

User control and transparency are key to trusting personalized mobile apps

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As concerns about privacy increase for people using mobile apps, users' trust and engagement may hinge on perceptions about how the app uses their data and whether it seeks user input before delivering personalized

services, according to researchers. However, their reactions may also depend on how familiar a user is with technology, they added.

In a study of a prototype app for recommending eco-friendly stores, users considered an app more trustworthy and easier to use if they felt they were consulted about the distance and nature of the stores they prefer, a process called overt personalization. Usability of the app was dampened when the personalization was covert, when it recommended stores without first asking their preferences.

But, it is not always feasible to consult app users because it would interrupt them and require them to make too many choices, said the researchers. One solution is to make sure that users have a clear understanding of how the app is using their data.

According to the researchers, higher perceived [transparency](#)—whether users recognize that the app is clearly conveying how and why it is collecting the data—is associated with better product involvement and user engagement. Transparency can also mean lower [privacy concerns](#).

"Providing details about how the app is going to do things, such as how it will use your information, how it will store the data and how it's going to delete that information, may reduce some of the privacy concerns and the feeling of being creeped out by personalized offerings," said S. Shyam Sundar, distinguished professor of communications and co-director of the Media Effects Research Laboratory.

Tsai-Wei Chen, a user experience designer at Optum, who worked with Sundar, said that the perception of control can lead to a series of positive user reactions.

"If you give people a perception of control, they trust the app more, and, the more they trust it, the greater their involvement in the app and the

more positive attitudes," said Chen. "Their privacy concerns also went down and they had greater engagement with the app."

The researchers, who presented their findings at the CHI Conference in Montreal, found a connection between a user's technological savvy and his or her ability to perceive overt personalization and information transparency.

"People who were more familiar with using technology—power users—could tell the difference between overt and covert personalization," said Sundar. "They better recognized the value of information transparency and felt that it made up for perceived lack of overtness in personalization."

The researchers suggest that because users' familiarity with technology may influence how they experience features, such as privacy controls, developers should have a clear understanding of their customers' expertise and limitations when designing an app.

Developers should also make cues about information usage more obvious for casual tech users, they added.

"For users who have some tech expertise, it's easier to incorporate covert personalization, but make sure the transparency cues are apparent and easy to understand," said Chen. "For users with lower tech expertise, you need to work hard to convey overt personalization and information transparency, or find other features to increase their trust."

For the study, the researchers recruited 302 participants to use five different versions of an app prototype, called GreenByMe, that recommended local eco-friendly stores. The five versions covered the different conditions of the experiment, including covert personalization, overt personalization, high transparency, low transparency, and a control

condition.

In the overt condition, the app displayed selection menus. To test transparency, in the high transparency condition, a screen contained an explanation on how the [information](#) would be used.

Provided by Pennsylvania State University

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