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The AI Constraints Paradox: How Psychological Distance and Perceived Ownership Shapes Public Reactions to AI's Societal Roles

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INTRODUCTION

Artificial Intelligence (AI) is widely used in everyday life—through chatbots, voice assistants, and recommendations. Yet, **people trust AI in personal tasks but often resist it in public roles like hiring or healthcare**. Why?

This study investigates that paradox through two lenses:

Psychological Distance: Personal AI feels "close" and practical.

Perceived Ownership: Users feel more control in personal use.

Using over **220,000 YouTube comments**, we applied **sentiment analysis** and **topic modeling**.

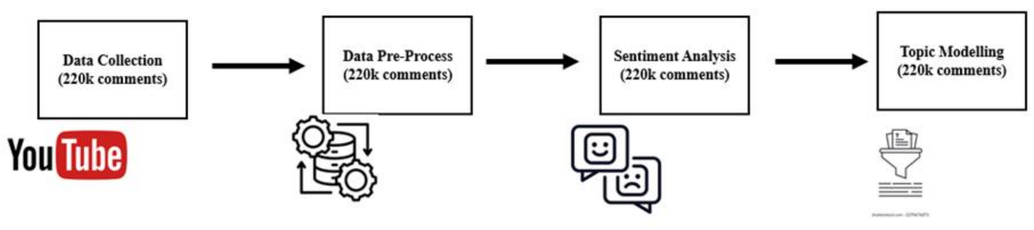
Results show:

Personal-use AI (e.g., apps) → more positive reactions

Societal AI (e.g., job automation) → higher negativity

We argue that **concrete, personal framing** reduces resistance, while abstract, institutional framing triggers skepticism. These findings offer insights for **designing more trustworthy AI**.

METHODS AND MATERIALS

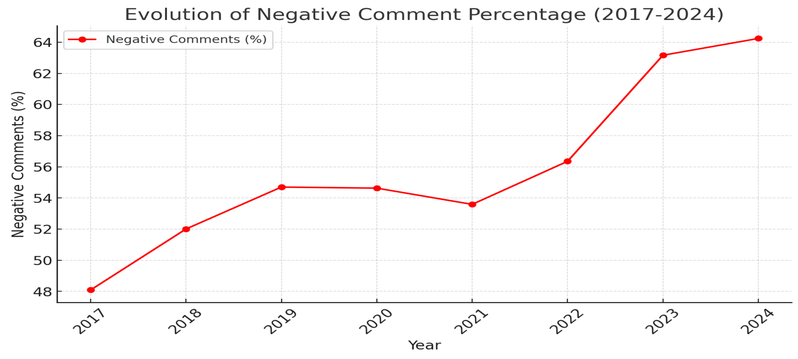


- This study utilized user-generated YouTube comments collected via the Google API. Over 220,000 English-language comments related to AI were analyzed.

- Text preprocessing included tokenization, stop-word removal, and lemmatization. Sentiment was assessed using a DistilBERT model to classify positive and negative reactions.

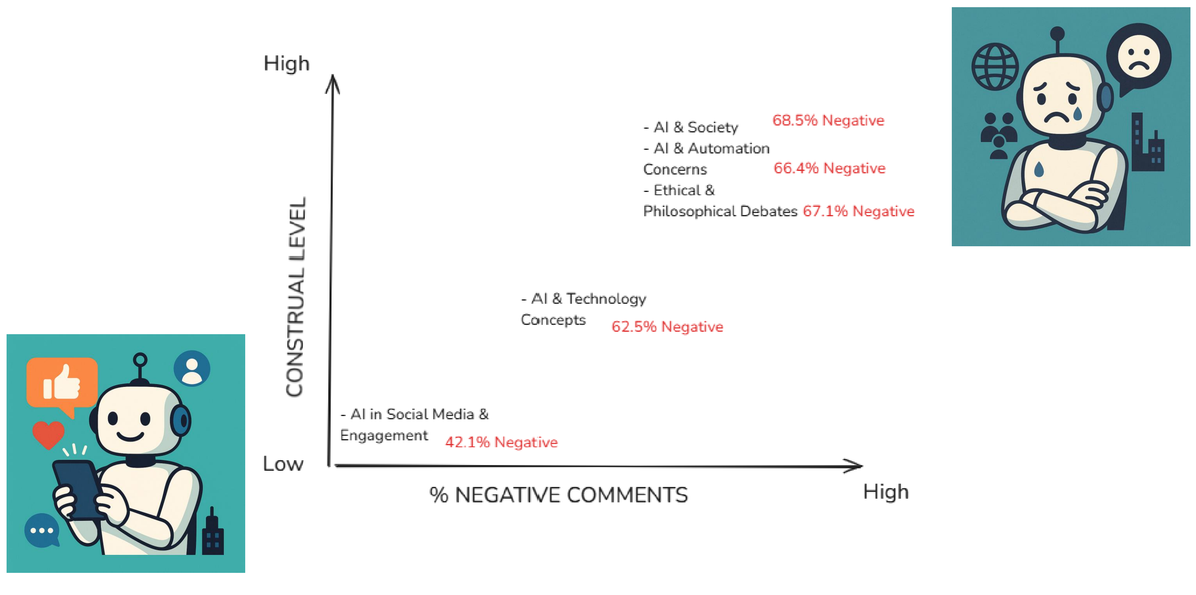
- Topics were identified via Latent Dirichlet Allocation (LDA), and logistic regression was employed to evaluate predictors of negativity.

- The analysis revealed topic-based sentiment variation linked to construal level and psychological distance.



RESULTS & DISCUSSION

Main Topic	AI Constrain Frameworks (Valenzuela et al., 2024)	Construal Level	Typical Public Thinking Style	Negative Sentiment (%)
– AI in Social Media & Engagement	Regulated Expression	Low	"How does this affect my app use?"	42.10%
– AI & Technology Concepts	Parametric Reductionism	High	"How does the algorithm work?"	62.50%
– AI & Society	Agency Transference, Parametric Reductionism	High	"Why is AI changing our world?"	68.50%
– Ethical & Philosophical Debates	Agency Transference, Regulated Expression	High	"Is AI morally right or wrong?"	67.10%
– AI & Automation Concerns	Agency Transference, Parametric Reductionism (risk of de-skilling), Regulated Expression	High	"Will AI take my job?"	66.40%



CONCLUSION

This study reveals a **paradox** in public attitudes toward AI:

People **embrace** AI in **personal contexts** but **resist** it in **societal applications**.

Why?

-Low psychological distance (e.g., AI that helps *you* write) builds trust

-High distance (e.g., AI in hiring or policy) raises concern and rejection.

-Feeling of ownership makes users more tolerant of AI's limits.

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ONLINE VERSION

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