

COGNITIVE MECHANISMS BEHIND FIGURATIVE INTERPRETATION OF IDIOMS

Sevarakhon Dekhkonova

Independent Researcher

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ABSTRACT

Idioms are common figurative expressions whose meanings are not strictly compositional, and their interpretation involves multiple cognitive mechanisms. This article reviews key theories in cognitive semantics and psycholinguistics to explain how idiom understanding arises from conceptual metaphor, metonymy, conceptual blending, and the salience of meanings. Conceptual metaphor theory shows how idioms often map concrete source domains onto abstract targets, enabling figurative readings. Metonymy highlights how parts of meaning can stand for related concepts within the same domain (e.g., he has to have the last word, where word stands for the act of speaking). Conceptual blending illustrates how elements of literal and figurative scenarios merge to produce new idiomatic senses. Finally, the salience hypothesis predicts that familiar, prototypical idiomatic meanings are activated first, regardless of context. Examples of English idioms such as break the ice, spill the beans, and kick the bucket illustrate these mechanisms. Overall, this analysis suggests that idiom comprehension is guided by a rich interplay of metaphorical and cognitive mappings and by the prominence of conventional meanings.

Introduction

Figurative language encompasses a wide range of expressions (metaphors, metonymies, idioms, proverbs, etc.) that vary in familiarity, ambiguity, transparency, compositionality, and predictability. Idioms are conventionally fixed, multi-word phrases whose figurative meanings generally cannot be deduced from the meanings of the individual words. For example, to break the ice means to relieve social tension, a meaning not evident from break or ice individually. Idiomaticity exists on a continuum: some idioms are completely non-compositional, while others contain analyzable elements. For example, cost an arm and a leg partially hints at great expense through arm and leg, whereas kick the bucket offers no compositional clue at all. Cognitive semantics holds that idioms often reflect underlying conceptual patterns. Although idiomatic meaning is usually considered non-compositional, many idioms are motivated by conceptual mappings such as metaphors (e.g. spill the beans

from the concept of spilling to revealing secrets). However, idioms as a class differ from simple metaphors: their meanings are predominantly fixed and conventional and cannot be significantly altered by context, unlike metaphoric expressions which are more flexible and context-dependent. This paper reviews cognitive mechanisms hypothesized to underlie idiom comprehension, focusing on conceptual metaphor, metonymy, conceptual blending, and salience. Each of these mechanisms provides a lens for understanding how speakers interpret idioms beyond the literal level, often supported by experimental studies and corpus analyses.

Literature Review

Idioms have been modeled in various ways in psycholinguistics and cognitive linguistics. A traditional view distinguished noncompositional vs. compositional accounts (e.g. Swinney & Cutler, 1979), with some researchers treating idioms as lexicalized wholes while others emphasize their analyzability (Sprenger, Levelt, & Kempen, 2006; Gibbs, 1995). In cognitive semantics, idioms are seen as conceptual constructions that often draw on embodied experience (Lakoff & Johnson, 1980) and image schemas. Conceptual Metaphor Theory has influenced idiom research by linking many idioms to underlying metaphors (e.g. argument is war in “he defended his point”). However, as discussed above, idioms are not identical to metaphors, and idiomatic meaning tends to be lexically conventionalized. Another influential approach is Giora’s Graded Salience Hypothesis, which posits that the most familiar and prototypical meaning of a word or phrase (salient meaning) is accessed first, regardless of whether a literal or figurative interpretation is intended. Applied to idioms, this hypothesis predicts direct access to idiomatic meaning for conventional idioms, while less familiar meanings require additional inferences. Empirical support comes from ERP studies showing smaller N400 amplitudes for highly salient idiomatic meanings than for weakly salient ones.

