

Discussion Note #2
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Cognitive Tools for a Cognitive Problem:

A proposal for an alternative epistemological orientation for studying fantastical thinking and measurement instrument creation.

In Jacqueline D. Woolley's article titled, Thinking about Fantasy: Are Children Fundamentally Different Thinkers and Believers from Adults, it is stated that there are areas of both convergence and divergence in the way adults and children think about things that are real and those that are in the realm of fantasy. To put it in her words,

“Summarizing the literature reviewed in this section should cause us to reject the hypothesis that children and adults differ qualitatively both in terms of fantastical thinking and in terms of thinking about fantasy. Yet we have also rejected the claim that children and adults do not differ at all.”

While this view is supported by a great deal of empirical evidence and appears to be a plausible point of departure for her subsequent positing of possible explanatory theories, it shows that despite a great deal of research not much has been learned. Such a circumstance may stem from its very adherence to the credence-giving measures espoused and employed by the positivist paradigm under which the research seems to have taken place.

At the outset it should be stated that this is not an argument against empirical studies and their predominantly objectivist roots per se. Rather my goal is to make the case for exploring the affordances of perspectives/orientations which draw on interpretivistic epistemological traditions and to describe what they might look like through several examples related to the domain in question.

Woolley herself notices the obstacles in place in the domain through her mention of the bias the methods and measurement instruments have toward mis/understanding the complicated nature of the issue. She notes that instruments such as binary yes/no scales for reporting a subject's belief or lack thereof in proposed phenomena eliminate the possibility for subjects to position themselves along a continuum. Additionally the methodological/procedural adherence to mean-score reporting she describes seems to indicate neglect or disinterest in outlier/confounding cases that give rise to issues of individual difference.

While Woolley has articulated these issues, even questioning the plausibility of measuring the presence of unreal events/objects, she offers no deeper rationale or unified theory as to why they exist. She describes the efforts of empirical science to answer questions in this domain but falls short of stating how such attempts to reduce the social sciences to the mean of scores on a binary scale -smacks of physics envy.

To be clear, it was her explication of the research and its shortcomings that led to my speculation that movement on the continuum toward interpretivism and away from objectivism might prove

fruitful. In fact it was Woolley's suggestion (below) that got me started thinking about how improved measurement instruments might work on such a multifaceted issue.

“To assess whether this sort of continuous progression is operating, researchers need to develop more sensitive measures beyond the yes/no, real/not real response options used in most studies. ...rather than being asked if wishes come true a child could be asked, If we made five wishes right now, how many would come true?”

Starting with this suggestion let's explore what such a study and its subsequent measure instruments might look like.

Firstly, instead of using the mean to generate inferences about the population why not target students with individual differences and unpack the cognitive roots of said differences through dialogue about stated and observed behavior. Once this subpopulation is established we can begin applying instruments which allow for sustained interaction between the subject and interviewer.

Take for instance the example Woolley gives of Taylor (1994) asking children if they thought a picture of a moose cooking dinner could happen in the real world or not. Instead of closing the space off to only a yes/no answer, why not let the child order several different images of moose on different continuums including:

- most to least likely to see while driving in the country
- most to least likely to dream about
- most to least likely to make up a story about
- most to least likely place to see each image



These orderings would become not the summative data-collection point by which to determine the mean but rather the start of a cognitive interview about the choices they made; with the interpretivistic goal being that of noticing recurrent themes emerging from the interactions.

As an aside, another potentially fruitful avenue would be to notice changes in interaction trajectories when the interviewer changes from an adult to a teen, fellow adolescent, child, robot or Teddy Ruxpin-like toy.

Such an interaction-centered approach to the issue may also help one recognize the way the entire domain is colored by personal/subjective perspective. If we can agree that there is no definitive notion of 'real' but rather only a nebulous collective one, then we can begin to explore what elements in the domain are generative to the subject and why. We can seek to understand the utility and occasions for 'slipping over the rainbow'?

I am reminded of Yann Martel's message in his 2001 novel *Life of Pi*. He seeks to play with our notion of the need for things to be either real or made up fantasy. In his book, a

young Indian boy retells his story (to insurance adjusters and a reporter) of being lost at sea in a life raft with several zoo animals including a Bengal tiger. In the end whether the animals were actually with him or whether they were people he imagined as animals (to deal with the trauma of the events) is irrelevant. The question becomes a personal one, namely: what version of events is preferred?

Such a question may be more interesting to cognitive science than that of Woolley and her peers. The question of why certain versions of events are preferred in certain situations by certain individuals may better serve as a catalyst for us to understand the cognitive strategies and functions we seek to study.

References

- Woolley, J. D. (1997, December). Thinking about fantasy: Are children fundamentally different thinkers and believers from adults? *Child Development*, 68(6), 991-1011.
- Martel, Y. (2001). *Life of Pi*. Canada: Random House of Canada.