

# I'd Never Forget That Face!

## Error Rates for Eyewitnesses



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Nov 15, 2022

SFU

# Today

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- Eyewitness identification
- Expert testimony on eyewitness reliability
- Lineup bias and eyewitness memory contamination
- Data on error rates in fair and biased lineups
  - Reflector variables (Wells, 2020)

# Eyewitness Identification



**Successful Investigation**

A single photograph of a person wearing a dark hooded jacket, looking directly at the camera.

**Culprit Present**

A 2x3 grid of six photographs. Each photograph shows a person wearing a dark hooded jacket, looking directly at the camera. The person's face is partially obscured by the hood.

**Unsuccessful Investigation**

A single photograph of a person wearing a light-colored hooded jacket, looking directly at the camera.

**Culprit Absent**

A 2x3 grid of six photographs. Each photograph shows a person wearing a light-colored hooded jacket, looking directly at the camera. The person's face is partially obscured by the hood.

Most line-up members are fillers

Fillers = Known Innocents (Wells & Turtle, 1986)

Fillers are not at risk of wrongful conviction

### Culprit Present



### Culprit Absent



Every line-up has a suspect

But not all suspects are guilty

Innocent suspects are at risk of wrongful conviction

Guilty  
Suspect



Innocent  
Suspect



# Mistaken Identification

## Field Studies ( $N = 6734$ )

- 24% of eyewitnesses to real crimes picked a filler (Wells et al. 2020)

## Innocence Project ( $N = 375$ )

- Mistaken ID contributed to 69% of U.S. DNA exonerations

## National Registry of Exonerations ( $N = 3299$ )

- Mistaken ID contributed to 26% of all known U.S. exonerations

# Innocence at Stake: The Need for Continued Vigilance to Prevent Wrongful Convictions in Canada

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Report of the Federal/Provincial/Territorial Heads of Prosecutions Subcommittee on the Prevention of Wrongful Convictions - 2018

## Recommendation #3

The use of expert evidence on the frailties of eyewitness identification is redundant and unnecessary in the fact-finding process.

*R. v. McIntosh*, 1997

“I do not think that it meets the tests for relevance and necessity set out in *Mohan*”



“Experts on Eyewitness Identification: I Just Don't See It”

Stuesser (2005)

### 1) Relevance

- Eyewitness ID is intuitive
- Eyewitness ID is not outside normal experience of jury
- Expert testimony is more prejudicial than probative

### 2) Necessary

- Trial safeguards are sufficient
- Mistaken ID is a problem in USA, but less so in Canada

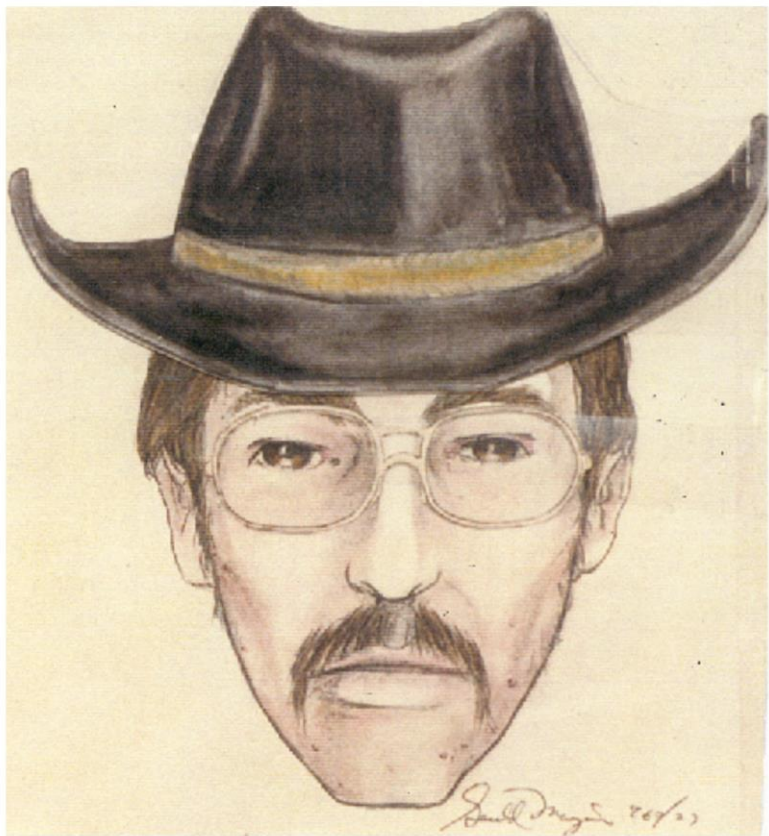
# Not a problem for Canada?

Stuesser (2005): cross-examination and jury instructions protect against wrongful conviction

- USA is exception
- Ineffective assistance of counsel (27% of wrongful convictions)

“high profile wrongful conviction cases... Milgaard, Sophonow and Morin... were represented by some of the best defence counsel”

# ID procedures were biased against Sophonow



- 1) Wearing cowboy hat
- 2) Only person photographed outside
- 3) Only person who appeared in photopack and at live lineup

# Repeating the ID procedure can contaminate eyewitness memory



Jennifer Thompson  
was sexually assaulted

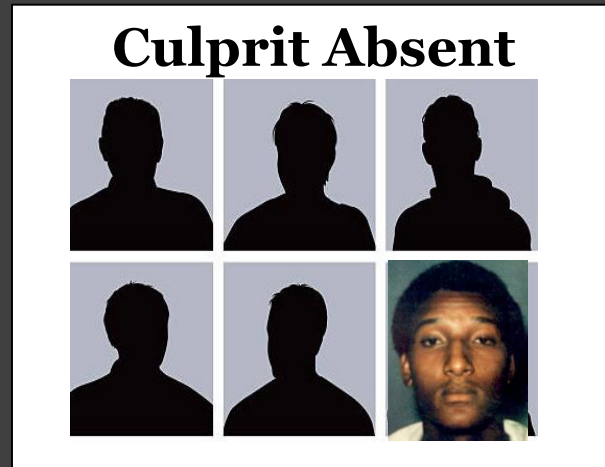
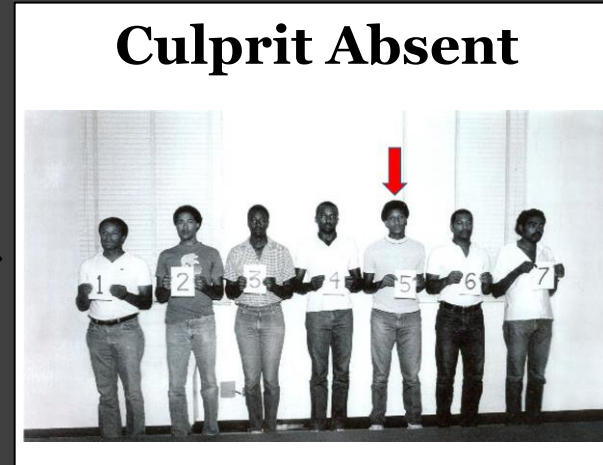


