The Strategic Display of Emotions

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Motivation

- Emotions undoubtedly affect people’s choices, and others react to this (e.g., Battigalli et al., 2017)
- But are emotions used *strategically* in social interactions?
- We examine if, depending on the context, people vary their own expressed emotions
- In our experiment, people send facial pictures of themselves in which they express different emotions
Related work

- Andrade and Ho (2009) show that people game emotions in UG
  - Written messages (expressing anger)

- Gneezy & Imas (2014) show people do, and strategically make others angry when this is to their advantage

- Heyes and List (2016) find that people are willing to pay to reveal a photograph
  - Neutral pictures
  - No variation in games
Why faces?

- We look at the strategic display of facial emotional expressions

- Large body of work shows that faces and emotional expressions are of central importance for social communication

- Similarities with verbal communication but
  - More hard-wired and instinctive
  - Often not aware of own expressions
  - Often harder to fake,
The Game

- We put people in different environments, expecting that it pays off to appear happy in one environment and angry in the other.

- The context is a task-delegation game, where one player has to delegate a task to one of two other players (cf Babcock et al., 2017).

- We vary whether or not it is a desirable task to get:
  - Game theory class
  - Admin duties
The Game

- One red player paired with two green players
- Red player assigns an investment task to one of the green players
- The “designated” player can then accept or refuse to invest
- Two versions: desirable and undesirable task
Version 1: Desirable task

- The designated green player earns $2 if she accepts to invest and $2.20 if she refuses.
- The other green player always earns $1.
- The red player earns $2 if the designated player accepts and $1 otherwise.
- Payoffs such that red player likes the designated green player to invest and the green player likes to get the task.
Version 1: Desirable task

Red assigns the task to A and A accepts to invest.

Earnings:

Red: 2.00
Green A: 2.00
Green B: 1.00
Version 2: Undesirable task

- In this version, if the designated green player refuses to invest, the other green player has to invest

- The green player that ends up investing earns $1

- The others earn $2 if the designated player invests, and $1.2 if the designated player refuses to invest

- Payoffs such that red player likes the designated green player to invest but green player does not like to get the task (with a caveat)
Version 2: Undesirable task

Red assigns the task to A and A accepts to invest. (A invests)

Earnings:
- Red: 2.00
- Green A: 1.00
- Green B: 2.00
Sequence of actions

- Prior to instructions, each green player takes two selfies: happy and angry
- Red player paired with two green players
- One green player can choose which picture to show to the red player, for the other this is determined randomly
- Red player sees the two pictures and assigns the task to one of them
- They play 12 rounds in total (6 decisions), rematching
- Feedback after every round about expressions on pics, chosen player, and investment decision
Design

- Red players in Tilburg, green players in Amsterdam
- Unknown to the red player that the green players were asked to express emotions
- Paid for all rounds
- 136 subjects in each role, gender balanced
Manipulation check

- We used Facereader software to verify that our manipulation worked.
- Reads basic emotions based on 500 points on the face.
Manipulation check

Measured Happiness

Measured Anger
Ratings

- An independent group of observers rated the pictures on trustworthiness (7-point scale)
- Angry pictures judged as less trustworthy (3.4 vs 4.7, \( p < 0.001 \))
Results – Happy picture selected

- Happy pictures more likely to be selected by the red player in either version of the game

- When the expressions on the two pictures differ, the happy picture is chosen 60% of the time (desirable task) and 65% of the time (undesirable task)
Results – Percentage sending angry pic

- Subjects are substantially more likely to send their angry picture when the task is undesirable compared to when the task is desirable.
Heterogeneity

- Subjects that send their happy picture when the task is undesirable might still be making the right choice.

- To test this, we can use the randomly selected picture as the counterfactual.

- We find that, at least on average, those subjects would be better off sending their angry picture.

- Those sending angry picture more often are also not perceived to be more or less trustworthy.
Heterogeneity

- Treatment effect stronger if they needed fewer attempts to answer test questions correctly
Heterogeneity

- We administered some measures of strategic and emotional reasoning
  - Strategic reasoning (backward induction)
    - Racing game (Gneezy et al., 2010)
  - Emotional theory of mind
    - Reading-mind-in-the-eyes (Baron-Cohen et al)
    - Angry button

- We observe stronger treatment effects for subjects that score high on those tasks
Next steps

- Don’t ask for expressions on pictures
  - More genuine
  - Learn over time
  - Harder to detect?
- Inform red player
- Webscraping