

To children (but not adults) a rose by any other name is still a rose

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Two vital parts of mentally organizing the world are classification, or the understanding that similar things belong in the same category; and induction, an educated guess about a thing's properties if it's in a certain category. There are reasons to believe that language greatly assists adults in both kinds of tasks. But how do young children use language to make sense of the things around them? It's a longstanding debate among psychologists.

A new study in [Psychological Science](#), a journal of the [Association for Psychological Science](#), challenges the predominant answer. "For the last 30 to 40 years it has been believed that even for very young children, labels are category markers, as they are for adults," explains psychologist Vladimir M. Sloutsky, who authored the paper with Ohio State University colleague Wei Deng. According to this theory, if you show anyone an oblong, scaled, limbless swimming thing and say it's a dog (its label), both adults and children will believe it's a dog (in that category of four-legged domesticated mammals) and should behave like a dog—bark or wag its tail.

The study confirms that many adults do use labels this way. But children do not. "Our research suggests that very early in development labels are no different from other features," says Sloutsky. "And the more salient features may completely overrule the label." You insist the swimming thing is a dog. The child weighs all the evidence—and "dog" is no more important than scales or swimming—and concludes it's a fish.

To test their hypothesis, the psychologists showed pictures of two imaginary creatures to preschoolers and college undergraduates. Both animals had a body, hands, feet, antennae, and a head. The "flurp" was distinguished by a pink head that moved up and down; the "jalet" had a blue sideways-moving head. The heads were salient—the only moving part. During training, the subjects learned what a flurp or a jalet looked like.

Then the experimenters changed some of the features, keeping the head consistent with most of them, and asked participants to supply the missing label. They also showed creatures with characteristics and a name, and the subjects had to predict—induce—the missing part. Both adults and children did best when the head was consistent with the name.

The difference arose when the head was a jalet's but label was "flurp," or vice-versa. Then, most of the adults went with the label (we accept that a dolphin is a mammal, even though it looks and swims like a fish). The children relied on the head for identification. Regardless of its name, a thing with a jalet's head is a jalet.

To eliminate the possibility that the participants were flummoxed by the invented names, they researchers called the creatures "carrot-eater" and "meat-eater." The results were the same.

Sloutsky says the findings could inform teaching and communicating with children. “If saying something is a dog does not communicate what it is any more than saying it is brown, then labeling it is necessary but by no means sufficient for a child to understand.” Talking with young children, “we need to do more than just label things.”