Photo lineup with  
innocent suspect  
Ronald Cotton

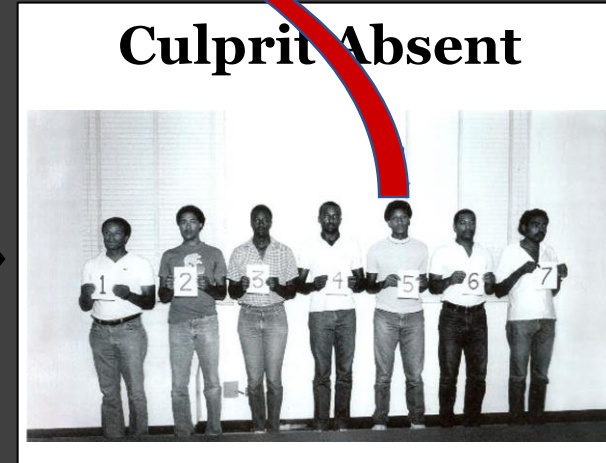
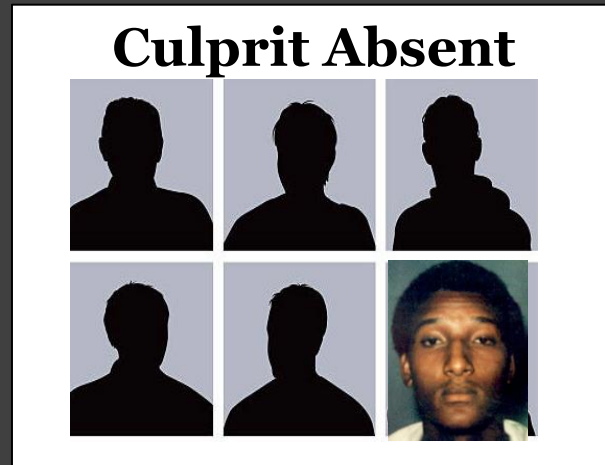


Live lineup with  
innocent suspect  
Ronald Cotton

# Repeating the ID procedure can contaminate eyewitness memory

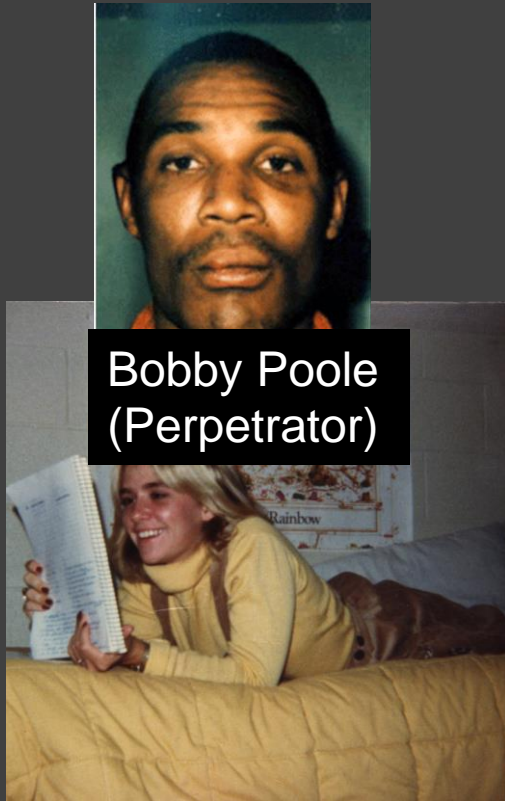


Jennifer Thompson  
was sexually assaulted

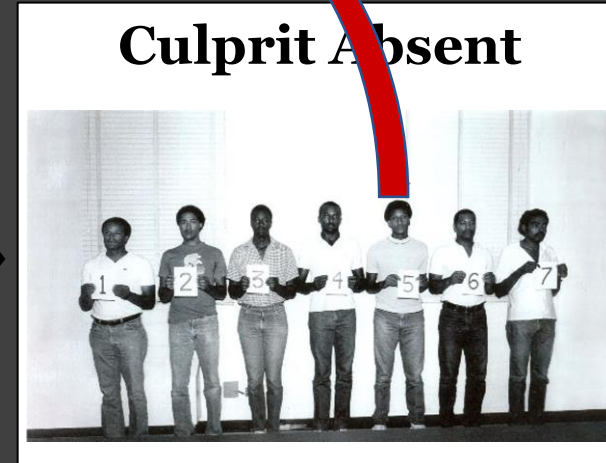
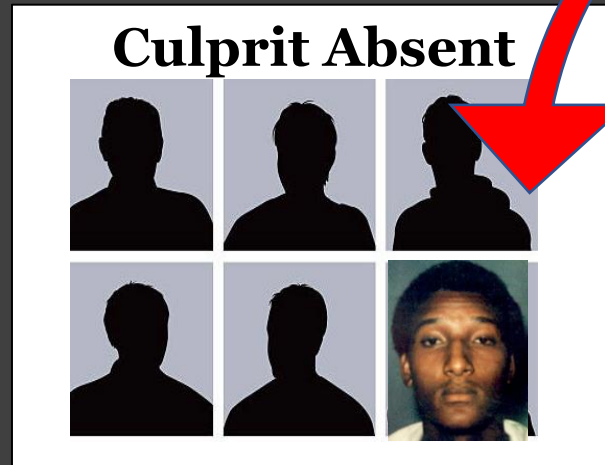


