Experimental tests of normative group influence and representation effects in computer-mediated communication - When interacting via computers differs from interacting with computers

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If and how normative social influence operates in anonymous computer-mediated communication and human-computer interaction.
Computer-mediated communication (CMC)

- Creation of unique interaction settings
- Liberation from norms and regulations that govern ordinary life or not?
CMC and normative social influence

- CMC and conformity to group norms
  - Conformity
    1. Private conformity
    2. Public compliance
  - ‘publicness’ of communication context
    1. Presence of interaction partners
    2. Social Presence
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CMC and normative social influence (2)

- Social presence & CMC → Paucity of different social context cues:
  1. Nonverbal cues
  2. Paralinguistic cues
  3. Physical presence

- New perception of identity
- Anonymity
- Deindividuation?
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Prediction of theories

Predictions

- Normative social influence will be reduced in CMC, compared to face-to-face interaction.
- Social identity/deindividuation (SIDE) model suggests possibility of even greater conformity to group norms in CMC than in face-to-face interaction.
Experiment

- Former researches focused on differences between CMC & FtF
- Focus on difference between the conforming responses to a group and those to an individual
- Group → four individuals
- Measure of public and private response
- Influence of form of representation (not hypothesized)
CMC and visual representation

Representation

- Representation of interactants
- Three different forms of representation
Representation form 1

**Figure:** Textbox representation
Figure: Stick figure representation
CMC and visual representation

Representation form 3

Figure: Animated representation
72 participants (36 male & 36 female)
- Assigned randomly
- Communicating with one or group of four individuals
- Communicating through textbox, stick figure or animated character
- Judgement task → choice dilemma
Ms. E, a college senior, has studied the piano since childhood. She has won amateur prizes and given small recitals, suggesting that she has considerable musical talent. As graduation approaches, she has the choice of taking a medical school scholarship to become a physician, a profession which would bring certain financial rewards, or entering a conservatory of music for advanced training with a well-known pianist. She realizes that even upon completion of her piano studies, success as a concert pianist would not be assured.
Results

- Participants expressed greater agreement with the unanimous group opinion than with the same opinion presented by a single other individual.
- Group effect attenuated when responses were provided in private situation.
- One interactant:
  - Greater discrepancy between expressed opinion and opinion measured in private with private conformity higher than public compliance.
- Four interactants:
  - No discrepancy between expressed opinion and opinion measured in private.
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Other results

- People expressed greater agreement with the interactant’s opinion when they were represented by textboxes than by animated characters.

- Representations by animated characters thought to be:
  1. Intellectual superior to those assigned to textboxes or stickfigures
  2. More trustworthy
  3. More socially attractive
  4. Also: added greatest ‘social presence’
  5. New questions!
Experiment 2

- Research on possible theories behind the findings of experiment 1
- Using HCI
New questions

- Why does group pressure exist in CMC?
- How ‘normative’ was public compliance observed in experiment 1?
- What are the effects of visual representation on person perception?
Setup

- 72 participants (36 male & 36 female)
- Assigned randomly
- Judgement task → choice dilemma
- Participants were told they would interact with computer agents
Results

- No interaction between response situation and the number of interactants
- No effect on number of agents for public compliance
- No effect on number of agents for private conformity
- Significant difference for public compliance in CMC & HCI
- No significant difference for private conformity
- Stick figure representation least favored by participants
- Visual representation great influence in HCI
Conclusions

- People expressed greater agreement with human partners than with computers
- No greater private confirmity of proposed decisions by humans
- Normative group pressure eliciting public compliance exist in CMC but not in HCI
- Visual representation great influence in HCI, less in CMC
- Group pressure does exist in CMC, due to individual’s awareness of engagement in ‘social’ interactions
- People are not liberated from ordinary norms and regulations when communicating via CMC