The Impact of **Delay** on the **Confidence-Accuracy** Relationship

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Background

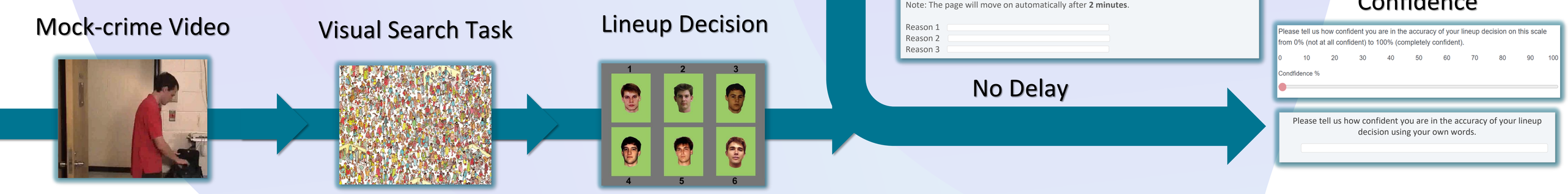
Collecting confidence immediately after an eyewitness identification is recommended because it is well-known that confidence collected after the eyewitness has engaged in social interactions is not predictive of accuracy (Shaw & McClure, 1996; Wells & Bradfield, 1998). However, there is little empirical evidence that explains how internal cognitive processes during a delay affect the confidence accuracy (CA) relationship. Generating reasons why a decision may have been incorrect has been shown to improve the CA relationship for event, eyewitness event and eyewitness lineup details (Brewer, Keast & Rishworth, 2002; Robinson & Johnston, 1996; Koriat et al., 1980). However, Brewer et al. (2002) did not use a an immediate confidence control group. Additionally, considering reasons a decision may have been incorrect and a reason it may have been correct did not improve the CA relationship in an eyewitness paradigm (Robinson & Johnston, 1998).

Research question: Will a delay between eyewitness identification and a confidence rating (in the absence of social influences) affect the CA relationship?

Hypotheses:

- Experiencing a non-social delay (i.e., visual search task) will result in a similar CA relationship as no delay
- Generating reasons why the decision may have been incorrect will result in a stronger CA relationship than no delay or doing an unrelated task

Procedure



Method

Participants: *N* = 1017 - Recruitment via Student participation for credit, social media and Amazon Mechanical Turk

Design:

2 Target Presence (Target-present, Target-Absent) X

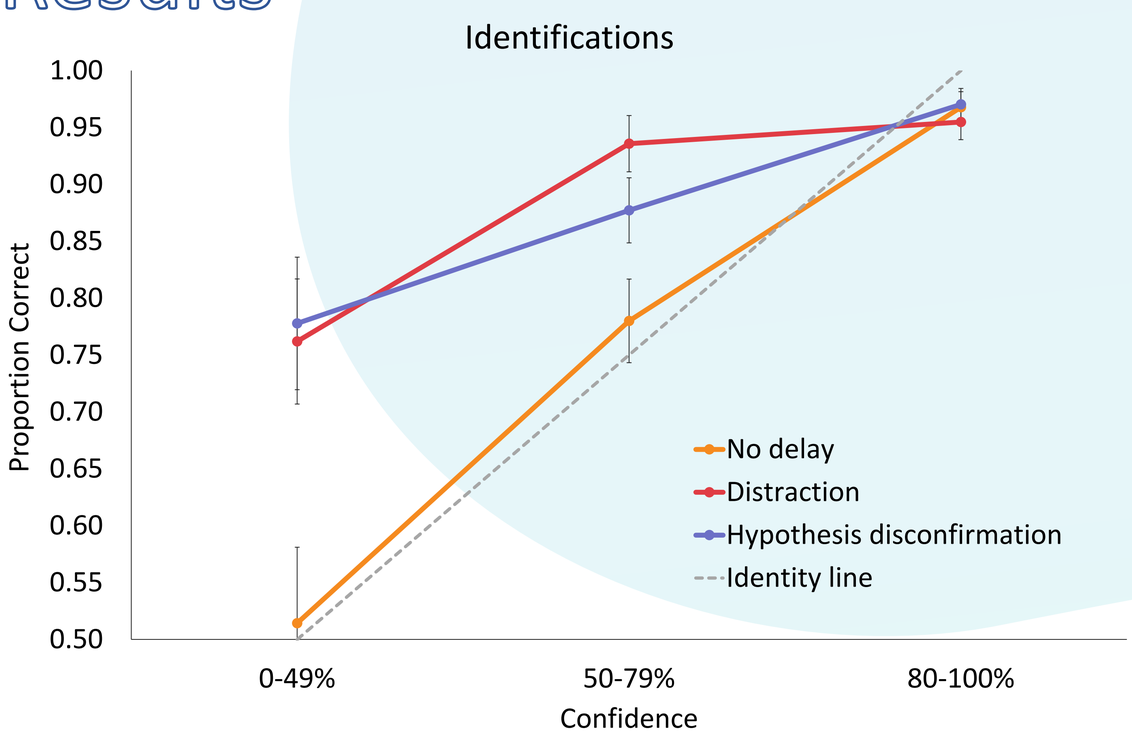
3 Delay (No Delay, Non-Social Delay, Hypothesis Disconfirmation)

- **No Delay** - Confidence questions immediately
- **Non-Social Delay** - Visual search task
- **Hypothesis Disconfirmation** - Think about the decision, then give 3 reasons why the decision may have been incorrect.

Measures: Confidence, Lineup Decision

A delay in collecting confidence reduces the confidence-accuracy relationship

Results



Inferential Confidence Intervals (ICIs) for Calibration Statistics

Conditions compared	C	OU	ANDI
No delay vs. Hypothesis disconfirmation	[.016, .05] [.002, .024]	[.11, .20]* [.01, .10]	[.19, .36]* [.02, .16]
No delay vs. Distraction delay	[.01, .05] [0, .02]	[.11, .21] [.005, .12]	[.18 .37] [.05, .24]
Hypothesis disconfirmation vs. Distraction delay	[0, .02] [.003, .02]	[.01, .11] [.01, .10]	[.06, .23] [.02, .16]

Note: C = Calibration index; OU = over/underconfidence; ANDI = Adjusted normalized discrimination index; * indicates a significant difference with a Bonferroni correction.

Discussion & Conclusions

- At 80%+, confidence was predictive of accuracy, regardless of condition
- Unexpectedly, a non-social delay AND hypothesis disconfirmation weakened the CA relationship and resulted in underconfidence.
- Although the no delay condition led to more overconfidence than the other conditions, this was true only when filler identifications were considered (see the Table)
- The CAC curves and ANDI values indicate the no delay condition results in the best ability to discriminate guilty from innocent persons
- The results support current recommendations to collect confidence immediately following identification—not just to avoid feedback but also to avoid the internal cognitive processes that may interfere.

Confidence judgments should be collected immediately.

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