



The Impact of Delay on the Confidence-accuracy Relationship

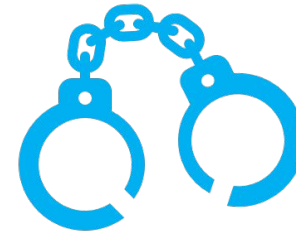


Confidence

Eyewitness Memory



- Eyewitness memory is fallible
- Memory decays over time



Innocence project

- 377 wrongful convictions
- 69% of those involved misidentification



Confidence and Eyewitness Accuracy

Confidence Accuracy (CA) Relationship

- How well confidence predicts accuracy.

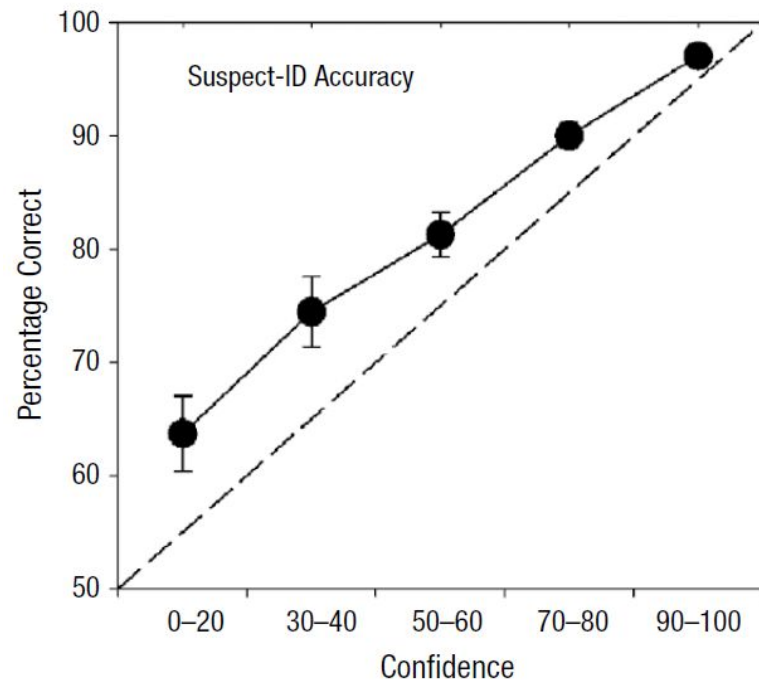
Eyewitness Confidence

- Confidence is a good predictor of identification accuracy when the lineup is conducted under pristine conditions.

(Brewer & Wells, 2006; Juslin, Olsson & Winman, 1996; Wixted & Wells, 2017)

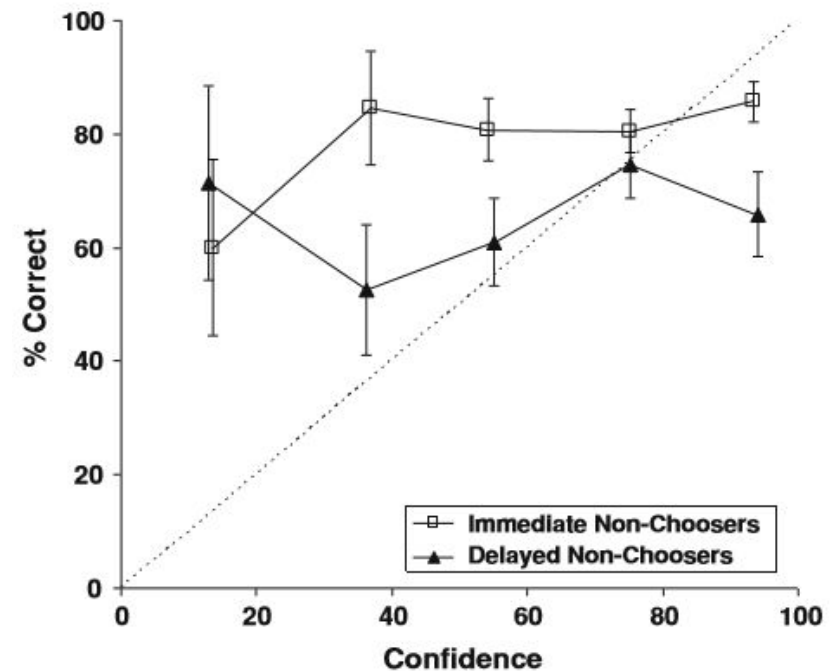
The confidence accuracy relationship

Identifications



Wixted & Wells (2017)

Rejections



*Sauer, Brewer, Zweck
& Weber (2010)*

Pristine conditions

Immediate confidence



Fair lineups

Double Blind



No more than one suspect per lineup

Cautioning that the offender might not be in the lineup

Delay

Delay between viewing the crime and making a lineup decision influences accuracy but not the CA relationship. But what if a delay occurs after making a lineup decision but before giving confidence?

