

Conceptualizing the Role of Credibility in the Relation between Awareness of Falsity and Intention to Donate in Non-profit Advertising

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https://www.behance.net/gallery/58647517/Communication-Design-Portfolio-by-Bingui-Li?isa0=1&log_shim_removal=1.

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ABSTRACT

With the emergence and rapid development of artificial intelligence (AI), it is still unclear which type of image between AI-generated images and real images made by human in non-profit advertising could motivate stronger intention to donate. Awareness of falsity plays a key role in differentiating between AI-generated images and real images. The present article aims to collect different streams of literature and develops a conceptual model proposing the underlying mechanisms of awareness of falsity's effects on intention to donate by relating it to credibility as the possible mediator. It further outlines how the proposed conceptual model could be tested and employed by using AI-generated images in non-profit advertising as stimuli.

Keywords: AI (Artificial Intelligence); advertising effectiveness; awareness of falsity; credibility; intention to donate.

INTRODUCTION

Artificial Intelligence (AI), as a set of the art-of-the-state technologies, offers the possibilities of solving problems, facilitating decision-making, and carrying out tasks connected with human beings and their intelligence, through machine learning and other computational operations (Qin and Jiang, 2019; Copeland, 2021). The contemporary notion of advertising and advertising content has been challenged by recent technological advancements, within which AI is most prominent (Campbell et al., 2020; Li, 2019; Qin and Jiang, 2019). Since AI makes it automatically feasible to discover special insights, create ads, and impact the product's evaluation and consumers' intention to buy, more competent, personalized, targeted, and intelligent advertising has been easier to make (Chen et al., 2019; Deng et al., 2019; Li, 2019). AI is expected to continue to significantly change advertising and marketing and play a dominant role in creating advertising messages (Campbell et al., 2022; Whittaker et al., 2020; Sabharwal, Sood and Verma, 2022). The effectiveness of advertisements has always been a leading research focus in advertising research (Eisend and Tarrahi, 2016; del Barrio-Garcia et al., 2020; Shumanov et al., 2021).

In the coming years, artificial intelligence (AI) is predicted to revolutionize advertising and marketing, and further dominate the era of advertising messages (Campbell et al., 2021), because of high-level similarities between AI-generated images and real images (Arango, Singaraju and Niininen, 2023). Additionally, given the huge cost-efficiency of AI-generated images (Campbell et al., 2021) and the combination of real and fantastic worlds, AI-generated images might be used preferentially than real images in the future. Therefore, overall considering the huge change AI brings to advertising (Bullock, 2020; Wu, 2021), there are more and more non-profit advertisers using AI to create advertisements customers urgently need, because of AI's strengths in advertising creation, like easy-accessibility, easy-operation

and easy-output working mode (e.g., Vartiainen and Tedre, 2023), through some widely recognized text-to-image generation tools, (e.g., Dall-E, Midjourney and Stable Diffusion). Text-to-image generative AI, in the form of the creation of visual images from text prompts, is currently state-of-the-art algorithmic art (Vartiainen and Tedre, 2023). Based on the prompt offered by the user, although AI creates a completely unique image that has not been previously seen (McGeehan, 2022), it is difficult to differentiate AI-generated images from real images (Elgammal et al., 2017) due to the high levels of verisimilitude from AI-generated advertisements, which have similar effects from virtual or augmented reality, makes it easier to give consumers vivid imagination in a special situation (Bogicevic et al. 2019; van Laer, Feiereisen, and Visconti 2019). Given that awareness of falsity, reflecting the presented reality, is the fundamental element of consumer's responses to AI-generated images (Campbell et al. 2021), it remains unclear how AI-generated images in non-profit advertising influence donors' intention to donate. Credibility of AI advertising decides consumers' reception and adoption (Roy et al., 2017; Huh et al., 2020) and motivates donors' intention to donate (Kashif et al., 2015). Besides, the perceived reality of images contributes to consumers' credibility evaluations for advertisements (Fabrikant, and Çöltekin, 2009). Therefore, it could be argued that credibility becomes the potential mediator of the underlying mechanism of awareness of falsity affecting intention to donate. In the present article, we collect different streams of literature and integrate them into a new conceptual model revealing the underlying mechanisms of awareness of falsity's effects on intention to donate by relating it to credibility as the possible mediator. It further outlines how the proposed conceptual model could be tested and employed by using AI-generated images and real images.

