



Test Results


Guidance Categories


 Credible


 Credible
Truthful

 Not Credible


 Not Credible
Deceptive

 Not Credible
Confession

 Not Credible
Probable Confession

 Not Credible
Too Many Timeouts


 Not Credible
Random Responses


 Not Credible
Countermeasure


 Indeterminate

 Indeterminate
Demo Test

 Indeterminate
Aborted Test

 Indeterminate
No License

 Indeterminate
Insufficient Data
from Eye Scanner

 Indeterminate
Inconclusive

Decision Model

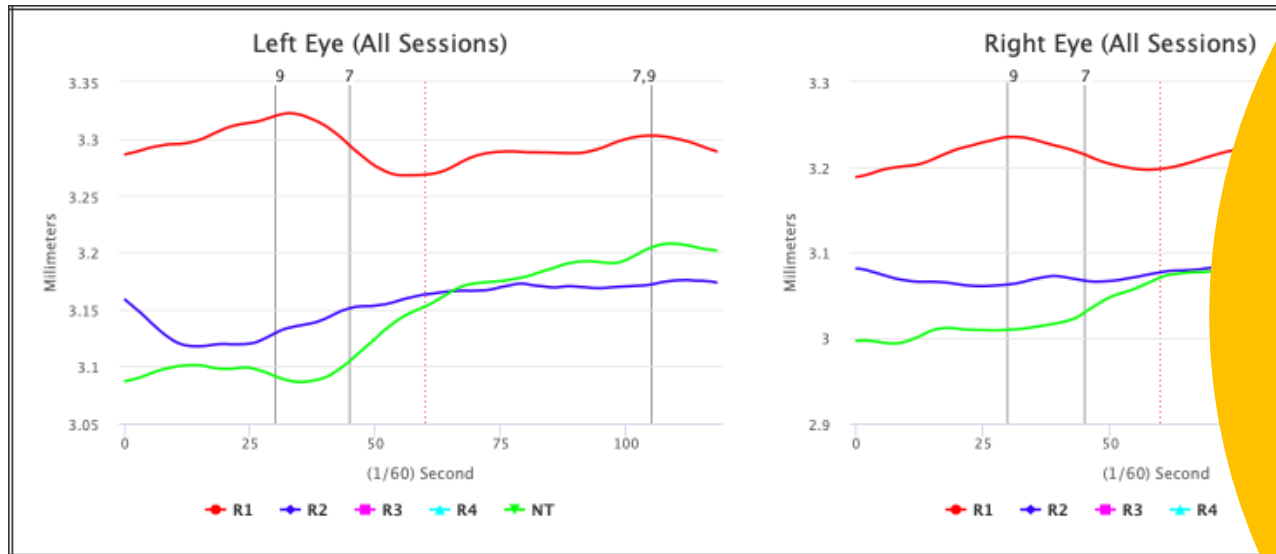
1) Algorithm

- Logistic regression equation
- Many features considered with optimum weights applied
- Scores from 1 to 99

2) Decision Logic or Rules

- % of unexpected answers
- % of timed out questions
- % of missing eye data

Algorithm Features – Liar behavior



- **Pupil diameter:** greater among guilty
- **Fixations:** fewer among guilty
- **First pass duration:** shorter among guilty
- **Response time on R1:** faster among guilty
- **Blink rate:** lower for guilty
- **Error rate:** higher among guilty

Source: Lyin' Eyes: Ocular-motor Measures of Reading Reveal Deception, Experiment 2, Journal of Experimental Psychology: Applied, Sep 2012.

Decision Logic and Rules

Result in “Not Credible” outcome

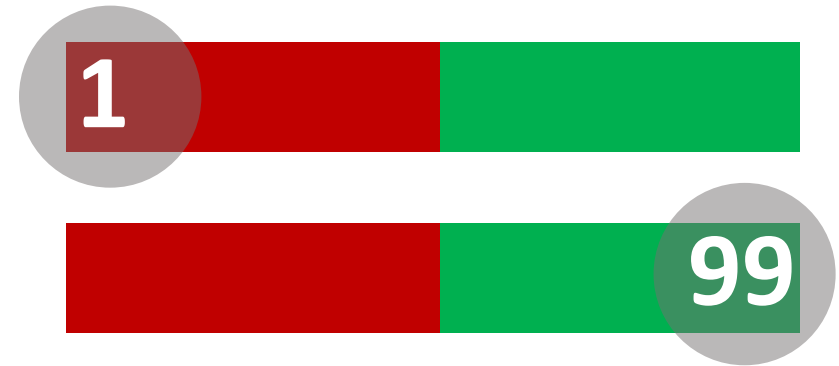
- High % unexpected = *random response*
- *Extremely* high % unexpected = *probable confession*
- High % timed out = *too many timeouts*
- If pupil response is not “normal” = *countermeasure*
- If test proctor records confession = *confession*