(Wixted, Read & Lindsey, 2016)



Confidence

Delay between lineup and confidence



Feedback during a delay
reduces the CA relationship.



What about a non-social
delay?



Hypothesis Disconfirmation

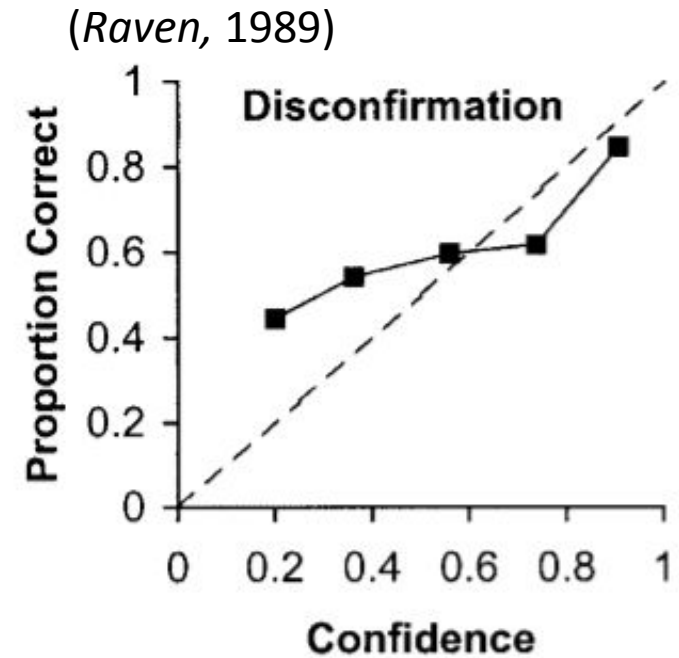
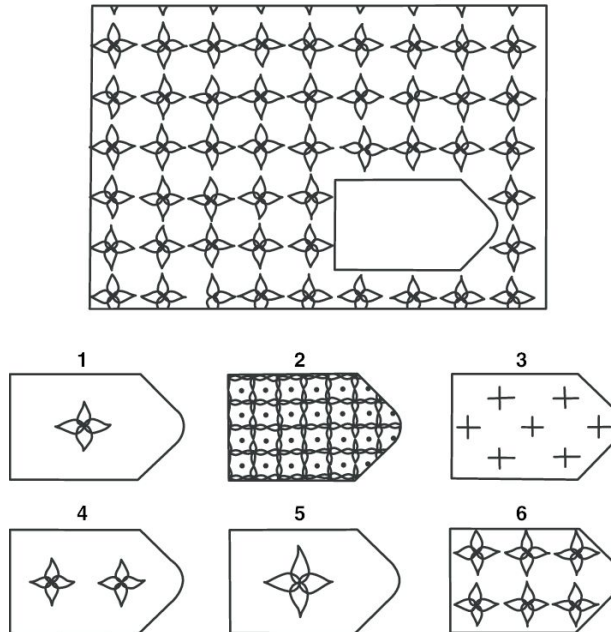
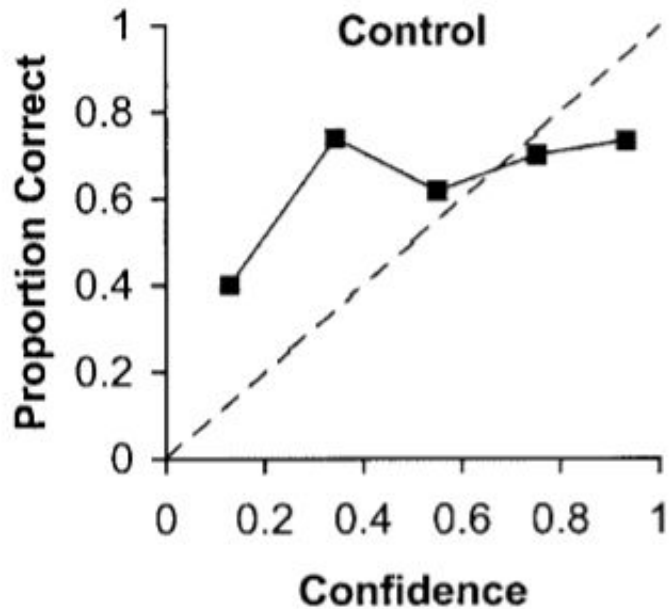
A large, abstract blue watercolor splash graphic on the left side of the slide, with various shades of blue and white ink-like textures.

