Reply to Data Colada [125]
Ryan Oprea

Once again, I'm grateful to Uri for giving me an opportunity to write a brief reply.

The first main point in my response is that removing subjects who made errors in the instructions questions doesn't change behavior nearly as strongly as an analysis of the median suggests. Errors in mirrors continue to be strongly biased in the direction of the classical empirical patterns that underlie prospect theory, and there continues to be significant qualitative agreement in lottery and mirror behavior over most of the distribution. I think the median is a fine statistic (as the post says, its appropriateness depends on the research question) but in these data it hides this strong asymmetry (people are on average three times more likely to make prospect theoretic mistakes than the opposite in both mirrors and lotteries) which I think is central to the point of the AER paper. I included CDFs in my response because I think looking at the raw distributions is helpful for seeing this.

In the course of making this case I refer to the median as a "knife's edge" statistic. I am happy to consider using a different term here if (as the post seems to suggest) it admits too many interpretations. What I meant to get across when using this term is that relatively subtle changes to the distributions in these data can create apparently big changes in behavior at the median. I point this out in a graph of the aggregate distribution (reproduced in the post) but I also refer the reader to an appendix Figure (Figure 10) where one can see that the same is true for most of the individual task distributions too. The reason I made this observation in my response was that it helps to explain how it can be that, when restricting to zero error subjects, the CDFs in lotteries and mirrors remain overall pretty similar (and errors similarly biased), even though medians look strikingly different. I think the other statistics focused on in the comment (e.g., rates of expected valuation, concentration rates of valuations near the median) tend to suffer from the same limitation. For all of their virtues, they tend to conceal the strongly asymmetric prospect-theoretic bias of errors in mirrors -- a bias that remains strong and significant even after removing subjects that make no mistakes in the instructions questions.