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The development of the imagination and imaginary worlds
Commentary on E. Dubourg & N. Baumard Why imaginary worlds? The psychological foundations and cultural evolution of fictions with imaginary worlds.

Sarah R. Beck & Paul L. Harris

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Abstract:
Evidence from developmental psychology on children's imagination is currently too limited to support Dubourg and Baumard's proposal and in several respects it is inconsistent with their proposal. Although children have impressive imaginative powers, we highlight the complexity of the developmental trajectory as well as the close connections between children's imagination and reality.

Main text:

Developmental evidence is one of the three key areas that Dubourg and Baumard use to support their proposal. Specifically, they claim that children appear to be both highly exploratory and highly imaginative. Although both these claims might be true, a closer look at the developmental psychology literature is needed to make the case convincingly and to identify potential issues.

Developmental psychology presents a complex picture because different types of imaginative thinking emerge at different ages. For example, pretend play appears by 2 years (Harris & Kavanaugh, 1997), future thinking around 5 years (McCormack & Atance, 2011), counterfactual thinking between 3 and 6 years (Beck & Riggs, 2014), and creative problem solving between 5 and 8 years (Beck et al., 2011). There is very little research specifically on the development of thinking about imaginary worlds. The authors cite Taylor et al.'s (2020) study that surveyed 8- to 12-year-olds about whether they had "a special imaginary place that they think about a lot" as evidence that paracosms *can* be created by children. However, it was relatively uncommon for children to report creating imaginary worlds. Thus, only around 17% of 8- to 12-year-olds did so (compared, for example, to around 50% reporting imaginary companions). Given that this is the age group where paracosms are thought to be most common, it seems that creating imaginary worlds is quite rare and emerges later than many other imaginative abilities.

Dubourg and Baumard emphasise a broad range of imaginary worlds and their differences from reality: "far removed islands, locations in the future or the distant past, other planets, or environments in alternative history" p4. Because there is little developmental evidence showing that children create imaginary worlds, it is tempting to rely on the widespread view that children often engage with fantasy that is beyond what they experience in reality. Yet, when observing children's pretend play, we typically see them re-enacting mundane home or school scenes or pretending to enact a role they have personally experienced or seen on television. In fact, various lines of evidence indicate that much imaginative thinking is about the real world or its close cousins, rather than a distant or non-existent fantasy world (Harris, 2021). One rare study explored children's and adults' preferences for realistic or fantasy stories (both fictitious), for example, a realistic story "about a boy/girl with lots of brothers and sisters" and a fantasy story about a boy/girl who lives on an invisible farm". Four- and five-year-olds showed no preference for either type of story over the other, and a preference for fantasy increased rather than decreased with age between children and adults (Barnes et al., 2015).

Dubourg and Baumard underline the ‘uselessness’ of information gained from imaginary worlds. But this contrasts with recent psychological accounts showing that using the imagination to think about reality can be particularly useful for children. For example, in a study of regret, 6- and 7-year-olds had to choose between two boxes. The box they picked contained fewer rewards than the unchosen box. Those children whose counterfactual thinking (‘If I had picked the other box, I would have had the better prize’) led to regret (feeling worse after the unchosen box’s contents were revealed), were more likely to make rational decisions in the future, by choosing the alternative option (McCormack et al., 2020). In fact, we might even make the broader claim that thinking about imaginary worlds can increase our understanding of the real world. For example, when children read Harry Potter, they are learning about personal relationships and morality, as well as the rules of Quidditch.

Dubourg and Baumard present evidence that preferences for consuming imaginary worlds decrease with age: books and films were studied by Purhonen et al. (2009) and Dubourg et al. (2021) respectively. But the participants in these studies were adults, the youngest of whom were eighteen. This reflects a tendency in their account to group different ages together: “imaginary worlds should be more attractive to children, teenagers, and young adults.” p21. But to make an effective developmental argument we need to be precise about the ages at which abilities emerge and how they interact. In particular, the developmental evidence on exploratory behaviour refers to children and (rarely) adolescents rather than adults, so it is currently difficult to marry this with the evidence on adults’ fiction preferences.

Nevertheless, it is encouraging to see an account of the imagination that draws on diverse areas of evidence and we hope that developmental evidence can be used to ground this kind of account. The challenges we offer could be addressed by a more precise account of children’s imagination abilities and how those abilities relate to their changing exploratory tendencies. Developmental psychology can also take lessons from this account, which highlights the lack of research on imaginary worlds and the key distinction between producing and consuming imaginary elements.

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