Review: The Revival of Idioms
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The Revival of Idioms

Idioms: Processing, Structure, and Interpretation

The modern study of language in the cognitive sciences has its historical roots in formal approaches to meaning and structure. This historical debt is still being paid through a number of biases and implicit assumptions that exclude those aspects of language that do not fall neatly under the formal rubric. Figurative language such as metaphors and idioms is typically the victim of such historical bias because the study of these creatures always involves a challenge to formal assumptions. Andrew Ortony argued that metaphors are not just nice, but are intrinsic to language, and thus their study is central to any theory of language. His 1979 edited volume Metaphor and Thought launched more than a decade of productive work on metaphor in cognitive science. Cristina Cacciari and Patrizia Tabossi’s edited volume, Idioms: Processing, Structure, and Interpretation, has the potential to do the same for idioms. The book makes a strong case for the importance of the study of idioms. It forces us to reconsider the long-dominant conception of idioms as simple, frozen forms. The contributing authors demonstrate that idioms are complex and highly dynamic, and therefore pose a serious challenge for any theory that attempts to account for their interpretation. We focus here on some of the main issues raised in each of the chapters.

Defrosting idioms: Are idioms compositional?

Cacciari explains in her contributed chapter that although at an early point in an idiom’s ontogenesis its meaning may have been a function of its internal structure, in synchronic usage the relationship between an idiom’s form and its meaning is assumed to be arbitrary. For example, the meaning of To trip the light fantastic is stipulated by convention rather than computed as a function of its component word meanings and English rules of compositionality. The present volume reflects the emerging view that idioms are far more flexible than previously acknowledged. As do other authors, Cacciari emphasizes that idioms are not just syntactically flexible, but semantically productive as well. Even the authors that continue to view idioms as noncompositional acknowledge that idioms frequently undergo syntactic and semantic transformations, as in “Businessmen are holding their collective breath.” This gives rise to a central question in the synchronic study of idioms: How can a language comprehension system treat idiomatic expressions, given that they seem to violate compositionality and yet exhibit a great deal of variability?
One version of the traditional approach has assumed that idioms are represented as unitary lexical entries comparable to long words (e.g., Swinney & Cutler, 1979). In their contribution, Botelho da Silva and Anne Cutler argue that if this lexicalist model is correct, there should be a more direct connection between form and meaning for idioms than for literal expressions. Using an incidental memory task, they found that subjects were more likely to recall the exact surface form of an idiomatic phrase than of a literal phrase, which was more likely to be paraphrased. The authors conclude that these findings are “very consistent with a view of idioms as unitary lexical items” (p. 140). Clearly, the lexical view is alive and well.

The general argument against the lexical view is that many idioms behave more like structured phrases or sentences than like words, and out of this argument emerges the provocative suggestion that idioms are actually compositional (cf. Wasow, Sag, & Nunberg, 1983). For example, in his chapter Raymond Gibbs describes studies that suggest that the more an idiom can be broken down into parts that correspond to elements of its meaning (i.e., is analyzable), the more syntactically flexible an idiom is: To spill the beans is more analyzable than To kick the bucket, and it can also undergo more syntactic transformations (e.g., The beans were spilled, but not The bucket was kicked). The same holds for lexical flexibility. Some idioms tolerate the substitution of a word. This suggests that the form of these idioms is not frozen but much more flexible than the form of a word.

Christiane Fellbaum argues that the role of function words in idioms provides further evidence for compositionality. She demonstrates that determiners serve the same functions in idioms as in literal sentences. For example, in the idiom He promised her the moon, the definite article indicates the uniqueness of the noun moon, just as it does in the literal sentence They saw the moon. Fellbaum argues that this “contradicts the assumption that they are represented as single lexical items. . . . This supports the now common contention that idioms do not differ in many ways from ‘literal’ strings” (p. 273).

In their contributions, both Sam Glucksberg and Cacciari propose that the component words of an idiom can contribute to its meaning. One indication of this is that parts of some idioms come to acquire their idiomatic meaning (e.g., spill as meaning to divulge). The phrase-induced polysemy model proposed by Glucksberg assumes “that the words of familiar idioms have become polysemous through frequent use in idiom contexts” (p. 11). Cacciari suggests that the productive use of idioms could employ “the literal semantics of the words . . . as well as the aspect of meaning they acquire in figurative expressions” (p. 38). Both Glucksberg and Cacciari demonstrate that the productive use of idioms is highly motivated: language users may change an idiom constituent to convey a different meaning that relates systematically to its original meaning in the context of the variant. Such variants appear in natural conversations (He didn’t spill a single bean), as well as in written materials, as in the cited essay title “Convicted Minimalist Spills Bean” (p. 9). Cacciari adds slips of the tongue to the list of evidence indicating compo-
sitionality, as in "Swallow the bullet instead of Bite the bullet" (p. 38). Lexicalist theories would have to struggle to explain comprehension of a variant idiom because as Glucksberg points out, their meaning "cannot be stored in memory because the expression is novel" (p. 9).