Many theoretical perspectives in psycholinguistics address idioms. For example, one view treats idioms as entries in the mental lexicon: highly familiar idioms are stored as single units, enabling direct retrieval of their figurative meanings. This lexical approach explains why frequent idioms show fast recognition and why unpredictable idioms (e.g. leave no stone unturned) can still be recognized holistically. An alternative is the compositional view: some researchers argue that listeners often do attempt partial composition for idioms. Studies have shown that when idiom parts are semantically transparent, comprehenders can infer meaning by combining parts (e.g. see red → anger). In practice, idiom processing seems to hybridize these models. Factors such as syntactic fixedness and semantic transparency influence processing. Fixed idioms (that cannot easily change form) tend to be more lexicalized, whereas flexible idioms can sometimes be parsed component-wise. Decomposability also matters: opaque idioms (like kick the bucket) yield no clue from their words and rely on memory, whereas transparent idioms (like spill the beans, where beans hints at secrets) allow partial meaning construction. Experimentally, decomposability and transparency often predict processing ease: idioms rated as more decomposable can be interpreted faster. For example, literal continuations following a transparent idiom (see red – scream) may be processed faster than for an opaque idiom (kick the bucket – stumble), reflecting residual literal activation.

Psycholinguistic studies also support fast idiom access: idioms prime related concepts (for example, spill the beans primes reveal) more quickly than unrelated terms. Such priming

suggests that idiom meanings are stored or computed rapidly as coherent semantic wholes. Other studies show a literal bias: initial processing often treats idioms like literal strings, especially when idiom meanings are less frequent (Swinney & Cutler, 1979). Researchers also examine the role of context: some models propose that strong context can preempt literal meanings, but according to Giora's account, context has limited reach when a salient idiom meaning exists. Overall, the literature suggests that idiom comprehension is multi-layered, relying on both stored knowledge and on-the-fly interpretation via cognitive mappings.

Analysis: Key Cognitive Mechanisms

Metaphor

Conceptual Metaphor Theory (Lakoff & Johnson, 1980) provides a central framework: many idioms are understood via mappings from a concrete source domain to an abstract target domain. According to this view, idiomatic expressions represent embodied experiences (e.g. spatial or physical scenarios) that are projected onto social or abstract concepts. Cognitive semantics treats idioms as rooted in metaphorical patterns. For example, phrases like spend money, lose face, and grasp an idea invoke metaphorical domains of spending, combat, and possession, respectively. Break the ice metaphorically likens easing social tension to breaking a sheet of ice on water, so the concrete action encodes the abstract outcome of initiating conversation. Some idioms derive historically from metaphors (e.g. spill the beans from literal spilling to revealing secrets), but they function as conventionalized figurative units. In processing, metaphorical mapping allows listeners to transfer a conceptual schema: one understands argument via the WAR schema (as in "he defended his point") or difficulty via the OBSTACLE schema (as in "we had to overcome many hurdles"). These metaphorical schemas make idioms interpretable by highlighting parallels between source and target domains.

Metaphorical idioms often draw on common experiential domains. For example, emotions and arguments are frequently conceptualized in terms of temperature or combat: blow off steam (release anger by metaphorically letting off pressure) and on fire (being enthusiastic) are rooted in a heat metaphor for emotions, while win an argument or attack someone's position exemplify the ARGUMENT IS WAR metaphor in idiomatic form. Such patterns reflect pervasive mappings in thought: what is physical or concrete provides a scaffold for describing the abstract. Over time, some metaphoric idioms become opaque. For instance, kick the bucket meaning 'to die' likely originated in an archaic physical context, but today bucket no longer evokes its source in most speakers' minds. Nevertheless, even opaque idioms may once have been living metaphors, and some researchers argue that even lexicalized idioms retain traces of conceptual metaphor in memory (Gibbs, 1992). In processing terms, idioms encoded as metaphors can sometimes be unpacked into underlying schemas, especially when their imagery is vivid. For instance, hearing spill the beans may automatically activate conceptual structures of "letting secrets out" and the physical act of spilling, enriching understanding. In summary, metaphor provides a systematic way that idiomatic meanings are linked to embodied experience.

Studies of idiom comprehension find some engagement of sensorimotor areas when idioms invoke physical actions, but the effect is generally reduced for idioms than for literal or novel metaphorical phrases. For instance, familiar opaque idioms show less motor activation

than corresponding literal actions, suggesting that idiomatic meaning may be less embodied than metaphorical meaning. This indicates that while conceptual metaphors underlie many idioms, the cognitive load of idiom retrieval relies more on stored knowledge than on active simulation.

