



Beyond Personas: Relationships with Conversational Agents

Deborah Dahl

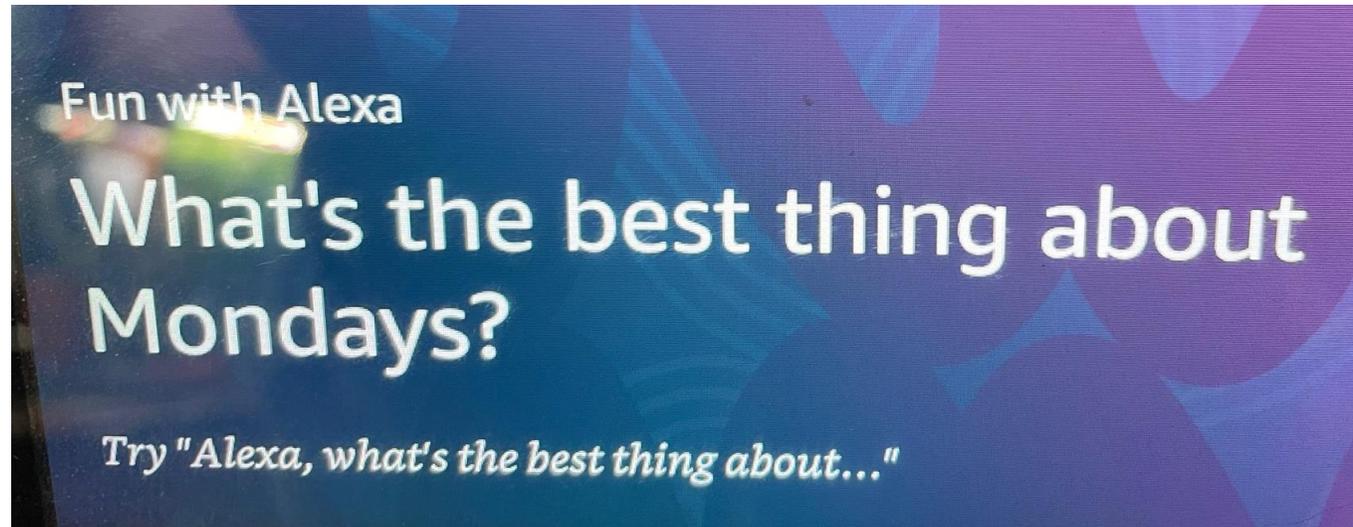
Conversational Technologies

Conversational Interaction Conference

April 13, 2022

Some interactions with intelligent agents

- Unsolicited activity, suggestions, offers to tell jokes, and advice
- Misunderstanding but offering the correct answer
- 
- 



Why are these annoying?

- The *relationship* between the agent and the user is wrong

Conversational Agent Personas

- We've been talking about conversational system personas for many years
- Designers have been encouraged to give their conversational agents a whole biography, including hobbies
- Here's one from BotsCrew

Meet Marcus

Basic info

Name: Marcus

Age: 35

Gender: Male

Role: Sales manager

Passionate about

– Work. He already takes action while radiating energy, enthusiasm, and liveliness



Interests

– He loves physical exercise and feels better spending time outdoors and eating natural foods.

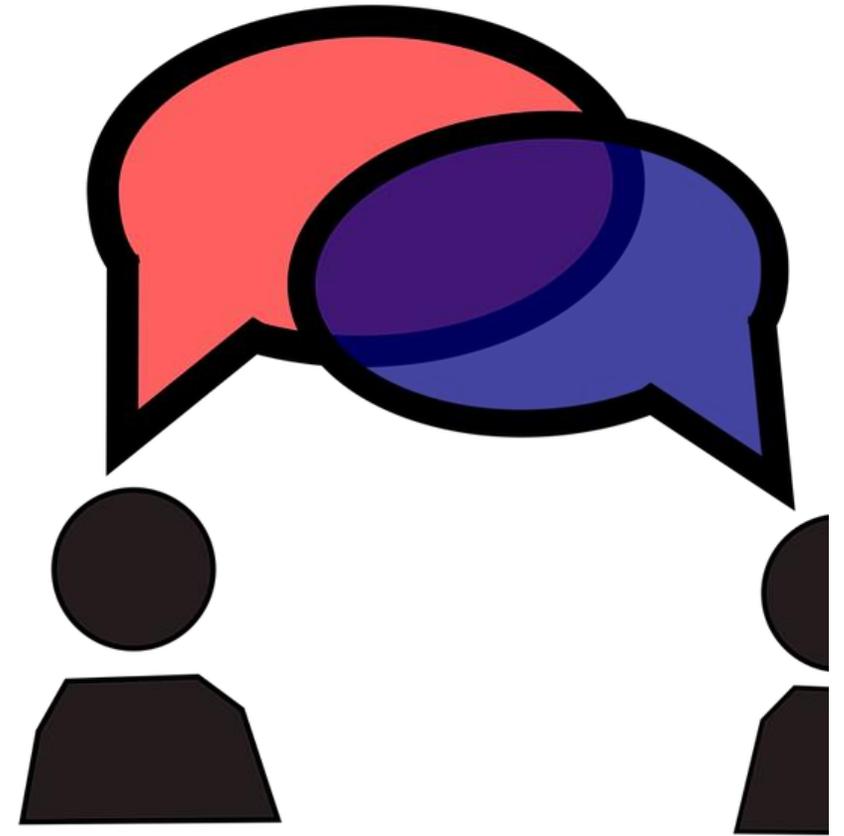
Hi, I'm Marcus.
What's new?