An immediate question comes to mind: If an idiom is compositional, what is the nature of the elements that compose its meaning? In addition to phrase-induced meanings and selected aspects of literal meaning, Raymond Gibbs suggests that idioms rely on underlying conceptual mappings of the sort that George Lakoff and Mark Johnson describe in their 1980 book Metaphors We Live By. Gibbs argues that "such figurative meanings provide part of the link between the lexical makeup of idioms and their figurative meanings such that many idioms make sense in having the meanings they do" (p. 74). For example, he states that idioms such as "Lose your cool and Get steamed up appear to be motivated by the conceptual metaphor ANGER IS HEATED FLUID IN A CONTAINER" (p. 67). Gibbs describes a variety of studies that make the connection between idioms and such conceptual mappings.

Oliviero Stock, Jon Slack, and Andrew Ortony propose a restricted model of compositionality. In their model, if an idiom is not syntactically flexible, it is represented in the lexicon as a big word "indexed by the initial words of the string" (p. 241). In contrast, syntactically flexible idioms will vary in the degree to which their constituents can be mapped onto elements of the idiom's meaning ("the analyzability of the idiom"), and the structure of this mapping will determine the idiom's semantic and syntactic flexibility. As opposed to other approaches, the mapping here is restricted to predicate-argument structure. Under this model, "idiom comprehension involves the recognition of the referent mapping associated [with] the idiom" (p. 235).

Although Stock, Slack, and Ortony view syntactic flexibility as intrinsic to the way in which idioms are represented and processed, they reject the relevance of the semantic and discourse productivity of idioms to a theory of idiom comprehension. Instead, they define idiom productivity as metalinguistic. This distinction between productivity and syntactic variability raises an issue that requires consideration: How do we determine what must be accounted for, and what should be excluded because it is either epiphenomenal, metalinguistic, or otherwise disease infected? If productive variants of idioms are part of the normal way of using language, then they are an element of the natural phenomenon that must be reckoned with. We need systematic criteria to define the boundaries of the natural phenomenon under investigation.

Which compositional view is "correct"? At this stage it is difficult to tell which view is more adequate because the different theories are too sketchy. Each needs to spell out more clearly its assumptions and its boundary conditions—What kind of idioms does each theory apply to? What might constitute evidence against the theory? In his contribution, Adam Makkai suggests that the answer might depend on the particular knowledge and cognitive capacity of the user. Some idioms could be relatively compositional for some people who understand how the domain of the idiom might connect to its
meaning, but relatively opaque to others. The emerging compositional positions are of the most important developments in the recent study of idioms, and each contribution makes a compelling case for the plausibility of some version of compositionality. The ultimate test of these theories will be in their future development as not only testable, but in principle refutable.

**Recognizing idioms**

Different from the issue of compositionality, idiom recognition has traditionally received more attention. For many expressions, such as *Kick the bucket*, the problem is to determine whether it should be treated as an idiom or as a literal phrase. Because context has substantial effects on both word recognition and lexical access, Lucia Colombo focused on the role that context might play in activating an idiom's meaning. She investigates this using a cross-modal priming paradigm and a garden path paradigm, where she looks at the ability of context to lead one to wrongly expect an idiomatic completion of a phrase. Colombo raises an important issue: What kind of effect does context have on the on-line resolution of the meaning of idioms?

A fundamental question in the literature on lexical access and semantic integration has concerned the time course of meaning activation. In the study of idioms, the question has addressed the activation of an expression's idiomatic and potential literal meanings. This is especially interesting with idioms that do not reveal themselves until late in the phrase, as in *The contractor walked all over [the house/him]*. Tabossi and Francesco Zardon consider the point during comprehension in which the idiomatic meaning becomes available. They assume that the meanings of idioms are “associated with configuration of words. . . . the processing of an idiomatic string takes place literally, until sufficient information in the string renders it recognizable as an idiom. Only at this point, referred to as the idiom key, is the idiomatic meaning activated” (p. 147). They suggest that the lexical hypothesis should predict that the idiomatic meaning is available before the key is heard. This prediction is based on the assumption that word meanings are activated upon identification of their acoustic-phonetic onset; this, of course, depends upon one's theory of word recognition in general. If Tabossi and Zardon are correct in suggesting that their evidence argues against a lexical view, it will be important to see how the notion of key plus configuration is integrated with the emerging theories of compositionality.