Result in “Indeterminate” outcome

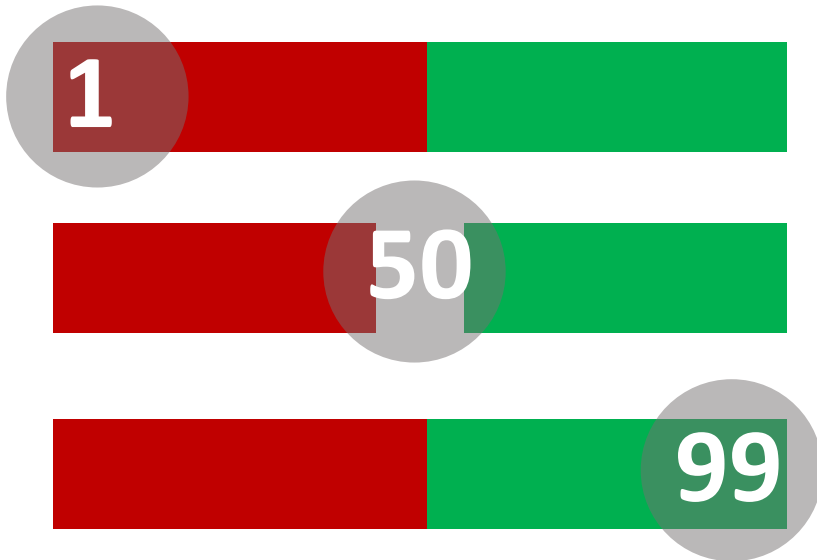
- Insufficient data collected = *insufficient data*

MCT, HMCT, AMCT Scores

- 1 to 49 = Deceptive (DI)
- 50 to 99 = Credible (NDI)
- Example: 50 to 99 are “truthful” outcomes



DLC Scores



DLC

1 to 40 = Deceptive (DI)

41 to 59 = Inconclusive (INC)

60 to 99 = Credible (NDI)

DLC2 and HDLC

1 to 44 = Deceptive (DI)

45 to 55 = Inconclusive (INC)

56 to 99 = Credible (NDI)

Credible

Credible - Truthful

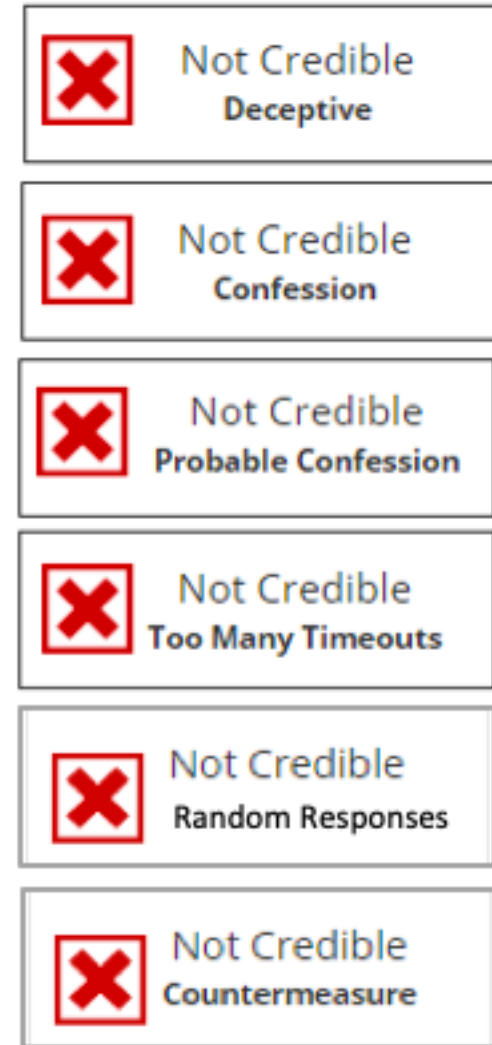
- Score of:
 - 50-99 on MCT
 - 60-44 on DLC
 - 56-99 on DLC2/HDLC
- No deception indicated



Credible
Truthful

Not Credible

- **Deception** – Deception indicated. Score of 1-49 for MCT, 1-40 for DLC, 1-44 for DLC2.
- **Confession** – No score, test was saved by test proctor as Admission.
- **Probable Confession** – High percentage of unexpected answers. No score for that topic.
- **Too Many Timeouts** – No score. High % of unanswered questions. Poor reader or malingering.
- **Random Response** – No score. Examinee answered randomly/did not pay attention or responded too quickly. Poor reader or countermeasure.
- **Countermeasure** – No score. Non-standard pupil dilation; medical condition or use of eye drops.



Indeterminate

- **Demo test** – not scored; no test license is consumed.
- **Aborted test** – test quit before completion.
- **No License** – no test licenses are currently available in that account.
- **Insufficient data** – countermeasure (squinting or closing eyes), glare from glasses, dry eyes, or excessive make-up.
- **Inconclusive** – not enough examinee reaction. Score falls in mid-point area. Only on DLC tests.



Indeterminate
Demo Test



Indeterminate
Aborted Test



Indeterminate
No License



Indeterminate
Insufficient Data
from Eye Scanner



Indeterminate
Inconclusive

Helpful Tips – Countermeasures

- **Follow Test Proctor Procedures**
 - Follow pre-test checklist steps
 - Give the correct test based on pre-test admissions
- **Video record exams**
 - Verify if insufficient data was a countermeasure
 - Folder on station: C:/DataLockerVR
- **Two diagnostic tests (verify suitability)**
 - Pupil Light Reflex Diagnostic
 - Digit Span Sequence Diagnostic
- **Review Test Report (look for patterns)**
 - Summary of Examinee Answers and Answer Detail

