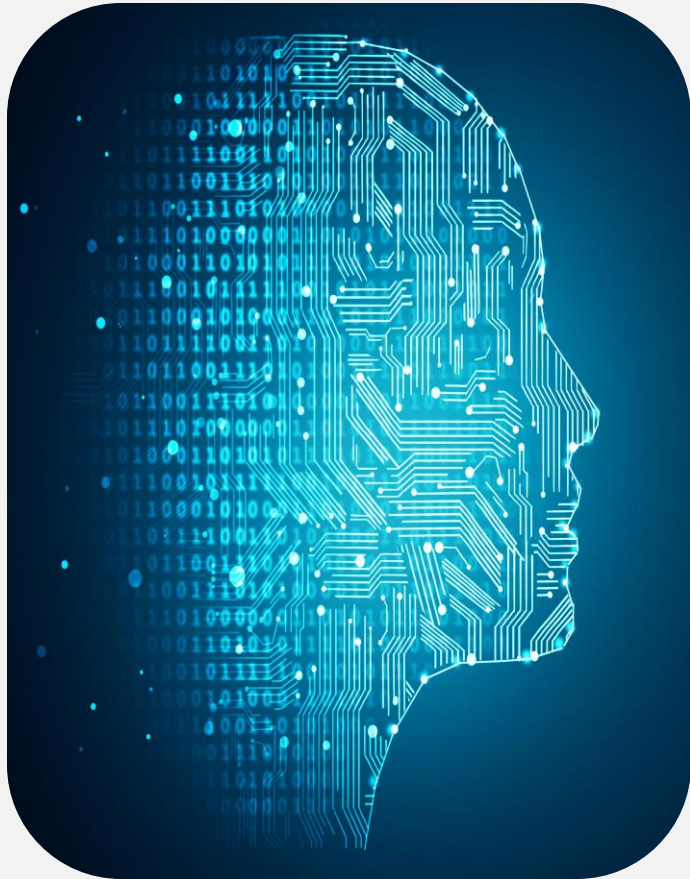


It's Destroying Our Jobs!

Impacts of Media Framing on
Prior Knowledge and Intention
to Use Generative AI

Zoë Hagley & Anyun Chatterjee





OVERVIEW OF STUDY

- We are interested in understanding people's intention behind using or avoiding generative artificial intelligence
- We believe prior knowledge, created from media narratives, plays a significant role in the intention to use the tool.
- The Integrated Behavioral Model provides a good framework for studying behaviors
- We propose a laboratory experiment where participants will be primed and then asked to complete a task with the option to use AI





STUDY RATIONALE

BREAKTHROUGHS



There has been an increase in chatbots such as ChatGPT. More public and private entities are exploring the uses of generative AI for more efficient communication and productivity.

PRIOR KNOWLEDGE

Using software is a behavior. But studies have not taken this approach to testing AI. Our study further tests the boundaries of IBM by asserting that prior knowledge and attitudes developed through media representations can impact on intention.



SLOW UPTAKE

While generative AI continues to show promising results for increasing human productivity, user uptake remains slow. The media has exacerbated some user hesitancy.



KNOWLEDGE GAPS

Communication scholarship on generative AI is steadily forthcoming, but many gaps. No studies that investigated the intention. Understanding the intention can help with mitigating fears.

