# Deal or no deal: 5 year olds make smart decisions in games of risk 

9 January 2013

You may have to be over a certain age to be a contestant on "Deal or No Deal", but children as young as five start to maximize their profits - in cookies - when making decisions similar to those on the show, according to research published January 9 in the open access journal PLOS ONE by Valerie Dufour and colleagues from the National Center for Scientific Research in France.

Children aged 3-9 were given a cookie and presented the option to either keep it or exchange it for one of 6 identical cups containing cookies. The cookies in the cups could be larger, smaller or equal in size to what they already had. The chances of winning a larger cookie were altered by presenting different combinations of cookie sizes in the cups ( 3 large, 2 equal and 1 small, for example). In each case, the children were told how many cups had a 'winning' cookie before they made their decision.

Three to four-year-olds could not distinguish between the profits to be had by choosing to exchange their cookie when the odds of winning were greater. Kids aged five and up were better at understanding the odds of winning, and their decisions were affected by chances of losing. They also framed their decisions in the context of previous wins or losses.

The researchers found that though children over the age of five were risk-seekers, they also exhibited an aversion to loss typically seen in adults. This aversion arises from a 'better safe than sorry' choice but can also lead to judgment errors in adults, causing a loss of potential profits. The results of this study suggest that this is a decisionmaking pattern that we begin to learn as early as age five.

More information: Steelandt S, Broihanne M-H, Romain A, Thierry B, Dufour V (2013) DecisionMaking under Risk of Loss in Children. PLoS ONE 8(1): e52316. doi:10.1371/journal.pone. 0052316

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APA citation: Deal or no deal: 5 year olds make smart decisions in games of risk (2013, January 9) retrieved 6 May 2021 from https://medicalxpress.com/news/2013-01-year-olds-smart-decisionsgames.html

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