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Previous research has shown that consumers frequently choose products with too many features that they later find difficult to use. In this research, the authors show that this seemingly suboptimal behavior may actually confer benefits when factoring in the social context of consumption. The results demonstrate that choosing products with more capabilities (i.e., feature-rich products) provides social utility beyond inferences of wealth, signaling consumers' technological skills and openness to new experiences and that consumers' beliefs about the social utility of feature-rich products are predictive of their choices of such products. Furthermore, the authors examine when impression management concerns increase consumers' likelihood of choosing feature-rich products. They find that public choices in which participants display their preferences to others encourage feature-seeking behavior but that the anticipation of having to use a product in front of others provides an incentive to avoid additional features.

Keywords: impression management, social influence, conspicuous consumption, signaling, product features

The Social Utility of Feature Creep

A recent trend across many product categories is bundling a variety of product features into a single multi-purpose device capable of a sometimes astounding number of functions. For example, consumers can choose among cell phones that also play music, take pictures, and record video; refrigerators with television capabilities; and home theater systems with 50-button remote controls. The literature has described this trend as "feature bloat" or "feature creep" (Surowiecki 2007). On the positive side, adding features can increase capability (i.e., the product's ability to perform multiple desired functions) and provides positive differentiation by giving products clear advantages over competitors (Carpenter, Glazer, and Nakamoto 1994). On the negative side, although each positively valued feature translates into added benefits to consumers in an abstract sense, additional features tend to decrease usability, because

each added feature is one more thing to learn, to possibly misunderstand, and to search through when looking for something else (Nielsen 1993). Indeed, research has indicated that consumers perceive the increased complexity of products with a high number of features as detrimental to their usability or ease of use (Page 2009) and that feature-rich products can lead to dissatisfaction or feature fatigue (Thompson, Hamilton, and Rust 2005).

Unlike previous research, which has focused on examining disparities between prepurchase valuation and use of product features at the individual level (Meyer, Zhao, and Han 2008; Thompson, Hamilton, and Rust 2005), we examine the social aspects of choosing products that offer a higher number of capabilities (i.e., feature-seeking behavior). We offer two specific contributions. First, our studies show that choosing products with a higher number of features can be an effective strategy in cultivating others' positive impressions, conferring social benefits beyond inferences of wealth and regardless of the specific product features. Second, we examine conditions under which consumers are willing to trade off the cost of decreased usability for the expected social utility imparted by feature-rich options. In particular, we find that heightening consumers' impression management concerns through a priming task or exposing them to a public choice situation systematically increases the attractiveness of feature-rich options but that this effect can be reversed when consumers anticipate that others will be evaluating their product usage. Relative to

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public choices, in which consumers' preferences (but not their product interactions) are observed by others, anticipating using a product in front of others increases the importance of product usability, enhancing the attractiveness of feature-poor products. This observed shift in the attractiveness of additional features underscores an important distinction between conspicuous consumption of feature-rich products and other forms of conspicuous consumption. Unlike other types of conspicuous consumption (e.g., luxury brands), consumers perceive a usability cost to additional features (e.g., picture a consumer fumbling with an overly complicated digital camera); therefore, although consumers prefer feature-rich products for public display, they may choose feature-poor products for public performance.

In the next section, we develop specific hypotheses about the social utility of seeking product features and report the results of four studies designed to test our predictions. We conclude with a discussion of our findings and their theoretical and managerial implications.

CONCEPTUAL BACKGROUND

Conspicuous Consumption

When making consumption decisions, people frequently consider not only the direct effects of their choices on their welfare (private utility) but also the indirect (social) effects that emerge from societal observation of those choices (i.e., social utility; Ireland 1994). Whereas "private utility" refers to consumers' satisfaction from consuming a bundle of goods and services, "social utility" refers to other people's reactions and appreciation of a consumer's private utility, also called the spectator's view (Ireland 1994). The notion that consumption can provide social utility is commonly associated with the term "conspicuous consumption." Conspicuous consumption broadly connotes a person's purchase of luxury goods—and the subsequent blatant display of such goods—to demonstrate his or her wealth (Veblen [1899] 1975). This behavior can take several forms with regard to product choices. First, in "between-category" conspicuous consumption, consumers may purchase goods in product classes that others cannot access (e.g., a private jet, a skyscraper with a person's name). In "within-category" conspicuous consumption, consumers' purchases are in the same product category but at different price points, as when a person purchases a BMW when his or her neighbor can only afford a Toyota. In the current study, we explore a third—and increasingly common—mode of conspicuous consumption: "within-product" conspicuous consumption, investigating whether and when purchasing the same product but with a higher number of features may also lend social benefits.

