

# Wishful Thinking Beyond Dichotomous Outcomes



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## WISHFUL THINKING

**Wishful thinking** – the tendency to expect a preferred outcome (Krizan & Windschitl, 2007).



Krizan, Miller, & Johar (2010)

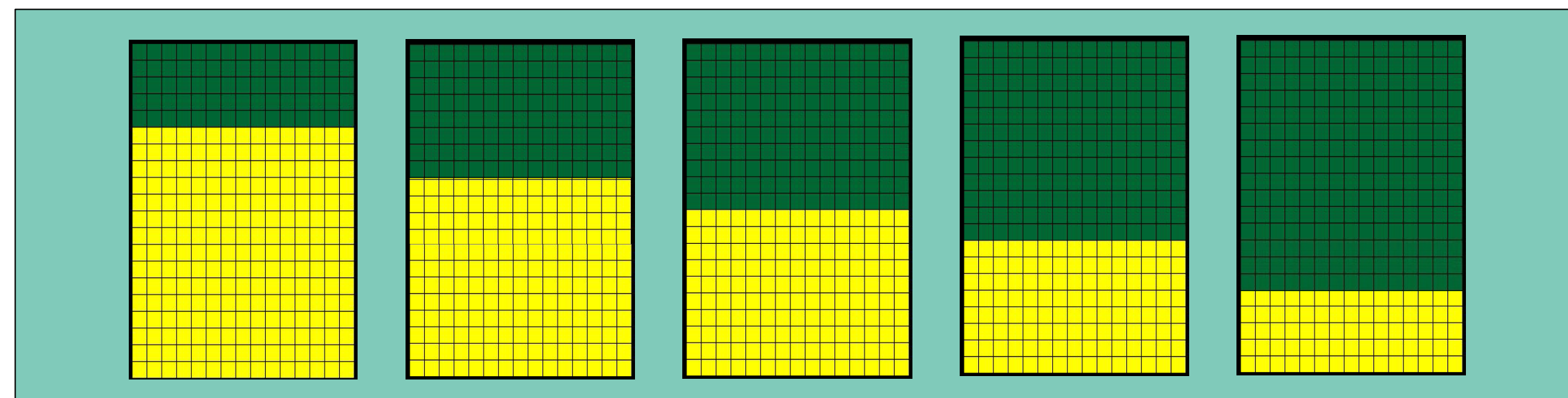


Simmons & Massey (2012)

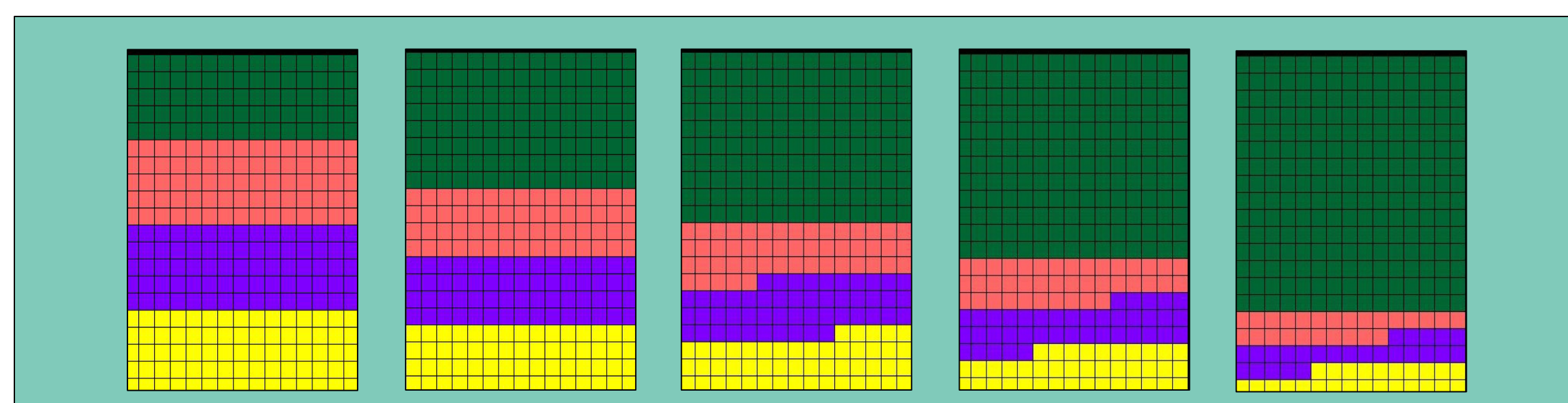
## METHOD

Participants predicted which color the computer would choose from multicolor grids of various color distributions (see below); half of the participants saw grids with two colors, half saw grids with four colors.