Jennifer inferred that she  
recognized Cotton because he  
was the perpetrator

# Repeating the ID procedure can contaminate eyewitness memory



Jennifer Thompson  
was sexually assaulted

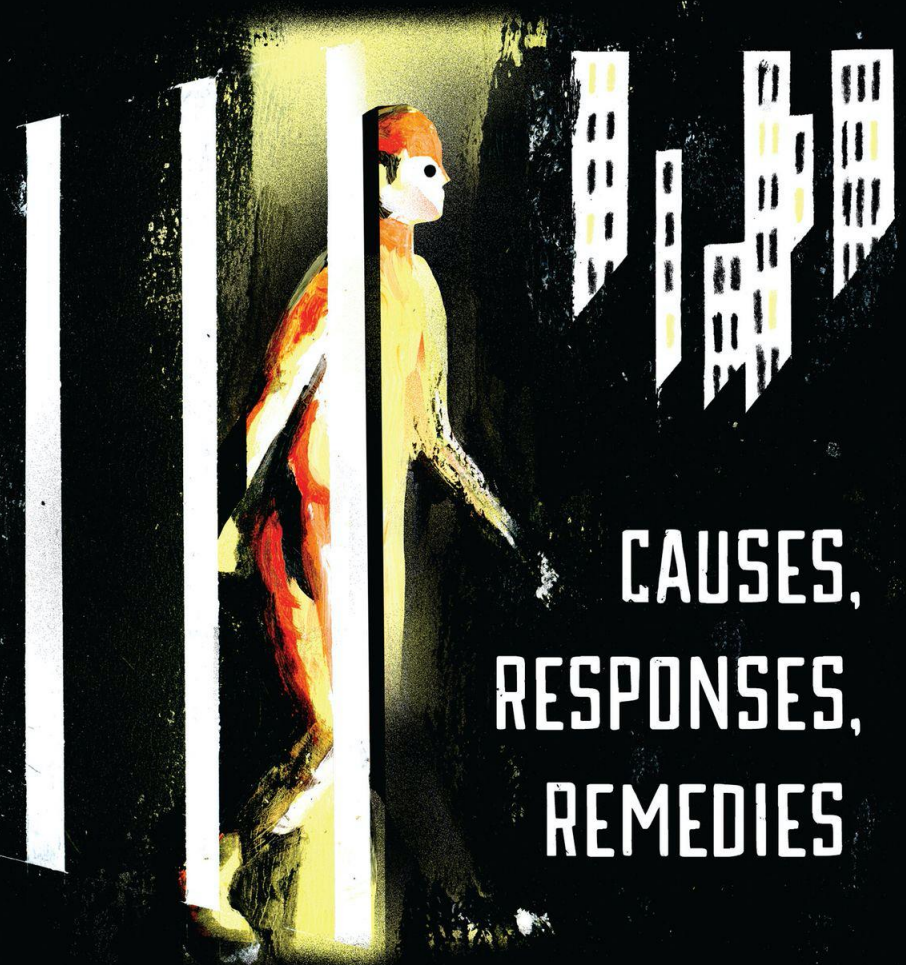


Cotton was familiar from the  
photo lineup, not the crime  
(unconscious transference)

## Stuesser (2005)

“I do not believe that mistaken eyewitness identifications are as prevalent a cause of wrongful convictions in Canada as they are in the United States”

# MISCARRIAGES OF JUSTICE IN CANADA



CAUSES,  
RESPONSES,  
REMEDIES

KATHRYN M. CAMPBELL

Mistaken ID contributed to  
44% of wrongful convictions  
in Canada

- *Hill v. Hamilton-Wentworth Regional Police Services Board, 2007*
  - Hill -> Indigenous
  - Lineup fillers -> Non-Indigenous



# Who should go in the lineup with the suspect?

Fitzgerald, Oriet, Price, & Charman (2013) *Psychology, Public Policy, & Law*

Fitzgerald, Whiting, Therrien, & Price (2014) *Applied Cognitive Psychology*

Fitzgerald, Oriet, & Price (2015) *Law and Human Behavior*

Price & Fitzgerald (2016) *Journal of Experimental Psychology: Applied*

Oriet & Fitzgerald (2018) *Law and Human Behavior*



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Society

Law and Human Behavior

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2020, Vol. 44, No. 1, 3–36  
<http://dx.doi.org/10.1037/lhb0000359>

## Policy and Procedure Recommendations for the Collection and Preservation of Eyewitness Identification Evidence

Gary L. Wells  
Iowa State University

Margaret Bull Kovera  
John Jay College and the Graduate Center, City University of  
New York

Amy Bradfield Douglass  
Bates College

Neil Brewer  
Flinders University

Christian A. Meissner  
Iowa State University

John T. Wixted  
University of California, San Diego

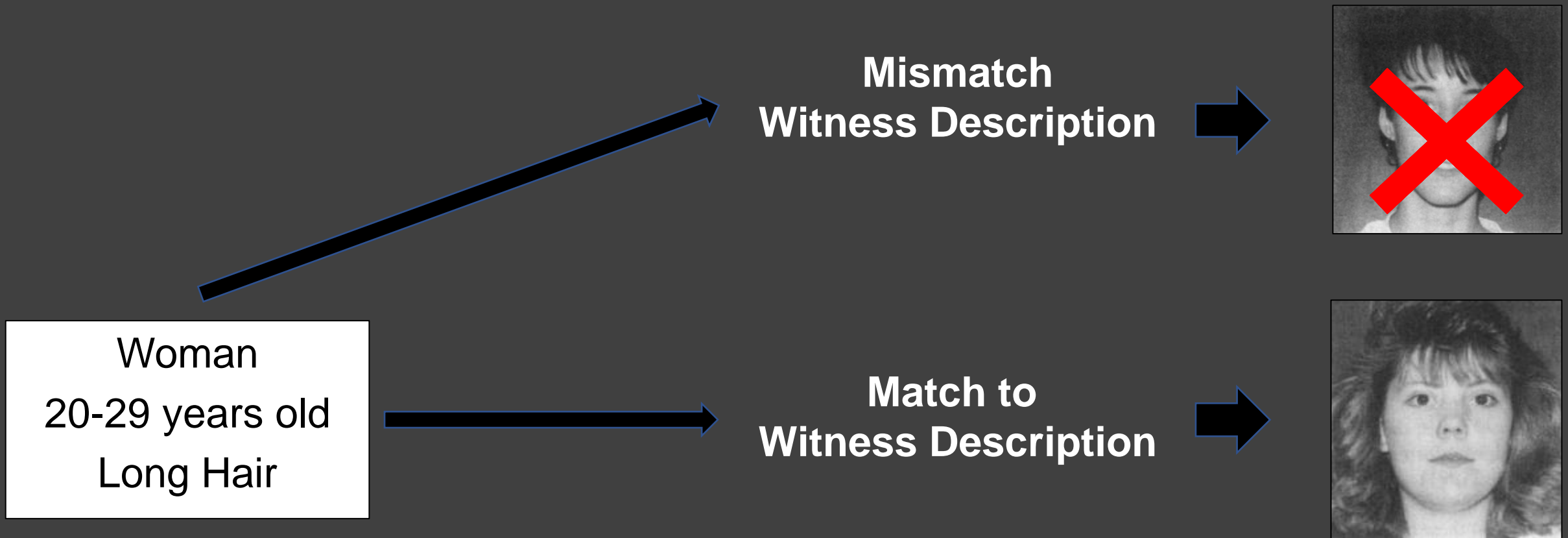
p. 18:

