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Metaphor

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Metaphor involves describing or understanding one thing in terms of another. When talking about “fighting” urges, “wrestling with” a decision, or “swimming in” debt, people use words for physical actions to refer to experiences that are not inherently physical. Researchers call the concept being described the *target* (or *tenor*) and the concept used to describe it the *source* (or *vehicle*). Metaphor is ubiquitous in virtually all forms of communication, including everyday conversations, political speeches, spontaneous gestures, and visual media. Some metaphors are deliberately crafted to illuminate complex domains (“DNA is a recipe”). Some are so deeply embedded in language they are barely noticeable (“falling in” love). And some are *dead*, having strayed too far from their original literal meanings (“spill the beans”). Once the province of philosophers and literary theorists, metaphor has become a major topic in cognitive science and many other fields. Researchers want to know why metaphors are so pervasive, how people use and understand them, and what they reveal about the relationship between language and thought.

History

In the 4th century BCE, Aristotle treated metaphor as primarily a poetic and rhetorical figure of speech. He recognized that metaphors can aid learning, but he stressed that a facility with metaphor was a sign of extraordinary intelligence. This classical view prevailed for centuries, until it was called into question by several philosophers in the mid-20th century. Max [Black \(1955\)](#) rejected the idea that metaphors are largely decorative and suggested that they can generate genuinely new ideas from the interaction between two conceptual domains. Meanwhile, Mary [Hesse \(1966\)](#) made the case that metaphor plays a vital role in scientific reasoning.

Just a couple of decades later, linguist George Lakoff and philosopher Mark Johnson extended this line of thinking, arguing that metaphor is a fundamental component of the human conceptual system and that it is pervasive in language and thought ([Lakoff & Johnson, 1980](#)). Their *conceptual metaphor theory* stimulated interest in metaphor research across disciplines and generated new insights into the cognitive processes underlying metaphor comprehension (see the section “Core concepts”). This led to a large body of experiments that tested assumptions about the difficulty of processing metaphors. In contrast to earlier proposals (e.g., [Searle, 1979](#)), this work showed that comprehending metaphors is not inherently more challenging than literal language ([Gibbs, 1994](#)).

In the 21st century, metaphor remains a popular topic within cognitive science and related fields. It features in research on reasoning, categorization, creativity, learning, problem-solving, and other high-level cognitive processes.

Core concepts

Conceptual metaphor theory

The central claim of conceptual metaphor theory is that people understand abstract concepts like time, causation, and emotions by using what they know about more concrete domains such as space, actions, and journeys ([Lakoff & Johnson, 1980](#)). These systematic mappings from source to target domains structure how people think about reality and are evident in conventionalized patterns of metaphor in everyday language. For example, the conceptual metaphor “love is a journey” organizes how individuals conceptualize romantic relationships, as illustrated in the following example: “We’ve come a long way but recently hit some bumps in the road. Should we push ahead or go our separate ways?” The progress of the relationship maps onto a path, the difficulties onto obstacles, and the future onto a destination ([Table 1](#) shows a fuller set of correspondences between the two domains).

Table 1. *Systematic Correspondences in the “Love Is a Journey” Conceptual Metaphor*

Source (journey)	Target (love)	Example expression
Travelers	Lovers/partners	“We’ve come a long way together.”
The path/road	The course of the relationship	“We’re on the right track.”
Destination	Shared life goals	“Where is this relationship going?”
Obstacles on the road	Problems in the relationship	“We’ve hit some bumps in the road.”
A fork in the road	A decision point	“We’re at a crossroads.”
A dead end	An unresolvable impasse	“This relationship is stuck.”
Parting ways	Breaking up	“Let’s go our separate ways.”

Many conceptual metaphors, including “love is a journey,” are grounded in everyday embodied experience and other universally familiar aspects of human life [see [Grounded Cognition](#)]. As a result, certain metaphorical source domains appear in language after language, including motion, bodily functions, natural disasters, war, and disease ([Kövecses, 2005](#)). However, specific mappings may vary across cultures. For instance, in some languages (e.g., Indonesian), the liver, not the heart, is the metaphorical seat of emotion. Beyond these linguistic patterns, evidence from a large body of behavioral experiments, gesture research, and cross-linguistic studies supports the idea that these mappings reflect how people think, not just how they communicate ([Gibbs, 2017](#)).