Metonymy

Metonymy is another key mechanism in figurative language. In contrast to metaphor's cross-domain mapping, metonymic idioms rely on associations within a single domain. In metonymy, one element stands for another related element (often part-for-whole, container-for-content, etc.). The example he has to have the last word illustrates this: the word word (a linguistic item) is metonymically used to stand for the desire to speak and conclude a discussion, reflecting a tight semantic connection. Similarly, lend me a hand uses hand (an instrument for help) to mean help or assistance. Metonymic idioms are typically more transparent: there is a close link between the literal term and the intended meaning.

In everyday idioms, many examples of metonymy emerge from body parts and objects. For example, lend me a hand (offer help) and get out of hand (lose control) both use hand metonymically for assistance or influence. Similarly, keep an eye on (monitor) uses eye for attention, and get off on the wrong foot uses foot to mean start. Common nouns appear too: the bottle is slang for alcohol or problems with drinking, wheels stands for a car, and press for the news media. In many of these cases the shift is logical and conventional, such that understanding a metonymic idiom feels intuitive. Because the figurative meaning is tightly linked to the literal term, metonymic idioms are often learned and recognized quickly. For instance, lend a hand typically has almost no ambiguity for listeners, whereas spill the beans (metaphorically 'reveal secrets') requires abstract mapping. Research indicates native speakers rate metonymic idioms as less nonliteral than metaphoric ones, suggesting that access to the idiomatic meaning may be easier when a clear contiguity relation exists. Thus, metonymy provides a local semantic shortcut in idiom interpretation, leveraging everyday associations to convey figurative meaning rapidly.

Conceptual Blending

Another framework is Conceptual Blending (Integration), which generalizes metaphor and metonymy by combining elements from multiple scenarios into a new conceptual space. Fauconnier and Turner (2002) describe blending as a cognitive operation that merges pieces of different mental spaces to produce emergent meaning. In this view, understanding an idiom may involve simultaneously considering a literal scenario and an abstract scenario. For example, breaking the ice might blend the concrete scenario of fracturing physical ice with the social scenario of starting a conversation. The blend inherits structure from both inputs and yields the idiomatic meaning (initiating dialogue). Similarly, spill the beans blends the act of spilling (a concrete mishap) with the notion of revealing information. The blend fuses concepts—here, beans and secrets—into a creative understanding of disclosing secrets inadvertently.

Conceptual blending theory accounts for cases where neither pure metaphor nor pure metonymy fully explains an expression, by allowing flexible construction from context. For example, the idiom spill the beans can be analyzed as blending the context of a social

gathering (secrets held by people) with a kitchen scenario (tipping over a container of beans). The resulting blend includes elements of both input spaces in a new context that corresponds to disclosing confidential information. While blending is most often discussed in the study of novel metaphors and creativity, it highlights that idiomatic meaning can emerge from a creative integration of concepts. Even conventional idioms may have originated via a blend of experiences. In sum, blending theory suggests that idioms can be understood as emergent constructions where listeners map multiple frames together to arrive at a coherent figurative interpretation.

Salience

The Graded Salience Hypothesis (Giora, 1997) asserts that among a phrase's possible meanings, the most salient (conventional, frequent, prototypical) meaning is accessed first, regardless of context. In idiom processing, this means highly familiar idioms evoke their figurative meaning automatically. For example, kick the bucket almost always triggers 'to die' immediately because that meaning is most salient; the literal image of kicking a pail is negligible. According to Giora, even if context suggests a literal interpretation, the most salient sense (usually the idiomatic one for a conventional idiom) is retrieved first. For instance, "hit the road" will mean "leave" by default rather than "strike the pavement," reflecting the dominance of the figurative meaning. Laurent et al. (2006) found electrophysiological evidence supporting this: idioms rated as strongly salient produced smaller N400 amplitudes when their idiomatic meaning was probed, compared to weakly salient idioms. This indicates that the brain more easily processes the highly familiar idiomatic sense.

Giora's view further predicts that if an idiom has a viable literal meaning, that meaning will be retrieved only after the salient figurative meaning if at all. For example, spill the beans rarely leads people to think about actual beans first. The hypothesis explains why context alone cannot immediately force a less salient meaning: a highly salient idiom meaning dominates initial processing. In practical terms, salience acts as a filter prioritizing the conventional idiomatic interpretation during comprehension. Only when the salient meaning proves inadequate (e.g. context contradicts it) might the comprehender entertain alternative meanings. Thus, salience is a top-down factor that governs the time course of idiom interpretation, favoring frequent, prototypical meanings first.