### Two Outcomes



### Four Outcomes



Participants earned points in two ways:

- If their prediction was correct.
- If the computer chose the color associated with the reward (they lost points if the computer chose the color associated with losing points. (see below)

Desirable	Desirability	Undesirable
If the computer picks this color you win 100 points If the computer picks this color you get 0 points	If the computer picks this color you get 0 points If the computer picks this color you get 0 points	If the computer picks this color you lose 100 points If the computer picks this color you get 0 points
If the computer picks this color you win 100 points If the computer picks this color you get 0 points If the computer picks this color you get 0 points	If the computer picks this color you get 0 points If the computer picks this color you get 0 points If the computer picks this color you get 0 points	If the computer picks this color you lose 100 points If the computer picks this color you get 0 points If the computer picks this color you get 0 points

Wishful thinking predicts a greater likelihood of predicting the color associated with winning points (compared to losing them).

Studies 1 and 2 has identical procedures except for the outcome measure.

- Study 1 elicited outcome predictions (e.g., which color will the computer choose?).
- Study 2 elicited likelihood judgments (how likely is it this color versus the others?).

Wishful thinking is typically studied in situations where people make predictions with two possible outcomes.

In two studies ( $N=230$  and  $N=239$ ), we compared wishful thinking with 2 vs. 4 possible outcomes.

We found that the magnitude of wishful thinking was *not* affected by the number of outcomes.

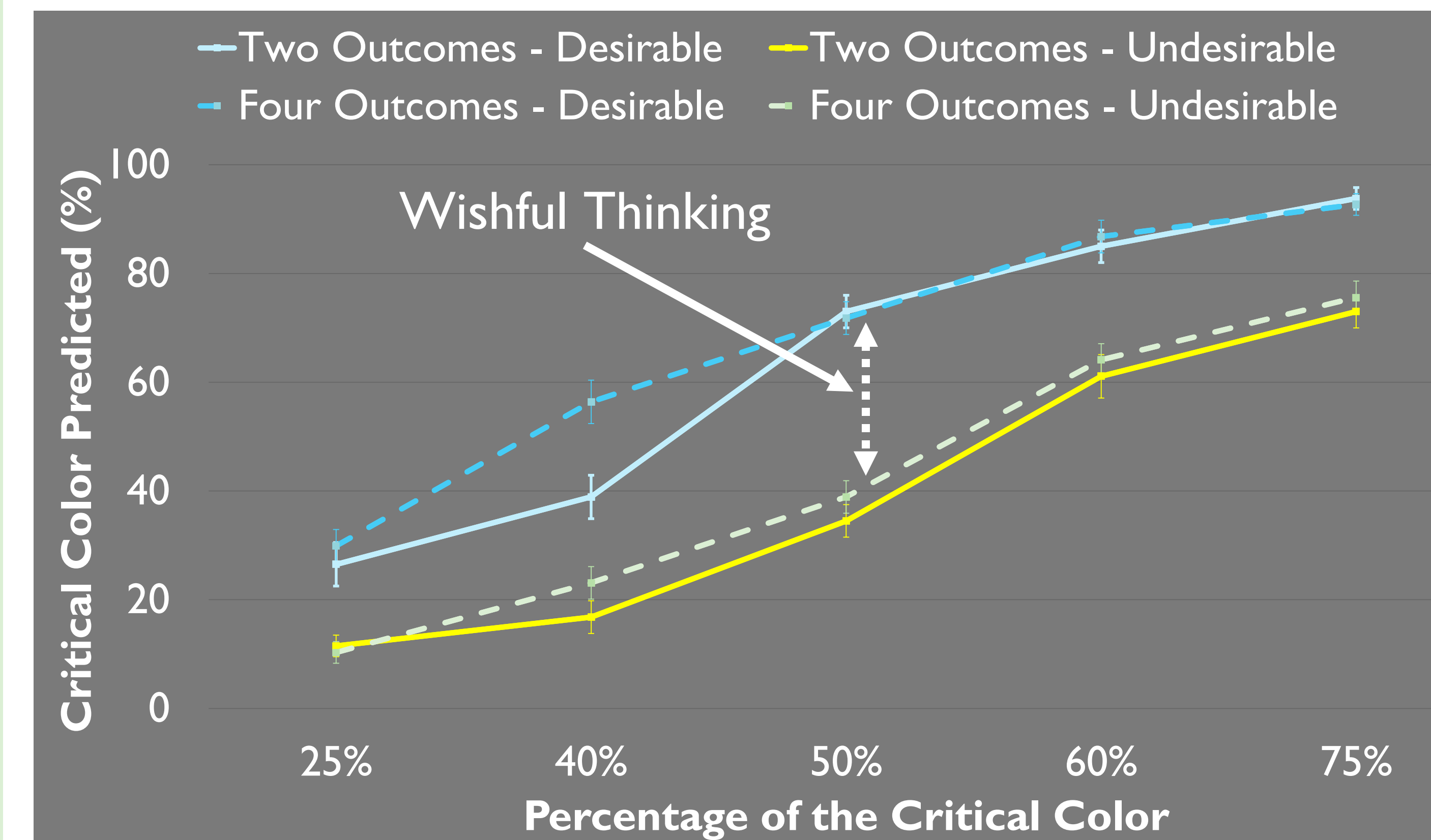
Past research on wishful thinking generalizes to situations that involve more than two outcomes.

