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Proceedings of the Annual Meeting of the Cognitive Science Society

Title

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Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 46(0)

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Publication Date

2024

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Peer reviewed

Can children leverage consensus and source independence to get better advice?

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Abstract

Young children, like adults, conform to group consensus. However, it is unclear when children develop more sophisticated intuitions about how the composition of groups, the way in which they acquire and aggregate information, impacts advice quality. This experiment assessed children's developing sensitivity to source independence - that is, do they understand that statistically independent sources of information are more valuable than correlated ones? Children (5-to-11-year-olds, $N=106$) and teenagers and adults ($N=99$) played a space exploration game in which they made multiple 2AFC decisions based on the advice of 8 friendly aliens. Across trials and participants, we manipulated consensus (the relative number of advisers endorsing each option) and source diversity (the relative number of independent advisers endorsing each option). Results indicated that children were able to detect the correlations between sources, but their ability to exploit this knowledge was late emerging, likely in the early adolescence years.