Because in general, products that at one time were the domain of only a few have become the domain of many, upgrading those options with additional features may be an effective way to attain social utility. Cell phones and MP3 players are recent examples of products that have gone from being rare to ubiquitous and have increasingly adopted more features. For example, if everyone owns an iPod, one way to gain social utility without switching to a different product class may be adding features. Veblen's ([1899] 1975) notion of conspicuous consumption ("Veblen effects") refers specifically to situations in which consumers

are willing to pay a higher price for a product that has similar functionality to a lower-priced product to convey wealth or status. In these situations, consumers engage in a monetary cost, such as when upgrading from a generic brand to a luxury brand, but usually product usability is not expected to diminish and may even increase. In contrast, attempting to gain social utility by choosing feature-rich products may require consumers to sacrifice not only money but also some level of product usability because of the increased complexity created by enhanced functionality. Thus, feature-seeking behavior requires consumers to balance the social utility that can be gained (or possibly lost) when choosing features and the desire for easy-to-use products.

Social Utility and Feature-Seeking Behavior

An extensive body of research on identity signaling demonstrates that people use consumption to signal to themselves and others their beliefs, attitudes, and social identities (Belk 1988). Various aspects of a product contain symbolic meaning and may convey a particular image, such as specific brand associations (Aaker 1997) and price (Sengupta, Dahl, and Gorn 2002). Although social utility from consumption was originally associated with inferences about wealth and social status, research on social perception suggests that people are able to make personality judgments from thin slices of behavior in brief social interactions—also referred to as "zero-acquaintance contexts" (Gosling 2008). Specifically, research has shown that purchase decisions (e.g., preferences for food, attire, beauty products) and personal environments (e.g., work, personal living spaces) signal information about the personalities, values, and habits of their owners (Burroughs, Drews, and Hallman 1991; Gosling et al. 2002). Does the mere number of features a consumer chooses also invite such judgments? One view is that upgrading products also upgrades status in the eyes of others; another view, however, posits that awareness that feature-rich products are more difficult to use would invite negative impressions of those who choose them, as people who make poor consumer decisions.

We explore three routes by which feature-rich products can foster social utility. First, consumers may infer that products containing more features provide more benefits and, therefore, command a price premium. Previous research has shown that additional features, even irrelevant ones, significantly enhance product evaluations, leading to meaningful differentiation (Carpenter, Glazer, and Nakamoto 1994). Moreover, a high purchase price can signal greater socioeconomic status (Sengupta, Dahl, and Gorn 2002). Thus, we expect that choosing products with a higher number of features will increase perceptions of a person's wealth.

Second, we propose that the social benefits from number of features extend beyond mere wealth inferences to include horizontal distinctions that can more subtly differentiate consumers within a given socioeconomic class, such as consumers' relative level of ability and expertise. In support of this hypothesis, previous research on consumer-product skill matching has demonstrated that consumers match their product choices to their perceived relative ability (Burson 2007). Because additional features increase perceptions of difficulty of use (Thompson, Hamilton, and Rust 2005), we predict that observers will infer that choosers of feature-rich

products have greater skills in the product domain and are more technologically savvy.

Third, we propose that feature-seeking behavior can also signal specific personality traits, such as a person's openness to new experiences. Openness is one of the five major domains of personality. People who score high on openness are experience-seeking, creative, and intellectually curious; appreciate variety, novelty, and complexity; and have a wide range of interests (McCrae 1996). In contrast, closeness is manifested in a person's preference for familiarity, simplicity, and "down-to-earth utilitarianism" (McCrae 1996, p. 326). In addition, previous research has suggested that consumers with high levels of creativity and curiosity are more likely to adopt new technologies (Dickerson and Gentry 1983). We predict that observers perceive adopters of feature-rich products similarly, translating the enhanced functionality and flexibility of feature-rich products into perceptions of openness of their owners. In support of this contention, Ratner and Kahn (2002) show that those who incorporated greater assortment variety in their choices expected others to evaluate their product choices as more interesting, creative, and risk seeking. Feature-rich products enable consumers to use the product in different ways; thus, we expect that opting for more features triggers similar inferences about the personality of their owners.

In summary, we hypothesize that, controlling for inferences of wealth, feature-seeking behavior leads to more positive interpersonal evaluations. Specifically, we hypothesize the following:

H₁: Consumers who choose products with a higher number of features are perceived more positively and as more tech savvy and open to new experiences than those who opt for products with fewer features.

Feature-Seeking Behavior and Impression Management

If feature-seeking behavior lends social utility in the eyes of others, consumers' preferences for feature-rich products may be enhanced when considering the opinions of others. We examine consumers' desire to seek feature-rich products in the context of impression management theory (Tedeschi 1981). Impression management theory posits that people strategically adjust their behavior to portray the self in a socially positive light. These positive impressions can promote more rewarding social interactions (Chen, Shechter, and Chaiken 1996) and help consumers avoid negative feelings (Dahl, Manchanda, and Argo 2001).

