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Research Spotlights

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Research Spotlights

Research Commentary: Informing Privacy Research Through Information Systems, Psychology, and Behavioral Economics: Thinking Outside the “APCO” Box (p. 639)

Tamara Dinev, Allen R. McConnell, H. Jeff Smith

Individuals often engage in privacy-related behaviors that appear to defy rational explanations. For example, people may make spur-of-the-moment decisions to provide personal information to online websites because they desire immediate access to special collections of merchandise, to privileged information or, even, to lewd materials. Frequently, people who make such decisions later regret not spending more time thinking about the consequences of their actions. Past researchers have struggled to explain these behaviors that seemingly contradict existing neo-classical economics-driven theories of cost-benefit analysis and rationality of human behavior. The current authors propose an extended model for such decisions that includes not only “high-effort” cognitive processes such as those associated with careful consideration of costs and benefits but also “low-effort” processes. The latter, not incorporated in existent frameworks, account for how privacy behaviors can be driven by emotions and heuristic cues. The authors note that future research should incorporate these factors into privacy work, and they describe implications for individuals, policymakers, and organizations that adopt this more comprehensive perspective. In particular, managers are cautioned to be careful in implementing applications that take advantage of factors associated with low-effort cognitive processing, as a backlash may follow.

Discriminating IT Governance (p. 656)

Amrit Tiwana, Stephen K. Kim

As information technology (IT) grows into firms’ single largest capital expense (\$4 trillion annually), they increasingly demand that IT be strategically responsive yet economical. Yet only a few firms are consistently adept at using IT to strategically outdistance rivals. Why do only some firms excel at exploiting IT strategically yet economically? This study develops the idea that the “secret sauce” of strategically impactful IT investments is how they are governed. We show in this study of 105 U.S. firms that IT apps and IT infrastructure must

be governed differently. Who makes what decisions about them must be matched selectively with what “peripheral” knowledge the IT unit and line functions have of each others’ domain. Such discriminating IT governance bolsters IT strategic agility.

The insight for management: In governing IT apps and IT infrastructure, having greater technical knowledge in line functions but greater business knowledge in the IT unit respectively enhance a firm’s IT-enabled strategic agility.

Embarassing Exposures in Online Social Networks: An Integrated Perspective of Privacy Invasion and Relationship Bonding (p. 675)

Ben C. F. Choi, Zhenhui (Jack) Jiang, Bo Xiao, Sung S. Kim

A social networking site (SNS) allows people to connect and communicate with others online. At times, however, embarrassing contents about individuals can be exposed on a SNS. In an experiment, the authors found that an embarrassing exposure did not only invoke privacy perception in the affected individual (namely, the target) but also influenced her relationship with the content publisher. Specifically, when the embarrassing content was published through tagging, the target felt stronger privacy invasion than when it was simply posted. This effect was more evident if the content publisher was a distant friend than when she was a close friend. Additionally, when a distant friend revealed an embarrassing content, the use of tagging deteriorated her relationship with the target; by contrast, when a close friend published the content, tagging strengthened the relationship. This study also found that a target could perform several types of behavior in response to an embarrassing exposure, such as inaction, approach, and avoidance.

The insight for management: SNS users should be made aware of the intricate implications of embarrassing exposures—a benign joke might turn into unintentional humiliation that damages friendship. Hence, users should prudently consider the visibility and traceability of contents before publishing them.

Do Organic Results Help or Hurt Sponsored Search Performance? (p. 695)

Ashish Agarwal, Kartik Hosangar, Michael D. Smith

Sponsored search accounts for 40% of the total online advertising market. These ads appear as ordered lists

along with the organic search results in search engine results pages. We study the impact of changes in the competitors' listings in organic search results on the performance of sponsored search advertisements. Using data from an online retailer's keyword advertising campaign, we measure the impact of organic competition on both click-through rate and conversion rate of sponsored search advertisements. We find that an increase in organic competition leads to a decrease in the click performance of sponsored advertisements. However, organic competition helps the conversion performance of sponsored ads and leads to higher revenue. We also find that organic competition has a higher negative effect on click performance than does sponsored competition. The results inform the advertising strategies of firms participating in sponsored search auctions. Specifically, they show that organic competition may matter more than competition from other advertisers. Further, they reveal how advertisers can improve sponsored search performance by also analyzing organic competition. The results also suggest how search engines can increase advertiser participation by recommending keywords with different levels of organic competition based on their objective to maximize their clicks or revenue.

