Third-person perception: A new way to explore inner cognition

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What can thin-slices of behavior rated by onlookers tell us about inner cognition?

Cognitive scientists typically measure behavior objectively, using participant's key presses, eye movements, and facial expressions as coded by experts, to infer hidden cognitive processes

e.g., visual search: response time and accuracy (Wolfe et al., 1998)

emotional perception: actors (Ekman, 1999) and computer coding algorithms (Pickens & Field, 2009)

Two phase approach to our question

Phase 1 Participants video-taped while performing cognitive task

Phase 2 Naïve participants rate outward signs of inner cognition in video clips

Conclusions

Aspects of inner cognition are visible to onlookers.

In visual search, task difficulty, as well as participants' search ability, cognitive strategy, and emotional tone, and are all visible in thin-slices of behavior.

In emotion perception, spontaneous facial expressions reveal the emotional tone and specific emotion associated with a picture-triggered memory. Individual differences in emotional expressivity are predicted by ASD scores (emotional intelligence).

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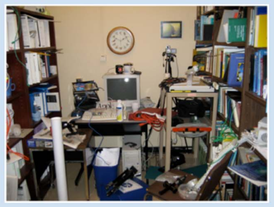
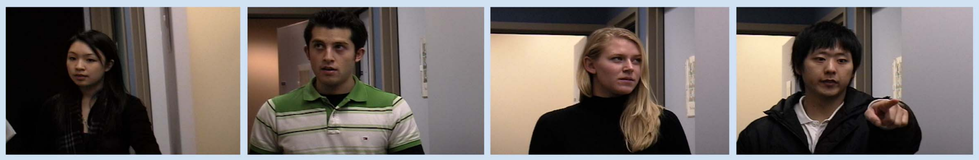
Study 1 - Visual Search

Phase 1 24 participants search for common objects in cluttered office

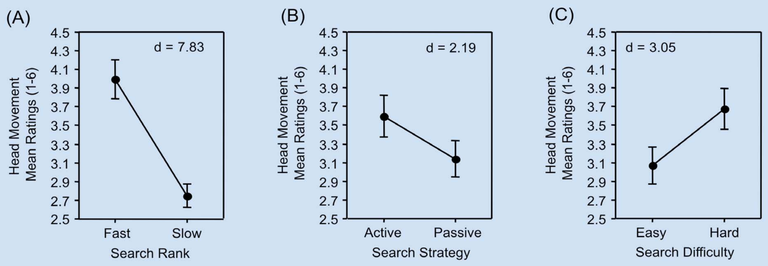


Phase 2 Raters, blind to hypotheses, rate video-clips of searchers

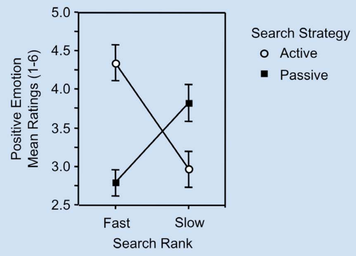


Results

1. Ratings sensitive to (A) traits, (B) states, and (C) stimulus factors:

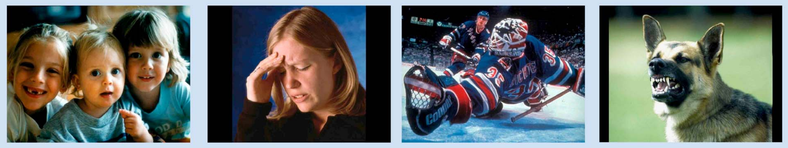


2. Ratings reveal trait-state congruency in the emotional expressions of searchers.



Study 2 - Emotion Perception

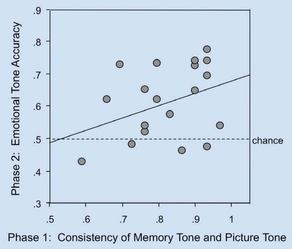
Phase 1 29 participants recall memories triggered by emotional images (IAPS)



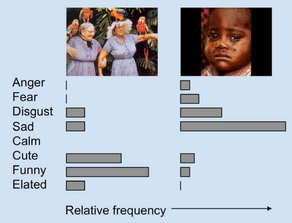
Phase 2 Raters rate emotion of participants captured on video.

Results

1. Raters reliably detect emotional tone (positive, negative) of picture-triggered memory.



2. Raters detect more than valence – can discriminate emotional classes



3. Autism Spectrum Disorder (ASD) score in Phase 1 predicts emotional expressivity.