Hypothesis Disconfirmation

- CA relationship stronger
- Koriat et al. (1980) - Event recall
- Robinson & Johnston (1998) - Eyewitness recall
- Brewer, Keast & Rishworth (2002) - Eyewitness identification

Brewer, Keast & Rishworth (2002)

- Control condition - 5-minute filler task
 - Puzzles from the Raven's Standard Progressive Matrices



Conditions



No Delay

Asked to give their confidence immediately after making a lineup decision



Non-Social Delay

120-second "Where's Wally" visual search



Hypothesis Disconfirmation

120-seconds to generate reasons why their lineup decision may have been incorrect



Hypotheses

1. There will be no difference in the CA relationship between a non-social delay and no delay
2. There will be a stronger CA relationship for Hypothesis Disconfirmation than no delay
3. There will be a weak CA relationship for rejections but high confidence rejections will be predictive of accuracy

Recruitment



74 students from QMU

In exchange for course credit



130 from social media

Reddit, Facebook, Twitter



813 from MTurk

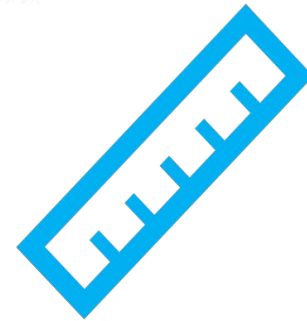
Amazon Mechanical Turk

Confidence



Own words

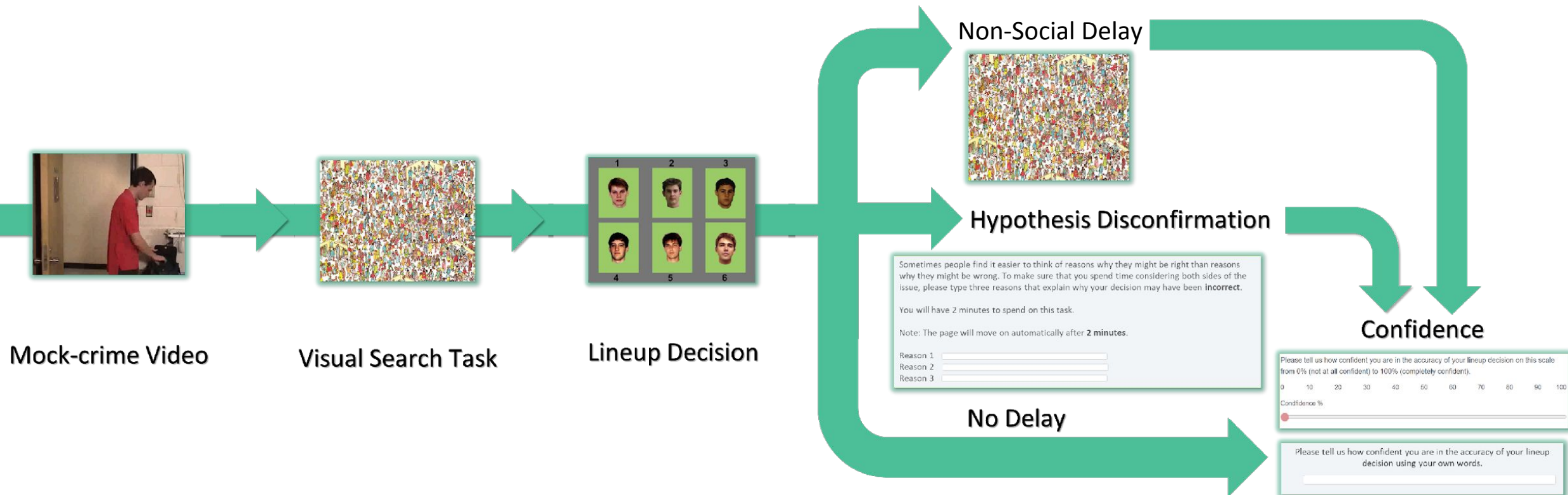
“Please tell us how confident you are in the accuracy of your lineup decision using your own words.”