Design of Consumer Review Systems and Product Pricing (p. 714)

Yabing Jiang, Hong Guo

Although there is abundant evidence that consumer reviews have a significant impact on product sales, the design of consumer review systems and its impact have not yet been well examined. The authors analyze firms' review system designs and product pricing strategies—what rating scale to use, whether to offer granular review reports, and how to set price accordingly. In contrast to the commonly used five-star rating scale, the authors find that the “like/dislike” scale is more beneficial for niche products, such as customized products offered on Etsy, whereas the 10-star scale is more beneficial for mainstream products. For products with high misfit cost, such as clothing and shoes, firms are advised to offer granular review reports with ratings of specific product attributes, such as comfort and style, to reduce consumer uncertainty of product fit. Different pricing strategies should be deployed: lower-bound pricing for high-quality niche products to take advantage of positive word-of-mouth; upper-bound pricing for high-quality mainstream products to profit more from the initial sale period.

The insight for management: Strategically choosing rating scale and offering granular review reports based on product types help firms reap greater benefits from consumer review systems and consequently improve their profitability.

Versioning in the Software Industry: Heterogeneous Disutility from Underprovisioning of Functionality (p. 731)

Shivendu Shivendu, Zhe (James) Zhang

Product versioning is a commonly observed phenomenon in the software industry. For example, Microsoft offers Windows 8 in three versions—Core, Professional, and Enterprise; Adobe offers Photoshop CS in two versions—Standard and Extended; and IBM offers statistical software SPSS in three versions—Standard, Professional, and Premium. The authors provide an explanation for universal business practice of software versioning by studying how different user segments evaluate software versions when they have different requirements for software functionality in a task-oriented environment. A user's willingness-to-pay for software is lower if software does not have functionality that she requires because she incurs inconvenience (disutility). The authors find a software firm is better off by adopting versioning strategy as long as different user segments have different required levels of functionality. The authors recommend that the firm should adjust functionality level of different versions when user segments' requirements for software functionality changes or sizes of user segments change. The authors suggest that when users' requirement of functionality is similar across different user segments, the firm should not adopt versioning strategy. The managerial insight is that software firms should carefully investigate functionality requirements of their different user segments in designing optimal software versioning strategy.

Can Payment-per-Click Induce Improvements in Click Fraud Identification Technologies? (p. 754)

Min Chen, Varghese S. Jacob, Suresh Radhakrishnan, Young U. Ryu

Even though click fraud with the pay-per-click pricing model to pay for ads on the Web is prevalent, the technology to detect click fraud has not improved in a commensurate fashion. Instead a typical mechanism used to resolve click fraud issues is to engage a third-party investigator. Why is this so? Why does the advertiser and the service provider not improve their own fraudulent click identification technologies? Our paper provides insights into this question. Specifically, we show that the nature of the double moral hazard problem prevents the advertiser and the service provider from improving the identification technologies. However, having a third-party resolve the disagreements in identifying fraudulent clicks mitigates this conundrum, and provides implicit incentives to improve the identification technologies. Thus, we provide an economic rationale for why third-party investigation has become a thriving industry in click fraud detection.

**What Motivates Contributors vs. Lurkers?
An Investigation of Online Feedback
Forums** (p. 773)

Chee Wei Phang, Atreyi Kankanhalli, Bernard C. Y. Tan

This study investigates what may influence the participation of contributors versus lurkers in online feedback forums, in particular, online policy deliberation forums (OPDFs). OPDFs are becoming pertinent as a platform for governments to collect inputs from citizens for public policy formulation. Based on results from a field survey, our study provides insights into what public administrators can do to promote the participation of contributors while also convert lurkers into contributors, so as to generate a healthy cycle of sustainable participation in these forums. Furthermore, we highlight two information technology (IT)-related factors of interactive forums that play important, differential roles in promoting participation, i.e., connectivity and communality. They help inform forum managers on the directions to which forum systems can be designed for encouraging participation. These insights may also inform other types of online feedback forums whereby organizations collect inputs from stakeholders, such as corporate feedback forums that collect work-related suggestions from employees, or brand communities that solicit customer preferences and ideas on new products or services. Future research may build on our findings to provide more specific guidance to other types of online feedback forums, and online communities in general.

**Designing Warning Messages for Detecting Biased
Online Product Recommendations:
An Empirical Investigation** (p. 793)

Bo Xiao, Izak Benbasat

Many e-commerce websites have implemented product recommendation agents (PRAs) to provide online consumers with product recommendations based on their product-related needs and preferences. However, whether PRAs truly empower consumers depends on their veracity and objectivity. In this study, the authors focus on PRAs designed to produce recommendations on the basis of benefiting e-commerce merchants (rather than benefitting consumers) and investigate how warning messages can be designed to help consumers better detect such biased PRAs. The authors find that a simple warning message alerting consumers to the risk of PRA bias without accompanying advice on how to detect such bias is a two-edged sword, as it increases correct detection of biased PRAs at the cost of increased incorrect detection (i.e., reporting bias in the recommendations of an *unbiased* PRA). By contrast, including in warning messages risk-handling advice about how to check for bias (particularly when the advice is presented in a way to emphasize the *loss*

from not following the advice) increases correct detection, but more importantly, also decreases incorrect detection.