Alternative frameworks to conceptual metaphor theory

Conceptual metaphor theory has drawn criticism for relying too heavily on linguistic evidence as a basis for claims about cognition and for underspecifying processing mechanisms. As a result, various

alternative accounts have emerged ([Holyoak & Stamenković, 2018](#)). The *categorization* approach treats metaphors as assertions of category membership rather than mappings between domains ([Glucksberg & Keysar, 1990](#)). On this view, saying “my job is a jail” indicates that jobs belong to the same abstract category that a jail exemplifies; namely, a constrictive, unpleasant place to be confined. The *career of metaphor* account integrates elements of both mapping and categorization to explain how people process different types of metaphor ([Bowdle & Gentner, 2005](#)). Novel metaphors are processed as analogies, which require structural alignment and projection between source and target domains, whereas familiar metaphors are processed more directly as categorizations (i.e., the processing mechanism shifts as a metaphor becomes conventionalized) [see [Analogy](#)]. Still others argue that metaphor comprehension requires no specialized mechanisms at all, relying instead on the same *pragmatic* processes that govern all communication ([Sperber & Wilson, 2008](#)).

Questions, controversies, and new developments

One open question concerns the role of embodiment in metaphorical cognition. When scholars propose that conceptual metaphors are grounded in bodily experience, this suggests that mental representations of abstract concepts are partly built from more concrete sensorimotor representations. Early experimental work appeared to support this claim by showing that manipulating physical sensations (e.g., holding a warm vs. cold cup) could shift people’s social judgments in metaphor-consistent ways (e.g., judging a person to be “warmer”). However, a number of studies have failed to replicate this kind of *embodied priming* effect ([Ebersole et al., 2016](#)). This has led to questions about what it means for a metaphor to be embodied in the first place ([Casasanto & Gijssels, 2015](#)).

At the same time, many promising theoretical and empirical developments have emerged in recent years. Scholars have proposed updating conceptual metaphor theory to better explain cultural and contextual variation in metaphor usage ([Kövecses, 2020](#)), whereas others have pushed the field beyond verbal language to examine metaphor in gesture, visual media, and multimodal communication ([Forceville & Urios-Aparisi, 2009](#)). With expanded access to large corpora and online participant pools, researchers can now systematically explore the role of metaphor in public discourse and experimentally test how metaphor framing shapes attitudes and decision-making in real-world contexts ([Flusberg et al., 2024](#); [Semino, 2008](#)).

Broader connections

Metaphor research has many practical implications for understanding how people think, communicate, and behave in a variety of settings, including public health, education, and risk assessment. For instance, messaging with metaphor affects reasoning about illness (her “journey with” cancer), the environment (the “war on” pollution), and natural disasters (“monster” wildfire) ([Flusberg & Thibodeau, 2023](#); [Marghetis & Matlock, 2025](#)). Metaphor also helps people conceptualize emerging technologies like generative artificial intelligence ([Mitchell, 2024](#)), and cross-linguistic research can illuminate the complex

relationship between metaphor, culture, and cognition ([Gibbs, 2017](#); [Kövecses, 2005](#)) [see [Large Language Models](#)]. The study of metaphor remains fertile ground for many types of research, figuratively speaking.

