



Speciesism: an obstacle to AI and robot adoption

Bernd Schmitt¹ 

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Abstract

Once artificial intelligence (AI) is indistinguishable from human intelligence, and robots are highly similar in appearance and behavior to humans, there should be no reason to treat AI and robots differently from humans. However, even perfect AI and robots may still be subject to a bias (referred to as speciesism in this article), which will disadvantage them and be a barrier to their commercial adoption as chatbots, decision and recommendation systems, and staff in retail and service settings. The author calls for future research that determines causes and psychological consequences of speciesism, assesses the effect of speciesism on the adoption of new products and technologies, and identifies ways to overcome it.

1 Introduction

Have you ever been fooled into believing that you are interacting with a real, human service person when in reality it was a machine? Do you wish you had been informed beforehand? Does it matter to you whether you interact with a human or machine?

Given that artificial-intelligence (AI) technology is becoming increasingly human-like, consumers may find it more and more difficult to distinguish chatbots, voice assistants and, perhaps soon, embodied robots from human employees. Such situations are reminiscent of the Turing test in which a person judges which of two interaction partners is human and which is a machine (Turing 1950). If the evaluator cannot identify the human and the machine successfully, the machine has passed the test. Whether any machine has actually passed the Turing test remains up for debate. However, as consumers encounter advanced AI products in stores, call centers, and other service settings and buy them for personal use to serve as assistants and companions, they will frequently face “Turing-like” situations. The marketplace of the future will be a mixed environment of humans and nonhumans. Managers need to prepare for this change, where distinguishability will be diminished or eliminated, and researchers embark on studying this novel phenomenon.

✉ Bernd Schmitt
bhs1@columbia.edu

¹ Columbia Business School, Columbia University, 3022 Broadway, New York, NY 10027, USA

On its face, consumers should welcome this development. After all, they will be receiving service and results of better or at the very least equal value. However, I will propose that *ceteris paribus* consumers have an inclination to prefer humans over AI because of a fundamental bias toward their own kind—“speciesism”. This bias disadvantages AI and robots relative to humans and will be an obstacle to their commercial adoption.

2 The construct of speciesism

Speciesism has been defined as “the assignment of different moral worth based on an individual’s species membership” (Caviola et al. 2019, p. 1011). The term “species,” derived from Latin *specere* (to look), refers to kinds or classes that look and appear similar, and different from others. The term has been applied widely in biology, and speciesism has been discussed in the context of human-animal relations.

Following the logic of the Turing Test, I am applying the term here to human-AI relations. Philosophers have argued that once AI has passed the Turing Test, terms such as consciousness, *qualia* (subjective perceptions of one’s senses and emotions), and other mental capabilities (such as creativity and morality) may no longer be the privilege of humans; they may also exist in a machine (Dennett 2017). In fact, commercially available advanced AI today, based on machine learning, can outperform a normal, fully enabled human on cognitive tasks; can also detect, respond, and display emotions; interact with its environment; and learn from experience. Terms such as “sexism” and “racism” are used when humans treat other humans who have the same skills and capabilities differently on the basis of biological sex and race. In sexism and racism, the bias and discrimination occurs within the human species; in the case of speciesism, it occurs between humans and non-human kinds.

Dehumanization, where people and entire groups are denigrated as less human, seems to reveal the thinking behind speciesism. Animals and machines are the prime categories that are seen as “less human”: there is “animalistic” and “mechanistic” dehumanization (Haslam 2006). The species bias against technology is not simply “technology phobia” (e.g., not liking AI as a product category). Rather, speciesism seems to be the result of a fundamental, categorical comparison of human and machine.

3 Empirical evidence

Research focusing on algorithm aversion, uniqueness neglect, and anthropomorphism is consistent with the speciesism hypothesis. Consumers prefer humans over algorithms in a variety of decision tasks (Dietvorst et al. 2014). They are reluctant to utilize AI healthcare because they believe that AI does not consider patients’ unique characteristics (Logoni et al. [in print](#)). They attribute human-like traits to a wide variety of stimuli and nonhuman agents (Epley 2018). Moreover, according to Mori’s (1970) “uncanny valley” hypothesis, consumers react differently to robots depending on how human they look and behave. In an “uncanny valley” paradigm, when consumers were shown stimuli (pictures or video) and told they were humans or robots, robots produced more negative affective reactions than the same stimuli presented as humans (Castelo et al.

2019). In sum, speciesism seems to underlie a variety of effects. Given its importance and relevance, speciesism deserves to be examined more closely.

4 Future research

The research agenda I am proposing here consists of three broad themes.

1. Determining causes and psychological consequences of speciesism. This research theme examines the underlying motivations of speciesism as well as the role of perceived threats, mind perceptions, and emotions as psychological consequences. Evolutionary factors may be the ultimate cause for speciesism. It may result from the fact that AI and its physical substrates, the robots—despite all their similarities to humans in appearance, cognition, and even emotion—have not gone through biological evolution. The human biological-evolutionary process may have encoded speciesism as a survival mechanism of the human race. Insightful qualitative and evolutionary studies may be needed to test this sort of reasoning. Also, research should assess consumers' responses to “technological evolution” relative to “biological evolution” because the former may in principle be considered structurally similar to the latter (e.g., in terms of adaptation, co-evolution, and even reproduction). Could this diminish speciesism, leading consumers to conclude that AI and robots are more advanced individuals of the same species?
2. Assessing the effect of speciesism on the adoption of new products and technologies. This research examines the degree to which speciesism affects the adoption of AI products. Technology adoption models in marketing have been developed decades ago for much simpler technologies, in which the issue of humanness was not considered (Rogers 1983). Two key factors in these models are perceived usefulness of the technology (including both utilitarian and social factors) and the technology's ease of use. It seems that speciesism needs to be added to these models as a general disposition that may bias the overall perception of the usefulness of the technology and the ease of use. Moreover, research on AI and speciesism will be a test case for these models to see if they can be updated or whether they need to be entirely replaced in this age of new technologies by models that incorporate new constructs such as human-likeness of the technology, threats to humans, and mind perception.
3. Research on overcoming speciesism. Prior research has presented a psychological conceptualization of what makes people human (Haslam 2006). Research should be conducted to test whether essential human traits can be instantiated in AI and robots and whether such designs can overcome speciesism. In the research on algorithm aversion discussed earlier, algorithms were judged more positively when presented as more human-like, suggesting that anthropomorphism may diminish speciesism. Another so far not explored empirical option may be to get consumers to adopt the perspective of the technology—e.g., how AI is programed; whether it follows a decision tree or neurological network; and what textual and sensory information it relies on. Just as search engines provide better results when the user enters appropriate keywords, AI may provide better performance when the user has

insight into AI's "way of thinking." This may result in an objective judgment of difference rather than a biased species preference.

5 Conclusion

Speciesism seems to be a pervasive bias to treat the human species preferentially over other species. Understanding how speciesism unfolds in future technology-related marketing contexts will be a key subject for researchers and practitioners because such knowledge will help to determine the future path of technology adoption.

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