Deception Detection:

Nonverbal Indicators, Communication Patterns, and Common Misconceptions

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What are some indicators?

- Write down what you would look for
- Eye contact, Blinks, Gaze
- Head movement, Nodding
- Smiling, Frowning, Stoic face
- Adaptors (e.g., touching, grooming, adjusting, hand movements, illustrators)
- Foot and leg movement
- Postural shifts
- Stuttering, pauses, inflection
- Vocal disfluencies (ah's, um's, er's)

Detecting Deception

- How good are you?

- How good are humans at detecting deception?

- Less than 50% accurate

- How often do we lie?
  - From 1.4 times a day to 7 times in a 10 minute conversation

What is Deception?

- Lies (providing false information)
- Equivocations (Vague and/or ambiguous statements)
- Concealments (Deception by omission)
- Exaggerations (Stretching the truth)
- Understatements (Downplaying the truth)

Why are we so bad at Detection?

- Evolutionary advantage of deceit
  - Self-deception to better deceive others

- People liked to be lied to about positive assessments
  - Compliments are typically well received

- Lack of motivation
  - It's cognitively taxing to be suspicious
  - Truth bias

- Lie detection is difficult
  - How do you know when someone is lying?
  - Relational report (experience and trust with individual)
  - Transactional Communication and "Noise"
  - We only know about the lies we catch

- Differences between deception and truth are subtle
  - What does a deceiver do differently?

Why are Deceivers so good at Deception?

- Highly **motivated** liars can engage in behaviors designed to create an honest impression.
  - For example, if eye contact is considered truthful behavior than effective deceivers will increase eye contact

- Machiavellianism, duper's delight, lack of affective arousal

- Liars that adopt these countermeasures can fool professional lie detectors

So who is good at deception?

- **<u>Prisoners</u>** have better insight into the psychology of deception compared to prison staff or students (Granhag et al., 2004)

- **Why?**
  - Because lying and deception are the norm, survival may depend on detection of deception (Vrij, 2000)

- Prison inmates often operate from a **lie bias** (Hartwig et al., 2004)

- Thus, **motivation** is key to deception detection and **stake (risk)** is key to effective deception communication.

Deceptive Patterns:
The Role of Cognition and Affect

- Why are there nonverbal displays of deception?

- Cognition
  - Cognitive overload leads to **nonverbal "leakage"**
  - It's difficult to completely fabricate and remember lies
  - Reversed chronology
  - Skilled deceivers may be deliberately "quieting" their nonverbals (e.g., poker face)

- Affect (Emotions)
- Some things you can't control
- Physiological responses to deception
  - Heart rate, blood pressure, cortisol increase, pupil dilation
  - Pinocchio effect

Universal Facial Displays of Emotion?

- Lie to Me (https://www.youtube.com/watch?v=jXytQOkNaq4&feature=related)

Nonverbal Cues

- Paul Ekman (scholar and advisor to **Lie to Me**) believes that individuals have micro-momentary universal expression of emotions:
  - disgust
  - anger
  - fear
  - sadness
  - Happiness/joy
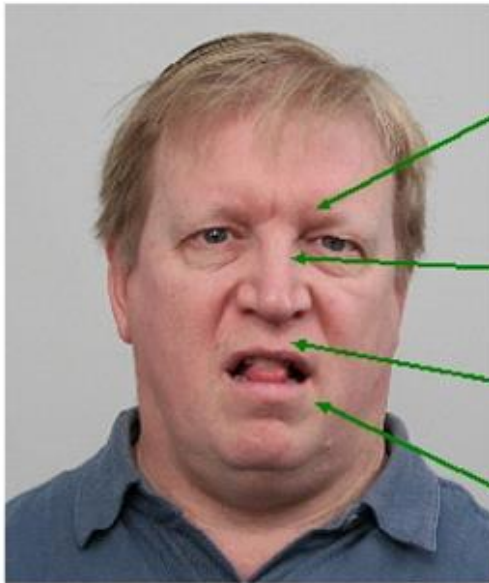 - surprise
  - contempt

Anger Joy Surprise

Disgust Sadness Fear

Seven Basic Emotions

Disgust
- Eyebrows pulled down
- Nose wrinkled
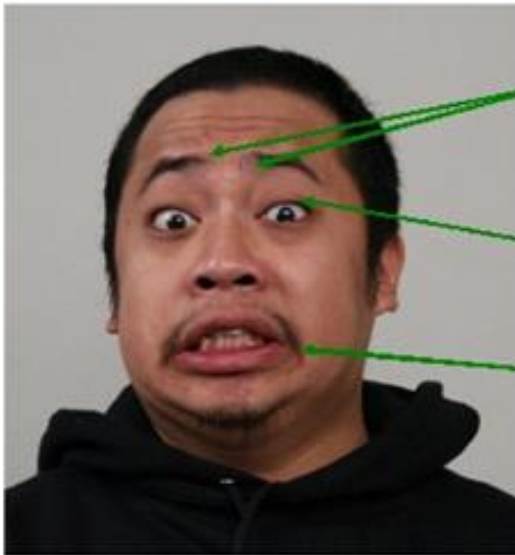- Upper lip pulled up
- Lips loose