Previous research has shown that the presence of others, even in the absence of direct interaction, activates people's concerns with the impression others are forming of them (Puntoni and Tavassoli 2007). Research on the norm of self-interest (e.g., Miller 1999; Ratner and Miller 2001) provides one example of how social concerns encourage people to adjust their behavior: Ratner and Miller (2001) show that because observers react negatively to actors who behave in ways that violate their own self-interest, actors are less likely to publicly endorse a social cause when they lack a clear vested interest to do so, despite their favorable (private) attitudes toward it. Furthermore, in consumer domains, previous research has demonstrated that social concerns encourage consumers to choose products that signal positive characteristics to others. For example, the presence of

others in a retail setting increases consumers' choice of more expensive/higher-quality brands over less expensive/lower-quality brands (Argo, Dahl, and Manchanda 2005). Moreover, envisioning a public consumption situation decreases choice of products associated with a negative reference group (White and Dahl 2006), and expecting a decision to be evaluated by others increases preference for variety (Ratner and Kahn 2002). Taken together, these findings indicate that consumers are sensitive to a wide range of environmental cues that trigger impression management concerns and adjust their choices to form positive impressions in the eyes of others. Given that feature-rich products are expected to be socially desirable, we hypothesize the following:

H₂: Consumers are more likely to choose feature-rich products in the presence (vs. absence) of impression management concerns about their product choice.

If adding features presents consumers with a trade-off between usability and social utility, however, contexts in which impression management concerns highlight the importance of product usability should attenuate consumers' desire to seek features—for example, when a person's product use is subject to public scrutiny. Unlike public choices in which consumers only display their preferences to others, a public use situation requires consumers to interact with the product features in front of others. Struggling to use a feature-rich product can signal consumers' inability or incompetence, reducing the likelihood that it will confer social benefits. We expect that anticipating a public use experience heightens consumers' desire to avoid tasks or situations that demonstrate their incompetence. Research on achievement goals shows that the desire to avoid a demonstration of incompetence, also referred to as "performance-avoidance goals" (Elliot and McGregor 2001), reduces people's risk-taking behavior, increases preference for easier tasks (Jagacinski, Kumar, and Kokkinou 2002), and can provide social value by increasing interpersonal liking (Darnon et al. 2009).

We predict that consumers anticipating a situation in which their product use will be evaluated by others increases their concerns with their ability to effectively use the product, enhancing the importance of product usability and the attractiveness of feature-poor options. Specifically, we hypothesize the following:

H₃: The effect of impression management concerns on preference for feature-rich products is moderated by the context in which such concerns are evoked, such that (a) anticipating a public (vs. private) choice increases consumers' preferences for feature-rich products, whereas (b) anticipating public (vs. private) product use decreases consumers' preferences for feature-rich products.

We test our hypotheses in a series of four studies. In Study 1, we examine the social utility of feature-seeking behavior by investigating whether observers evaluate choosers of feature-rich products more favorably than choosers of feature-poor products (H₁). In Study 2, we examine whether a priming task that encourages thoughts about adjusting one's behavior to social situations increases preferences for additional features (H₂). In Study 3, we use a different instantiation of impression management concerns and examine whether consumers' preferences for feature-

rich products increase when their choices are visible to others (H_2). Finally, in Study 4, we examine whether preferences for feature-rich products are reversed when consumers anticipate others evaluating their product use versus their choices (H_3).

STUDY 1

Design, Procedures, and Measures

One hundred eighty undergraduate students (57% men, $M_{\text{age}} = 20$ years) were randomly assigned to a 2 (number of features: feature poor vs. feature rich) \times 2 (feature information: absent/present) \times 2 (product replicates: cell phone vs. digital camera) between-subjects design. Participants were asked to evaluate a target consumer on the basis of his or her choice of either a cell phone or a digital camera. The purchased product had either 15 or 30 features (see Appendix A). Each participant was given the description of only one product. Price was kept constant (\$199.99), and only the number of included features varied across conditions. To rule out the possibility that our results could be driven by the content of the selected features, we manipulated the presence of feature information between subjects. Half the participants were presented with a description of the features included in the product. The other half did not see the specific list of features and were given information only on the total number of features included in the product (15 vs. 30).

Participants rated the target consumer in terms of overall impression ("bad/good," "negative/positive," and "unfavorable/favorable"; $\alpha = .95$), perceptions of technological savvy ("not knowledgeable about technology/knowledgeable about technology" and "not skilled with technology/skilled with technology"; $\alpha = .93$), perceptions of wealth ("not wealthy/wealthy"), and perceptions of openness to new experiences ("not open-minded/open-minded," "not innovative/innovative," "not interesting/interesting," "not risk-seeking/risk-seeking," and "not creative/creative" [the last four items are from Ratner and Kahn 2002]; $\alpha = .87$). Next, participants rated the product's capabilities ("performs few functions/performs many functions," "has few capabilities/has many capabilities," and "has few advantages/has many advantages"; $\alpha = .91$) and usability ("learning to use this product would be easy: interacting with this product would not require a lot of mental effort": "disagree/agree" [from Thompson, Hamilton, and Rust 2005]; $\alpha = .46^1$). We measured all items on seven-point scales.

Results and Discussion

Product inferences. A 2 (number of features) \times 2 (feature information) \times 2 (product replicate) analysis of variance (ANOVA) on capability ratings revealed a main effect of number of features, such that participants perceived the feature-rich product as having significantly greater capabilities than the feature-poor product ($M_{\text{feature-poor}} = 4.4$, $M_{\text{feature-rich}} = 5.4$; $F(1, 172) = 40.0$, $p < .001$). No other effects were significant ($ps > .19$). A 2 \times 2 \times 2 ANOVA on usability ratings indicated a significant main effect of number of features ($F(1, 172) = 9.0$, $p < .01$). The feature-poor product was

rated as easier to use than the feature-rich product ($M_{\text{feature-poor}} = 5.4$, $M_{\text{feature-rich}} = 4.9$). No other effects were significant ($ps > .15$). Regardless of the presence or absence of feature information, the number of included features increased perceptions of capability and decreased perceptions of usability.