THEORETICAL OVERVIEW AND LITERATURE SYNTHESIS

The Role of AI in Advertising

AI is defined as the capability of algorithmic digital computers, computer-controlled machines, or robots which carry out tasks generally associated with intelligent beings (Panchiwala and Shah, 2020; Parekh, Patel, Patel and Shah, 2020; Shah, Patel, Sanghvi and Shah, 2020; Patel, Shah and Shah, 2020). In modern-day advertising, AI plays a pivotal role (Panchiwala and Shah, 2020; Parekh, Patel, Patel and Shah, 2020; Shah, Patel, Sanghvi and Shah, 2020; Patel, Shah and Shah, 2020). In recent years, there has been a radical evolution in the advertising ecosystem (Donthu et al., 2022a; Donthu et al., 2022b). Rodgers (2021, 2) defined AI advertising as "brand communication that employs machine functions to learn and perform tasks aimed at persuasion, using inputs from humans, machines, or both". AI advertising could be viewed as subset of advertising that integrates cognitive science, computer science and advertising (Rodgers, 2021). AI technologies are increasingly used in tasks, including automated market segmentation and targeting, the creative development of ad, and optimization of ad investments (Kietzmann, Paschen, and Treen, 2018). **Figure 1** shows entire three development stages of media channels and manipulation tools. From the perspective of media channels, advertising has prominently shifted from traditional channels (e.g., newspapers, billboards, radio and television) to all kinds of new media and platforms, as technology of digital media upgrades (Ford, et al., 2023). From the perspective of manipulation tools, the development of advertising manipulation techniques has experienced three stages: manual analog tools (e.g., lighting and makeup), interactive digital tools (e.g., Photoshop and computer animation) and AI-driven synthetic tools (e.g., deepfakes and GANs), which are able to generate completely new content, such as individuals and objects that do not exist and have never existed (Campbell et al., 2022). It is common that the co-existence of multiple techniques is used in creative processes (Campbell et al., 2022). Although recent technological

advancements have sped up the combination of AI with many tools, apps and areas we use in daily life, the world of advertising may be one of the fields most deeply impacted by the transformative AI technology (Huh, Nelson and Russell, 2023).

Figure 1 near here.

Awareness of Falsity and Credibility

The awareness of falsity, which is defined as presented false reality in an ad, is a basic element of consumers' responses to AI-generated images (Campbell et al. 2021). Specifically, only if the world presented in an ad is different from actuality, even though the world is precisely depicted or created through artificial means, the reality presented in an ad can be false (Campbell et al. 2021). It has been evidenced that consumers' credibility for images relies on their degree of realism (Fabrikant, and Çöltekin, 2009). Extant research has shown that when advertisements present high levels of verisimilitude, it generally becomes easier for consumers to imagine themselves in a special situation, with similar effects from virtual or augmented reality (Bogicevic et al. 2019; van Laer, Feiereisen, and Visconti 2019). In contrast, there are negative attitudes toward falsity in ads among consumers (Held and Germelmann, 2018). Campbell et al. (2021) explored the effects of ad falsity on the persuasive effectiveness of AI-generated advertisements. When consumers process information and distrust in communications, perceived falsity brings about negative responses, including a defensive approach, which further harms the overall persuasiveness of an advertisement (Boush, Friestad, and Wright 2015; Darke and Ritchie 2007).

Credibility and Intention to Donate

Brand credibility refers to “the extent to which consumers have trust in brand of companies' trustworthiness and expertise” (Erdemet al.,2002, cited in Pratono and Tjahjono, 2017).

