Trust and Credibility: What are the Differences When People Perceive an AI Anchor as an AI Anchor or a Human Anchor

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) × 2 (standing vs. sitting) between-subjects experiment was employed where the conceptualized standing and sitting were derived by personality → big five factors → extroversion → 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 of "know" (subjects perceive the AI anchor as an AI anchor) group and "don't know" (subjects perceive the AI anchor as a human anchor) group would be added text guides "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 "don't know" group, one more question "Do you know or has found in the process of the experiment that, in fact this is an AI anchor" to ensure the perception of "human anchor" of the group.

The result of 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

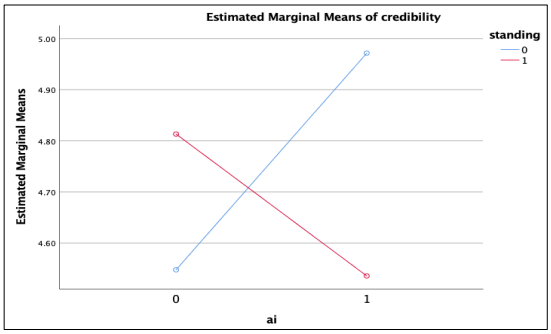

Figure 2. Demonstration of the interactive effect of "know" and posture

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.

Table 1 *Analysis of Variance Results from the Experiment*

Dependent variables	*M* (*SD*)				*F* 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†, $\eta^2 = .02$

†$p < .10$, *$p < .05$.

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.

Reference

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