Do as I Do, Not as I Say

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Mirroring

The behavior in which one person subconsciously imitates the gesture, speech pattern, or attitude of another... often affects other individuals' notions about the individual that is exhibiting mirroring behaviors, which can lead to the individual building rapport with others.

...is subconsciously done during the act and often goes unnoticed.

How do humans mirror each other?
Body language/posture

Source: Westside Toastmasters
Yawning is contagious

“Mirror neurons”
And... we mimic speech

• Words/phrases (example: “So...”)

Paralinguistic features:
• Volume
• Pitch
• Rate of speech
• Accent
Humans like similarity
Similarity attraction

“One of the most powerful and consistent behavior patterns with respect to personality is similarity attraction: People are attracted to other people who are similar to themselves.”

-“Wired for Speech”, Nass and Brave, 2005
Mirroring has been shown to...

- Help waitresses gain higher tips
- Enable sales clerks to achieve higher sales numbers
- Give women more favorable ratings in speed dating

1 Van Barren et al., 2003
2 Jacob et al., 2011
3 Gueguen, 2009
How does this relate to voice assistants?
A voice causes humans to associate:

- Gender
- Personality
- Age
- Place of origin
- Emotions

And whether intentional or not... we react socially
Similar emotion = better performance?

• “Talking Cars Should Know Their Drivers”, Nass & Brave
  • Testers were predisposed towards a positive or negative emotion
  • Two different voices in the car, enthused vs. subdued
  • Subjects found it easier to attend to voice emotions similar to theirs
  • On average, drivers with same emotion had less than half as many accidents

Source: Nass & Brave, 2005
Example: Alexa’s “whisper mode”...

- Launched in Fall 2018
- When you speak in a whisper, Alexa can whisper back
What about the uncanny valley?
The Uncanny Valley

“…a person's response to a humanlike robot would abruptly shift from empathy to revulsion as it approached, but failed to attain, a lifelike appearance. This descent into eeriness is known as the uncanny valley.” - Masahiro Mori, The Uncanny Valley, 1970
In conclusion…

• Mirroring is natural human behavior
• Humans relate to voice assistants socially
• Voice assistants can utilize paralinguistic cues to create a more engaging experience
Thank you!

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