BDE2

The goal of this study was to see if people’s tendency toward over- or underprecision was moderated by the number of events, or in this case, height of the Quincunx.

Method

183 participants saw Quincunxes of varying heights and predicted where the ball would fall when dropped again.

Results

Participants estimated the likelihood that the ball would go into their chosen bin at 32%. In reality, the likelihood that the ball would go into that bin was 21%. The difference between these two is 10.6%, and this is significantly greater than zero according to a one-sample t-test, t(182)=6.35, p=1.7 X 10-9. A 2 (order) X 12 (height) ANOVA revealed no significant effects for either of our independent variables or their interaction, Fs<1.3, p >.25.

For the SPIES elicitation, we began by focusing on those bins that each participant said they thought the ball was most likely to wind up in. 88% of participants picked a single bin as most likely. The remaining 12% of participants reported a tie between at least two bins. On average, across all participants, they picked 2.42 (SD=2.24) as being “most likely.” Participants overestimated the likelihood that the ball would fall into these bins by an average of 3.6% per bin. This mean is revealed to be greater than zero by a one-sample t-test, t(182)=3.64, p=3.6 X 10-4. A 2 (order) X 12 (height) ANOVA revealed no significant effects for either of our independent variables or their interaction, Fs<1.5, p >.14.

In order to test whether people displayed more confidence using the item-confidence or the SPIES elicitation, we computed peak confidence for each measure. For SPIES, that means using the maximum probability assigned to any bin. We submitted these two measures to a 2 X 12 X 2 mixed ANOVA where the last factor was within-subjects (SPIES vs. item-confidence). The results reveal a strong within-subjects effect of question format, *F* (1, 157) = 41.83, *p* < 1.2 x 10-9. None of the other main or interaction effects attained significance, *F*s < 1.4, *p*s > .17.