In many respects, the treatment of idiom recognition parallels approaches taken in the literature on word recognition and lexical access of ambiguous words. However, for idioms, the problem of recognition may be substantially different (or remarkably similar, depending on your view of word recognition). The “same” idiom can appear with various syntactic structures, with lexical substitutions and elisions, with internal modifiers, and so on, and each form conveys a somewhat different meaning. As Stephen Pulman points out, this makes recognition via pattern matching problematic. Moreover, he argues that we cannot appeal to the notion of canonical form because the relationship between variant forms of an idiom “is not anything that could or should be captured by syntactic or lexical rules, or directly by compo-
sitional semantics" (p. 261). How then can we characterize the relationships between different instantiations of an idiom? He suggests that idioms should be represented as logical rather than linguistic forms. This logical form can be arrived at via entailment. For example, *John let the cat out of the bag* entails that the cat is out of the bag, which implies that the logical form of the idiom is as follows:

$$\exists c, b. \text{cat}(c) \land \text{bag}(b) \land \text{out-of}(c, b).$$

Pulman suggests, then, that "treating the process as akin to inference provides the necessary flexibility to deal with these types of variation" (pp. 262–263). As Pulman himself discusses, this suggestion faces conceptual difficulties, yet we found it interesting and hope that the possible psychological implications of an idiom's logical form will be explored.

**Syntactic processing of idioms**

Idiom recognition might occur early or late in the phrase, but before recognition the phrase is probably processed like a nonidiomatic phrase. Giovanni Flores d'Arcais suggests that this poses a puzzle because on the one hand syntactic parsing might lead to a compositional analysis of the idiom, "whereas the idiomatic character of the idiomatic phrase is not compositional, and the meaning of the idiom is not instantiated on the basis of the joint operations of the parser and of the lexical processor" (p. 82). This assumption of initial obligatory syntactic processing leads Flores d'Arcais to predict that the parser may cause an occasional conflict because it will lead to the construction of a competing literal interpretation, although this might depend on the extent to which an idiom is familiar.

The contribution of Robert Peterson and Curt Burgess also concerns syntactic processing. They see idioms as very good candidates to test assumptions of the theory of the modularity of mind, specifically, the modularity of subsystems of the linguistic processing system. The main question they raise is—To what extent are the syntactic and semantic systems independent? Once the idiomatic meaning is recognized, can the comprehension system inhibit the syntactic analysis or the compositional semantic analysis? If the parser cannot be prevented from completing its own operation, does the parser compel the semantic system to complete its operation as well? They contrast three models that embody different subsets of assumptions. They discuss their results in light of neurological data on the hemispheric lateralization of linguistic functions and propose a model of language comprehension based on the contributions of hemispheric specialization.

This focus on syntactic and semantic processing highlights the compositionality issue that will have to be debated more directly in the field. The researchers who look at the syntactic analysis of idioms assume that idiomatic meaning is not compositional. In contrast, those researchers who advocate the compositionality view of idiom meaning attempt to make a connection between the syntactic behavior of idioms and their idiomatic meaning, as well as between semantic elements and the idiomatic meaning of the idiom. They have not, however, clearly specified what is being composed, and how
it relates to theories of parsing and meaning composition. A direct dialog between the two persuasions might contribute to our understanding of what it means for idioms to be compositional and might contribute to the refinement of theories of syntactic parsing and semantic processing in general.

**Idioms in acquisition**

The different views concerning use of idioms bring up a set of issues about children's acquisition of idioms. Chiara Levorato's contribution focuses on these issues, and Cacciari discusses this in her review of the place of idioms in the field. Levorato brings up questions such as, Do children develop a "figurative competence"? Does their understanding of idioms require special linguistic tools? Are idioms acquired by rote? How do children use context to interpret idioms? Does context play a different role in idiom comprehension for children than adults? Levorato proposes that the acquisition and use of idioms follows closely "the development of a whole series of linguistic skills that give the child an ever greater control over his or her communicative possibilities. This linguistic development could be said to start with a nominal realist phase, when an object and its name are viewed as one and the same thing, and it could be said to have concluded with metalinguistic competence" (p. 119). Further research on the way idioms are acquired may lead to new insight into our understanding of the use of idioms by adults.

**Where does this lead?**

*Idioms: Processing, Structure, and Interpretation* does an excellent job of presenting the state of the art in the study of idioms. Its strength is in raising important issues, which is precisely what one would want from a book that should serve to motivate the future investigation of idioms.

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