

## Motivation

- Despite the increasing prevalence of automated conversational agents (i.e., chatbots), **little work has explored when and why people differently respond to chatbots versus human agents**
- Because prior work mostly focused on how people evaluate *decisions* provided by algorithms versus human, it is unclear **how customer response to AI may vary in a context that involves *conversational interactions***

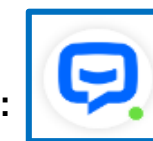
## Key Findings

- People are more interested in engaging with a **chatbot** (vs. a **human**) in a purchase context where **self-presentation concerns are active**
- Based on Theory of Mind (e.g., Gray et al., 2007) in robotics, we show that this is because **people ascribe less mind to the chatbot** (vs. a **human**) and **therefore believe the chatbot is less able to feel emotions. Consequently, people feel less embarrassed in the presence of a chatbot.**

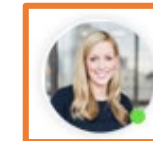
Two differences between “chatbot” and “human agent” condition across all studies:

(1) The agent’s name: **Chatbot** vs. **Sam** (Studies 1a -5) or **Chris** (Study 4)

(2) The icon representing the agent:



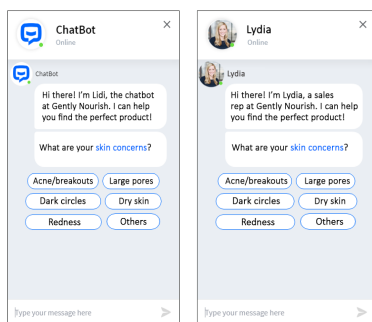
vs.



### Study 1a

n = 183 UGs

Imagined interacting with an agent from an **online skin care brand** to receive **product recommendations for a skin concern**



DV = *Engagement likelihood* (1 = not likely at all, 7 = very likely)

Engagement intentions were significantly higher in the **chatbot** ( $M = 4.14$ ) than in the **human** condition ( $M = 3.53$ ;  $F(1, 181) = 4.31, p = .04$ ).

### Study 1b

n = 309 UGs

Imagined interacting with an online drugstore’s agent providing a **free sample of an embarrassing product** (anti-diarrheal pills; Dahl et al. 2005)

Greater percentage of participants responded that they would accept the free sample in the **chatbot** (70.0%) versus **human** condition (30.0%), ( $\chi^2(1, 307) = 5.23, p = .02$ )

### Study 2

n = 304 UGs

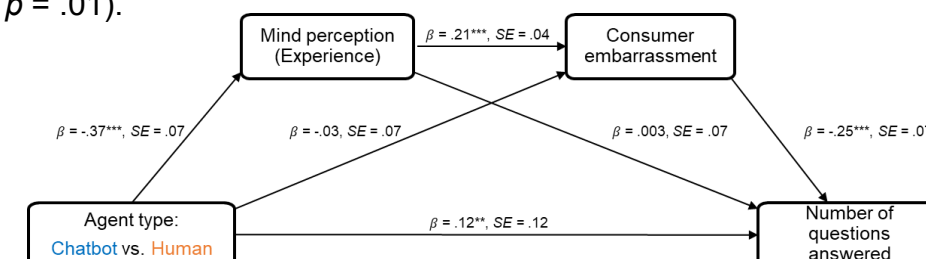
Actually interacted with a real chatbot ostensibly from an **online dating service** asking 10 multiple-choice questions (e.g., “In your previous relationships, how well do you think you met your partners’ sexual needs?”) that could be either skipped or answered

Participants answered more total questions when asked by the **chatbot** ( $M = 9.29$ ) versus the **human** agent ( $M = 8.42$ ;  $F(1, 302) = 15.40, p < .001$ ).

## Study 3: The effect is driven by perceptions that chatbot (vs. human) has less capacity to feel and experience emotion, which reduces embarrassment

n = 595 Mturk users

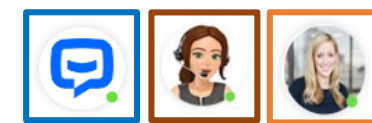
- Interacted with a real chatbot ostensibly from **online skin care brand** asking 9 multiple-choice questions that could be either skipped or answered and asked to provide email address. Rated mind perception (agency and experience; Gray et al. 2007) and embarrassment (Dahl et al. 2005).
- Participants answered more questions when they were asked by the **chatbot** ( $M = 7.90$ ) vs. **human** ( $M = 7.15, F(1, 593) = 11.81, p = .001$ ). Significant serial mediation through the experience perception and embarrassment (index = .0513, 95% CI [.0230, .0872]).
- Participants also more likely to give email address to a **chatbot** (62.3%) than **human agent** (37.7%;  $\chi^2(1, 595) = 6.13, p = .01$ ).



## Studies 4 and 5: This effect is mitigated when...

**Self-presentation concerns are absent**

**The chatbot is humanized (via visual and verbal manipulation)**



n = 403 UGs (Study 4)

Choice for an online drugstore with a **chatbot** (vs. a **human agent**) decreased when participants imagined purchasing **hay fever** (vs. **anti-diarrheal**) pills ( $\chi^2(1, 394) = 39.52, p < .001$ )

n = 1.316 MTurk users (Study 5)

When participants imagined looking for **anti-diarrheal pills in an online drug store**, engagement intentions were significantly higher for a **standard chatbot** ( $M = 3.67$ ) than for a **humanized chatbot** ( $M = 3.26, p = .01$ ) or a **human agent** ( $M = 2.95, p < .001$ ).

