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Evidence for representation of pretend objects by Kanzi, a language-trained bonobo

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Secondary representations enable our minds to depart from the here-and-now and generate imaginary, hypothetical, or alternate possibilities that are decoupled from reality, supporting many of our richest cognitive capacities such as mental-state attribution, simulation of possible futures, and pretence. We present experimental evidence that a nonhuman primate can represent pretend objects. Kanzi, a lexigram-trained bonobo, correctly identified the location of pretend objects (e.g., “juice” poured between empty containers), in response to verbal prompts in scaffolded pretence interactions. Across three experiments, we conceptually replicated this finding and excluded key alternative explanations. Our findings suggest that the capacity to form secondary representations of pretend objects is within the cognitive potential of, at least, an enculturated ape and likely dates back 6 to 9 million years, to our common evolutionary ancestors.