ASSESSING EYEWITNESS IDENTIFICATION

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Eyewitnesses provide information of great value for the investigation and prosecution of crimes.

**BUT**

Eyewitnesses sometimes make misidentifications, which lead to convictions of innocent people.
EVIDENCE from POST-CONVICTION ANALYSIS of FORENSIC DNA

- Polymerase Chain Reaction (PCR) invented in 1983
- permits “amplification” of DNA samples
- first applied to forensic DNA in 1987
EVIDENCE from POST-CONVICTION ANALYSIS of FORENSIC DNA

- Polymerase Chain Reaction (PCR) invented in 1983
  - permits “amplification” of DNA samples
  - first applied to forensic DNA in 1987
- Innocence Project founded 1992
  - post-conviction analysis of forensic DNA
  - exoneration of 337 people
  - ~75% of whom were convicted based on misidentifications made by one or more eyewitnesses
Is There a Role for Science?
Identifying the Culprit
Assessing Eyewitness Identification

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Co-chairs
Committee on Scientific Approaches to Understanding and Maximizing the Validity and Reliability of Eyewitness Identification in Law Enforcement and the Courts

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Committee on Scientific Approaches to Understanding and Maximizing the Validity and Reliability of Eyewitness Identification in Law Enforcement and the Courts

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Identifying the Culprit
Assessing Eyewitness Identification
The committee examined two general areas of scientific research:

1. **Basic research** on vision and memory

2. **Applied Research**: Research directed at the specific problem of eyewitness identification
Basic Research On Vision
STAGES OF HUMAN VISUAL PROCESSING

SENSATION

PERCEPTION

ATTENTION
STAGES OF HUMAN VISUAL PROCESSING

SENSATION
STAGES OF HUMAN VISUAL PROCESSING

PERCEPTION
Basic Research On Memory
STAGES OF HUMAN MEMORY

- PERCEPTION
  - WORKING MEMORY
    - encoding
    - storage
    - retrieval
  - LONG TERM MEMORY
- ACTION
  - WORKING MEMORY
  - LONG TERM MEMORY

recognition
STAGES OF HUMAN MEMORY

PERCEPTION → WORKING MEMORY

WORKING MEMORY → encoding → LONG TERM MEMORY

LONG TERM MEMORY → storage → WORKING MEMORY

WORKING MEMORY → recognition → ACTION

ACTION → retrieval → LONG TERM MEMORY
STAGES OF HUMAN MEMORY

PERCEPTION

WORKING MEMORY

encoding

LONG TERM MEMORY

recognition

storage

WORKING MEMORY

retrieval

LONG TERM MEMORY

ACTION
STAGES OF HUMAN MEMORY

PERCEPTION
  ↓
WORKING MEMORY
  ↓
encoding
  ↓
LONG TERM MEMORY

ACTION
  ↑
WORKING MEMORY
  ↓
retrieval

recognition

storage

LONG TERM MEMORY
Basic research on vision and memory has demonstrated that:

There are insurmountable limits on our abilities to perceive and remember, which are imposed by biology and the nature of the world we inhabit.
Assessing Eyewitness Identification

Applied Research On Eyewitness Identification
Applied research on eyewitness identification indicates that accuracy and reliability are influenced by additional factors:

1. System Variables

2. Estimator Variables
System Variables
- Under the control of the criminal justice system
e.g. line-up identification procedures
- Should be adjusted to optimize eyewitness performance
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Estimator Variables
- NOT under the control of criminal justice system
- Conditions under which event is witnessed
e.g. Viewing conditions (illumination, distance),
presence of weapon,
race of witness relative to suspect
- Must be taken into account when considering validity of eyewitness testimony

Identifying the Culprit
Assessing Eyewitness Identification
Can We Improve The System?
The committee offers findings and recommendations for:

• Improving and facilitating best practices in eyewitness procedures for law enforcement

• Strengthening the value of eyewitness identification in court, and

• Improving the scientific foundation underpinning eyewitness identification

Identifying the Culprit
Assessing Eyewitness Identification
Recommendations for Law Enforcement Practice

Identifying the Culprit
Assessing Eyewitness Identification
1. Provide personnel with training
   a) about vision and memory and the variables that affect them
   b) on practices for minimizing eyewitness contamination
   c) on effective eyewitness identification procedure protocols

2. Employ blind photo array and live lineup administration and adopt clear, written policies and training on photo array and lineup administration

3. Develop standard instructions to use when engaging a witness in an identification procedure

4. Document a witness’ level of confidence verbatim at the time when she or he first identifies a suspect

5. Video record eyewitness procedures
Recommendations for the Courts

Identifying the Culprit
Assessing Eyewitness Identification
Judge and juror evaluation of eyewitness identification evidence is not easy.

- Unfamiliarity with the limitations and difficulties identified by scientific research as inherent in the identification process
- Best guidance for courts is a more careful use and understanding of scientific evidence
Manson v Braithwaite test promulgated by the U.S. Supreme Court in 1977 is outdated and doesn’t incorporate insights gained from decades of scientific research.

It considers, for example, witness confidence in the accuracy of an identification as a marker of reliability.

Science, however, tells us otherwise...
1. Judges should make basic inquiries before eyewitness identification evidence is offered.

2. Judges should take steps to make juries aware of prior identifications, the manner and time in which identifications were conducted, and the confidence level expressed by eyewitness at the time of the initial identification.
3. Judges should allow expert testimony on the basic scientific principles influencing eyewitness identifications.

4. Recognizing that expert testimony is not always available, courts should develop clear and concise jury instructions as an alternative means of conveying information.
Recommendations for Additional Research

Identifying the Culprit
Assessing Eyewitness Identification
The committee calls for:

1. Collaboration between the scientific and legal communities to establish a research initiative on eyewitness identification

2. Further research on the interplay between system and estimator variables

3. An exploration of methods that can lead to a more cautious witness response while not compromising discriminability

4. An exploration of the merits of different statistical tools for use in evaluations of eyewitness performance
Court recommendations, coupled with new law enforcement training, standardized procedures for administering lineups, better data collection, and additional research will not only improve the accuracy of eyewitness identifications but will allow judges and juries to more effectively evaluate the degree to which such accuracy has been achieved.