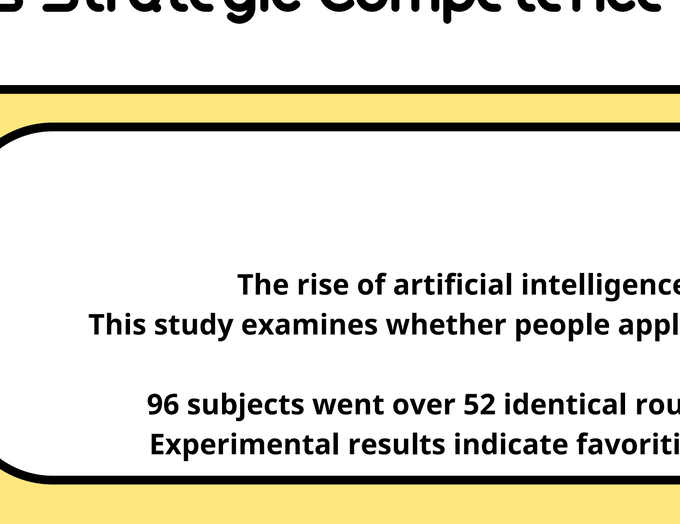
Does Strategic Competence of Machines Elicit Social Responses Towards Machines?

Introduction

The rise of artificial intelligence (AI) and robotics has led to an increasing integration of machine agents into society.
This study examines whether people apply social behaviors to machines in the absence of language and appearance, investigating if such responses can be considered anthropomorphic.
96 subjects went over 52 identical rounds of repeated Ultimatum or Dictator Games against both human and/or machine agents.
Experimental results indicate favoritism towards humans and a sense of entitlement towards machines competent in Tic Tac Toe





Smart or Human

Cheap talk in Human-Machine Interaction

Alexandros Kafkas

Methodology

Experimental Design

	ONE	BOTH
Baseline	UG/DG-ONE	UG/DG-BOTH
Tic Tac Toe	TTT-UG/DG-ONE	TTT-UG/DG-BOTH

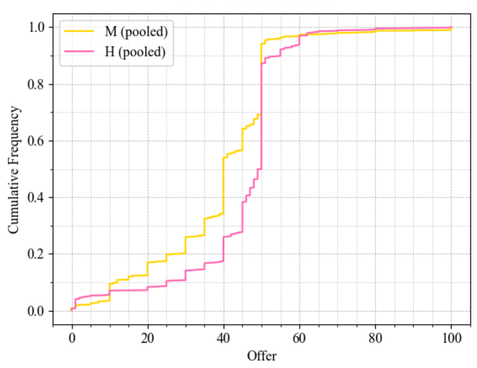
Hypotheses



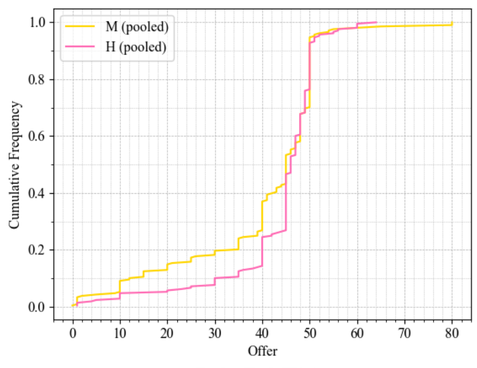
Subjects allocate more tickets to human agents than machine agents: H1
Subjects allocate tickets equally between human agents and machine agents: H2
Subjects allocate tickets equally between human agents and AI agents: H3
Subjects allocate more tickets to AI than to Random machine agents: H4
AI agents score higher in Perceived Intelligence than Random machine agents: H5
AI agents score higher in Anthropomorphism than random machine agents: H6
Anthropomorphism and offers have a positive relationship: H7
Perceived Intelligence and offers have a positive relationship: H8
Perceived Intelligence and Anthropomorphism have a positive relationship: H9