Interpersonal evaluations. We examined how the number of features affected impressions of the target consumer. A 2 (number of features) \times 2 (presence vs. absence of feature information) \times 2 (product replicate) ANOVA on wealth ratings indicated that participants perceived the chooser of the feature-rich product as wealthier than the chooser of the feature-poor product (5.0 vs. 4.5; $F(1, 172) = 7.7$, $p < .01$). No other effects were significant ($ps > .14$).

To test H_1 , we ran a 2 \times 2 \times 2 analysis of covariance (ANCOVA) with wealth ratings as a covariate on each of the evaluative dimensions. As we predicted, there was a significant main effect of number of features, such that participants rated the chooser of feature-rich (vs. feature-poor) product more favorably in terms of overall impressions (4.8 vs. 4.4; $F(1, 171) = 5.5$, $p < .05$), technological savvy (4.8 vs. 4.0; $F(1, 171) = 21.4$, $p < .001$), and openness (3.9 vs. 4.4; $F(1, 171) = 13.5$, $p < .001$). In addition to the main effect of features, there was also a significant two-way interaction between features and product replicate on technological savvy ratings ($F(1, 171) = 10.1$, $p < .01$) and openness ($F(1, 171) = 7.7$, $p < .01$), indicating that the social benefits from features were greater for cell phones than digital cameras. It is noteworthy that the presence versus absence of feature information did not interact with number of features on any dimension of interpersonal ratings ($ps > .14$), suggesting that the social utility from feature-seeking behavior is not contingent on the presence of specific product features.

Using a between-subjects design, Study 1 shows that the number of chosen product features can influence absolute interpersonal judgments. Participants evaluated consumers who chose feature-rich products more positively than those who did not. Importantly, the positive effect of feature-seeking behavior on person perception was not contingent on the presence of specific features but rather on the mere knowledge that in general, a consumer prefers a higher number of features. In addition, these results indicate that the social utility from additional features extends beyond inferences of wealth, signaling more nuanced individual traits, such as a person's technological savvy and openness to new experiences. In the next study, we examine the implications of our finding that feature-rich products seem to offer greater social utility in the eyes of others, testing whether priming participants with impression management concerns regarding their choices increases the attractiveness of feature-rich products (H_2).

STUDY 2

Design, Procedures, and Measures

One hundred six undergraduate students (57% women, $M_{\text{age}} = 20$ years) were randomly assigned to a 2 (primed motive: accuracy vs. impression management) \times 2 (product replicate: cell phone vs. digital camera) between-subjects design. The study was administered in two parts, which were presented to participants as two separate studies. The first

¹Although these items showed high intercorrelations in previous research, the Cronbach's alpha in this study was unexpectedly low. Thus, we ran the ANOVA on both the composite score and each item separately. The results were similar in both analyses.

study contained a priming task, and the second study contained a product evaluation task. The priming task, based on Chen, Shechter, and Chaiken (1996), exposed participants to three scenarios associated with either accuracy or impression concerns (for further information, see the Web Appendix at <http://www.marketingpower.com/jmrjune11>). In the accuracy condition, participants described how they would respond to situations involving behaving objectively, such as being a reporter getting facts for a newspaper article, looking for sources of information to evaluate different colleges, and searching for information for a class assignment. In the impression management condition, participants described how they would respond in situations in which they needed to adjust their behavior to the demands of a social situation, such as going for lunch with a person who might invite them for a job interview, going out on a date with their best friend's cousin, and coming up with a polite excuse not to go out with a friend on a Friday night. Participants worked on these scenarios for five to seven minutes.

Next, participants were asked to complete a short survey about either cell phones or digital cameras. Participants were asked to imagine that they were considering the purchase of a cell phone or digital camera and were presented with a side-by-side description of two products: a model with 15 features (feature poor) and a model with 30 features (feature rich). The product features were the same as those used in Study 1 (see Appendix A). After reading the product descriptions, participants chose their preferred option. Next, participants rated the extent to which they thought about others' opinions about the products and about discussing the products with others ("not at all/very much"). We averaged these items, which served as a manipulation check of impression management concerns ($\alpha = .82$). We measured all items with seven-point scales.

Results and Discussion

Manipulation check. We ran a 2 prime \times 2 product replicate ANOVA on the impression management composite score. This analysis revealed that participants primed with the impression management scenarios indicated that they considered others' opinions during the product evaluation task more than participants primed with the accuracy scenarios ($M_{\text{accuracy}} = 3.0$, $M_{\text{impression}} = 3.6$); $F(1, 102) = 3.6$, $p = .06$). No other effects were significant ($ps > .43$).

