What if we took a holiday? Enriching Advertising with Intelligent Voice Assistants

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Extended abstract

Introduction

For several decades, the entertainment industry has created an imaginary relationship between human and non-human beings like robots, humanoids, or other artificial intelligent (AI) devices, some of which could perfectly hold a fluent conversation and respond to voice instructions. AMELIA, the conversational AI, is the current market-leading solution that incorporates the main elements of human interaction (e.g., expressions, emotions, logical conversation, and understanding), enabling digital employees creation and delivering the "most engaging user experiences" (Amelia, 2022). The Intelligent Voice Assistants (VAs) are the most prominent technology and a fast-evolving disruption on human-computer interaction (Moriuchi, 2019). This technology has become of paramount importance on smart devices and is exponentially rising worldwide with over 8.4 billion VAs expected in 2024 (Laricchia, 2022).

Given the spreading technological development, VAs will certainly play a major role for marketers on brands' communication strategies, advertising effectiveness and purchase intentions. In fact, with the communication automation process, VAs sophistication growth is leading to personalized and assertive recommendations, contextualized conversations with consumers, which will certainly enhance consumer engagement with the brand (Hoy, 2018; McLean *et al*., 2021; Tassiello *et al*., 2021). However, how will advertising value be influenced by AI attributes?

Theoretical Background

Previous studies highlighted the relevance of future research on AI assistant features, such as human-like features (McLean *et al*., 2021; McLean & Osei-Frimpong, 2019; Schanke *et al*., 2021) or social presence (Park *et al*., 2022). Despite the attention given to in-home VAs, studies concerning the practice of advertisements through AI assistants are still in an early stage (Cho *et al*., 2019; Park *et al*., 2022; Paxton, 2019; Romero *et al*., 2021). Therefore, this study aims to overcoming this gap by conducting a study on the use of advertising through an AI assistant, the inherent effects and value perception, in the tourism context.

As VAs rely on human voice-based conversational interactions, users easily tend to anthropomorphize them (Whang & Im, 2021), eliciting social responses, including a sense of social presence defined by the degree of perceived presence of a communication partner (Biocca *et al*., 2003; Jacob *et al*., 2021). These human similarity cues, based on the "similarity-attraction" principle may convey social presence in the form of social attraction (McLean *et al*., 2021; Nass & Moon, 2000). While imbuing the smart devices with human qualities, the non-human partner is perceived as humanlike (Park *et al*., 2021), a significant VA attribute and a prerequisite to parasocial relationship (Whang & Im, 2021). Parasocial relationships are gradually developed upon illusory human-to-human interactions (parasocial interactions) with the device (Horton & Wohl, 1956), creating a delusional interpersonal relationship such as friendship or of more intimacy. Hence, we suggest that VAs attributes such as social presence (**H1**), social attraction (**H2**), and perceived humanlikeness (**H3**) positively influence with parasocial relationship. Whang and Im (2021) established that consumers' decisions are significantly influenced by VAs product recommendations once a strong relationship is created, so we can posit that also the advertising value is positively influenced by parasocial relationship (**H4**). Grounded on Ducoffe's (1995, 1996) web advertising model, and by Martins *et al*. (2019), the informativeness (**H5**) is conceptualized as positively affecting advertising value, while irritation (**H6**) assumes a negative effect.