“the science has not yet been able to specify what the optimal level of similarity of fillers to the suspect ought to be”

“there is general agreement among experts for a minimal requirement that fillers should fit the description that the eyewitness gave of the culprit”

# Match to Fillers to Description

Select fillers who possess the features of perpetrator, as described by the witness



# Experimental Study of Fair and Biased Lineups

Ryan J. Fitzgerald, Simon Fraser University

Colin G. Tredoux, University of Cape Town

Stefana Juncu, University of Portsmouth

- 3428 participants observed staged crime
- Lineup manipulations
  - 1) Suspect: Guilty vs. Innocent
  - 2) Fillers: Fair vs. Biased

Biased Lineup



← Perpetrator

Fair Lineup



Biased Lineup



← Perpetrator

Fair Lineup



# Present Research: Outcome Variables

## Accuracy

- Suspect ID Error Rate ( $1 - \text{PPV}$ )

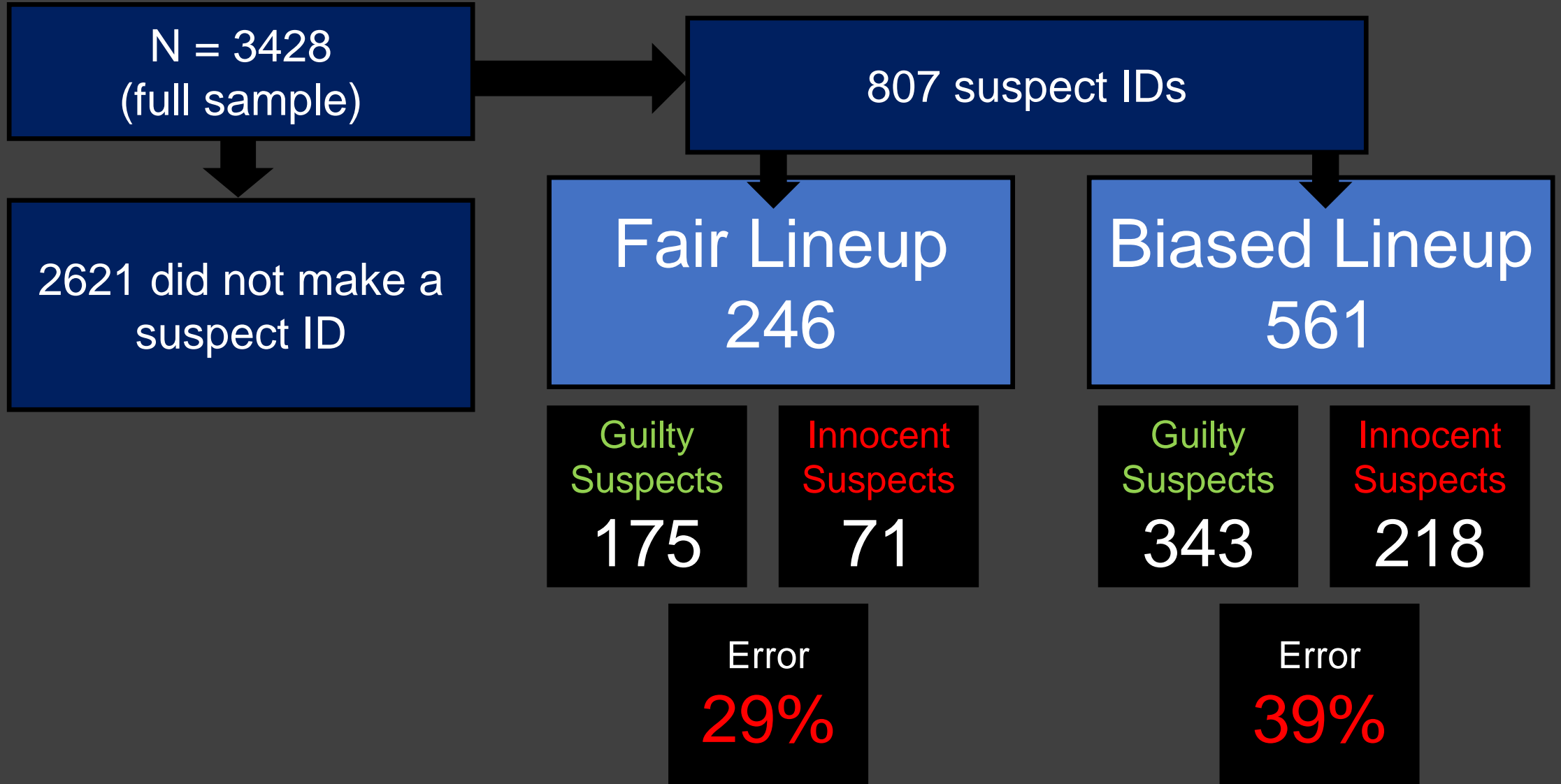
### Positive Predictive Value (PPV)

**If the test comes back positive, what is the likelihood that the disease is present?**

**If the suspect was identified, what is the likelihood that the suspect is guilty?**



# Suspect ID Error Rate (Overall)



# Present Research: Outcome Variables

## Accuracy

- Suspect ID Error Rate

Reflector Measures  Indicators of eyewitness ID accuracy  
(Wells, 2020)

# Present Research: Outcome Variables

## Accuracy

- Suspect ID Error Rate

## Reflector Measures

- 1) High Confidence
- 2) Strong Match to Memory
- 3) Automatic Recognition
- 4) Deliberative Strategy