The insight for management: Properly designed detection support mechanisms (such as warning) can be implemented to help consumers perform better in detecting manipulative online business practices.

**Research Note: Tigerblood: Newspapers,
Blogs, and the Founding of Information
Technology Firms** (p. 812)

Brad N. Greenwood, Anand Gopal

In this paper, we study the impact of increases in media coverage from two sources, newspapers and blogs, on firm founding rates in the context of technology-based entrepreneurship. Although increasing work has begun to investigate the effect of user-generated content on entrepreneurial behavior and managerial decision making, limited attention has been devoted to how media affects firm founding or the boundary conditions of such an effect. Arguing for the direct effect of increased discourse in traditional and user-generated media in the information technology (IT) industry, results suggest that discourse in traditional media and blogs strongly influences IT firm founding rates. We further consider the differential impacts of media discourse on firm founding in different IT subsectors, over time, and in different locations. While the strength of the effect appears to be attenuating over time (suggesting that the emergence of new media providers may be squeezing out traditional media providers), we observe no difference in the effect across different geographic areas. We test our hypotheses using entrepreneurial firm founding data from VentureXpert from 1998–2007, social media data from the three largest blogging platforms, and traditional media coverage from 11 major U.S. newspapers.

**Research Note: Parenting New Acquisitions:
Acquirers' Digital Resource Redeployment and
Targets' Performance Improvement in the
U.S. Hospital Industry** (p. 829)

Kui Du

Managing an acquisition is like parenting: the acquirer needs to nurture its newly acquired businesses. The challenge, however, is to know what exactly a parent needs to provide. Using the U.S. hospital industry as the research context, the author finds that, by reusing their own health information technology (IT) systems in the newly acquired hospitals, hospital acquirers can significantly improve the efficiency and quality of their acquired hospitals. Moreover, not everyone is equally ready for parenting, and not all acquirers are equally capable of reusing their IT systems in acquisitions. The author also finds that a capable hospital acquirer should have already had rich experiences in

implementing and standardizing IT systems internally, before it starts to reuse its IT systems in acquisitions. Overall, the study introduces a parenting mentality of managing IT integration after acquisitions. The results can help practitioners to self-assess their readiness for acquisitions and make proper integration decisions after acquisitions from an IT perspective.

The insight for management: Reusing IT systems can create value in acquisitions, but make sure that the acquiring organization has been prepared for it.

**Research Note: Patching the Cloud:
The Impact of SaaS on Patching Strategy and
the Timing of Software Release** (p. 845)

Vidyanand Choudhary, Zhe (James) Zhang

The cloud-based software delivery model is different from the traditional on-premises software. Users of on-premises software have to install and maintain their software, whereas cloud-based software is maintained by the vendor. This paper focuses on changes in the timing of software release and patching effort of the vendors because of this change in delivery model. They find that managers of cloud-based software should release their software early even if the rate of defects is higher than comparable on-premises software. This is even more important when their potential market is large. This is because managers of cloud-based software can manage software maintenance more cost-effectively than users. Moreover, users are less concerned about managing defects because it becomes the responsibility of the vendor, and therefore they are willing to pay higher prices. Authors also find that the vendor's patching strategy should be different for cloud-based software relative to traditional on-premises software. Managers of cloud-based software need not fix as many defects as managers

of comparable on-premises software because cloud vendors can effectively manage the cost of the software defects. For the same reason, managers of cloud-based software should prioritize fixing defects that primarily affect users over defects that primarily affect the vendors.

**Research Note: Can't Buy Me Love...or Can I?
Social Capital Attainment Through Conspicuous
Consumption in Virtual Environments** (p. 859)

Oliver Hinz, Martin Spann, Il-Horn Hann

The desire for social status itself, a person's standing in relation to other people within a community, is considered a fundamental human motive. One purpose of consuming luxury goods can be seen as the endeavor to impress other people which in turn can increase their social status. Finding empirical evidence for this effect is nearly impossible in real-world settings, because social status is usually not directly observable for large populations. In this work, we take advantage of the digital footprints that are left in social networks. Specifically, we analyze the digital footprints of purchases and social interactions in different virtual worlds. We use virtual worlds as artificial laboratories, which allows us to analyze the social capital of their inhabitants, subsequent to their purchase of virtual prestige goods. Our results show that conspicuous consumption indeed represents an investment in social capital for consumers. For companies selling digital products, creating prestigious items is a profitable strategy which allows them monetizing users' desire for higher social status. Finally, our study illustrates that virtual environments and their data can be extremely valuable when trying to examine and understand consumer behavior and we expect that more social science researchers will exploit this opportunity.