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# Cognitive Appraisals in a Deception Task

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# Cognitive Appraisals in a Deception Task

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## Problem

- Polygraph test is not a “lie detector”
- Physiological arousal can have a variety of psychological influences
  - Relevant questions vs. control questions
  - Stress of being interviewed
- As such, polygraph tests are not admissible in court

## Supporting Research

Blascovich & Mendes, 2000

- Identified cognitive appraisals of challenge and threat
- Performance must be “goal-relevant and evaluative”
- Challenge appraisal
  - Individual believes task can be overcome with applied effort
  - Increased cardiac activity, decreased peripheral resistance (vasodilation)
- Threat appraisal
  - Individual believes task to be insurmountable
  - Increased cardiac activity, no change or slight increase in peripheral resistance (vasoconstriction)

These physiological differences are shown in Figure 1.

## Hypotheses

Null Hypothesis: No physiological difference between lying and truthful individuals

First possible outcome

- Lying participants – threat-appraisal response
- Truthful participants – challenge-appraisal response

Second possible outcome

- Lying participants – challenge-appraisal response
- Truthful participants – threat-appraisal response

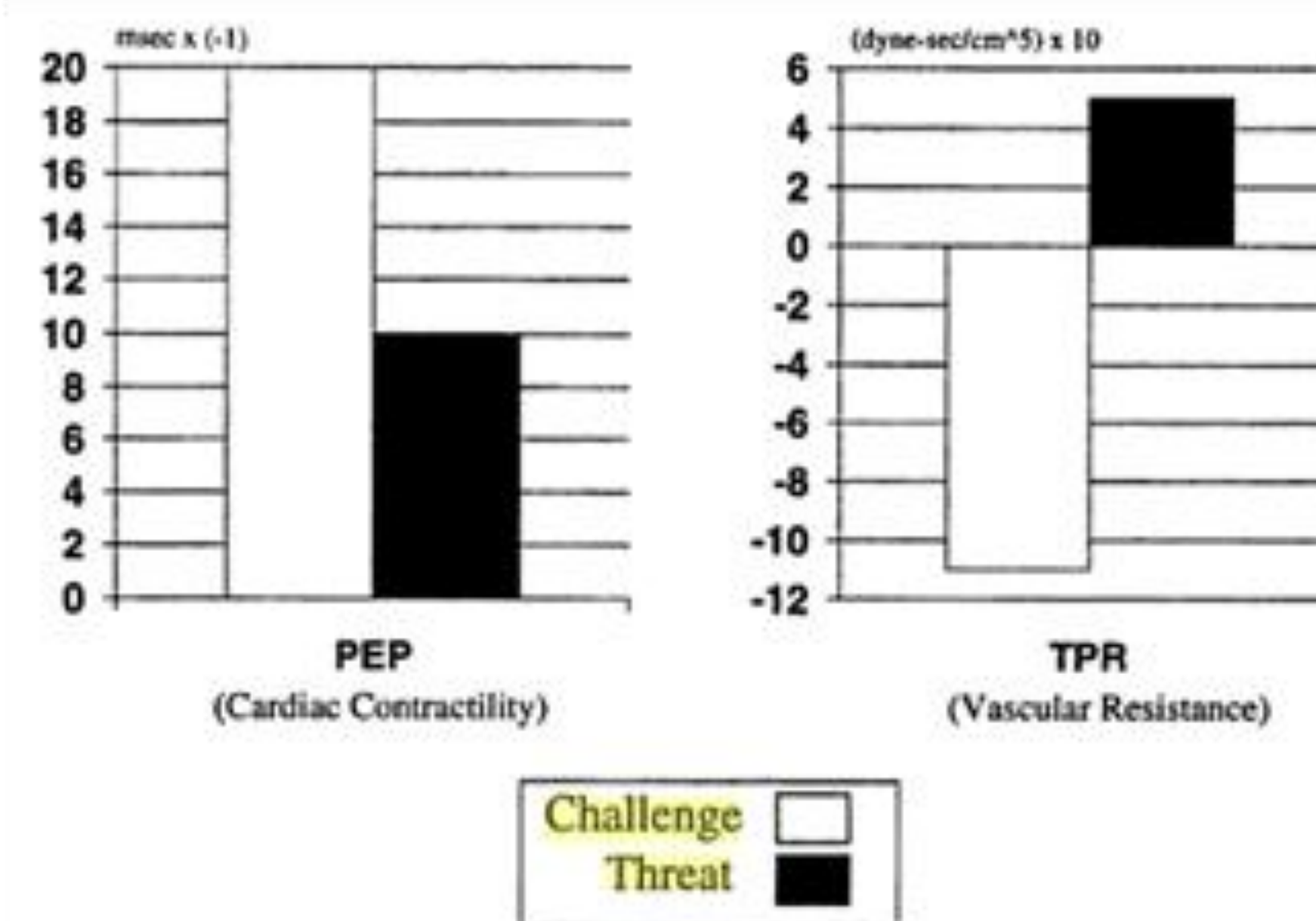


Figure 3.3. Cardiac and vascular patterns (adapted from Tomaka, Blascovich, Kelsey, & Leitten, 1993).

