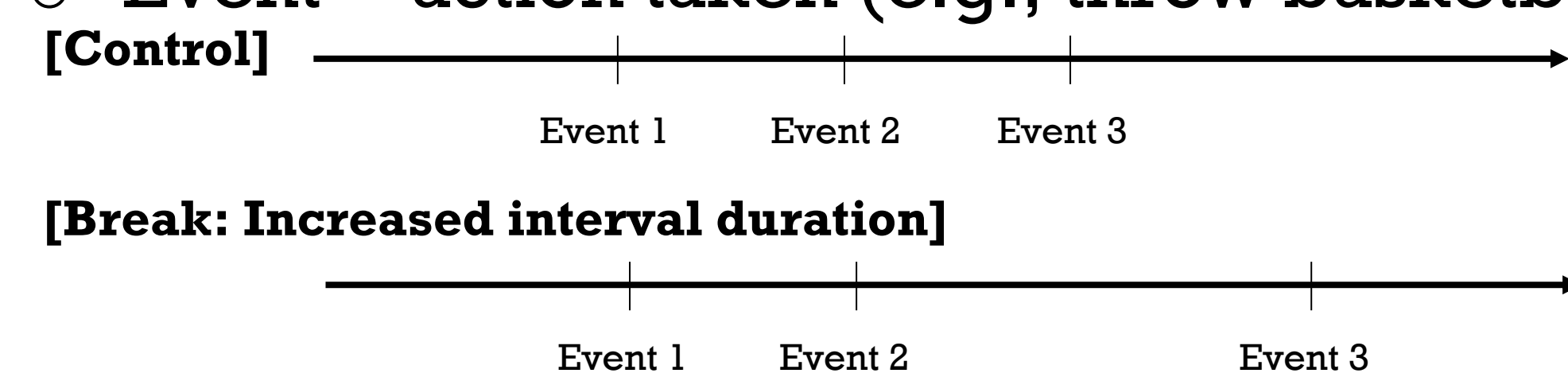


Abstract

- How do people predict when streaks will end?
- What influences perceived likelihood of streak continuation: length, agency^{1, 2, 3, 4, 5}
- Also: psychological momentum, or beliefs about the perceived likelihood of something continuing based on prior actions^{6, 7}
- In physics, Momentum = mass × velocity; we focus on what influences velocity by changing the interevent interval time

- Event = action taken (e.g., throw basketball)



S1: Breaks Hurt Perceived Streak Continuation

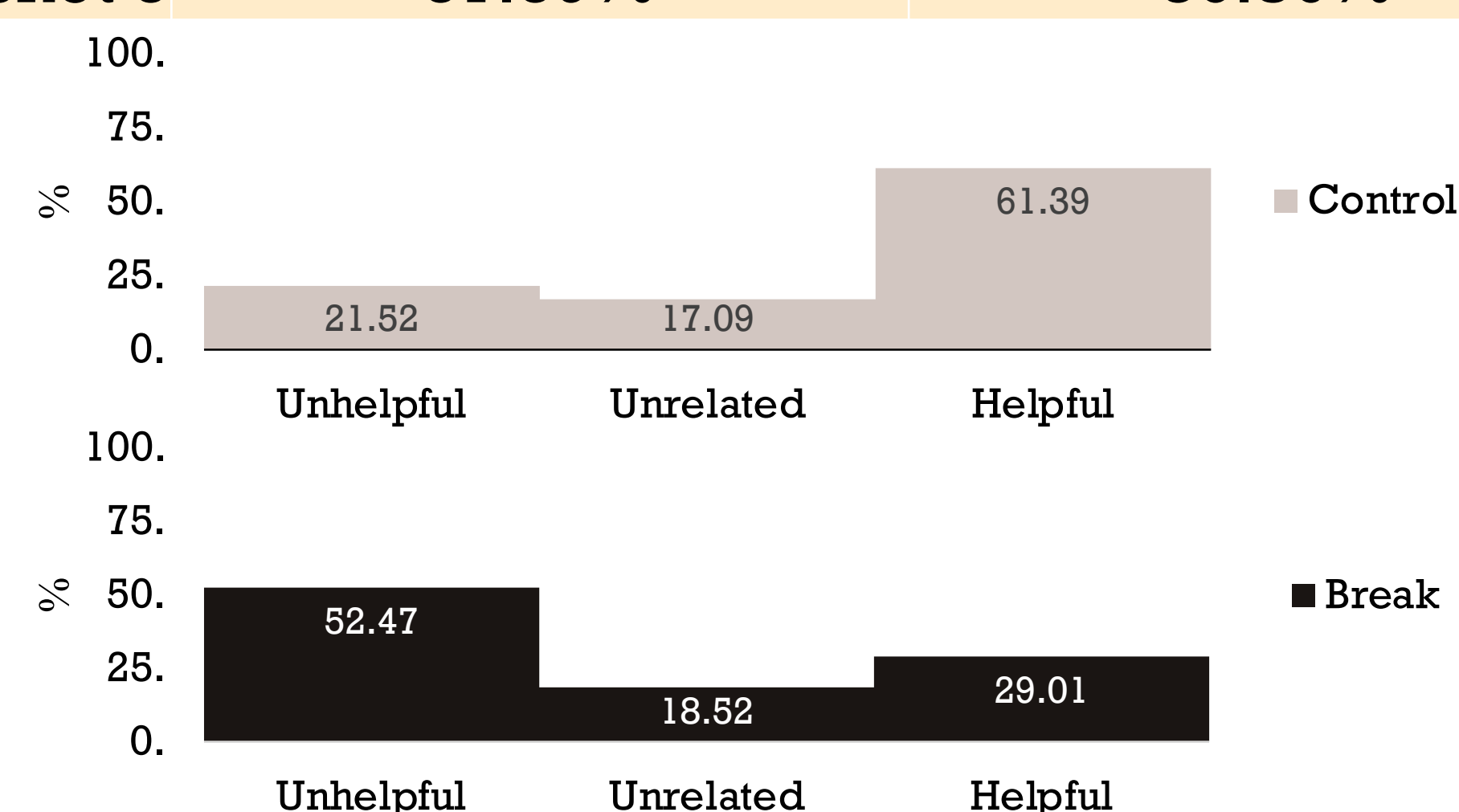
Method (aspredicted #47202):

