# How to make online recommendations work better

October 3 2019, by Matt Weingarden

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Researchers from Erasmus University published a new paper in the *Journal of Marketing* that explores online recommendations and their effectiveness, providing marketers with tools to maximize this important

engagement tool.

The study, forthcoming in the November issue of the *Journal of Marketing*, is titled "Making Recommendations More Effective Through Framings: Impacts of User- Versus Item-Based Framings on Recommendation Click-Throughs" and is authored by Phyliss Jia Gai and Anne-Kathrin Klesse.

Algorithm-based recommendations are everywhere. Imagine you are browsing news articles on the website of The New York Times. You see a piece in the "Science" section, find it interesting, click on the title, and start reading. Once you finish the article, the webpage automatically generates other article recommendations for you so that you extend your engagement with the platform's content. The recommendations are branded with the tagline: "More in Science," the section you have already been reading.

While most companies provide explanations for why customers receive recommendations, they differ in the specific strategies they adopt. Some companies, like the aforementioned The New York Times, emphasize that recommendations are item-based: That is, they are based on common attributes across products (e.g., "More in Science" by The New York Times, and "Similar to [what you have listened to]" by Spotify). In contrast, other companies highlight that their recommendations are user-based by focusing on the overlap in customer preferences (e.g., "Customers who viewed this item also viewed..." by Amazon and "Customers also watched..." by Netflix). Importantly, companies can explain the same recommendation as either item-based or user-based, because today's recommender systems frequently adopt a hybrid approach that accounts for both common attributes across products and common preferences across customers.

The study investigates which of the two explanations (hereafter referred

to as item-based and user-based framings) is more effective at triggering clicks on a recommendation. The research team suggests that item-based and user-based framings differ in terms of the information they provide to customers regarding how a recommendation is made. Both framings tell customers that the recommendation is based on a product matching of the focal item that customers have shown interest in to the recommended item: Item-based framing matches products by their attributes, whereas user-based framing matches products by their consumers. Critically, user-based framing also suggests to customers that the recommendation is based on taste matching among users who shared interested in the focal item. By providing information on taste matching beyond product matching, user-based framing serves as a sort of "double guarantee" for customers liking the recommended product.

To test whether user-based framing outperforms item-based framing in terms of recommendation click-throughs, the researchers conducted two field studies within WeChat, the top social media app in China. They collaborated with a media company that publishes popular science articles and summaries of academic research on WeChat and embedded a pair of recommendations at the end of each day's focal article. One article was recommended using user-based framing and the other using item-based framing. Gai explains that "In both studies, user-based framing increased the click-through rates of recommended articles compared to item-based framing. When asked about their understanding of the two framings, subscribers responded that they see that both suggest product matching as the basis for recommendations, but that user-based framing also signals taste matching. This confirms that user-based framing provides additional information."

"However, customers do not always see taste matching as successful" adds Klesse. "When taste matching is perceived as inaccurate, user-based framing is no longer more advantageous than item-based framing or even becomes disadvantageous." One critical factor that contributes to

the perceived success of taste matching is how much experience customers already accumulated within a consumption domain. More experienced individuals tend to see their own tastes as idiosyncratic. As a result, it is more difficult for them to believe that their tastes can be accurately matched with other people's tastes based on a single focal item. Another critical factor is the presence of other users' profiles. Companies sometimes display the information of other users who are interested in the recommendation, but this information backfires when it indicates to customers that they are different from other users. Dissimilarity cues, such as age and gender, make people infer that their tastes diverge from other users and lead to customers avoiding the user-based recommendations.

These novel findings have relevance for companies that use product recommendations. The research suggests that the explanation matters for why customers see a recommendation. Importantly, adapting the explanation for a recommendation comes with almost zero cost and, thus, constitutes an effective tool that can help companies maximize the return on recommender systems. Importantly, the study highlights situations in which user-based framing is more effective than item-based framing and in which situations it becomes disadvantageous. By leveraging these findings, managers can tailor the framing of their recommendations for different customers and products and thereby boost click-through rates.

**More information:** Phyliss Jia Gai et al, Making Recommendations More Effective Through Framings: Impacts of User- Versus Item-Based Framings on Recommendation Click-Throughs, *Journal of Marketing* (2019). DOI: 10.1177/0022242919873901

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