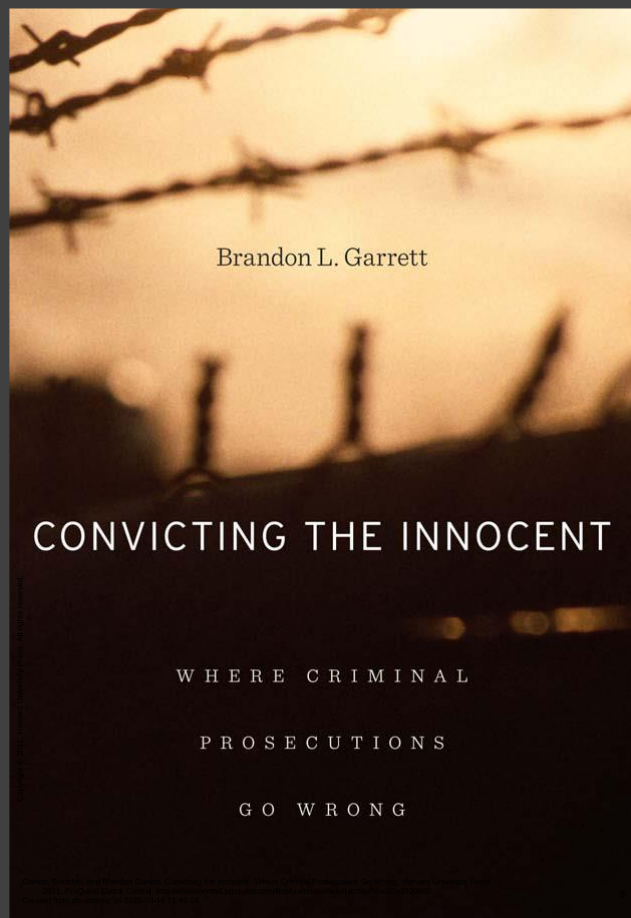
# Sophonow Inquiry: Confidence

“The jury should as well be instructed that the apparent confidence of a witness as to his or her identification is not a criteria of the accuracy of the identification.”

Peter Cory (2001)

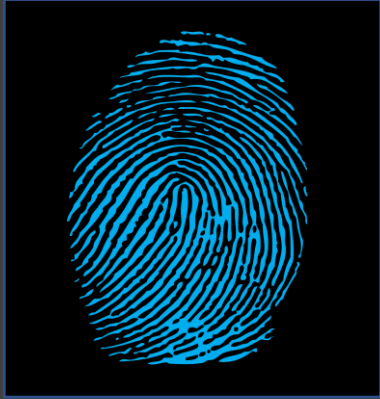
Former Justice, Supreme Court of Canada

# Garret (2011)



- Reviewed trial transcripts from DNA exonerations
- At trial, witnesses were always confident
- Initially, many of these witness were uncertain

# Forensic Test



Test Result:  
Conclusive  
Match



Trial:  
Fingerprint test  
used as evidence  
against defendant

Wixted (2018)

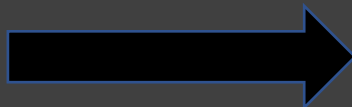
# Forensic Test



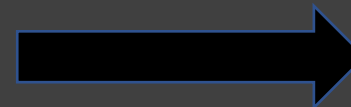
Test Result:  
Inconclusive

Pre-Trial ID

“It might be #2  
but I’m not sure”



Test Result:  
Inconclusive

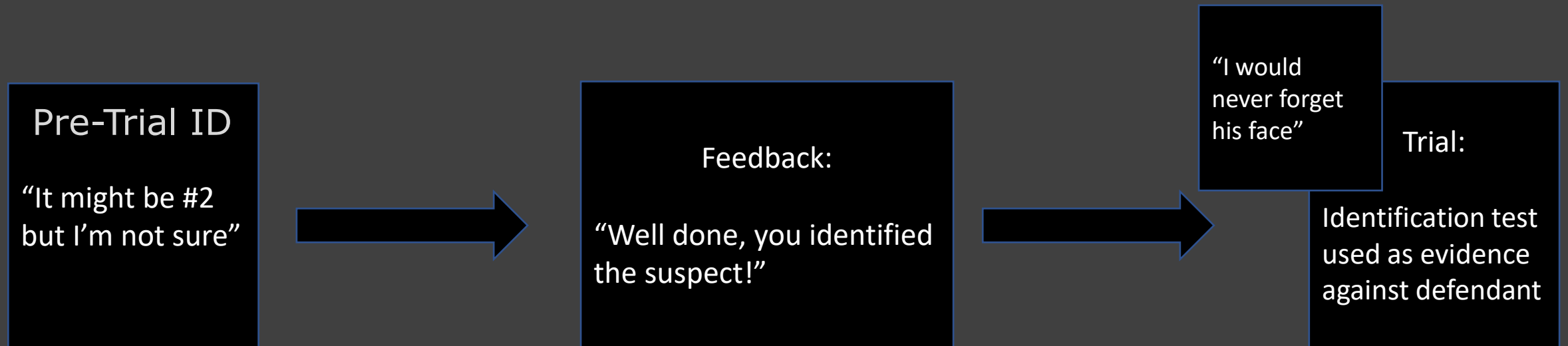


Trial:

Identification test  
used as evidence  
against defendant

Wixted (2018)

# Post-Identification Feedback Effect



Steblay, Wells, & Douglass, 2014; Wells & Bradfield, 1998



# Present Research: Outcome Variables

## Accuracy

- Suspect ID Error Rate

## Reflector Measures

- 1) High Confidence
- 2) Strong Match to Memory
- 3) Automatic Recognition
- 4) Deliberative Strategy

