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# Cognitive Development



Editorial

## Children's cognizing the unreal



### 1. Introduction: children's cognizing the unreal

The field of cognitive development has been concerned largely with how children think about the real world, exemplified by Piaget's seminal research on developing concepts of time and space. The metaphor of the "child as scientist," exploring and formulating hypotheses about the real, physical world, guides the bulk of research in cognitive development. A much smaller space has been devoted to the issue of how children think about and understand what is not real. How is thinking about what is unreal different from, and how it is the same as, thinking about what is real?

Defining "the unreal" is critical. Reality, which is not entirely its opposite, has many meanings and is itself often defined by that with which it is contrasted. We use the word *real* to indicate natural (vs. artificial, or vs. supernatural), a sensory experience (vs. a dream or an imagining), and something that is alive (vs. a replica like a toy or a cartoon character), among other things. Encompassing all that is not real and then some, non-reality therefore is multi-faceted. In this issue, we present a representative sample of non-realities, each of which presents a unique challenge or opportunity for the young child (Table 1). Thus, we include, but also go beyond, traditional Piagetian concepts such as play and imagination, to address concepts of the supernatural, the virtual, the invisible, and the impossible. We ask not only whether children conceive of various entities as real or not real, but also what sorts of properties they attribute, and how they tell the difference.

What makes thinking about the unreal particularly interesting is that human beings—and especially young ones—can do it at all. One would expect natural selection to create cognitive systems that concern themselves with reality, because such systems would confer selective advantage. By contrast, pretending that sand is a pie could itself be costly in evolutionary (to say nothing of gustatory!) terms, should one actually eat the pie. There would seem to be a selective advantage in conceptualizing the

**Table 1**  
Reality and its contrasts.

Real	Contrasts	Articles most concerned with
Natural	Supernatural	Shtulman & Yoo
Directly perceived	Imagined	Woolley & McInnis
Alive	Replica	Aguiar & Taylor; Gjersoe, Hall, & Hood
Experienced	Pretense	Goldstein & Bloom; Markova & Legerstee
Possible	Impossible	Corriveau & Harris
Existence	Non-existence	Van Reet, Pinkham, & Lillard

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sand as sand itself. What does representing what is not real buy the child? How does a child do it, and how does it differ from how children think about what is real? What can children's thoughts about reality tell us about cognitive development more broadly, and what aspects of cognitive development might inform children's understanding of reality? This issue presents nine articles that grapple with these issues. Our conclusion considers common themes that arise across the articles.

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