The Psychological Reality of Idiom Storage

Lior Ordentlich

Abstract

In a series of experiments, the current study aims to examine the psychological reality of idiom storage. Idioms are multi-word expressions which carry conventionalized, not fully compositional meanings, indicating that they form representational units in the mental lexicon. However, as often observed in the linguistic literature, idioms also seem to involve internal structure, typical of phrases generated in the syntax. This inherent contrast poses intriguing challenges to the modular model of grammar generally assumed in generative approaches to language. In such a model, the human language faculty consists of several independently functioning components, including the computational system (the syntax) and the mental lexicon. But if syntactic structure is formed post-lexically in an independent component, what is the mental representation of idioms and their internal formation?

Most psycholinguistic and cognitive studies addressing this question have done so from a comparative perspective, in an attempt to characterize the interaction and distinction between figurative and literal language (e.g. Gibbs, 1980; Giora and Fein, 1999). In this context, idioms are examined as part of a larger class of nonliteral or figurative expressions, which also includes metaphors, irony and metonymy, to name a few. The expressions in this class all require speakers and comprehenders to go beyond the literal, compositional meaning of utterances. Accordingly, the main focus of previous experimental studies has been the cognitive processes involved in figurative production and comprehension of utterances, as opposed to those needed when similar utterances are used literally.

There is a considerable body of psycholinguistic research on topics related to this comparison. This includes studies which examine how idioms are represented and retrieved from the lexicon (see e.g. Borrow and Bell, 1973; Cacciari and Tabossi, 1988; Swinney and Cutler, 1979), the activation of literal meanings during idiom processing (Cutting and Bock, 1997; Sprenger et al., 2006, among others), the role of context and familiarity in idiom comprehension (e.g. Schweigert, 1986) and more. Yet hardly any studies were conducted in Hebrew, and more importantly, little attention was paid to possible effects of internal structure on the mental representation, storage and processing of idioms.

The current research aims to explore such effects by employing various behavioral measures, given the theoretical framework of the Type-Sensitive Storage model (Horvath and Siloni, 2009b, 2012). This model distinguishes between phrasal and clausal idioms, attributing a different manner of storage to each type of idiom: Phrasal idioms are stored as subentries of their lexical head, while clausal idioms are stored as independent non-compositional units. The first series of experiments investigates the storage of phrasal idioms in the mental lexicon of Hebrew and English speakers. Several approaches (e.g. Swinney and Cutler, 1979) adhere to a non-compositional view of the mental representation of such idioms, claiming that they are stored as single lexical units. There are theoretical and empirical reasons to believe that

this manner of storage is inadequate for phrasal idioms, many of which exhibit syntactic flexibility. The experiments focus on verb phrase (VP) idioms, examining competing storage options for them: Under the lexical verb heading the idiom, as was suggested by Horvath and Siloni (2009a, 2012), under the nominal head of the NP complement, under both (see e.g. Everaert, 2000) or non-compositionally in a separate list. In accordance with the results of these experiments, a similar experiment will be conducted with clausal idioms, in order to compare their manner of storage with that of phrasal idioms.

An interesting structural property of idioms which has received much attention in the linguistic literature is the extent to which their form matches their meaning, or in other words, whether or not each component of an idiom refers to a specific part of its figurative meaning. Many studies have shown a correlation between this property (decomposability) and the syntactic flexibility of idioms (e.g. Nunberg, 1984). It was further suggested (Fadlon et al., 2013) that idioms with a strong form-meaning relation (decomposable idioms) can be lexically retrieved by semantic composition of their figurative parts, just like any literal phrase. In contrast, idioms whose form and meaning are not directly related (nondecomposable idioms) cannot benefit from such a strategy. Therefore, and although the two types of idioms are stored in the same manner in the mental lexicon of adult speakers, decomposable idioms are easier to retrieve than nondecomposable ones. The current study examines this proposal in a pair of experiments which test lexical retrieval and comprehension of the two idiom types. The experiments will again include VP idioms in Hebrew and English, and will compare the retrieval speed of decomposable and nondecomposable idioms within each language, thus providing information regarding their storage.

As already mentioned, Horvath and Siloni (2009b, 2012) distinguish between phrasal and clausal idioms. While the former contain only phrasal material, the latter involve sentential functional material. Hence they can include a specific tense, modals, negation or wh-questions. As opposed to phrasal idioms, clausal idioms do not display syntactic flexibility, a fact that may be taken to reflect their storage as independent lexical units (Horvath and Siloni 2012). The final experiment in this study employs the divided visual field (DVF) method, designed to assess the contribution of each cerebral hemisphere to lexical processing. The experiment examines whether the diverging storage mechanisms of phrasal and clausal idioms can be detected from the manner in which the different idiom types are processed in each hemisphere.

The different experiments in this study should provide novel evidence in the research of idioms, both in Hebrew and as part of the human language faculty, and improve our understanding of the mental representation of idioms. Owing to the unique nature of idioms, the results of the study are expected to potentially make a substantial contribution to linguistic and psycholinguistic theories concerned not only with idioms, but with the wider issue of lexical organization.