be attributed to structural similarities.

Despite the vast differences between the four languages, however, all participants used distinct words to describe when the student was walking and to identify precisely when she began running. These results, which also appear in the March 2008 issue of *Psychological Science*, indicate cross-linguistic commonalities in naming patterns for locomotion and help to support the notion of certain universal rules and constraints in all languages.

“We found that converging naming patterns reflect structure in the

world, not only acts of construction by observers,” Malt stated. “On a broader level, the data reveal a shared aspect of human experience that is present across cultures and reflected in every language.”

Source: Association for Psychological Science

Citation: Running words together: The science behind cross-linguistic psychology (2008, March 25) retrieved 5 May 2024 from <https://medicalxpress.com/news/2008-03-words-science-cross-linguistic-psychology.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.