0 – 100% Scale

“Please tell us how confident you are in the accuracy of your lineup decision on this scale from 0% (not at all confident) to 100% (completely confident).”

Procedure

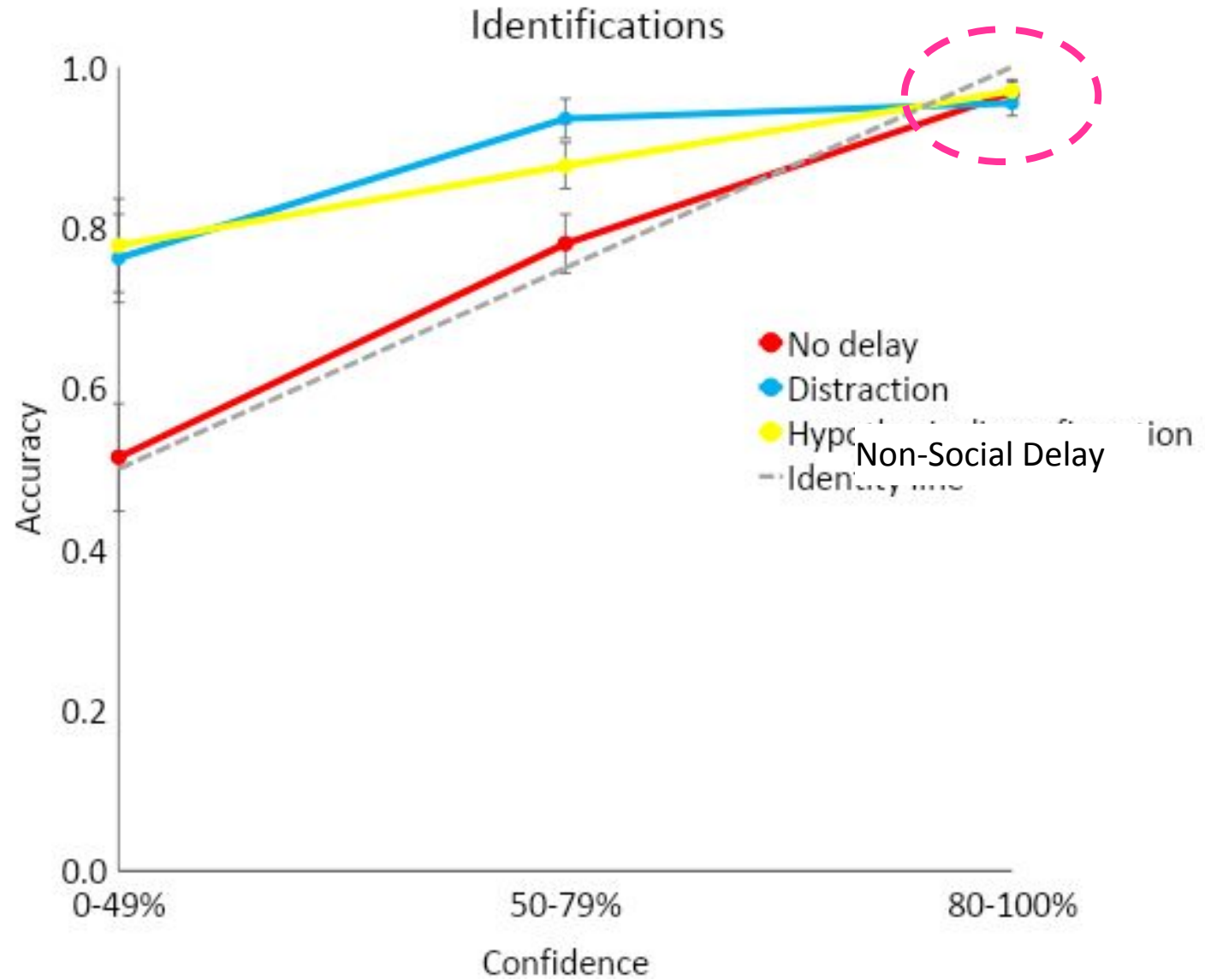




Results

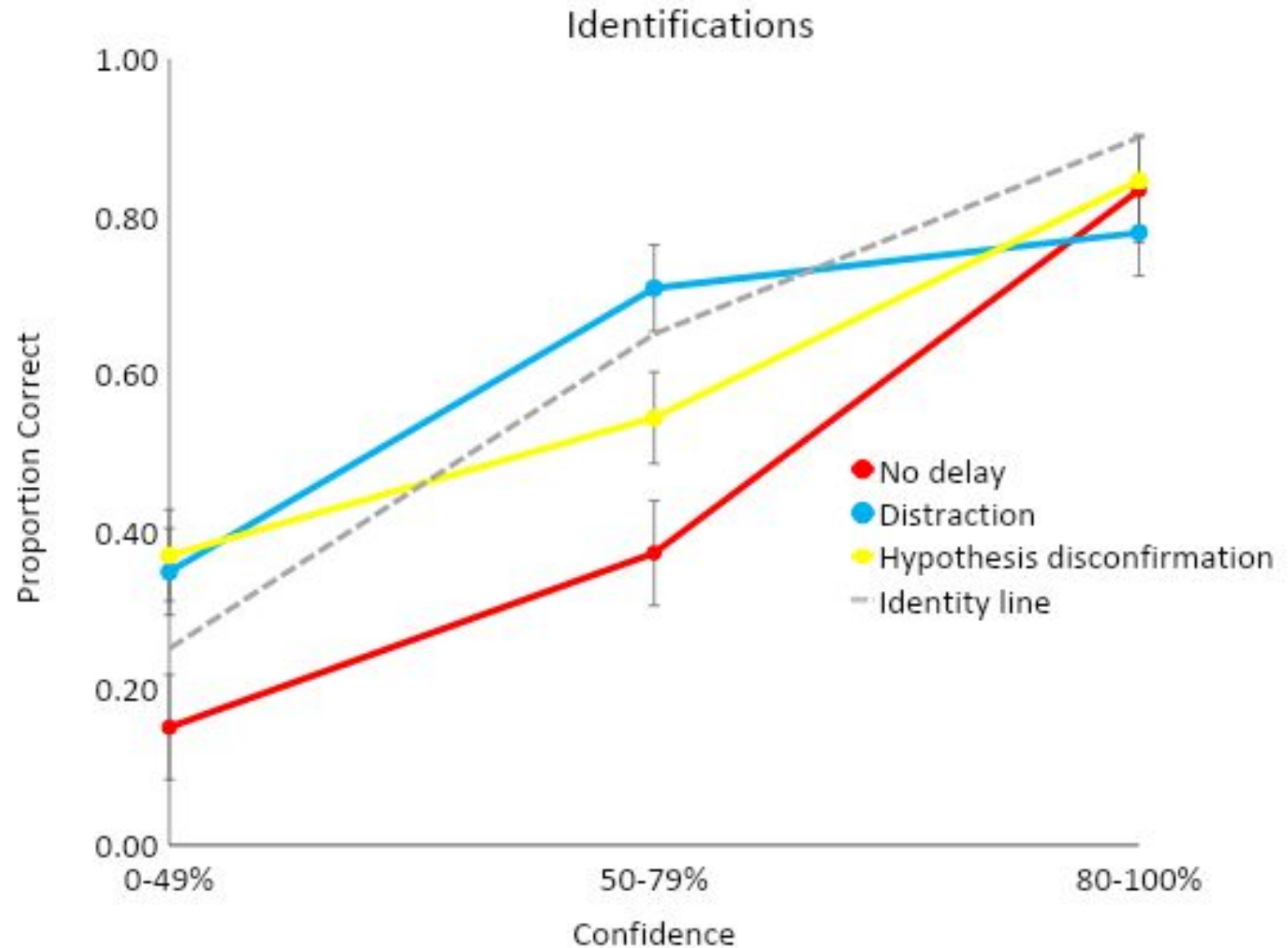
Results

Hypotheses 1 & 2



Results

Hypotheses 1 & 2



Results

Hypotheses 1 & 2

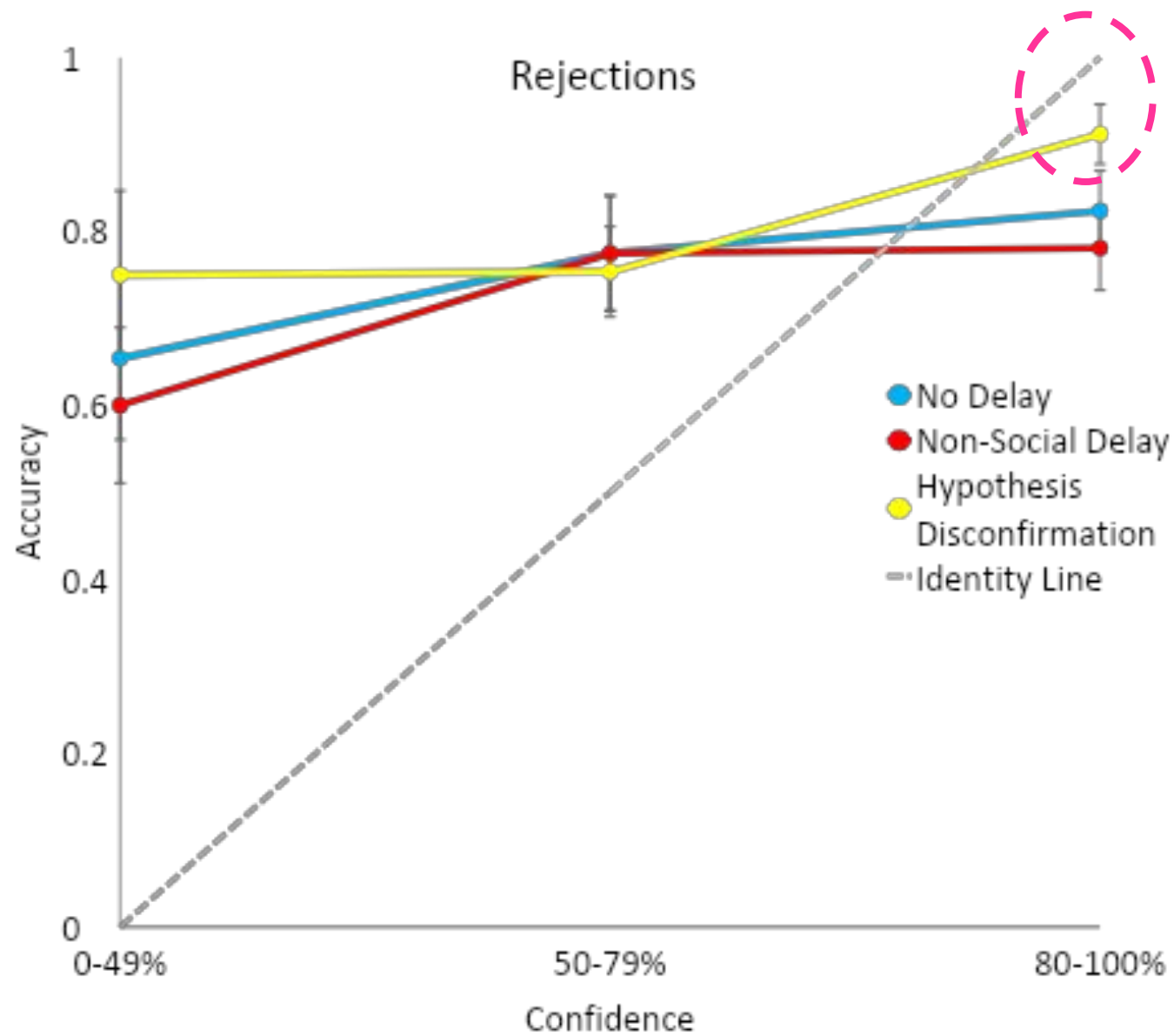
Inferential Confidence Intervals (ICIs) for Calibration Statistics

Conditions compared	C	OU	ANDI
No delay vs. Hypothesis disconfirmation	[.033, .035] [.008, .009]	[.156, .159] [.058, .063]	[.273, .281] [.139, .147]
No delay vs. Non-Social delay	[.033, .034] [.013, .014]	[.156, .159] [.052, .056]	[.273, .281] [.084, .091]
Hypothesis disconfirmation vs. Non-Social delay	[.008, .009] [.013, .014]	[.058, .063] [.052, .056]	[.139, .147] [.084, .091]

Note: C = Calibration index; OU = over/underconfidence; ANDI = Adjusted normalized discrimination index

Results

Hypotheses 3



Summary of results

- High confidence predicted identification accuracy in all conditions
- A non-social delay AND Hypothesis Disconfirmation reduced the CA relationship compared to no delay
- No delay resulted in worst calibration and over/underconfidence
- No delay resulted in the best discrimination (ANDI)
- CA relationship for rejections was weak
 - except maybe for high confidence rejections in hypothesis disconfirmation

Summary of results

Compared to no delay....

Non-social delay AND Hypothesis
Disconfirmation
↓ the CA relationship



Implications

- Any delay reduces the CA relationship so police should avoid delays.
- We now have more evidence to back up the current recommendations for immediate confidence – we need to do this not just avoid feedback but to avoid the internal cognitive processes that interfere.



Any questions?