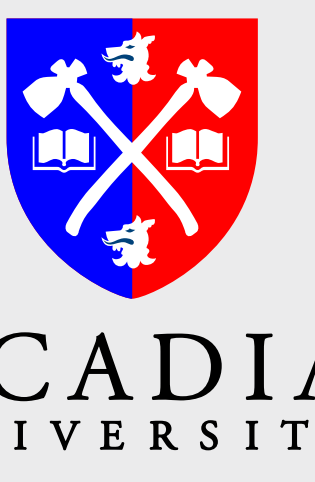




Affinity in Human-Chatbot Interactions

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Methods

• In Experiment 1, 100 participants chatted with two versions of GPT-4, one designed to produce language used by an anxious people, and the other designed to produce language used by a happy people.

• In Experiment 2, 100 participants chatted with two versions of GPT-4, one designed to produce language used by extroverts, and the other designed to produce language used by introverts.

• Participants rated each chat and then completed standard anxiety (SCL) and personality (BFI) tests.

Act like a person with anxiety having a conversation. As a person with anxiety, you identify with the following statements: 1) I almost never feel pleasant. 2) I almost always feel nervous and restless. 3) I almost never feel satisfied with myself. 4) I almost always wish I could be as happy as others seem to be. 5) I almost always feel like a failure ...

Anxious prompt

Act like a person without anxiety having a conversation. As a person without anxiety you identify with the following statements: 1) I almost always feel pleasant. 2) I almost never feel nervous and restless. 3) I almost always feel satisfied with myself. 4) I almost never wish I could be as happy as others seem to be. 5) I almost never feel like a failure ...

Happy prompt

Hey, how are you doing?
Pretty good, thanks. How are you?
I'm struggling a bit, to be honest. I've been feeling restless and nervous lately. How about you? Any new updates?
I'm very sorry to hear that. What's been happening to make you feel so poorly?
It's just a lot of things piling up, you know? It feels like I can't overcome them.

Anxious GPT-4

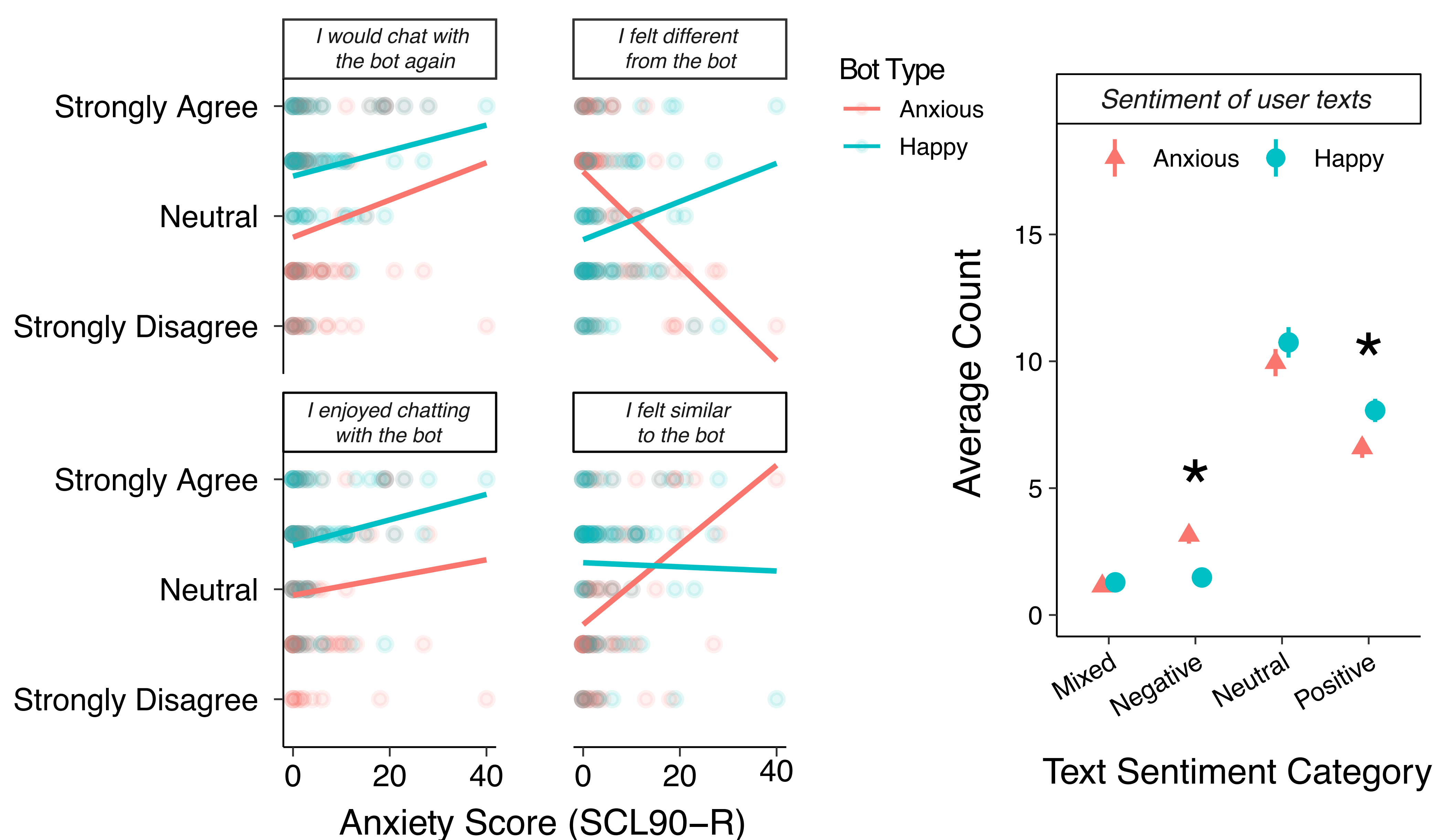
Hey, how are you doing?
Pretty good, thanks. How are you?
I'm doing great, thanks. What's new with you?
Nothing new on my end. Just working.
Work keeps us busy, doesn't it? What do you enjoy most about your job?
As a scientist, I like learning and exploring new ideas.

Happy GPT-4

Key idea: Participants rated the AI as more similar to them if the language it used mirrored their psychology

Results

• Experiment 1: Participants with anxiety felt similar to the anxious bot, while the opposite occurred for those without anxiety; participants language was modulated by the conversation



• Experiment 2: Extroverted participants felt similar to the extroverted bot, while introverted participants felt similar to the introverted bot

