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Taking the Easy Way Out: Effects of Feedback on Children's Metacognitive Control

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Abstract: It is a well-known finding that adults are "cognitive misers," in that they optimize performance by reducing effort whenever possible. We examined how this tendency emerges in the course of development. We incentivized participants to acquire as many points for correct responses as possible, and allowed them to choose between two games of differential difficulty on every trial. Whereas adults systematically chose the easier of the two games, 5-year-olds did not. However, when we gave children feedback on the basis of their choice rather than accuracy, they exhibited evidence of optimization by selecting the easier game. Further, they showed the same pattern when the two games were modified to be identical in difficulty, with only feedback supporting the choice of one game over the other. These findings suggest that children may be cognitive misers, but they rely on external feedback rather than internal signals of effort to optimize their behavior.