Methodology

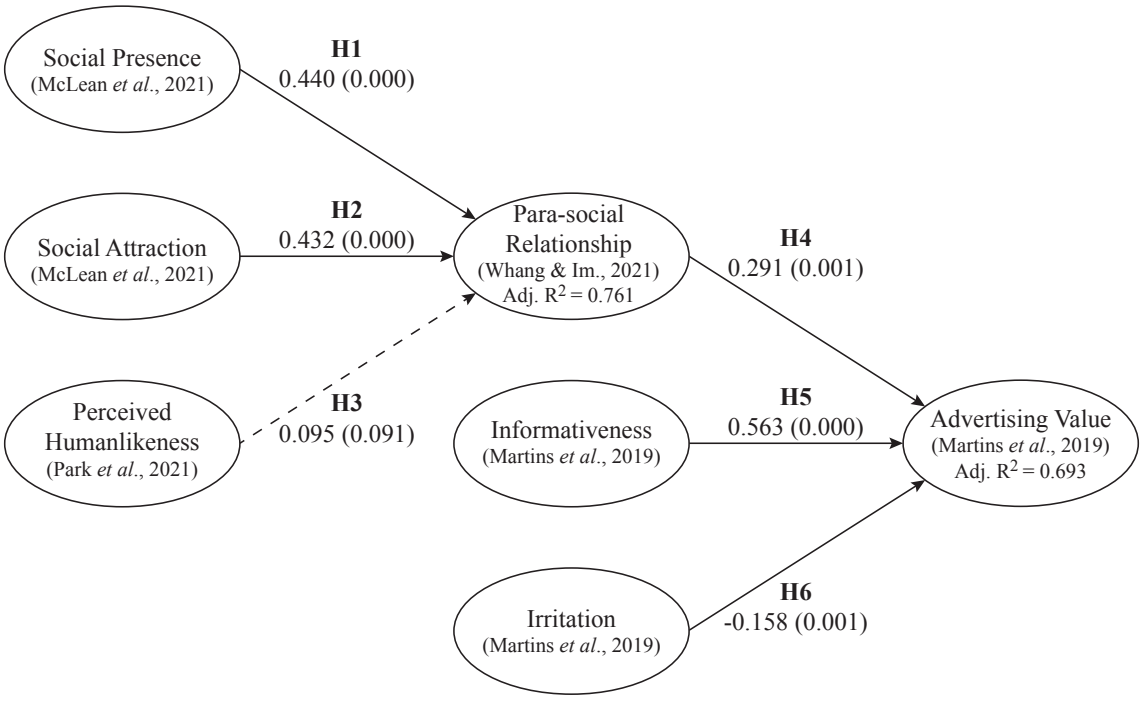
For this study, a total of 142 Amazon Mechanical Turk (MTurk) VA users volunteered for survey in exchange for a monetary compensation. All constructs' measurement scales were adapted from previous research (see Figure 1), and the hypotheses were tested using Partial Least Squares Structural Equation Modeling (PLS-SEM) on SmartPLS 3 (Hair *et al*., 2010).

The measurement model revealed itself as complying with the minimum thresholds, upon checking items' reliability (loadings higher than 0.7) and constructs' reliability (both Cronbach's alpha (CA) and composite reliability (CR) higher than 0.7) (Henseler *et al*., 2009). The convergent validity was evaluated by calculating the average variance extracted (AVE) being higher than 0.5 (Hair *et al*., 2010). For discriminant validity assessment, the Fornell-Larcker criterion (Fornell & Larcker, 1981), the cross-loadings comparison (Chin, 1998), and the Heterotrait-Monotrait ratio (HTMT) (Henseler *et al*., 2015) were analyzed. In

this case, the authors opted to also confirm the discriminant validity results by calculating the new measure HTMT2 proposed by Roemer *et al*. (2021). The measure HTMT2 allows items' loadings of a construct to be different from each other, which turns out as more likely to hold in most scales, while HTMT does not, hence providing more accurate estimations of the correlations between latent variables. All HTMT2 values are below the 0.90 threshold, which supports the discriminant validity condition. For model's goodness-of-fit assessment, the absolute measure Standardized Root Mean Square Residual (SRMR) was calculated obtaining a value of 0.07, hence considered a good fit (Henseler *et al*., 2014; Hu & Bentler, 1998).

To test the structural model, the bootstrapping technique of 5,000 subsamples was used to estimate the statistical significance of model's path coefficients (Martins *et al*., 2019). The path coefficients ($\hat{\beta}$) and *p*-values are included in Figure 1.

Figure 1. Conceptual model and structural model results.



Results

Social presence ($\hat{\beta} = 0.440$, $p < 0.001$), social attraction ($\hat{\beta} = 0.432$, $p < 0.001$), and perceived humanlikeness ($\hat{\beta} = 0.095$, $p > 0.050$) explain 76.1% of parasocial relationship, even though perceived humanlikeness stands as non-significant. As for the advertising value, it is explained in 69.3% by parasocial relationship ($\hat{\beta} = 0.291$, $p < 0.010$), informativeness ($\hat{\beta} = 0.563$, $p < 0.001$), and irritation ($\hat{\beta} = -0.158$, $p < 0.010$). Advertising value is negatively influenced by irritation revealing itself as an inhibitor of the former.

This study intends to develop a framework to better understand the perceived value of advertising through intelligent VAs, and how the human voice as the anthropomorphic cue is reflected on AI attributes, and how their relationship with advertising value is mediated by parasocial relationship. Practically, this research aims to give insights to practitioners on how to build effective advertising strategies using VAs. In the tourism context, it is important to enhance to what extent this assertive technology can be used to advertise and recommend tourist destinations only voice-based, that mostly rely on visual cues to attract consumers.

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