Product choice. To test H_2 , we conducted a logistic regression on participants' choices with prime, product replicate, and the two-way interaction as predictors. The results revealed a significant effect of product replicate (Wald statistic (1) = 8.5, $p < .01$) and prime (Wald statistic (1) = 4.9, $p < .05$). The two-way interaction was not significant ($p > .89$). Overall, participants choosing between digital cameras were more likely to choose the feature-rich model (83.3%) than those choosing between cell phones (55.8%; $\chi^2(1) = 9.6$, $p < .01$). More important, consistent with H_2 , participants primed with impression management motives were significantly more likely to select the product with more features (80%) than participants primed with accuracy motives (58.8%; $\chi^2(1) = 5.6$, $p < .05$).

Overall, these results show that priming consumers to think about the impressions others are forming of them significantly increases the attractiveness of feature-rich products. One limitation of our studies thus far is that partici-

pants (both observers in Study 1 and choosers in Study 2) did not have a direct experience with the target products. Previous research (Thompson, Hamilton, and Rust 2005) has indicated that the weight of product usability on consumers' evaluations is greater when evaluations follow a direct experience than an indirect experience (e.g., reading a product description). Do impression management concerns increase preference of feature-rich products when consumers have experienced firsthand their usability cost? In Study 3, we test this hypothesis in a situation in which consumers have a direct experience with the target products before making their choices.

STUDY 3

The goal of Study 3 is threefold. First, we use a different manipulation of impression management, varying the observability of participants' choices. Second, we design a more conservative test for the effect of impression management (H_2) by giving participants the opportunity to use both feature-poor and feature-rich products before choosing their preferred option. Third, we assess whether participants' beliefs about the social utility provided by feature-rich products are related to their choices of such products, investigating whether the desire for social utility underlies choices of feature-rich products.

Design, Procedures, and Measures

One hundred fifty-five undergraduate students (53% women, $M_{\text{age}} = 20$ years) were randomly assigned to a 2 (product features: feature poor vs. feature-rich) \times 2 (domain: private vs. public choice) mixed design. We manipulated product features within subjects. Participants were invited to take part in a study about digital video players and were asked to use two digital video players to watch videos on a computer. Using stimuli developed by Thompson, Hamilton, and Rust (2005), we manipulated the number of features included in the product: One product offered 7 features (feature-poor model), and one offered 21 features (feature-rich model). The two video players differed only on the number of features (see Appendix B). Participants were provided with a manual for each player describing how to use its capabilities.

After trying both products (order counterbalanced between subjects), participants indicated their preferred model. We manipulated choice domain between subjects. In the public choice condition, we informed participants that their choices would be revealed to another participant in the study, who would be asked to evaluate the original participant's decision and make inferences about him or her. Participants in the private choice condition did not receive this information. After choosing their preferred video player, participants rated how they expected others to evaluate two target consumers, one who chose the feature-poor and one who chose the feature-rich digital video player (we counterbalanced order between subjects).

Measures

After making a choice, participants rated the extent to which they thought about other people's opinions about the product, discussing the product with others and justifying their choices ("not at all/very much"). We averaged these

items to form a manipulation check for impression management concerns ($\alpha = .67$).

In the second part of the study, participants were asked to rate how they expected others to evaluate two target consumers, one who chose the feature-poor and one who chose the feature-rich digital player. Using the same items from Study 1, participants reported how they expected others to view both consumers in terms of overall impressions ($\alpha = .89$), perceptions of technological savvy ($\alpha = .88$), wealth, and openness to new experiences ($\alpha = .88$). Next, participants rated perceptions of each product's capabilities ($\alpha = .85$) and usability ($\alpha = .72$). As a control variable, we measured expertise with digital video players by asking participants to rate their familiarity with digital video players ("not familiar at all/very familiar"), and the frequency with which they watched videos on the computer ("never watch/watch all the time"; $\alpha = .74$). We measured all items on seven-point scales. Finally, participants provided demographic information.

Results

Expertise (Mdn = 4.5, SD = 1.6) had a significant effect on capability and usability ratings ($ps < .01$) and a marginal effect on openness ratings ($p < .06$). There were no significant effects of expertise on any other measures ($ps > .10$). As we expected, participants assigned to the public choice condition indicated greater impression management concerns ($M = 2.4$) than those in the private condition ($M = 2.0$; $F(1, 153) = 4.2, p < .05$).

Product inferences. A 2 (product features) \times 2 (choice domain) repeated measures ANCOVA on capability ratings with expertise as a covariate revealed a significant effect of product features ($F(1, 152) = 7.0, p < .01$) and a significant interaction between product features and expertise ($F(1, 152) = 7.6, p < .01$). Perceived capability was higher for the feature-rich product ($M = 5.5$) than the feature-poor product ($M = 3.1$), and this difference was slightly greater for experts than novices. No other effects were significant ($ps > .11$). The same 2 \times 2 repeated measures ANCOVA on usability ratings indicated a significant main effect of product features ($F(1, 152) = 12.2, p < .01$). Perceived usability was higher for the feature-poor product ($M = 6.0$) than the feature-rich product ($M = 4.7$). In addition, there was a main effect of expertise ($F(1, 152) = 19.5, p < .001$), such that experts provided higher usability ratings than novices. No other effects reached significance ($ps > .24$). As in previous studies, participants perceived a usability cost for the enhanced capability offered by feature-rich products.

