

Regarding the Robot Perspective



Empirical Study of Reader Reactions to Robots in SciFi Texts

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Human bridge characters can be a means of circumventing the inevitable anthropomorphism of non-human agents in favor of an anthropocentric understanding of fictional narratives through a human perspective (James 2019, 582). James' expansion of Keen's model of narrative empathy (e.g. 2007; 2011) is supposed to account for the positive impact stories about non-humans can have on our behavior regarding non-human animals in general. It takes up on Herman's idea that "narrative affords a bridge between the human and the nonhuman" (2011, 159).

Human bridge characters might not only be used to make us care about non-human animals, but also about non-animal agents such as robots. Fictional human "bridges", providing a relatable perspective, might promote empathy for fictional robots and consecutive altruistic behavior for real-life robots. Former studies on related topics have already focused on the effect of narratives of animal suffering (see, for example, Malecki et al. 2019). A study by Mara and Appel (2015) from the field of human-robot interaction focused on the positive effects of literary texts including robotic agents on participants' behavior toward real-life robots. However, this study did neither include the expertise of literary scholars, nor did it test the effectiveness of the manipulated short story. My pilot study investigates the impact of a direct robot perspective in contrast to the effects of a human "bridge" in fictional narratives on readers' felt empathy and their altruistic intents, as well as the degree to which they anthropomorphize robot characters.

Theory

Hypotheses

- H1: altruism no bridge < altruism bridge
- H2: anthropomorphism no bridge > anthropomorphism bridge
- H3: empathy no bridge > empathy bridge

Stimulus

robot perspective & human perspective



- 2 texts/participant, combinations:
- C1 = no bridge (robot perspective)
- C2 = bridge (human perspective)
- C3 = original texts
- C4 = manipulated texts

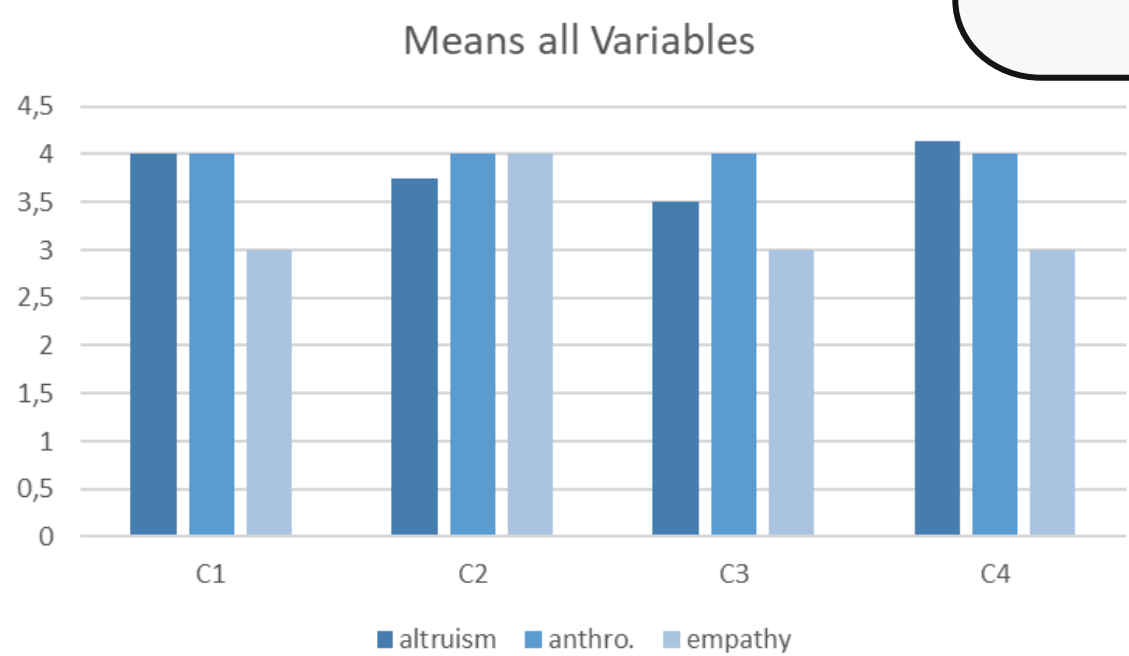
Participants

n = 32
age 19-41 (m = 28, SD = 5.7)
19f, 10m, 3n
C1 = 6, C2 = 10, C3 = 9, C4 = 7
random sample, online survey

Measurements

6-point Likert scales for:
altruism & disposition (Manzur & Olavarrieta 2021)
anthropomorphism (Eyssel & Kuchenbrandt 2012)
empathy & disposition (Kuijpers et al. 2014, adapted)

Results



	C1		C2		Differences		
	m	SD	m	SD	t	p	Cohen's d
altruism	4	1	3.75	1	-0.40	0.34	0.21
anthro.	4	1	4	1	0.07	0.47	0.03
empathy	3	1	4	1	-1.70	0.05	0.87

no significant differences in altruism & empathy disposition between groups; but an interaction effect between altruism & empathy (ANOVA); no significant differences between original (C3) & manipulated (C4) texts for anthro. & empathy, but for altruism; participant comments indicate this might be due to robot preference (might also affect results of C1 & C2)

Discussion

Differences of empathy & altruism between texts with and without bridge characters were found in opposite direction to what was indicated in the hypotheses, which means that H1 & H3 probably need to be refuted. Instead, it seems that empathy for robots is stronger when presented through a human perspective, while altruism is affected more positively by a direct representation of the target species. Bridge characters as focalizers apparently have an effect, but in relation to robot perspectives, it appears to be contrary to intuition. For future studies, the design can be reduced to one stimulus text since the manipulation was effective. The reported effects might also be used to validate HRI studies using fiction as stimulus material (see Theoretical Background). Character relations were reported to influence participants. Also, both stimulus texts might have interacted. Anthropomorphism (H2), measured with a questionnaire for real-life human-robot interaction, might have to be measured differently and could be related to character agency. In continuation, a study including exposure to an actual robot, e.g. in form of a repetition of Mara and Appel's experiment, might yield further insights on the effect of perspective on our evaluation of robots.

"I liked [Gods] better. I could relate more to both characters."
"I had no sympathy for Klara."
"I enjoyed [Gods]. I would like to read texts about human & android love stories."
"I don't enjoy reading about [Klara's] lackluster self-esteem."

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