When and how do toddlers in rural Western Kenya understand the referential nature of pictures?

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Abstract

Humans possess a remarkable capacity to create and understand abstract representations, such as pictures. U.S. 18-month-olds understand that pictures refer to objects; however, less is known about how this understanding develops. We test the hypothesis that understanding the representational nature of pictures requires frequent experience with pictures, by working with rural Kenyan toddlers with few visual symbols in their early environments.

We taught rural Kenyan toddlers a novel word (dax) for a picture of a novel object. We then presented the picture and the object to toddlers and asked them to point to the dax, reasoning that toddlers would select the object if they understood that pictures are representations of objects.

Surprisingly, only half the sample learned the novel word. Moreover, the toddlers who learned the word selected between the picture and object randomly. We discuss follow-up studies to continue exploring the development of pictorial competence across early environments.