Product choice. To test H_2 , we conducted a logistic regression on choice with public versus private domain as a predictor. In support of our prediction, the results revealed a significant effect of private versus public choice domain: Participants were more likely to select the feature-rich product in the public than the private choice condition ($b = .77$; Wald statistic (1) = 5.4, $p < .05$). In the private condition, after using the two video players, the majority of the participants preferred the easier-to-use, feature-poor model (54%), replicating the findings of Thompson, Hamilton, and Rust (2005). However, the anticipation of having their choice evaluated by others significantly reversed participants' preferences ($\chi^2(1) = 5.5, p < .02$). In contrast to the 46% who chose the feature-rich option in the private choice condition,

65% of participants chose the feature-rich model in the public choice condition. When public evaluation concerns were salient, a significantly greater number of participants were willing to trade off the decreased usability of the feature-rich option for the social utility conveyed by choosing additional features.

Social utility. Did choosers of feature-rich products anticipate social utility from their choices? We examined participants' beliefs about how others would view consumers who choose feature-rich and feature-poor products. A 2 (product features) \times 2 (choice domain) repeated measures ANOVA on wealth ratings indicated only a main effect of product features ($F(1, 153) = 46.7, p < .001$); as in Study 1, participants expected others to rate choosers of feature-rich products as wealthier than choosers of feature-poor products (4.5 vs. 3.6). For each of the other evaluative dimensions, we ran a 2 (product features) \times 2 (choice domain) repeated measures ANCOVA with wealth ratings as a covariate. There was a significant main effect of product features on all dimensions. When we controlled for wealth differences, participants expected others to evaluate choosers of feature-rich products more favorably in terms of overall impression (4.7 vs. 4.2; $F(1, 152) = 3.1, p < .08$), technological savvy (5.6 vs. 2.8; $F(1, 152) = 138.9, p < .001$), and openness (4.9 vs. 3.2; $F(1, 152) = 93.0, p < .001$). Including expertise as a covariate did not change the pattern of results.

A possible account for these results is that, because the majority of participants chose the feature-rich player themselves, their positive ratings of such consumers reflect a desire to justify their choices. However, note that even participants who chose the feature-poor option for themselves rated choosers of feature-rich products more positively on wealth ($F(1, 65) = 13.0, p = .001$), technological savvy ($F(1, 65) = 183.0, p < .001$), and openness ratings ($F(1, 65) = 66.0, p < .001$); only the effect of product features on overall impression was nonsignificant ($p > .94$). These results suggest that self-justification alone cannot account for these results.

Finally, we examined whether participants' beliefs about the relative social utility offered by feature-rich products were related to their choice of such products, exploring whether choices of feature-rich products are driven partly by consumers' desire for the social utility afforded by such products. To capture the relative social utility each participant afforded to the two kinds of consumers, we calculated difference scores between participants' ratings of feature-rich and feature-poor consumers on each of the four evaluative dimensions. We entered the four difference scores into a logistic regression predicting participants' own choices of feature-rich or feature-poor products. Differences in perceptions of wealth did not emerge as a significant predictor ($\beta = .18, p > .17$), and differences in perceptions of technological savvy actually emerged as a negative predictor ($\beta = -.35, p < .01$), suggesting that the extent to which selecting feature-rich products might make a person seem "nerdy" works against the selection of such products. Most importantly, differences in overall impression ($\beta = .38, p < .05$) and openness ($\beta = .34, p = .055$) were predictors of choice of the feature-rich product.²

²Multicollinearity does not seem to pose a threat to the interpretation of these results: Variance inflation factors ranged from 1.2 to 2.4.

Discussion

Study 3 demonstrates that consumers' expectation of having their choices evaluated by others significantly increased the attractiveness of feature-rich products, even when these participants were made aware of the decreased usability of such products through direct experience. We found that after a product trial, preferences shifted toward feature-rich options when choices were public and toward feature-poor options when choices were private. In addition, our findings indicate that consumers expect feature-seeking behavior to confer social utility beyond inferences of wealth and regardless of their own personal preferences for additional features. Consistent with Study 1, participants expected others to draw more positive impressions of choosers of feature-rich products and infer higher levels of technological savvy and openness. Among the four evaluative dimensions we measured, overall impression and perceptions of openness had the greatest positive impact on feature-seeking behavior.

Thus far, our studies have shown that enhancing a product's capability by adding features decreases its perceived usability but increases its social benefits. As a result, highlighting impression management concerns through priming tasks and public choices led consumers to choose products with more features. Can this effect be reversed? Study 4 examines a condition in which the desire to manage impressions increases the importance of usability, enhancing the attractiveness of feature-poor products (H_3). We predict that, when faced with the thought of having to actually use a product in front of others rather than merely display their preferences, consumers will more carefully weigh the usability costs of feature-rich products and shift their choices toward easier-to-use options.