Figure 1

## References

Blascovich, J., & Mendes, W. B. (2000). Challenge and threat appraisals: The role of affective cues. In J. Forgas (Ed.), *Feeling and thinking: The role of affect in social cognition*. (pp. 59-82). New York, NY: Cambridge University Press.

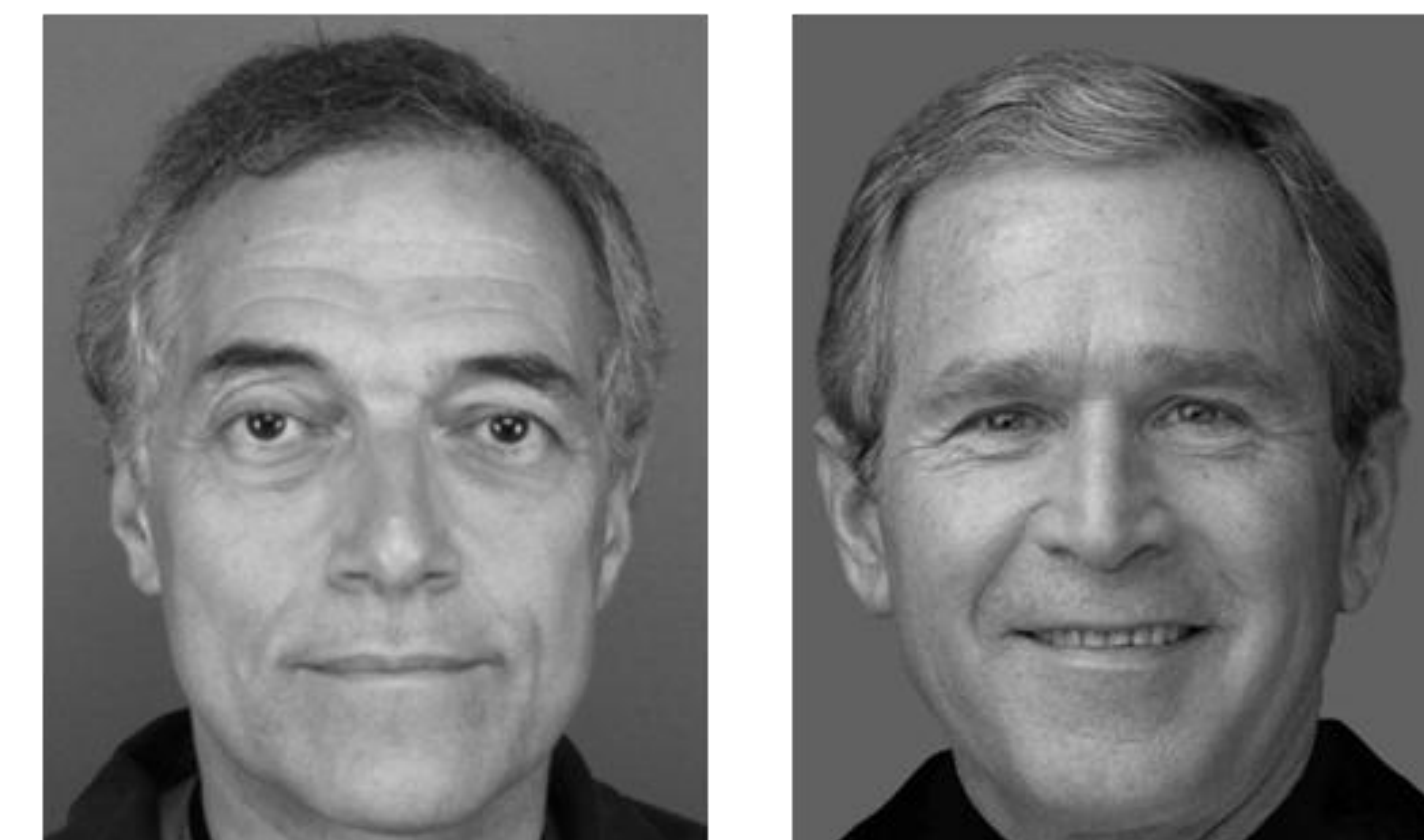
## Research Methods

Independent Variable: Whether or not participant is lying

- Control group: Truthful participants
- Experimental group: Participants instructed to lie

Dependent Variable: Physiological responses

Participants were shown a series of 20 faces, including 6 target “recognizable” faces (samples in Figure 2). Participants were asked, with the presentation of each face, whether or not the face was recognizable. Truthful participants were told to respond honestly. Lying participants were told to deny all recognition, even if the face were familiar to them.



Unrecognizable

Recognizable

Figure 2