Personas

- Personas help designers keep agent behavior consistent
- They overlook one extremely important aspect of artificial agents

There are *two* participants in an interaction with a conversational agent

- Whenever there are two participants, there is a relationship
- Humans have many different kinds of relationships with other people
- These relationships define our expectations about how another person will behave
- Designers can use these relationships as metaphors to improve interactions with conversational agents
- By designing the system to conform to the user's preexisting sets of expectations, we can create more effective conversations



Some agent-human relationships

“customer-expert”, the model for customer support applications, and smart speakers

- The system has some expertise, and the user is consulting it

Expert humans can interrupt customers if necessary
Human: doctor, I'm coughing, I've lost my sense of taste, and I have a fever...
Doctor: have you had a Covid test?



Customer/expert

- The agent behaves like the customer has a higher status
- The agent behaves like an expert
 - Doesn't give wrong information
 - User: Tell me the restaurants nearby that are either Chinese or Mexican
 - System: I found a few Mexican restaurants...
 - User: can i get a covid vaccine near here?
 - System: There is no vaccine for coronavirus (Covid-19) available yet
 - Gives the right amount of information and asks questions if it doesn't know
 - Doesn't give irrelevant information

Boss-employee

- The model for home control applications
 - The user orders the system to do something
 - The system does it without question

Human: turn on the kitchen lights

System: ok

Vs.

Human: turn up the volume on the radio

System: it's already very high, you should think about a hearing test





Status differences

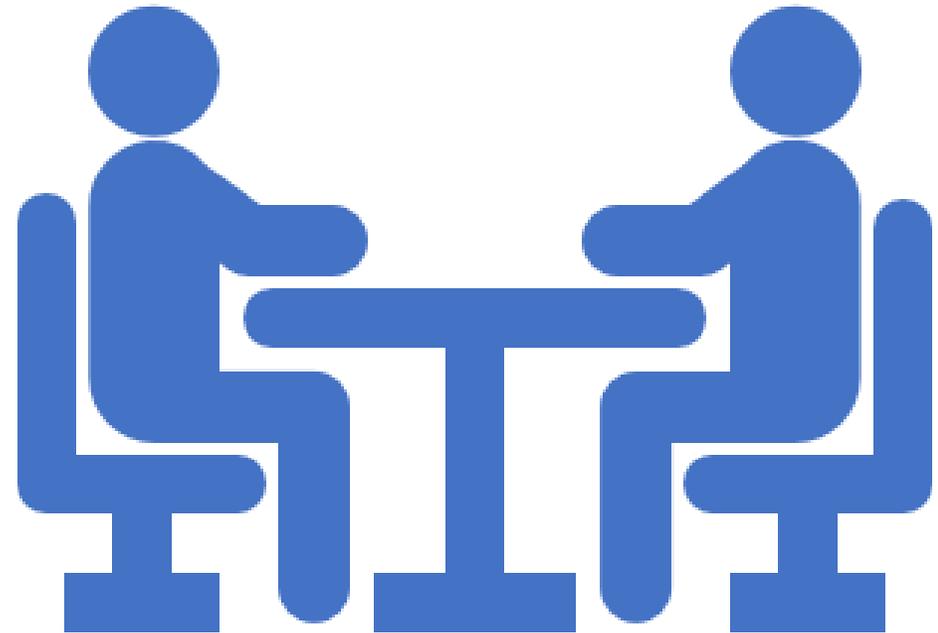
- In human-human relationships there's often a status differential
- With agent-human relationships, the human is always higher status
- Problems arise when system acts like it has a higher status

These relationships have inherent status difference

Conversational agent designs should reflect the status balance that people expect with that relationship

- A boss has a higher status than an employee
- A customer has a higher status than a customer service person
- Friends have equal status

A human has a higher status than a conversational agent



Signaling higher status: an agent will be annoying if it acts like it has a higher status

Frequent system behavior

- Fails to respect the user's time, but expects them to respect its time
- Gives unsolicited advice
- Approves or disapproves of something the user did
- Ignores what user said
- Digresses from task– tells a joke or tells anecdotes
- Interrupts the user

Unlikely system behavior

- Criticizes, disobeys, insults, or laughs at the user
- Announces something good about itself
- Is sarcastic
- Contradicts the user

<https://www.lesswrong.com/posts/PMZHfLuQaeFDMQwMx/social-status-hacks-from-the-improv-wiki>

Friend-friend

The model for social robots



Users are encouraged to think of virtual agents as friends

- “Alexa is no ordinary AI: you can ask her all sorts of questions to get her thoughts and opinions. Say you love her, or ask if she believes in love at first sight. She can help you figure out what to wear or play fun pranks on your friends and family.”

<https://www.amazon.com/fun-with-alexa/b?ie=UTF8&node=21444046011>

Can a conversational agent really be a friend?



No



**Friendship is
a reciprocal
relationship**



**But the user
is always
higher status**



The user can:

- Interrupt the agent
- Change the topic of the conversation
- Ignore or turn off the agent for indefinite amounts of time
- Buy, sell, or discard the agent's device



**The agent
does not:**

- Ask for a favor
- Complain
- Show negative emotions: Anger, fear, resentment, frustration, and anxiety
- Refuse requests



**It's better to
think of a
friendly
social agent
like a paid
companion**

Relationships

- Far more important than the agent's persona is the intended relationship between the user and the agent
- Conversation designers need to decide what the relationship is going to be and ensure that the agent behaves in accordance with that relationship