STUDY 4

Design, Procedures, and Measures

One hundred sixty undergraduate students (56% men, $M_{\text{age}} = 20$ years) were randomly assigned to a 2 (product features: feature poor vs. feature-rich) \times 2 (domain: private vs. public) \times 2 (selection task: product choice vs. product use) mixed design. We manipulated product features within subjects and domain and selection task between subjects. Participants were invited to take part in a study about portable GPS (global positioning system) navigation systems. Each participant was presented with a picture and side-by-side descriptions of two Garmin portable GPS devices currently available in the market (see Appendix C): Garmin nüvi 275T (6 features) and Garmin nüvi 755T (18 features). Given that in many product categories, options with higher functionality also command a price premium, the product description also included price information to increase external validity: The price of the model with 6 features was \$269.99, and the price of the model with 18 features was \$399.99.

All participants were asked to select their preferred GPS model between the two options. In the private choice condition, participants were not given any other information before making a choice. In the public choice condition, before selecting their preferred GPS device, participants were informed that their choice would later be disclosed to another participant in the same study who would be asked to evaluate their decision and make some inferences about

them. Participants assigned to the private use condition read that at the end of the research session they would have time to use their preferred GPS and experience its features. Participants in the public use condition were given this same information but were also told that, after their product trial, they would be asked to demonstrate their preferred GPS device to a small group of students who were participating in the same study.

Measures

After rating their relative preference between the GPS devices ("definitely prefer GPS A/definitely prefer GPS B") and choosing their favorite model, participants rated the extent to which they thought about each of the following: how their choice would influence others' opinions about them, others' opinions about the product, discussing the product with others, and the GPS devices that their friends or relatives have ("not at all/very much"). We averaged these items to form a manipulation check of impression management goals ($\alpha = .65$). Next, participants provided ratings of capability ($\alpha = .70$) and usability ($\alpha = .77$), using the same items from Study 1. In addition, they rated the importance ("not important/very important") of usability in their decision process. Finally, we asked whether participants had used a GPS device before and measured their expertise with the product category using three items ($\alpha = .84$): Participants rated their knowledge of the product compared with others ("one of the least knowledgeable/one of the most knowledgeable"), how clear an idea they have about which characteristics provide maximum satisfaction with the product ("not very clear/very clear"), and their familiarity with the range of features available for the product ("not familiar at all/very familiar"). We measured all items on seven-point scales. No participant actually had to engage in a product trial.

Results

The majority of the participants (86%) had used a GPS device before the study. Including expertise ($Mdn = 4.3$, $SD = 1.2$) as a covariate in our analysis did not reveal any significant effects, except on the perceived usability of the feature-rich product. We added expertise as a covariate in the analysis of usability ratings.

Manipulation check. A 2 domain (private vs. public) \times 2 selection task (choice vs. use) ANOVA on the impression management score revealed only a significant main effect of private vs. public domain ($F(1, 156) = 10.3$, $p < .01$). Those in the public condition indicated that they thought more about how their product choice would influence others' opinions about them ($M = 3.0$) than those in the private condition ($M = 2.4$). No other effects were significant ($ps > .55$).

Product inferences. A 2 (product features) \times 2 (domain) \times 2 (selection task) repeated measures ANOVA on capability ratings revealed a significant main effect of product features ($F(1, 156) = 434.0$, $p < .001$). Perceived capability was higher for the feature-rich product ($M = 6.4$) than the feature-poor product ($M = 4.2$). No other effects reached significance ($ps > .30$). A 2 \times 2 \times 2 repeated measures ANCOVA on usability ratings with expertise as a covariate indicated a significant effect of product features ($F(1, 155) = 49.2$, $p < .001$). Perceived usability was rated higher for the feature-poor prod-

uct ($M = 6.2$) than the feature-rich product ($M = 4.6$). In addition, there was a significant effect of expertise ($F(1, 155) = 13.4, p < .001$) and a significant interaction of product features and expertise ($F(1, 155) = 15.4, p < .001$). Not surprisingly, experts rated the feature-rich model as easier to use than the novices did. No other effects reached significance ($ps > .23$).

Relative preference and choice. Table 1 presents means across conditions. As H_3 predicts, a 2 (domain) \times 2 (selection task) ANOVA on relative preference ratings revealed a significant two-way interaction ($F(1, 156) = 15.6, p < .001$). No other effects were significant ($ps > .16$).³ Consistent with H_{3a} , increasing the observability of participants' choices marginally shifted preferences toward the feature-rich options ($M_{\text{public choice}} = 4.9, M_{\text{private choice}} = 4.1; F(1, 68) = 3.0, p < .09$). In contrast, and in accordance with H_{3b} , increasing the observability of participants' product use significantly shifted preferences toward the feature-poor product ($M_{\text{public use}} = 3.5, M_{\text{private use}} = 5.0; F(1, 88) = 16.2, p < .001$).

Product choices followed a similar pattern. A logistic regression on choice with domain, selection task, and their two-way interaction as predictors revealed only a significant interaction effect (Wald statistic (1) = 9.2, $p < .05$), again in support of H_3 . Although public choices directionally increased preference for the feature-rich option ($M_{\text{public choice}} = 70\%, M_{\text{private choice}} = 54\%; \chi^2(1) = 1.97, p < .17$), the anticipation of public use significantly decreased the share of the feature-rich option ($M_{\text{public use}} = 39\%, M_{\text{private use}} = 71\%; \chi^2(1) = 9.5, p < .01$).

