

Integrating psycholinguistics and usage-based models of formulaic processing

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Formulaic language, such as idioms (*kick the bucket*), restricted collocations (*best before*) and conversational expressions (*how do you do?*), has been the focus of research across many distinct disciplines (theoretical and applied linguistics, L1 and L2 language learning, psycholinguistics, corpus linguistics) for decades. Formulaic language comprises a substantial portion of natural language, whose mastery is essential to first (L1) and second language (L2) acquisition, and to perceptions of native-language fluency. Idioms are an especially intriguing aspect of formulaic language as they can vary along almost all linguistic dimensions that are important to formulaic language more generally. These include familiarity or degree of lexicalization, the extent to which they may be compositionally analyzed (in both a forward-going or retrospective sense), their structural flexibility, and whether they support more than one phrase-level interpretation.

Despite a long-standing interest in formulaic language, and idioms in particular, fundamental questions remain about their representation in memory and how they are processed on-line (e.g., are figurative interpretations of idioms directly retrieved or compositionally built?), and how it fits within the larger purview of human linguistic ability generally (are they special cases of language or paradigmatic of language use in general?). We believe that progress in answering such questions has been impeded by the fact that different research traditions have theorized about formulaic language, and studied it empirically, in relative isolation of each other. Here, our goal is to systematically integrate the various ways formulaic language, idioms in particular, have been theorized about within psycholinguistics, classic linguistics and the more recently proposed usage-based framework, and to assess which theory is the most viable given available empirical data.

Our central conclusion is that different theories about formulaic or idiomatic language across domains are more similar than different, and that three theoretical views have emerged for how people represent idioms and interpret idiomatic language. Within the *Lexical View*, an idiomatic form is recognized as a previously learned multiword pattern and its unitary form and meaning are directly retrieved from memory (e.g., in psycholinguistics, Swinney & Cutler, 1979; in classic linguistics, Chomsky, 1980). Within the *Compositional View*, an idiom's constituent words are accessed individually from memory, compositionally analyzed, and an interpretation generated incrementally, on-demand (e.g., in psycholinguistics, Hamblin & Gibbs, 1999; in pragmatically-oriented linguistics, Nunberg, Sag & Wasow, 1994). Finally, within the *Multidetermined View*, retrieval of multiword forms or other distributional information from memory proceeds in parallel with incremental compositional processing, thus the ultimate interpretation of an idiom or other formulaic sequence is a product of all sources of information (e.g., in psycholinguistics, Titone & Connine, 1999; in usage-based linguistics, Bybee, 2006 *inter alia*). Taken together, we believe that multidetermined or usage-based views hold the most promise for accounting for the full range of available empirical data on how both adults and L1 or L2 learners process formulaic or idiomatic language within a language and cross-linguistically.

References

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