Getting in Touch With Your Thinking Style: How Touchscreens Influence Purchase

Ying Zhu, University of British Columbia, Canada
Jeffrey Meyer, Bowling Green State University, U.S.A

We demonstrate that consumers’ purchase intentions toward utilitarian and hedonic products differ, depending on the device used. When consumers use a touchscreen device (vs. a desktop), purchase intentions are higher for hedonic products but lower for utilitarian products. Situation-specific thinking style is shown to be an underlying mechanism.

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EXTENDED ABSTRACT
Affordable, easy-to-use touchscreen technology dramatically alters human–machine interfaces, and consumers have readily accepted this dramatic change, as indicated by the skyrocketing demand for touchscreen devices. Predictions indicate that the touchscreen market will experience compound annual growth rates of 41% from 2013 to 2018 and reach a value of $51.77 billion by 2018 (Research & Markets, 2013). The prevalence of touchscreen devices sends a clear signal: Consumers enjoy tactile communication tools.

These nearly ubiquitous touchscreen interfaces spawn a new stream of questions for academia and industry. The use of touch potentially represents a new influence on behavior and consumption decisions, because consumers use their fingers to complete shopping processes; to zoom in and out to manage photo albums; and to tap, drag, slide, swipe, pinch, and rotate while playing games on touchscreen devices. Their intuitive interfaces also make touchscreens easy to use. Although this phenomenon is observable, the rapid growth of touchscreen usage has not been accompanied by academic theory. The way tactile uses on touchscreens affect consumer behavior and decision making in various activities is uncertain, suggesting the need for advanced tactile research.

To address this gap, the current study investigates touchscreen devices and the underlying psychological drivers that contribute to consumers’ responses to products presented on different devices. We identify differential effects of device types on purchase intentions, such that consumers are more likely to purchase hedonic products on handheld touchscreen devices but favor utilitarian products when using desktop computers (study 1). We then validate situation-specific thinking style (Novak and Hoffman 2009) as an underlying mechanism that contributes to the differences between the devices. Specifically, compared to desktop users, touchscreen users apply a more experiential but less rational thinking style (study 2). We also demonstrate that these situation-specific thinking styles mediate the relationship between device type and purchase intentions, and this mediation is moderated by the nature of the product (study 3).

STUDY 1 DEVICE TYPE AND PRODUCT NATURE
Ninety-nine students from a North American university (41% female; M_age = 19.6) participated in exchange for course credit. We randomly assigned participants to one of four conditions in a 2 (device type: handheld touchscreen device vs. desktop computer) × 2 (product nature: hedonic vs. utilitarian) between-subjects experimental design, with device type and product nature as independent variables and purchase intentions as the dependent variable.

An analysis of covariance revealed a significant interaction effect between device type and product nature on purchase intentions (F(1, 95) = 11.82, p = .001). Most importantly, as predicted by H1, the simple effects revealed that, participants have significantly higher purchase intentions for hedonic products when buying on touchscreens than on desktops (M_touch = 5.26, M_desk = 4.17; p = .012) and significantly higher purchase intentions for utilitarian products on desktops than on touchscreens (M_desk = 5.53, M_touch = 4.53; p = .024).

STUDY 2 DEVICE TYPE AND THINKING STYLE
Undergraduate students at a North American university (N = 90; 37% female; M_age = 19.6) participated for course credit. We use a single factor (device type) between-subjects design, with device type as the between-subjects independent variable, thinking style as the dependent variable. An ANOVA analysis revealed a significant effect of device type on experiential thinking style (F(1, 88) = 9.47, p = .003). Specifically, touchscreen users exhibited a significantly higher experiential thinking score than desktop users (M_touch = 3.70 vs. M_desk = 3.22; p = .003). We again used an ANOVA analysis, revealing a significant effect of device type on rational thinking style (F(1, 88) = 10.62, p = .002). Desktop users exhibited a significantly higher rational thinking score than touchscreen users (M_desk = 3.77 vs. M_touch = 3.35; p = .002).

STUDY 3 DEVICE TYPE, PRODUCT TYPE, AND THINKING STYLE
Study 3 mirrors the study design of Study 1. It used a 2 (device type: handheld touchscreen vs. desktop computer) × 2 (product nature: hedonic vs. utilitarian) between-subjects design, with device type and product nature as independent variables and purchase intentions as the dependent variable. Undergraduate students at a North American university (N = 100; 40% female; M_age = 19.4) participated for course credit.

A two-way ANOVA revealed a significant device type and product nature interaction (F(1, 96) = 9.46, p = .003). The results closely resembled those of study 1. Importantly, simple effects tests of the device type within product nature showed a significant difference for both hedonic and utilitarian products. Specifically, participants are more likely to purchase hedonic products when on a touchscreen than on a desktop (M_touch = 4.95, M_desk = 4.01; p = .039). The results also showed participants are more likely to purchase utilitarian products on a desktop than on a touchscreen (M_desk = 4.22, M_touch = 3.25; p = .026).

GENERAL DISCUSSION
Traditional touch research focuses on the functionality of touch and haptic information collected through fingers when consumers touch the surface of products directly (e.g., Peck & Shu, 2009). When using a touchscreen device to shop online, consumers cannot touch the product, yet touch remains an active part of their information search and facilitates purchase processes. In such a context, touching performed by fingers substitutes for traditional tools (e.g., mouse, keyboard). The functionality of touch as an evaluation tool during consumer decision making has received some academic attention (e.g., Krishna, Elder, & Caldara, 2010; Peck & Childers, 2003a, 2003b), but non-product touching remains an underexplored research area.

This research addresses the gap in tactile research by hypothesizing and testing different tactile effects of traditional computers and touchscreen devices on consumers’ purchase intentions toward products of a certain nature (e.g., hedonic vs. utilitarian). We also reveal that handheld touchscreen devices are more likely to evoke an experiential thinking style, whereas desktop computers align better with a rational thinking style. Finally, we show that situation-specific thinking style mediates the impact of the two types of devices on consumers’ purchase intentions, and this mediation effect is moderated by the nature of the product.
REFERENCES