- Ps (N = 320, ASU) read about Anuj who is practicing a wrist shot in hockey, randomly assigned to either Control or Break.
- Ps guess whether Anuj will score again and continue the streak on 2nd, 3rd, 4th, and 5th (key DV) shots.
- Ps learn Anuj makes shots 1, 2, 3, and 4. On 5th shot:
 - (Control) Anuj continues shooting
 - (Break) Before taking his 5th shot, he pauses for about a couple of extra minutes. Then, Anuj continues shooting.
- Key DV: Anuj will [will NOT] continue the streak
- DV2: Is break/continuing shooting unhelpful, unrelated, helpful?

Results:

- Break has negative impact on perceived streak ($z = -4.75, p < .001$)

% Believing Streak Continuation		
Shot 2	51.56%	
Shot 3	45.31%	
Shot 4	45.94%	
	Control	Break
Shot 5	57.59%	30.86%



S2: Activity Taking Longer > Break

Method (aspredicted #47490):

- Ps (N = 418, ASU) read about George practicing basketball free-throws with about a minute between throws. Ps randomly assigned to Control, Break, or Longer
- Similar setup to Study 1 with Ps guessing on shots 3-6. On Shot 6:
 - (Control) George continues shooting with his usual procedure and, at last, he shoots.
 - (Break) Before taking his sixth throw, George takes a minute off for a break. Then, George continues shooting with his usual procedure and, at last, he shoots.
 - (Longer) During his sixth throw, George takes more time in each step of the procedure, so the turnaround time takes a minute longer than usual. Then, at last, he shoots.

Results:

- Control > Break ($z = -7.03, p < .001$)
- Control > Longer ($z = -4.67, p < .001$)
- Longer > Break ($z = 2.67, p = .0077$)

% Believing Streak Continuation			
Shot 3	68.42%		
Shot 4	53.59%		
Shot 5	50.96%		
	Control	Break	Longer
Shot 6	71.01%	27.46%	42.75%

S3: Applies To Skill But Not Luck Games

Method:

- Ps (N = 344, mTurk) read about Yuval playing either a luck-based (Luck condition) or skill-based game (Skill condition); randomly assigned to one cell of 2 (Skill or Luck) × 2 (Control or Break).
- Make guess about if Yuval's streak continues in rounds 15-19.
- On round 19, Yuval continues (Control) or takes break (Break).

Results:

- Observe effect of Break (+1; Control = -1; $z = -2.49, p = .013$), Skill (+1; Luck = -1; $z = 4.60, p < .001$) and an interaction ($z = 2.07, p = .039$)
- Skill: Control > Break ($z = 3.03, p = .0025$)
- Luck: Control ~ Break ($z = 0.32, p = .75$)

% Believing Streak Continuation				
Round 15	95.65%	55.63%		
Round 16	90.76%	43.13%		
Round 17	78.80%	38.13%		
Round 18	79.35%	45.63%		
	Control/Skill	Break/Skill	Control/Luck	Break/Luck
Round 19	84.27%	64.21%	51.90%	49.38%