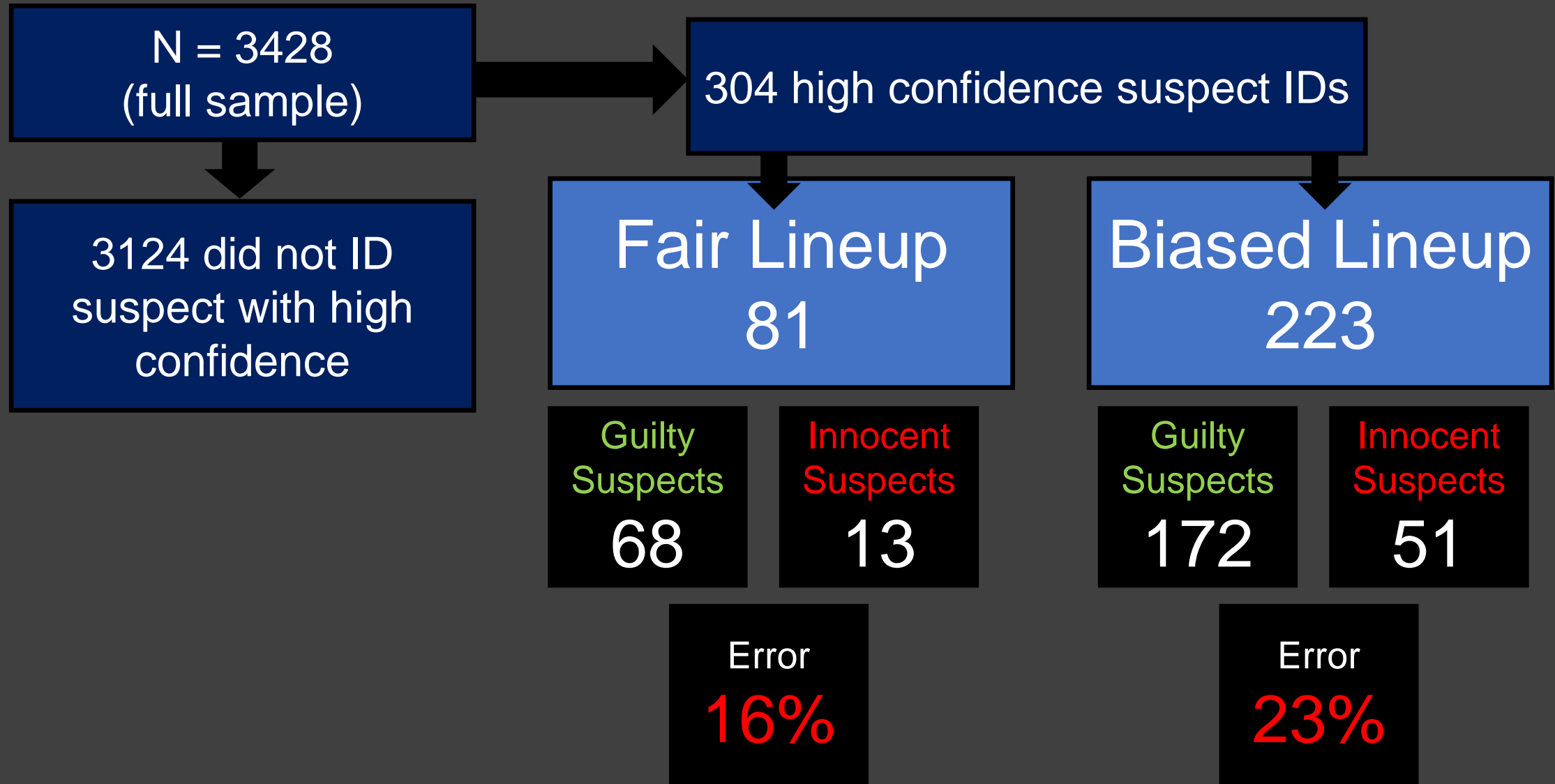
# Identification Confidence

Low Confidence

High Confidence

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

# Reflector Measure 1: High Confidence (90-100%)



# Present Research: Outcome Variables

## Accuracy

- Suspect ID Error Rate

## Reflector Measures

- 1) High Confidence
- 2) Strong Match to Memory
- 3) Automatic Recognition
- 4) Deliberative Strategy

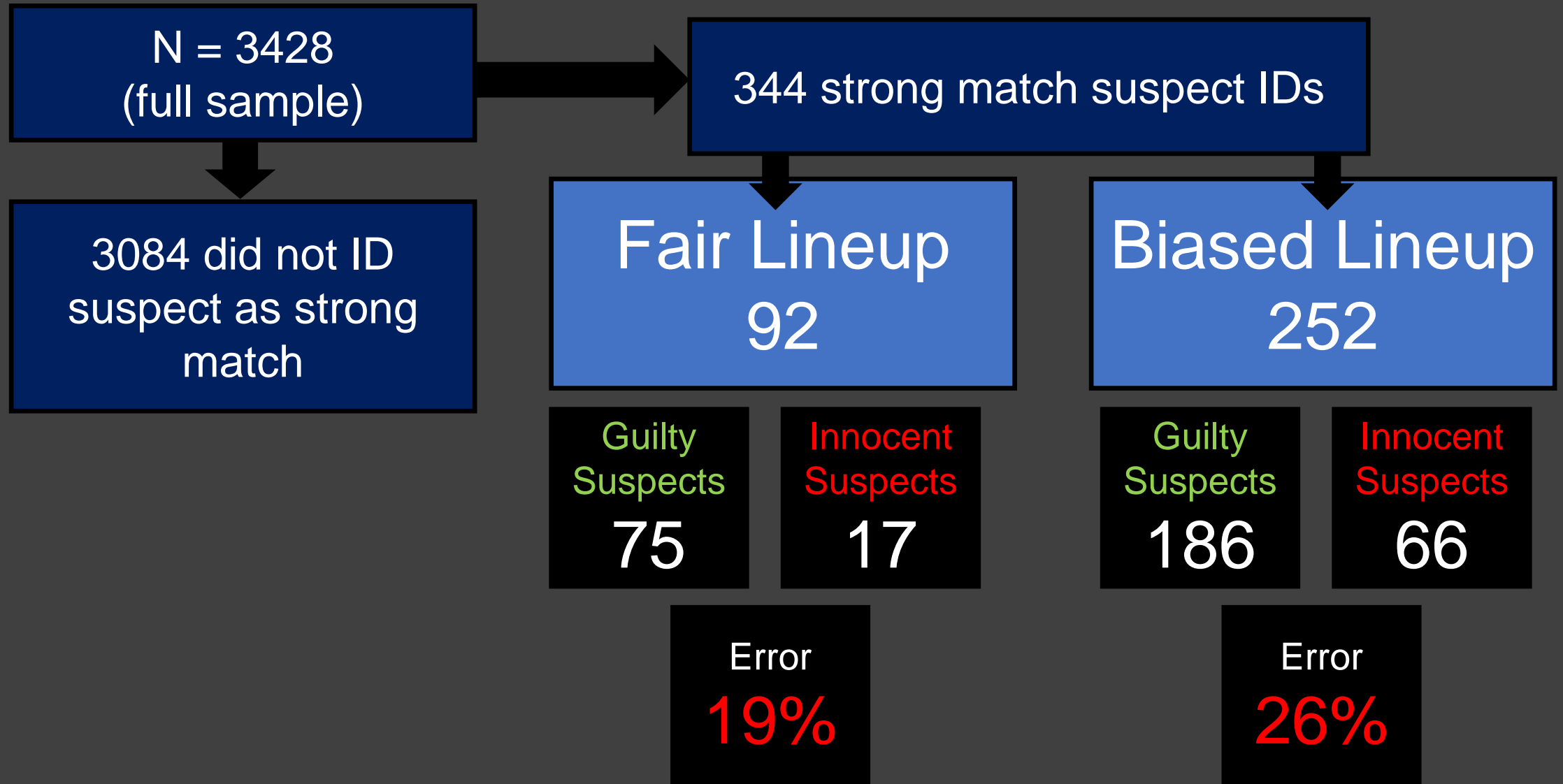
# True-False Statements

## Strong Match to Memory

“She perfectly matched what I remember”

“She was the closest to what I remember, but not exact.”