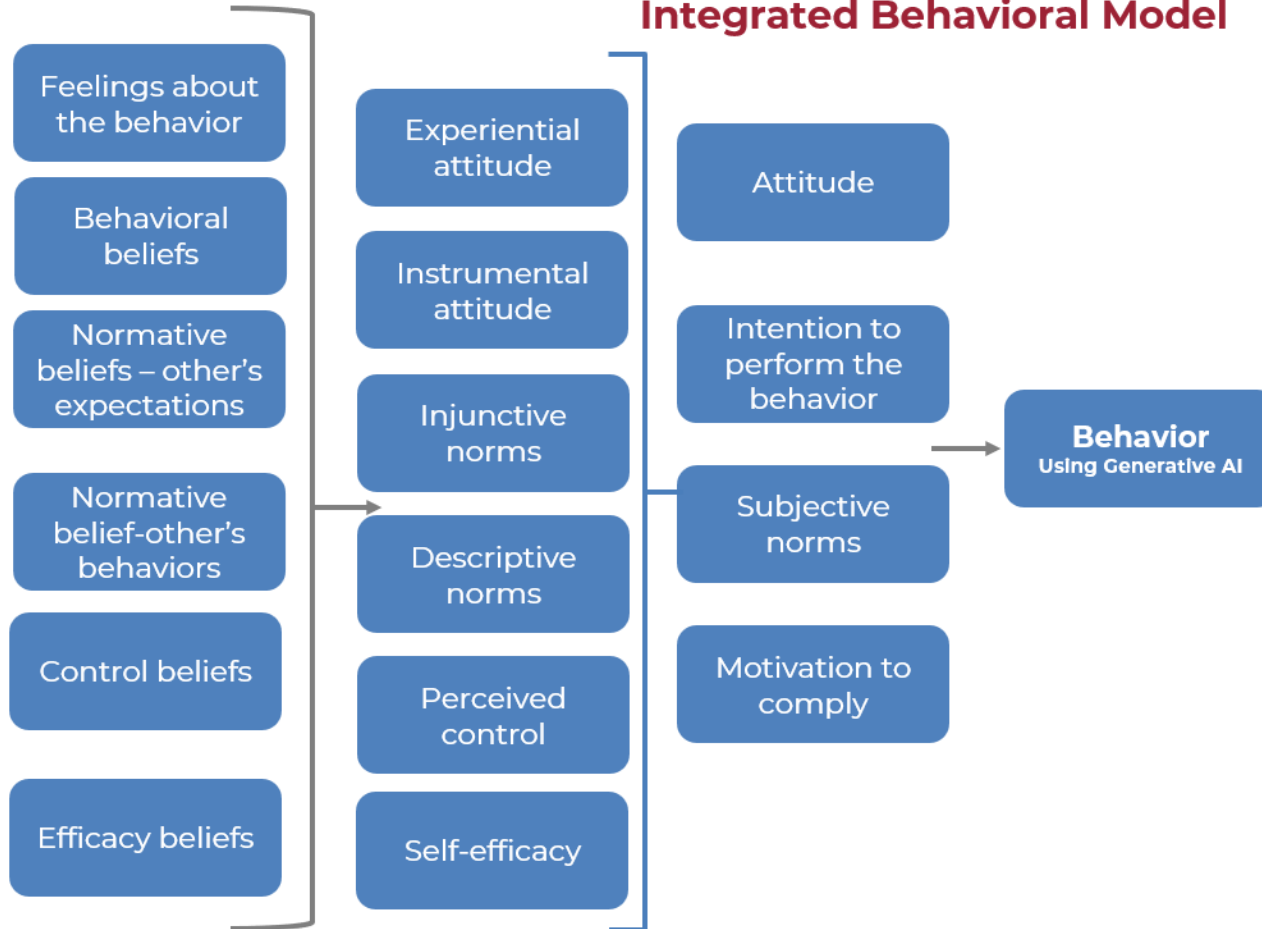


THEORETICAL FRAMEWORK

- IBM: Attitude toward the behavior, self-efficacy, and perceived norms can all impact intention
- Prior knowledge: People approach tasks and learning with facts, concepts, models, perceptions, beliefs, values, and attitudes, influencing how they filter and interpret incoming information
- The extent to which individuals can use their prior knowledge to construct new knowledge effectively is heavily dependent on the nature of the prior knowledge. Can be accurate or inaccurate
- Prior knowledge and intention go hand-in-hand



Integrated Behavioral Model





MEDIA FRAMING

- Media framing and agenda setting are key components that shape subjective norms.
- The media's presentation of information on generative AI, as destructive or constructive, creates social comparisons between those who utilize it and those who do not
- These media frames build on one's prior knowledge of generative AI



HYPOTHESES

H₁: Prior knowledge on generative AI formed by positive media frames will have a positive impact on one's intention to use the software.