Discussion

The preceding analysis shows that idiom interpretation typically involves multiple overlapping cognitive processes. In practice, listeners may simultaneously consider competing cues. For a highly familiar idiom, the salience mechanism will rapidly trigger its conventional meaning, but this initial activation can be further shaped by metaphorical or metonymic mappings. For instance, the idiom break the ice is saliently understood as easing tension, but the precise imagery and emotional undertones come from the ice-breaking metaphor. Conversely, in lend a hand, the hand-for-help metonymy provides an immediate clue about help, with little need for additional metaphorical framing.

It is plausible that idiom comprehension begins with a quick recognition of a learned phrase (analogous to dictionary lookup), followed by dynamic semantic processing. For example, cost an arm and a leg may first be recognized as a memorized unit; listeners then may still appreciate its vivid metaphor of paying a high price for bodily limbs, reinforcing the

meaning of “very expensive.” Caillies and Butcher (2007) describe this as a hybrid process: idiomatic phrases can initially engage semantic memory retrieval, then recruit more compositional analysis (metaphor or blending) as needed. The salience of an idiom’s meaning and its transparency determine how much of the internal content remains “alive” during comprehension. Highly transparent idioms may allow partial semantic activation of constituents (e.g. arm in cost an arm and a leg suggests great expense), whereas opaque idioms (e.g. kick the bucket) bypass constituent meanings entirely.

Moreover, these mechanisms do not exclude each other: many idioms carry both a metaphorical scaffold and a metonymic element. For example, spill the beans involves both the concrete source domain of spilling and the abstract target of secrets, blending these sources into a coherent interpretation. Conceptual blending explains how idioms can unify multiple source domains when a single metaphor or metonymy is insufficient. In other words, when an idiom contains layers of meaning, listeners may subconsciously build a blend of scenarios to grasp it.

This flexible interplay has been supported by experimental findings. For instance, context effects in self-paced reading show that idiom comprehension can be facilitated by context once the idiomatic meaning is activated, but not always prevent initial literal processing. Neuroimaging also suggests different brain systems: familiar idioms elicit less activation in language and sensorimotor areas than novel metaphors, implying a shift from online simulation to retrieval. The ERP evidence (Laurent et al., 2006) shows that salient idiomatic meanings are accessed automatically, consistent with behavioral priming results.

In sum, idiom processing appears to use a flexible toolkit: initial salience-driven retrieval is followed by mapping via metaphor or metonymy, possibly with blending creating emergent interpretations. The precise combination depends on idiom properties (familiarity, transparency) and context. For example, highly familiar idioms may be resolved almost immediately via salience, whereas less familiar or more novel figurative phrases might require more conceptual blending or metaphorical inference. Future research combining contextual manipulations, cross-linguistic comparisons, and neurocognitive measures will further clarify how these processes interact, and under what conditions each mechanism predominates.

Conclusion

Idioms are a rich domain of figurative language that reveal how human cognition uses metaphorical and associative mappings to convey meaning. This review has highlighted that no single mechanism is solely responsible for idiom understanding. Instead, idioms draw upon a combination of cognitive strategies: conventional metaphors map between domains, metonymy leverages lexical associations, and conceptual blending merges conceptual scenarios. Crucially, the salience of an idiom’s meaning determines the order of access, ensuring that the most familiar interpretation is retrieved automatically. Taken together, these mechanisms allow listeners to interpret idioms quickly and flexibly. For example, idioms like spill the beans involve both metaphor (secrets as objects) and a salient conventional meaning, while idioms like lend a hand are primarily metonymic with an obvious meaning. A comprehensive account of figurative interpretation should incorporate all these dimensions.

These findings have broader implications beyond idioms themselves. In language learning and AI, recognizing the cognitive basis of idioms can improve interpretation. For instance, language instruction might focus on the conceptual metaphors behind idioms, as suggested by cognitive semantics, rather than treating them as arbitrary phrases. In natural language processing, incorporating metaphor and metonymy recognition could aid machine understanding of idiomatic text. Ultimately, idioms exemplify the synergy between language and thought: they show how entrenched patterns, conceptual associations, and context work together to produce rich meaning beyond the literal words..

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