

In the process of understanding: Activation of literal and figurative meaning in idioms by native and nonnative listeners

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Idiomatic expressions pose a particular challenge for theories of language comprehension as they seem to ignore the rules of compositional language. Rather than being defined compositionally by the sum of the literal meanings of their parts, idioms are not constrained by this definition of meaning. Rather, idioms often mean something other than what one would expect based on the literal components. But what does this mean for comprehension? If the meaning of idioms are not defined by the meaning of the parts, is literal meaning still active in comprehension? And when, then, does figurative meaning become active?

While many authors have examined questions about the role of literal meaning, the results are mixed. Some authors have found that figurative meaning is available early in comprehension (Tabossi et al. 2009; Swinney and Cutler 1979), while others have not seen the same results (Cacciari and Tabossi 1988; Gibbs et al. 1989). For non-native speakers, processing figurative language has been shown to pose even more challenges than native comprehension, and figurative meaning might not be available online at all (Cieślicka 2006). However, based on offline studies, it is possible that factors such as translatability might help comprehension (Abel 2003; Cooper 1999; Liontas 2002). Examining processing differences between translatable and non-translatable idioms might indicate whether the first language impacts more than just strategies for comprehension, but comprehension itself.

This study addressed the question of availability of literal and figurative meaning again, adding to the current body of information for L1 processing, as well as examined a new component for L2 speakers. More precisely: Are both figurative and literal meaning available online? How quickly can native speakers access the figurative meaning of idioms, and how does this compare to non-native speakers? And, furthermore, for non-native speakers, does the translatability of idioms into the native language impact second language processing?

A cross-modal priming study with both native (L1) and nonnative (L2) listeners of English was used to investigate the activation of literal and figurative meaning in 64 English idioms. 64 native speakers of German (students at the University of Tübingen, Germany) and 40 native speakers of American English (students at the University of Maryland, USA) took part in the study. L2 participants were highly proficient (most with 9+ years of instruction). Participants first heard a sentence containing an idiom and 400 ms later had to make a lexical decision for a visually presented target word. Target words were either related to the figurative meaning of the idiom or to a literal component of the idiomatic phrase (see example below). The idioms were controlled for compositionality, literality, and familiarity based on a ratings study completed by native German speakers.

In example (1), *to give someone the cold shoulder* can be paraphrased as being unfriendly or ignoring a person because of a personal grudge.

- (1) He gave me the cold shoulder.
- (a) *arm* (literal)
- (b) *ignore* (figurative)

The reaction times for literal targets like (a) and figurative targets like (b) were compared to unrelated control targets (e.g., *beet* for (a) and *autumn* for (b)) and the targets were controlled for frequency and syllable count. A positive difference in reaction times between the related and unrelated conditions (i.e., facilitatory priming) is interpreted as evidence for online activation of figurative and literal meanings.

In order to look more closely at second language speakers, the study used only idioms that had differing levels of translatability. Idioms were chosen that can either be translated word-for-word from English into German while maintaining their idiom status in both languages, called Lexical Level (LL) idioms, and idioms that cannot be translated word-for-word, but still have an idiom equivalent in both languages, called Post-Lexical Level (PLL) idioms (see Irujo, 1986; Liontas, 2002). For example, take the idioms presented in (2) and (3):

- (2) read between the lines
 „to understand more than what is actually written or spoken“
- (2b) *zwischen den Zeilen lesen*
 between the lines read (read between the lines)
- (3) kick the bucket
 „to die“
- (3b) *ins Gras beißen / den Löffel abgeben*
 in the grass bite (bite the grass)/ the spoon give up (give up the spoon)

While the English idiom in (2) is equivalent to the German idiom in (2b), a translation of (3) would not give us either of the equivalent idioms in (3b) (as seen by the translations and glosses underneath).

Overall, facilitatory priming for both literal and figurative targets was found for native and non-native speakers. While the results do not provide answers as to whether literal-first or even parallel processing theories are correct, it shows support for theories assuming early activation for both figurative and literal meaning.

An examination of effects of translatability on idioms did not produce such clear results. While interference from L1 in L2 participants was expected with LL idioms resulting in larger priming effects than PL idioms, this was not found. Rather, comparisons of the reaction times of LL and PL idioms showed no significant differences in processing neither for the L2 nor for the L1 listeners. Seemingly, the L1 and L2 groups behaved very similarly in this experiment. At least with respect to these highly proficient L2 users, L2 processing, though often harder than L1 processing, might not have disadvantaged these users as much as previously thought (cf. Siyanova-Chanturia et al., 2011).

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