UBC VISION LAB

Social monitoring: The psychophysics of facial communication

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Abstract Number: 31

Poster Number: 33.320

Social monitoring ~ reading facial expressions of people viewing events we can't see

e.g., dog barking behind you poses little threat if person facing you is smiling

e.g., does your partner on Skype like what they see?

Questions

How many IAP pictures lead to reliable spontaneous expressions?

Does reading spontaneous facial expressions improve with training?

Lie detection: Is there a picture-emotion congruency effect?

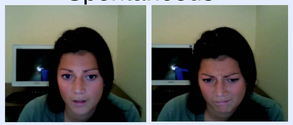
Does it vary between positive-negative expressions?

Phase 1 – Picture categorization
(24 participants, images moderate in arousal and valence)

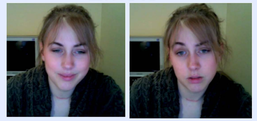
80 IAP Images

Phase 2 – Emotion categorization of Spontaneous expressions of 3 picture viewers
(22 participants)

Spontaneous



Emote



Mislead

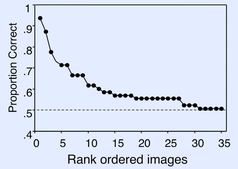
Phase 2 – Lie Detection in positive and negative expressions of 3 picture viewers (32 participants)

Congruent vs. Incongruent Expressions

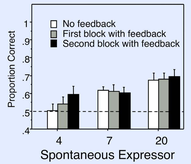
Phase 3 – Spontaneous mimicry when viewing emotional video faces?
Hypothesis: Increase in spontaneous expressions over viewing source pictures

Results

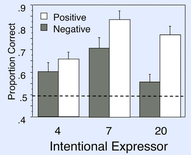
More than 25% images led to "readable" spontaneous expressions



Spontaneous expression classification not influenced by feedback



Lie detection accuracy greater for positive than negative expressions



Implications

Whole face/body responses can be used to measure emotion and person perception

The video-cam facing a study participant can be put to good use (with ethics approval)

Naïve participants can serve as
- expressors / stimuli (IV)
- responders (DV)
- data coders

The Future

There are socially informative signals to study in facial expressions of untrained observers.

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