People Differ Widely in Their Understanding of Even a Simple Concept Such as the Word ‘Penguin’

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The Merriam-Webster dictionary defines the word “penguin” as “any of various erect short-legged flightless aquatic birds (family Spheniscidae) of the southern hemisphere.” That description seems simple enough, but definitions are not what people have in mind when they actually use words. Instead people think of concepts: the myriad properties, ideas, examples and associations that spring to mind when we think about a word.

Our concepts are crucial to exactly what we mean when we use language, and new research has found that the concepts people hold, even for a word like penguin, vary from person to person on a shockingly frequent basis. This does not mean we all disagree on the basic definition of a penguin. But while some people might think they are noisy, plump creatures, more like a whale than an eagle, others might consider them to be awkward, strange animals, more like an ostrich than a dolphin.

These discrepant views—these concepts of penguins—are the kind of information researchers at the University of California, Berkeley, elicited from participants in a study that was published last month. The team’s results show that even the plainest of nouns can invoke dozens of distinct concepts in individuals’ mind. “People have wondered for a long time how to put a number on how much overlap there is, and it’s really low. It blows my mind,” says psychologist Celeste Kidd of the U.C. Berkeley, who was senior author of the study.

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