Turning to the non-profit organization, perceived credibility, which has been extensively studied in the context of online transactions (Castillo et al., 2011), is defined as the believability of a donation project judged by potential funders (O'Keefe, 2015). Pratono and Tjahjono (2017) also made a definition for customer's trust that means a belief about the reliability of a business organization, where fund has been raised for a charitable donation. Donors trusting the organization to perform effectively is a result of the progress towards achieving its goal (Powers and Yaros, 2013). The exchange in positive financial and social outcomes over time is able to increase consumer's trust (Changet al., 2015). According to previous studies, despite most of the true messages posted on donation platforms, occasionally there is misinformation and false rumors spread on such platforms (Castillo et al., 2011). This makes potential funders often rely on their assessment of the project's credibility to decide whether to make donations (Greenberg and Gerber, 2014). Whether people's donation will be abused for another purpose is what they who fund in charitable crowdfunding are concerned about, which results in an outcome that individuals will evaluate whether a project is credible before donating money (Liu, Suh and Wagner, 2017). Donors expect that donations are going to help people, and not going toward paying for lunch for the employees of the charity, which amplifies the concern to non-profit organization because trust becomes main reason to donate money (Kashifet al., 2015). It is likely to infer beliefs through the content of emotional ad and related feelings and evaluations it generates (Yoo and MacInnis, 2005). It has been also implied in considerable research that ads perceived as convincing and believable could give viewers more positive attitudes toward ads (e.g., Schlinger, 1979; Plummer, 1971; Aaker and Norris, 1982), such as intention to donate elicited by credible non-profit advertisement.

Formation of Conceptual Model

Concerning the links among awareness of falsity, credibility and intention to donate based on the above various streams of literature, it could be proposed that the awareness of falsity influences intention to donate through credibility. **Figure 2** shows the conceptual model of the present research. Awareness of falsity tends to reduce consumers' credibility for non-profit advertising (Boush, Friestad, and Wright 2015; Darke and Ritchie 2007), in turn lowering intention to donate (Liu, Suh and Wagner, 2017; Kashifet al., 2015). In this article, to manipulate awareness of falsity, three groups of images in non-profit advertising are viewed as stimuli (One group is real images as control group, one group is AI-generated images attached with a tag "AI-generated image", and another group is AI-generated images not attached with a tag (Arango, Singaraju and Niininen, 2023). Therefore, it could be hypothesized that AI-generated images with a tag indication in non-profit advertising would motivate less intention to donate through lower level of credibility, whereas AI-generated images in non-profit advertising without a tag indication would elicit more intention to donate through higher level of credibility. Real images in non-profit advertising would motivate the most intention to donate through the highest level of credibility than AI-generated images with or without a tag indication in non-profit advertising. If the hypotheses hold, it is possible to make non-profit advertisers realize the importance of using real images in advertisements, especially given the expectation that future regulations will require advertisers to be transparent on their use of AI-generated images.

Figure 2 near here.

Test of Conceptual Model

During the future experiment, 210 participants will be recruited through Prolific platform. **Figure 3** shows total nine stimuli divided into three groups (real images, AI-generated images

with AI-generated tag and those without it). To create sufficient variation in the ads, every group involves three ads with different levels of valence (positive, neutral and negative). Audience's perceptions toward the portrayed person are affected by specific face-related features, like facial expressions, which shape credibility judgements (Ert and Fleischer, 2020; Krumbhuber et al., 2007). Although much research (Bagozzi and Moore, 1994; Small and Verrochi, 2009) has been aimed to confirm which valence of facial expression (e.g., sadness and happiness) is more persuasive in motivating donations or raising intentions to donate, extant results of related studies are mixed. Thereby, the present article would bring in valence as the standard of stimuli's variation, to contrast different levels of valence's effects on intention to donate. Participants will be randomly exposed to one group of three-group stimuli to complete a between-subjects experiment. To manipulate awareness of falsity (Arango, Singaraju and Niinen, 2023), participants would randomly evaluate one group of three-group non-profit advertisements (total nine): One group including real images as control group, one group including AI-generated images with tags "AI-generated image", and another group including AI-generated images without tags "AI-generated image". The visual content from two AI-generated groups are the same excluding the presence of tag. AI-generated images in two groups are all made through Mid-journey's combination of "text to image" and "image to image" technics based on the selected images from NAPS picture database (Marchewka et al., 2014). AI-generated stimuli are extremely similar to the sample selected from NAPS. Next, participants will rate credibility of portrayed character(s) in ad images of one group stimuli (total three), on bipolar scales of images (Ohanian, 1990; Hassan and Jamil, 2014), and rate credibility of the non-profit brand UNICEF (Liu, Suh and Wagner, 2018; McCroskey and Teven, 1999). Lastly, intention to donate could be also rated on 7-point self-report scales ("To what extent do you want to make a donation for UNICEF after viewing the above non-profit ad?"; 1=not very probable, 7=very probable; Pham and Septianto, 2020), and attitudes towards