# Reflector Measure 2: Strong Match to Memory



# Present Research: Outcome Variables

## Accuracy

- Suspect ID Error Rate

## Reflector Measures

- 1) High Confidence
- 2) Strong Match to Memory
- 3) Automatic Recognition
- 4) Deliberative Strategy

# Alternative Reflector Variables

Fast IDs are more accurate than slow IDs (Weber & Brewer, 2006)

Why did you make the ID? (Dunning & Stern, 1994; Grabman et al., 2019)

- Automatic Recognition -> Accurate ID
- Deliberative Strategy -> Mistaken ID



# True-False Statements

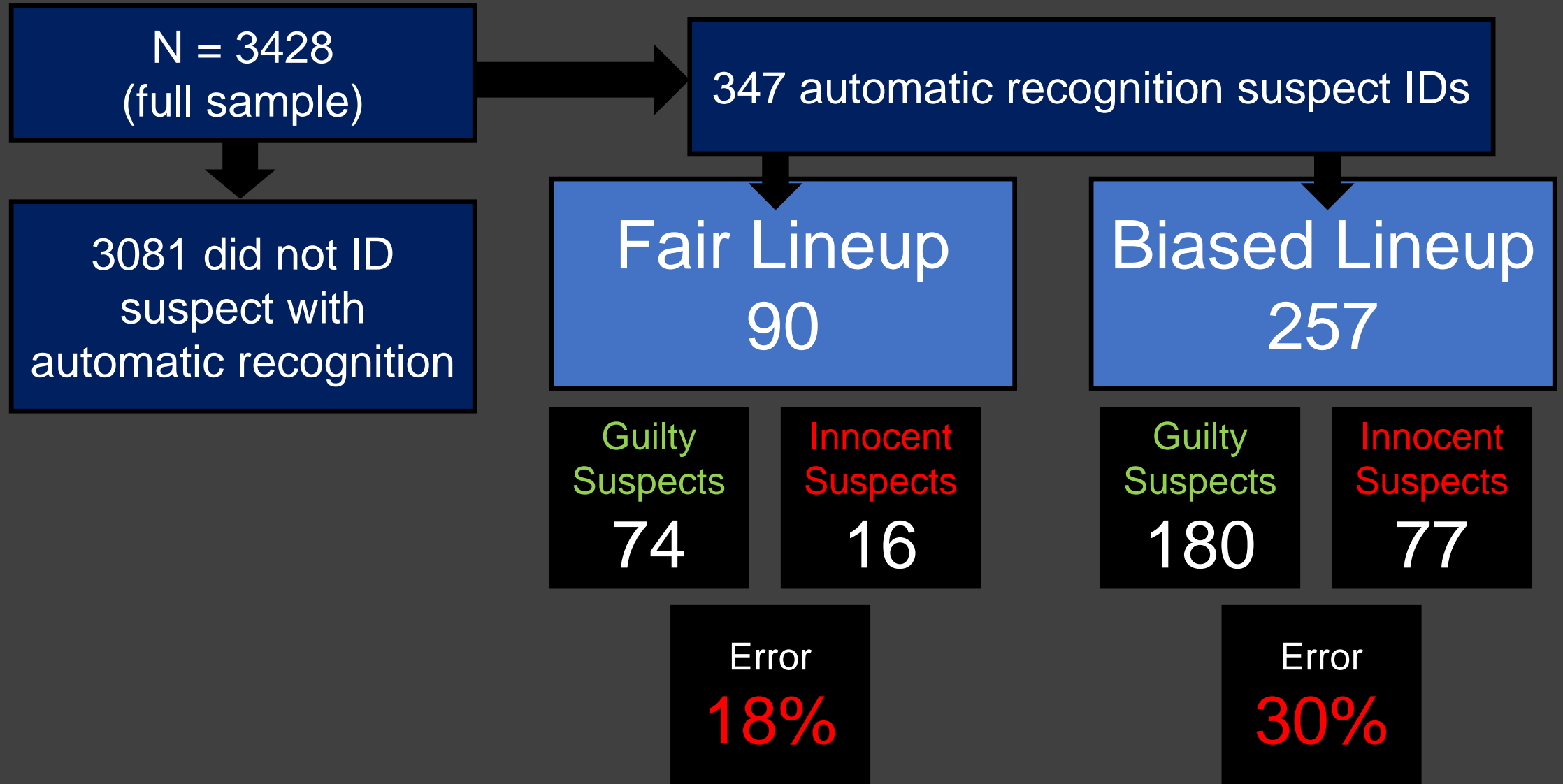
## Automatic Recognition

“I just recognized her. I can't explain why.”

“Her face just popped out at me”

“I knew it was her immediately”