H₂: Prior knowledge on generative AI formed by negative media frames will have a negative impact on one's intention to use the software.



PRELIMINARY DATA ANALYSIS



2022 Ada Lovelace Institute Data

Table 1: Study Population

Demographics	n=4012, %
Male	1912, 47.7%
Age, years (mean, SD)	48.1, 17.2
Age, years	
16-24	343, 8.5%
25-34	709, 17.7%
35-44	741, 18.5%
45-54	692, 17.3%
55-64	696, 17.4%
65-74	513, 12.8%
75+	318, 7.8%

Education	
No degree	284, 7.08%
Some degree	2156, 53.7%
Professional degree	1562, 38.9%

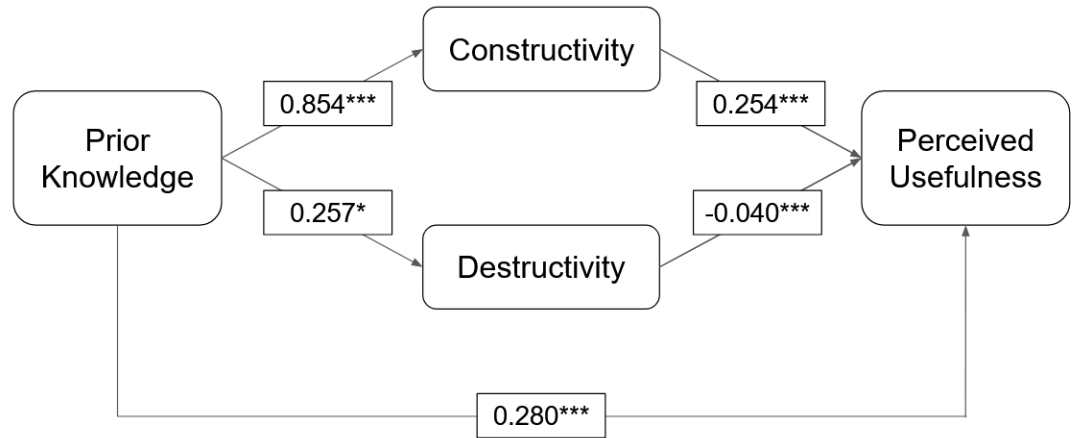
- Preliminary H₁: The level of prior knowledge regarding uses of AI has a significant positive impact on the perceived usefulness of AI overall
- Preliminary H₂: The relationship between prior knowledge and perceived usefulness is mediated by the believed constructivity and/or destructivity of AI as a technology

PRELIMINARY DATA ANALYSIS RESULTS

Table 2: Two models predicting the relationship between Prior Knowledge and Perceived Usefulness

Variable	Model 1, simple		Model 2, mediating effect	
	β	SE	β	SE
Intercept	5.57**	0.395	3.36**	0.342
Age	-0.01**	0.003	-0.004	0.002
Sex	0.239**	0.103	0.025	0.074
Ethnicity	0.035	0.074	0.044	0.053
Education	0.002	0.025	-0.022	0.012
Constructivity	--	--	0.289**	0.005
Destructivity	--	--	-0.097**	0.003
Prior Knowledge	0.461**	0.026	0.280**	0.019
	R² = 0.084		R² = 0.532	
	n = 3976		n = 3974	