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Further reading

- Gibbs, R. W., Jr. (2017). *Metaphor wars: Conceptual metaphors in human life*. Cambridge University Press.
- Ortony, A. (Ed.). (1993). *Metaphor and thought*. Cambridge University Press.
- Thibodeau, P. H., Matlock, T., & Flusberg, S. J. (2019). The role of metaphor in communication and thought. *Language and Linguistics Compass*, 13(5), e12327. <https://doi.org/10.1111/lnc3.12327>

References

- Black, M. (1955). XII.—Metaphor. *Proceedings of the Aristotelian Society*, 55(1), 273–294. <https://doi.org/10.1093/aristotelian/55.1.273>
- ↩
- Bowdle, B. F., & Gentner, D. (2005). The career of metaphor. *Psychological Review*, 112(1), 193–216. <https://doi.org/10.1037/0033-295X.112.1.193>
- ↩
- Casasanto, D., & Gijssels, T. (2015). What makes a metaphor an embodied metaphor? *Linguistics Vanguard*, 1(1), 327–337. <https://doi.org/10.1515/lingvan-2014-1015>
- ↩
- Ebersole, C. R., Atherton, O. E., Belanger, A. L., Skulborstad, H. M., Allen, J. M., Banks, J. B., Baranski, E., Bernstein, M. J., Bonfiglio, D. B. V., Boucher, L., Brown, E. R., Budiman, N. I., Cairo, A. H., Capaldi, C. A., Chartier, C. R., Chung, J. M., Cicero, D. C., Coleman, J. A., Conway, J. G., ... Nosek, B. A. (2016). Many Labs 3: Evaluating participant pool quality across the academic semester via replication. *Journal of Experimental Social Psychology*, 67, 68–82. <https://doi.org/10.1016/j.jesp.2015.10.012>
- ↩
- Flusberg, S. J., & Thibodeau, P. H. (2023). Why is mother earth on life support? Metaphors in environmental discourse. *Topics in Cognitive Science*, 15(3), 522–545. <https://doi.org/10.1111/tops.12651>
- ↩

- Flusberg, S. J., Holmes, K. J., Thibodeau, P. H., Nabi, R. L., & Matlock, T. (2024). The psychology of framing: How everyday language shapes the way we think, feel, and act. *Psychological Science in the Public Interest*, 25(3), 105–161. <https://doi.org/10.1177/15291006241277761>



- Forceville, C., & Urios-Aparisi, E. (Eds.). (2009). *Multimodal metaphor* (Vol. 11). Walter de Gruyter.



- Gibbs, R. W., Jr. (1994). *The poetics of mind: Figurative thought, language, and understanding*. Cambridge University Press.



- Gibbs, R. W., Jr. (2017). *Metaphor wars: Conceptual metaphors in human life*. Cambridge University Press.



- Glucksberg, S., & Keysar, B. (1990). Understanding metaphorical comparisons: Beyond similarity. *Psychological Review*, 97(1), 3–18. <https://doi.org/10.1037/0033-295X.97.1.3>



- Hesse, M. B. (1966). *Models and analogies in science*. University of Notre Dame Press.



- Holyoak, K. J., & Stamenković, D. (2018). Metaphor comprehension: A critical review of theories and evidence. *Psychological Bulletin*, 144(6), 641–671. <http://dx.doi.org/10.1037/bul0000145>



- Kövecses, Z. (2005). *Metaphor in culture: Universality and variation*. Cambridge University Press.



- Kövecses, Z. (2020). *Extended conceptual metaphor theory*. Cambridge University Press.



- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. University of Chicago Press.



- Marghetis, T., & Matlock, T. (2025). Metaphorical framing of wildfires shapes what they are, how they act, and how we should respond. *Metaphor and Symbol*, 40(1), 38–50. <https://doi.org/10.1080/10926488.2024.2415139>



- Mitchell, M. (2024). The metaphors of artificial intelligence. *Science*, 386(6723), eadt6140. <https://doi.org/10.1126/science.adt6140>



- Searle, J. R. (1979). Metaphor. In A. Ortony (Ed.), *Metaphor and thought* (pp. 92–123). Cambridge University Press.

[↩](#)

- Semino, E. (2008). *Metaphor in discourse*. Cambridge University Press.

[↩](#)

- Sperber, D., & Wilson, D. (2008). A deflationary account of metaphors. In R. W. Gibbs, Jr., (Ed.), *The Cambridge handbook of metaphor and thought* (pp. 84–105). Cambridge University Press.

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