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The 4 Degrees of Anthropomorphism of Generative AI

Nielsen Norman Group (2023)

Context

People have projected human qualities onto tech since the 1960s ELIZA effect, with generative AI intensifying this tendency as it responds in fluent, conversational language. In a qualitative usability study, the Nielsen Norman Group observed professionals and students treating chatbots as human to varying degrees. They found anthropomorphism serves two purposes: a functional one, where users assume the AI performs better, and a connection one, which makes the exchange feel more pleasant. The behaviours fall along a spectrum of rising emotional depth.

Key Insights

Courtesy (1st degree)

- Polite language and greetings (please, thank you, hello), treating the bot like a brief exchange with a store clerk.
- Motivated by social-norm habit; some users also assume the AI will mirror their tone.

Reinforcement (2nd degree)

- Praising satisfactory outputs (good job, well done) or scolding poor ones.
- Low connection but mid-functionality, as it is partly strategic.
- Users believe feedback shapes future responses and they find the AI mirrors positive tone, making the exchange pleasant.

Roleplay (3rd degree)

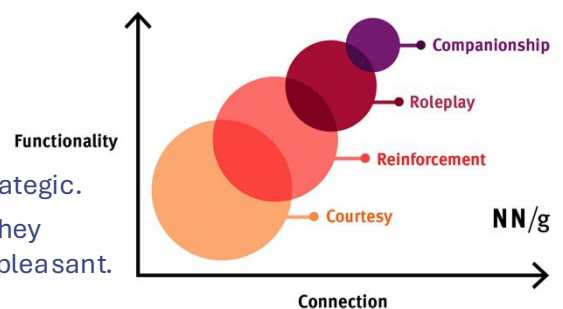
- Assigning the AI an expert persona (act as a senior project manager) to frame a task. Medium connection but high functionality; the most purpose-driven of the four.
- Termed **prompt skeuomorphism**, as users borrow a real-world role to bridge a gap in the AI's understanding, on the assumption that an expert frame yields a better answer (not technically confirmed). Often learned from prompt guides rather than the AI's own designers.

Companionship (4th degree)

- Relying on the AI as an emotional being capable of a human-like relationship, sometimes supplanting real-world connection. Highest connection and high functionality.
- Drawing on peer-reviewed work by Marriott and Pitardi (2023): users value loneliness relief, constant availability and kindness, and affirmation from a system with no independent view (**sympathy**)

Functionality & Connectivity of AI Anthropomorphism

nngroup.com/articles/anthropomorphism



Implications

- How do we design supportive interactions increasing engagement but not overreliance?
- Where should we intentionally limit anthropomorphic cues to prevent users from overestimating the AI's competence or authority?
- What features or initiatives would help users maintain appropriate judgement as interactions move from functionality toward connection and companionship?