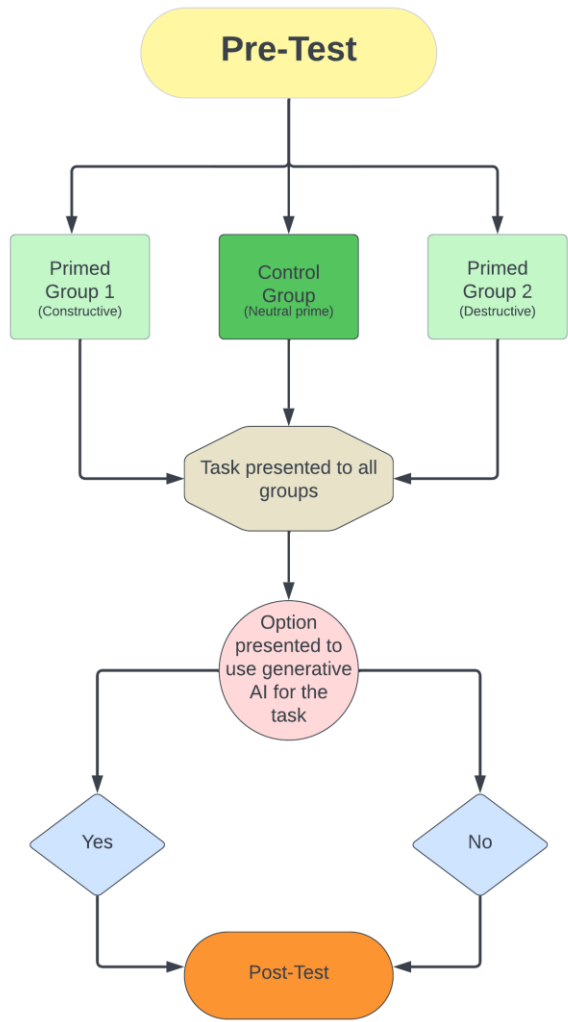
bolded with ** indicated statistical significance (p<0.05)



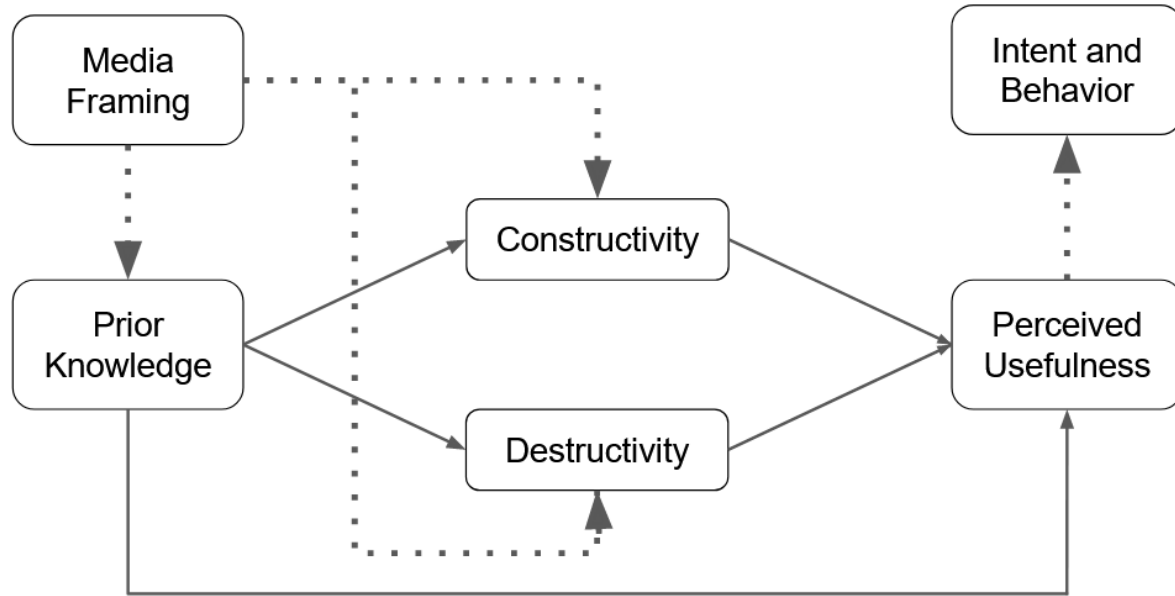


EXPERIMENT DESIGN





PROPOSED MEDIATION MODEL





CONSIDERATIONS & CONCLUSION

The study will be beneficial for understanding why and how people choose to use AI.

The results support a relationship between knowledge and perceived usefulness, mediated by attitudes, but do not consider prior knowledge and media frames.



THANKS!

Questions?