Seven Basic Emotions

Anger

- Eyebrows pulled down
- Upper lids pulled up
- Lower lids pulled up
- Margins of lips rolled in
- Lips may be tightened

Seven Basic Emotions

Fear

- Eyebrows pulled up and together
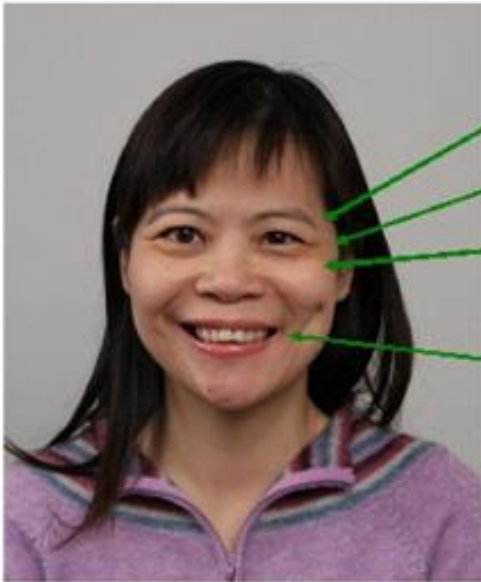- Upper eyelids pulled up
- Mouth stretched

Seven Basic Emotions

Sadness

- Inner corners of eyebrows raised

- Eyelids loose

- Lip corners pulled down

Seven Basic Emotions

Joy

- Muscle around the eyes tightened
- "Crows Feet" wrinkles around eyes
- Cheeks raised
- Lip corners raised diagonally

Seven Basic Emotions

Surprise

- Entire eyebrow pulled up
- Eyelids pulled up
- Mouth hangs open

Seven Basic Emotions

Contempt

- Eyes neutral

- Lip corner pulled up and back on one side only (contempt is the only unilateral expression)

Human Emotion and Deception

- What are the emotions most likely associated with deception?
    - Mostly fear and disgust

- Not always a direct connection between affect and behavior
    - Joy/Happiness of "getting away" with it?
   - Anger from accusatory questions?

What has other research discovered?

- Feely & deTurck (1998) found that when sanctioned to lie individuals
  - Had fewer speech errors & hesitations
  - Gazed less
  - Referenced themselves and others less
  - Had less adaptors
  - And that unsanctioned liars shifted more

- Park et al. (2002) found that individuals typically rely on
  - Third party information
  - Physical information
  - And that it can take days, weeks, and even months for people to uncover deceptive behavior

Other Nonverbal Indicators

- Sprorer & Schwandt (2007) found that deceivers had LESS nodding, foot and leg movement, and hand movement

- Primary moderators for deception include content, **motivation**, preparation, and sanctioning

Technology and Nonverbal Detection
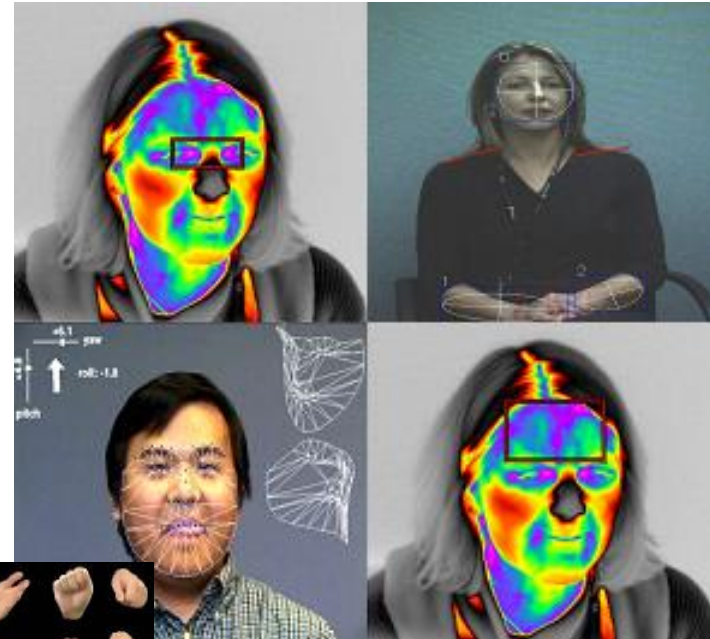
Head position   Left hand position   Right hand position

Head velocity   Left hand velocity   Right hand velocity