S4: Everyone Stops > Only Actor Stops

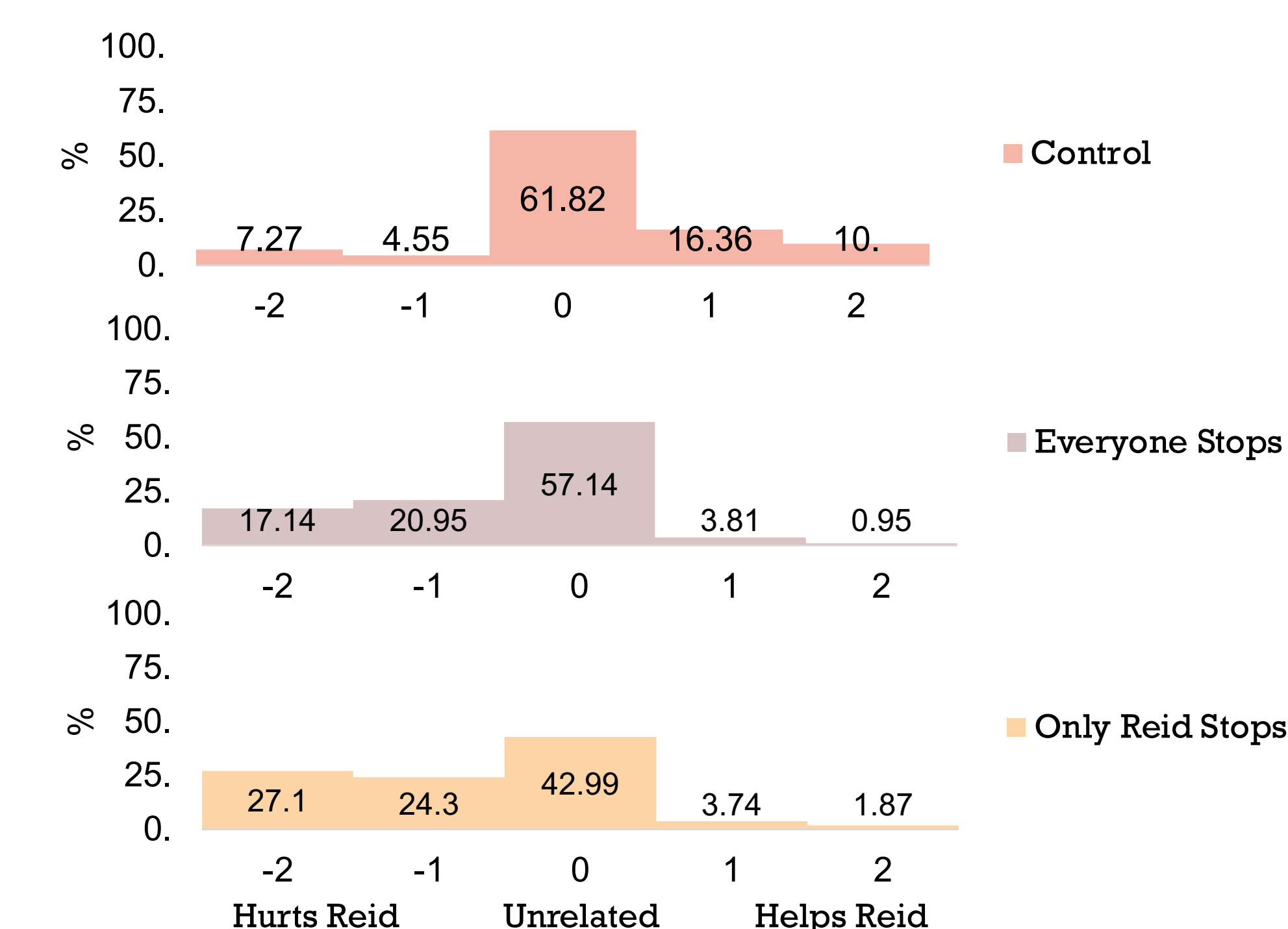
Method:

- Ps (N = 322, mTurk) read about Reid who plays skill-based Shanghai Mahjong with friends; Ps randomly assigned to Control, Everyone Stops, or Only Reid Stops.
- Ps make predictions about if Reid will continue the winning streak on Hands 2, 3, 4, and 5; learn Reid wins Hands 1-4.
- On Hand 5 (Key DV), Ps see Reid keep going (Control), Reid and everyone else take break (Everyone Stops), Reid takes a break while friends play a hand (Only Reid Stops)
- We assess perceived impact of break for Reid and everyone else: harmful, unrelated, helpful. We create score from -2 (Hurts Reid) to 0 (Unrelated) to +2 (Helps Reid).

Results:

- Control > Only Reid Stops ($z = -4.01, p < .001$)
- Control > Everyone Stops ($z = -1.91, p = .057$)
- Everyone Stops > Only Reid Stops ($z = 2.19, p = .029$)

% Believing Streak Continuation			
Hand 2	47.20%		
Hand 3	42.86%		
Hand 4	41.61%		
	Control	Everyone Stops	Only Reid Stops
Hand 5	49.09%	36.19%	22.43%



Conclusions

- Taking a break is perceived to have negative impact on likelihood of streak continuing—for skill-based games.
- Taking a break hurts perceived streak continuation more than taking longer.
- The actor being only one to take a break hurts perceived streak continuation more than everyone taking a break.

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