Preregistrations and data:

<https://osf.io/m9sjv/>  
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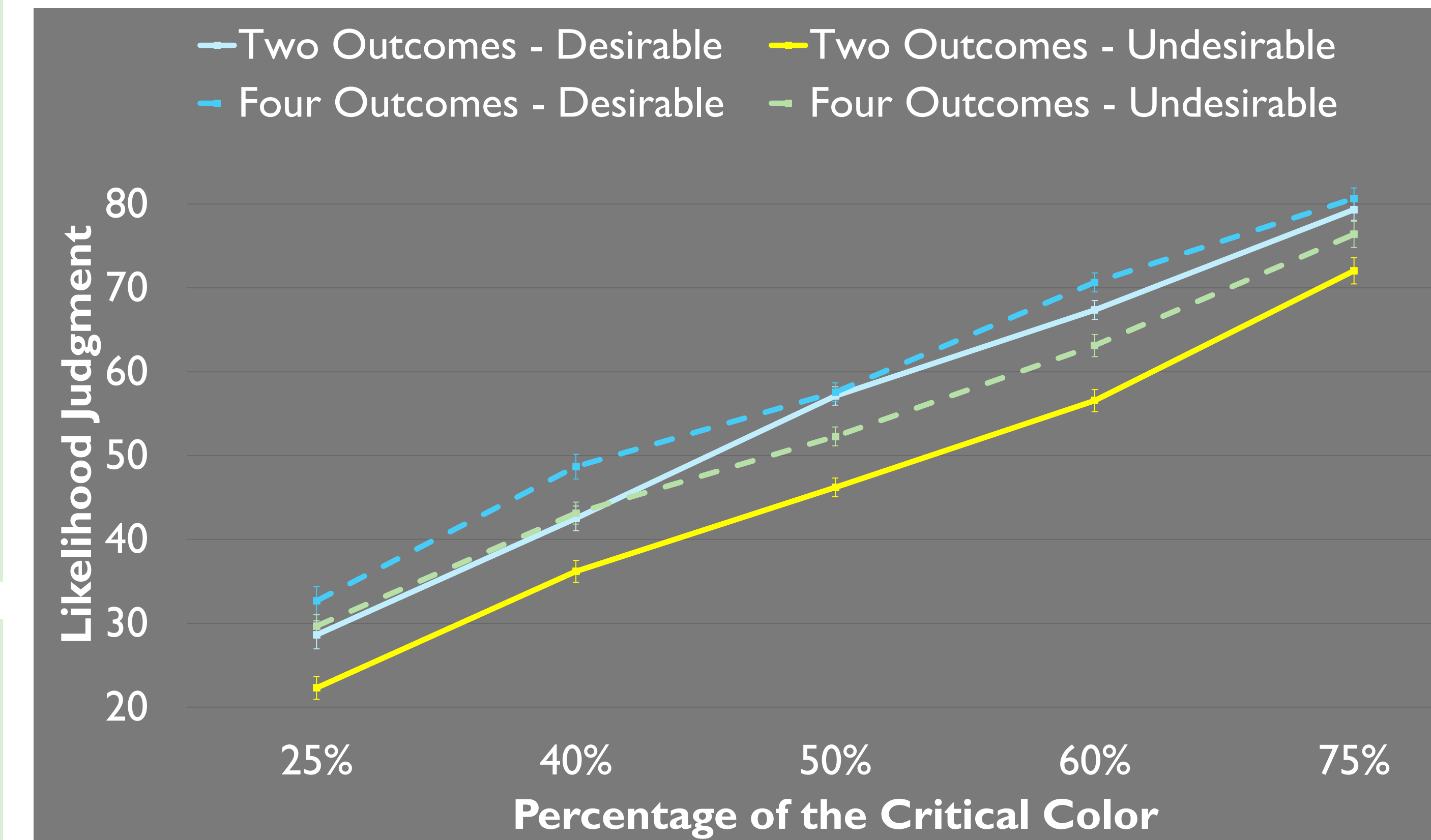


## STUDY 1 RESULTS



- People were more likely to pick the color associated with the desirable payoff. This indicates wishful thinking;  $p < .001$ ,  $\eta_p^2 = .39$ .
- This effect was similar across situations with two outcomes (solid lines) and four outcomes (dotted lines);  $p = .794$ ,  $\eta_p^2 = .00$ .
- Because we observed a large wishful-thinking effect (and also may have encountered ceiling/floor effects), we elicited likelihood judgments in Study 2.
- Research has shown that wishful thinking tends to be smaller for likelihood judgments versus outcome predictions.

## STUDY 2 RESULTS



- Results from Study 2 replicated those from Study 1.
- There was significant wishful thinking,  $p < .001$ ,  $\eta_p^2 = .21$ , though the effect was smaller than in Study 1.
- People engaged in similar amounts of wishful thinking across the two- and four-outcome conditions,  $p = .059$ ,  $\eta_p^2 = .02$ .