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A picture is worth a thousand calories: Ordering food on a touch screen can influence choices

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ANN ARBOR—Order a meal these days and there's a good chance you're using some kind of electronic device—a smartphone, tablet, computer or even a touch screen at the restaurant.

As so-called "i-ordering" becomes more common, it raises a question for restaurant owners, researchers and policymakers: Does the kind of interface used by customers affect their food choices?



New research at the University of Michigan shows it can.

Aradhna Krishna, professor of marketing at Michigan's Ross School of Business, and co-authors Hao Shen and Meng Zhang of the Chinese University of Hong Kong found that an iPad-like touch interface leads people to make more hedonistic food choices over more healthful ones.

A series of five studies suggests that when one sees a self-indulgent food on a touch screen, one has automatic imagery (also called mental simulation) of reaching out and picking it up. The touch screen is

consistent with this naturally occurring mental simulation and facilitates it—increasing the choice of the hedonistic food.

In other words, the act of reaching out to touch a picture of your food choice on a touch screen is more consistent with the natural mental simulation that occurs when one picks up that food—versus using a mouse on a laptop or a tablet with a stylus—making it more likely for people to choose cheesecake over fruit salad.

The results have immediate industry relevance as a number of restaurant chains such as Chili's, Applebee's, Sakae Sushi and Uno Chicago Grill have rolled out touch screens for customer orders at some locations.

"Humans act through mental simulation, even with the most mundane tasks such as picking up their glasses from their desk," said Krishna, the Dwight F. Benton Professor of Marketing. "When we see things that naturally attract us, there is an urge to reach out and grab for them. We find that when you touch the screen to order food, this mental interaction leads you to a more emotional choice rather than a more cognitive one."

Krishna and her co-authors first tested their hypothesis by having study participants choose either a cheesecake or a fruit salad using an iPad or a desktop computer. They found 95 percent of those using the iPad ordered cheesecake versus 73 percent using the desktop computer.

They ran other experiments that measured results between iPads with touch screens and those with a stylus, iPads with a mouse, and desktops. They consistently found the pleasurable food choice more strongly associated with a touch interface than with any other kind of interface.

Another study showed that if the order button was placed far from the picture, so that even on a touchscreen the study participant was not touching the food when ordering it, then the touch screen effect no longer held true.

"All of this points to the driver being the mental simulation of reaching out to grab something with your hand," Krishna said. "This has obvious implications for the restaurant industry. When Chili's ran a pilot to use table touch screens at some restaurants, dessert and appetizer orders increased. We can't say this direct-touch effect is the reason, but it can be one of the factors."

She notes there also are societal implications, as customers and policy officials should be aware that the method of ordering can push them toward higher-calorie food.

The research, "Computer Interfaces and the "Direct-Touch" Effect: Can iPads Increase the Choice of Hedonic Food?" will be published in the Journal of Marketing Research.

More information:

Study: Computer Interfaces and the “Direct-Touch” Effect: Can iPads Increase the Choice of Hedonic Food?

Aradhna Krishna

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