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Source Credibility of Intelligent Agents

Examining the Effects of Conflicting Information on Decision Satisfaction

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Recent advances in deep learning and natural language processing have prompted broader applications of artificial intelligence (AI). These techniques use a large amount of data and sophisticated algorithms to train intelligent agents through, for example, classifying data, establishing logic, or finding patterns. Intelligent agents, such as Alexa, Google, or Siri, can take the form of personal assistants and help individuals manage their daily tasks and activities. Such intelligent agents can also provide more sophisticated recommendations, such as product recommendations to online shoppers or oncology treatment recommendations to physicians. Although the future of AI is promising, there are challenges and concerns that need to be addressed. For instance, developers strive to increase the credibility of intelligent agents. It has been shown that giving an intelligent agent human-like qualities can improve credibility. Yet, little is known as to which specific factors increase source credibility of intelligent agents. Furthermore, research has yet to examine the effects of decision-making when human experts and intelligent agents provide conflicting recommendations.

Applying Source Credibility Theory (SCT) as the theoretical framework of this study, we propose an exploratory research model that examines how individual decision-makers respond to conflicting information received from human experts and intelligent agents. As SCT suggests particular attributes of an information source will enhance the credibility of the source, we plan to elucidate such attributes for intelligent agents. While SCT was created to examine attributes of humans, we expect that many of these attributes will apply to intelligent agents as they become more 'human.' We plan to examine three research questions: 1) Which characteristics of intelligent agents form credibility? 2) When individuals receive conflicting information, do they place greater credibility on human experts or intelligent agents? 3) How do conflicting recommendations, between human experts and intelligent agents, influence decision satisfaction?