

Trust and Credibility: The Differences between Perceiving an AI Anchor as AI and Human

Keywords: *AI anchor, trust, credibility, non-verbal cue*

On 7 November 2018 and 19 February 2019, the first sitting and first standing artificial intelligence news anchor in the world jointly developed by Xinhua News Agency and Sougou based on the face and voice of a real-world news anchor Hao Qiu were released respectively. The AI anchor has gotten a lot of discussions and debates from media but has received almost no scholarly attention in the area of communication.

This study selectively combined the analysis frameworks of interactive social robots (Lee et al., 2006) and talking-face computer agents (Gong & Nass, 2007) to study the AI anchor. In this study, a 2 (subjects know this is an AI anchor vs. subjects don't know this is an AI anchor) \times 2 (standing vs. sitting) between-subjects experiment was employed where the conceptualized standing and sitting were derived by personality \rightarrow big five factors \rightarrow extroversion \rightarrow non-verbal cues (Lee et al., 2006). For each group, 20 participants were included and given a piece of video of AI anchor presenting news. Videos for the group of subjects perceiving the AI anchor as an AI anchor and the group of subjects perceiving the AI anchor as a human anchor would be guided by captions "AI anchor is presenting" and "news presenting" respectively to lead participants to perceive the anchors as AI anchor and human anchor. Moreover, after the experiment, for the group of subjects perceiving the AI anchor as a human anchor, one more question "Do you know or has found in the process of the experiment that, in fact this is an AI anchor" would be asked to ensure the perception of "human anchor" of this group.

Results of two-way ANOVA indicated that there is a significant main effect of "perception of anchors" (AI or human) on the trust of the anchor saying that people trust the anchor less if they perceive it as an AI anchor rather than a human anchor.



Figure 1. Demonstration of experiment interface

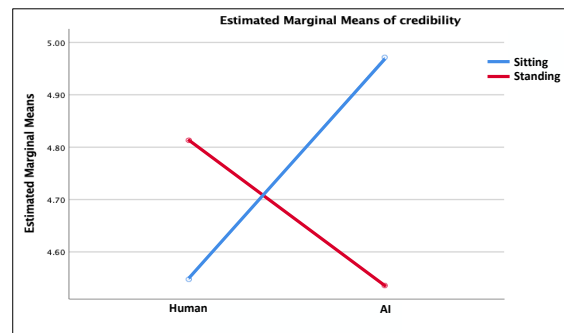


Figure 2. Demonstration of the interactive effect of "know" and posture

The most important finding is that, a marginally significant crossover interaction effect between the perception of anchors and postures (standing or sitting) on the perceived credibility of the news presented by the anchor was tested (see Figure 2). Specifically, when people perceived the anchor as a human anchor, and more non-verbal cues like gestures, postures, and movements were observed (standing), they would think the news was more credible. However, when the anchor was perceived as an AI anchor, more non-verbal cues look unnatural, and then the credibility would decline.

In summary, under the experimental environment, the perception of the anchor as an AI anchor or human anchor would impact the trust of the anchor and the credibility of the

news presented by the anchor. A more detailed discussion and conclusion would be included in the future progress of this study.

Table 1
Analysis of Variance Results of the Experiment

Dependent variables	<i>M (SD)</i>				<i>F</i> values and effect size		
	AI		Human		Main effects		Interaction
	Standing	Sitting	Standing	Sitting	Perception of anchors	Postures	P × P
Trust	4.08 (1.18)	4.21 (1.02)	4.90 (.82)	4.92 (.87)	.87*, $\eta^2 = .01$	2.62, $\eta^2 = .03$.12, $\eta^2 = .00$
Liking on verbal features	3.68 (1.26)	3.85 (1.02)	4.15 (.93)	4.00 (.87)	1.95*, $\eta^2 = .03$.13, $\eta^2 = .00$.13, $\eta^2 = .00$
Liking on non-verbal features	4.24 (.98)	4.13 (.90)	4.17 (.72)	4.28 (.76)	.31, $\eta^2 = .00$.03, $\eta^2 = .00$.49, $\eta^2 = .01$
Credibility	4.54 (1.02)	4.97 (.91)	4.81 (1.12)	4.55 (.69)	.01, $\eta^2 = .00$.60, $\eta^2 = .01$	1.64†, $\eta^2 = .02$

† $p < .10$, * $p < .05$.

Reference

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