

Anthropomorphism, Emotions and Construal Level

Possible Benefits of Emotion Regulation and Construal Level on Perceived Anthropomorphism and Consumer Reactions to Chatbots

Relevance

A chatbot is an artificial intelligence (e.g., a computer program) which responds to text or voice inputs from a human being (e.g., consumers) (Adamopoulou & Moussiades, 2020). Industry reports estimate the market size for chatbots to grow approximately 24% per year until 2024, then reaching up to 1.3 billion dollar (AMA, 2021). Chatbots offer a number of advantages for companies, e.g., time and cost efficiency. Also, from a consumer's perspective, several reasons for contacting an artificial intelligence exist. In a survey, 53% of respondents stated that they expect them to solve problems more quickly than humans (Brain, 2018).

Anthropomorphism

Anthropomorphism is an important construct in the context of chatbots. It is defined as the process of attributing humanlike characteristics (i.e., physical or mental) to nonhuman agents or objects (Eplay, Waytz & Cacioppo, 2007). Chatbots with a humanlike shape (e.g., an avatar, a real name) can increase overall satisfaction (Verhagen, van Nes, Feldberg & van Dolen, 2014). The opposite effect can be observed, for example, when customers are angry and anthropomorphize the chatbot (Hadi, Crolic, Thomaz & Stephan, 2019). Surprisingly little is known about processes and design parameters which may positively influence attributing humanlike traits to a nonhuman agent.

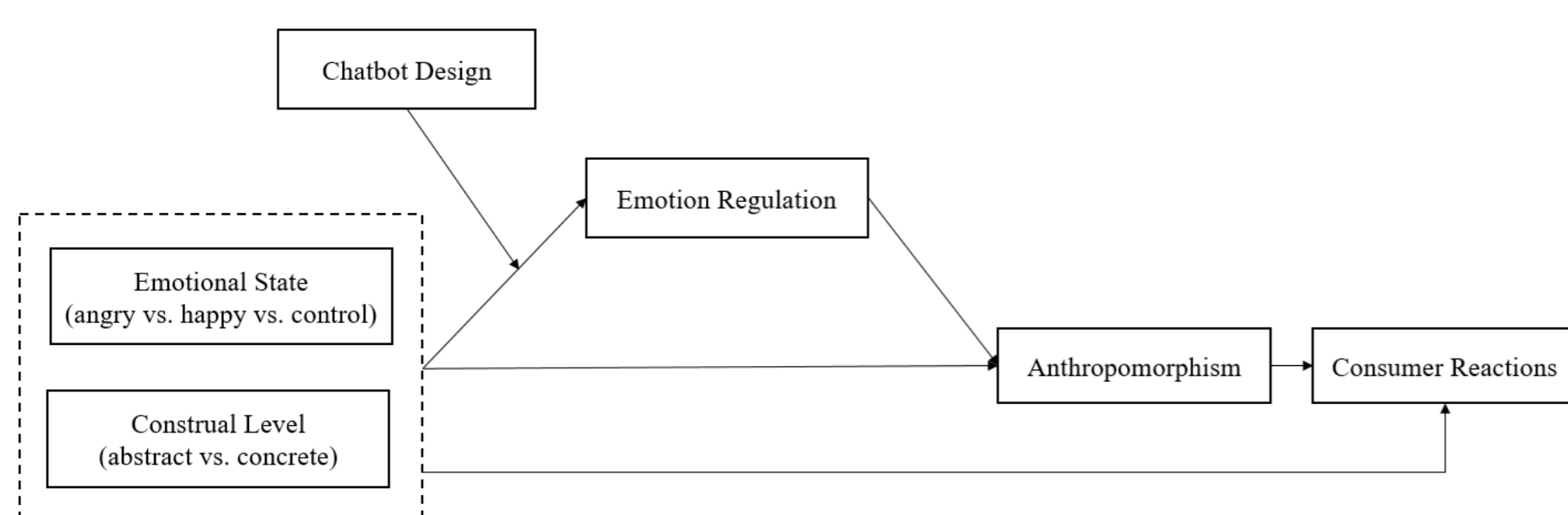
Emotions and Emotion Regulation

About one third of companies evaluate the use of chatbots meaningful to handle complaints (Statista, 2021). Complaints are very often accompanied with negative emotions of consumers, e.g., frustration or anger (Dallimore, Sparks & Butcher, 2007). By changing an existing emotion into a desired (mostly pleasant) one, people use the ability to regulate their emotions (Tamir, 2016). The motivation behind regulating emotions depends on a specific goal (i.e., instrumental or hedonic goals) which should be achieved (Tamir, Mitchell & Gross, 2009). The question arises whether chatbot (designs) can help with emotion regulation

Construal Level

Construal level theory proposes that individuals construe objects or events on a psychological distance, which differs in an abstract or concrete mindset (Trope & Liberman, 2010). Several studies have shown that the way text messages are communicated (e.g., *why* vs. *how*) can prime both mindsets (Humphreys, Isaac & Wang, 2020). In terms of emotion regulation, one's mindset exhibits a positive influence. Especially instrumental goals paired with an abstract mindset lead to an efficient way of regulation (Schwartz, Eyal & Tamir, 2018), which in turn should influence perceived anthropomorphism.

Possible Conceptual Framework



Research Questions

- How are consumer reactions to chatbot interactions depending on the emotional state of a consumer?
- Does the match between emotional state and mental construal level influence emotion regulation?
- What are the underlying processes (except expectancy violation)?

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