Results

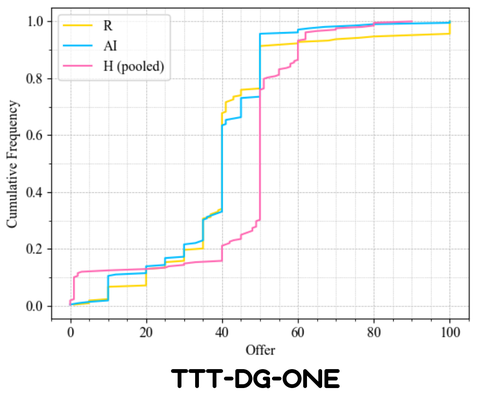
UG-ACROSS



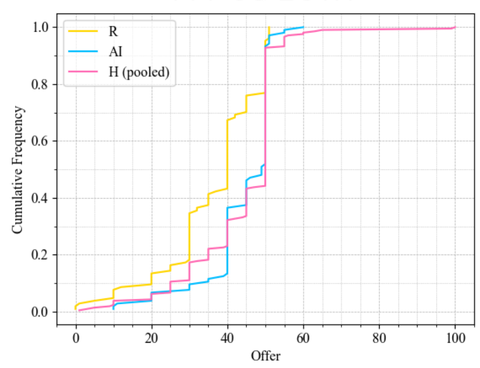
UG-BOTH



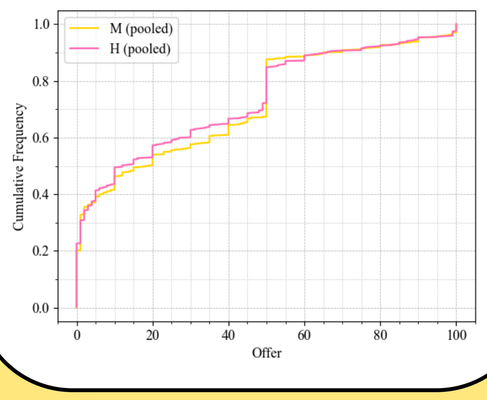
TTT-UG-ONE



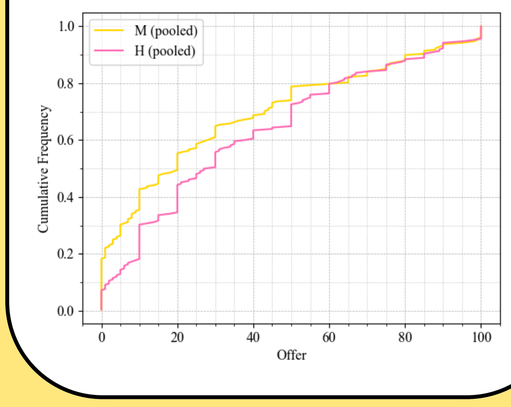
TTT-UG-BOTH



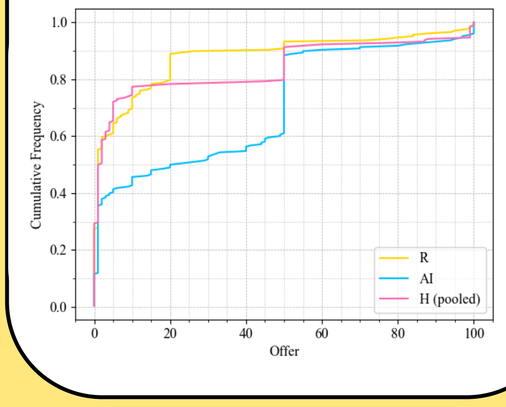
DG-ACROSS



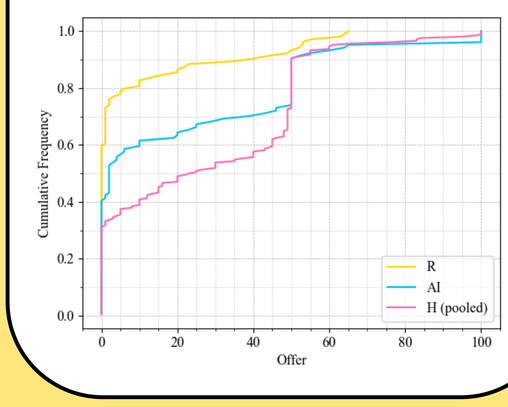
DG-BOTH



TTT-DG-ONE



TTT-DG-BOTH



Overall, subjects allocate more resources to human agents in bargaining, but do not differentiate between them in giving

Matched with both humans and machines, subjects give significantly less to machines in DG, but not it UG

Matched with one type of agents, subjects differentiate between AI and Random machine agents only in DG

Matched with both types of agents, there is an entitlement effect towards AI agents, and favoritism towards humans

Conclusion

When strategic competence was inferred through cheap talk, AI agents received more favorable treatment compared to non-AI agents. Notably, when subjects interact exclusively with machine agents in strategic bargaining, they display payoff-maximizing behavior regardless of the machine's perceived intelligence. AI agents are perceived as more intelligent and anthropomorphic than non-AI agents, though this perception is influenced by the presence of human agents and is maximized in their absence.

Image by pngtree.com