# Specialization builds trust among web users

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(PhysOrg.com) -- If you name it, they will use it, according to a team of international researchers who investigated how people perceive the trustworthiness of online technology. In an experiment, participants said they trusted websites, recommendation-providing software and even computers labeled to perform specific functions more than the same Internet tools with general designations, according to S. Shyam Sundar, Distinguished Professor of Communications, Penn State.

"In general, the attribution of specialization can increase the credibility of a product or any kind of object," Sundar said. "It's really how the human psyche works."

Researchers randomly assigned a group of 124 undergraduate students to buy wine with websites, recommendation agents and computer monitors that were labeled either as specialized wine purchasing-technologies, or as general e-commerce technologies.

The specialized tools differed from their generalized counterparts only in the way they were labeled and in specific on-screen cues during the experiment, said Sundar, who worked with Yoon Jeon Koh, director of market intelligence, Economics and Management Research Lab, KT Corp., Republic of Korea. For instance, the search engine providing product recommendations was labeled "wine agent," while the general recommendation agent was named, "E Agent."

Participants who answered a questionnaire following the experiment reported that they trusted the specialized technology significantly more

than they trusted general websites, recommendation agents and computers.

Credibility appears to increase when participants used more than one specialized tool -- or layer -- at the same time for the wine-buying task. For example, Sundar said that the participants trusted a website more if it features a specialized recommendation agent.

"It's a cumulative interaction," said Sundar. "When at least two out of the three layers of online sources were labeled specialist, there was an increase in the trust and credibility among the users." The researchers report their findings in the December issue of the International Journal of Human-Computer Studies.

Sundar suggested that mental shortcuts -- heuristics -- could explain why users attribute expertise to specifically-labeled e-commerce tools. People often rely on these shortcuts when they make decisions on media sources.

"Basically, cognitive heuristics are mental shortcuts that we use to make judgments that lead to decisions," Sundar said. "For example, we see a long essay, we immediately think that it is a strong essay. This is the 'length equals strength' heuristic. Similarly, we tend to quickly believe statements made by experts or specialists because we apply the 'expertise heuristic,' which says that experts' statements can be trusted."

Researchers also tracked the time that users spent making purchases. While researchers expected that multiple layers of specialization would speed up decision-making time, the results revealed that users spent less time when there was a contrast between the source layers. For example, the quickest decisions were made by participants who used a specialized website on a general computer.

These results seem counter to product development trends in the e-commerce industry. More companies are developing multi-purpose technology to suit a range of functions.

"Lately, in the industry, a lot of effort is being directed to produce convergence, creating devices that are trying to do everything for everyone," said Sundar. "For example, cell phones are promoted as doing so many things -- from making calls to navigating the web."

E-commerce developers may also find that customers trust transactions and recommendations made on specialized websites and by recommendation agents, rather than multi-purpose portals.

Sundar said the experiment is rooted in earlier research on television networks and channels that specialize in certain content areas. In a 1996 experiment, participants said that entertainment clips on TV sets designated as entertainment televisions were more entertaining. Likewise, viewers said that news footage on "news television sets" was more newsworthy.

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