# Reflector Measure 3: Automatic Recognition



# True-False Statements

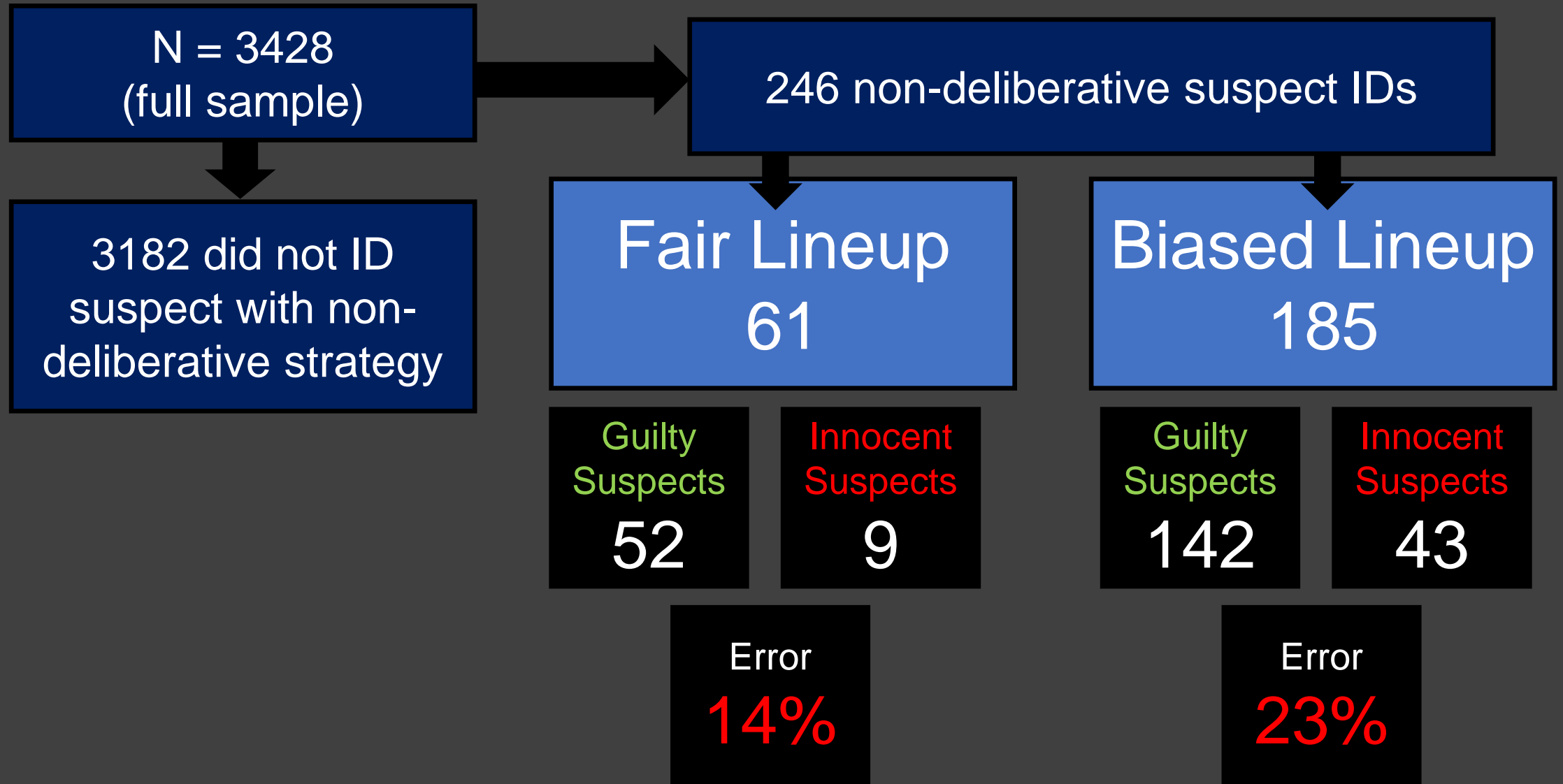
## Deliberative Strategy

“I compared the women to each other to narrow the choices.”

“I eliminated the ones that were definitely not her, then decided among the rest.”

“I didn’t recognize her at first, but eventually I figured it out.”

# Reflector Measure 4: Deliberative Strategy = False



# Takeaways from the study

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- Suspect ID error rates were high
- Error rate was reduced if
  - a) High confidence
  - b) Strong match to memory
  - c) Automatic Recognition
  - d) Nondeliberative memory
- Biased lineups consistently increased the error rate

# Study Limitations

1. True-false statements
  - Suggestive
2. Ecological validity
  - Staged crime, short delay, ID had no consequences
3. Generalizability
  - Error rates may not generalize to criminal cases

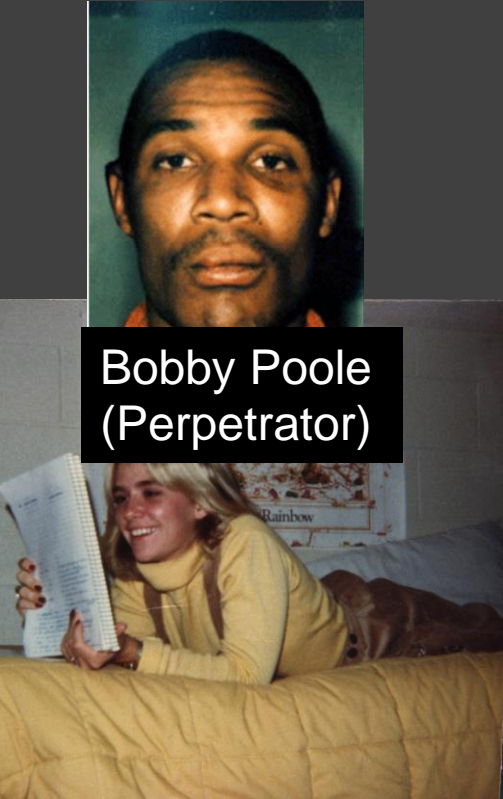
# Wells & Quinlivan (2009)

Aim of experiments is not to establish absolute risk

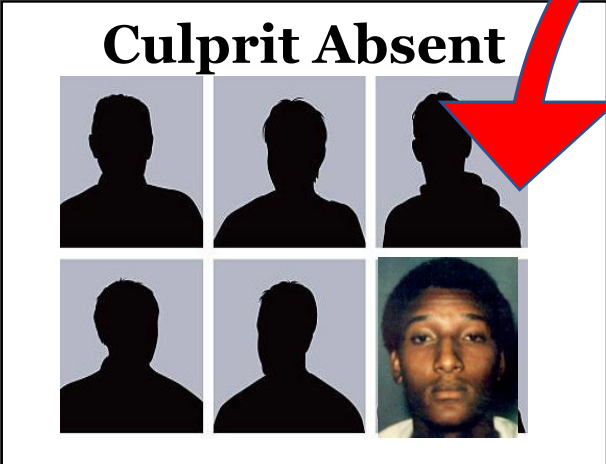
Experiments are used to establish cause and effect

- i.e., Relative risks

# Repeating the ID procedure can contaminate eyewitness memory and inflate eyewitness confidence



Jennifer Thompson  
was sexually assaulted



Cotton was familiar from the  
photo lineup, not the crime  
(unconscious transference)



# Federal/Provincial/Territorial Heads of Prosecutions Committee:

## 2005 – Prevention of Miscarriages of Justice

- No recommendation to collect confidence statement

## 2011 – Path to Justice

- Critique by Sherrin (2007), re: confidence
- Committee rejected Sherrin's proposal

## 2018 – Innocence at Stake

- Recommendation to collect confidence statement

# Innocence at Stake: The Need for Continued Vigilance to Prevent Wrongful Convictions in Canada

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Report of the Federal/Provincial/Territorial Heads of Prosecutions Subcommittee on the Prevention of Wrongful Convictions - 2018

## Recommendation #3

The use of expert evidence on the frailties of eyewitness identification is redundant and unnecessary in the fact-finding process.

# Stuesser, 2005

“This is not say that expert testimony on the frailties of eyewitness identification should never be allowed.”

e.g., expert could testify about memory contamination

Expert testimony on eyewitness ID has been admitted in Canadian courts

*R. v. Henderson, 2009*

“the effect of post-event confirmation on a witness's confidence level may well be within the experience level of everyday people. I quite frankly have my doubts about that”

# Stuesser (2005)

“Our federal government could well introduce a Code of Practice in the Criminal Code.”