the non-profit brand UNICEF on three 7-point bipolar items (bad/good, negative/positive, unfavorable/favorable; MacKenzie and Lutz, 1989; Simmons and Becker-Olsen, 2006; Chung and Lee, 2019).

Figure 3 near here.

CONCLUSION

Despite of fast development of AI technics, the relation between AI-generated images human in non-profit advertising and intention to donate is still unclear. Falsity from AI-generated images detach and distort the reality from real images, undermining the notion of credibility and truth, as the simulation for real images (Gross, 2024). Thereby, in the present article, we introduce the awareness of falsity, an important role of consumer's response to AI-generated images (Campbell et al., 2021), as the independent variable. Next, different streams of literature are collected together to find the links among awareness of falsity, credibility and intention to donate, which promotes the form of a new conceptual model, where credibility may be a potential mediator of the underlying mechanism in the relation between awareness of falsity and intention to donate. With specific testing methods pointed out, the data and results will be available at the time of the conference. If the results conform to the hypotheses that the disclosure of AI-generated images in ads would decrease credibility, how we could create and implement AI-powered advertising in a responsible, trustworthy and ethical way (Huh, Nelson and Russell, 2023) becomes the part of future advertising practice.

It is possible that the awareness of anti-misinformation or AI fraud (Chesney and Critron, 2019) is the underlying cause undermining trust.

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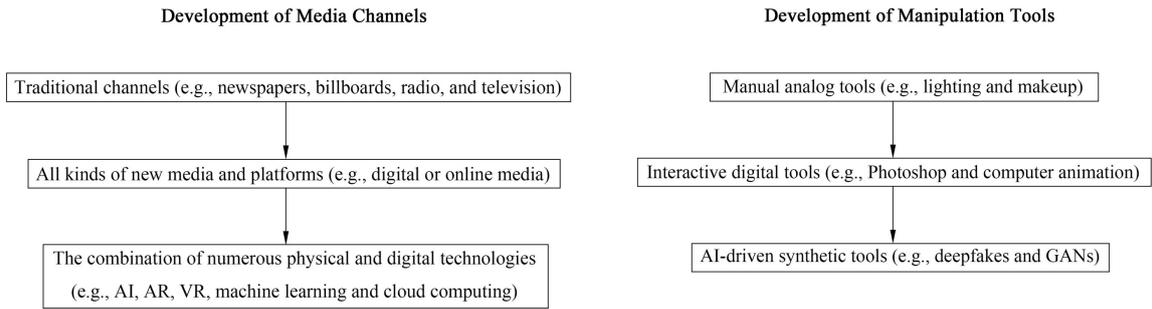


Figure 1. Development of Media Channels and Manipulation Tools in Ads

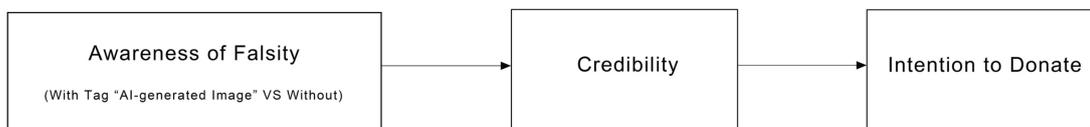


Figure 2. Conceptual Model

	Positive Valence	Neutral Valence	Negative Valence
Real Image selected from NAPS in non-profit advertising			
AI-generated Image made through Midjourney in non-profit advertising (with tag "AI-generated Image")			
AI-generated Image made through Midjourney in non-profit advertising (without tag "AI-generated Image")			

Figure 3. Stimuli Collection of Real Images, AI-generated Images with and without a Tag in

Non-profit Advertising based on Valence (Total Nine)