Importance of usability. We expected that the anticipation of having to use the product in front of others—rather than simply sharing preferences with others—would increase the perceived importance of product usability. Confirming this prediction, a 2 (domain) \times 2 (selection task) ANOVA on usability importance ratings showed a main effect of selection task ($M_{\text{choice}} = 5.6, M_{\text{use}} = 6.1; F(1, 156) = 8.1, p < .01$) and a significant two-way interaction ($F(1, 156) = 6.9, p < .05$). This interaction was driven by participants' importance ratings in the public use condition ($M = 6.5$), which was higher than all other conditions ($p < .05$).

A mediation analysis shows that the importance of usability partially mediated the effect of the interaction of domain and selection task on relative preference and choice (see Table 2). When we added usability importance ratings as a predictor in the regression on preference and choice, there was a significant effect of usability importance ($ps < .01$),

whereas the interaction between domain and selection task decreased in magnitude (for relative preference, the interaction coefficient fell from $b = 2.3, t = 4.0, p < .001$ to $b = 1.9, t = 3.4, p < .01$; for choice, it fell from $b = 2.1, Wald = 9.2, p < .01$ to $b = 1.7, Wald = 5.6, p < .05$). The indirect effects of usability importance on relative preference (Sobel test = 1.99, $p < .05$) and choice (Sobel test = 2.14, $p < .05$) were significant, indicating that expecting to use the product in front of others shifted preferences toward feature-poor products by highlighting the importance of product usability.

Discussion

Study 4 shows that public choices and public use have different effects on the attractiveness of additional features (H_3). When participants envisioned having their choice evaluated by others, they shifted their preferences toward feature-rich products; conversely, when they envisioned having a product usage experience evaluated by others, they had an incentive to avoid additional features. In such situations, the usability costs of additional features can hinder a person's public performance, and consumers strategically choose fewer features to cultivate positive impressions on others.

GENERAL DISCUSSION

Our studies make several contributions to the literature. First, we show that observers rate consumers who chose feature-rich (vs. feature-poor) products significantly more positively, and this difference was captured both in absolute and comparative interpersonal judgments. Specifically, we find that choosing more features, irrespective of feature content, enhances person perception beyond inferences of wealth, leading to more positive perceptions of the person's technological skills and openness to new experiences.

Second, the current studies expand on impression management research by demonstrating that impression management concerns can lead consumers to seek or avoid features, depending on the context in which these concerns are evoked. Highlighting impression management concerns through priming tasks and public choices increases feature-seeking behavior. However, highlighting impression management concerns by making consumers' actual product use

³Higher numbers indicate greater preference toward the feature-rich option.

Table 1
PRODUCT PREFERENCE AND USABILITY IMPORTANCE IN STUDY 4

Condition	Relative Preference	Share of Feature-Rich Option	Importance of Usability
Private choice	4.1 (1.9)	54%	5.8 (1.2)
Public choice	4.9 (1.3)	70%	5.4 (1.4)
Private use	5.0 (1.8)	71%	5.8 (1.3)
Public use	3.5 (1.7)	39%	6.5 (.74)

Notes: Standard deviations are in parentheses. Higher numbers in relative preference indicate greater preference toward the feature-rich option.

Table 2
THE MEDIATING ROLE OF PRODUCT USABILITY ON PRODUCT PREFERENCE

Independent Variables	Usability Importance (Mediator)		Relative Preference (DV)		Choice (DV)	
	b	t	b	t	b	Wald
Constant	5.8	31.3***	6.1	8.5***	4.3	12.7***
Domain (private vs. public)	-.17	-.91	.49	1.8	.40	1.2
Selection task (choice vs. use)	.46	2.4*	.06	.22	.22	.36
Domain \times selection task	-1.0	-2.6*	1.9	3.4**	1.7	5.6*
Usability importance			-.35	-3.1**	-.71	13.7***

* $p < .05$.
** $p < .01$.
*** $p < .001$.

Notes: Regression coefficients are unstandardized. DV = dependent variable.

observable to others increases the importance of product usability and shifts preference toward feature-poor products. This preference reversal is particularly significant given that previous research has shown that social concerns usually lead consumers to prefer products with superior brand image (Argo, Dahl, and Manchanda 2005), higher price (Chao and Schor 1998), and positive reference group associations (White and Dahl 2006). With respect to product features, our findings show that consumers prefer feature-rich products for public display, but they may choose feature-poor products for public performance.

Third, whereas previous research has suggested that the preference for feature-rich products can lead to dissatisfaction (Thompson, Hamilton, and Rust 2005), our findings indicate that such choices may offer utility from a different source: by conferring social benefits. Although choosing feature-rich products may lower product satisfaction derived in more private settings, such choices can have a positive effect when consumers' preferences are displayed to others. Moreover, for those concerned with minimizing the gap in product valuation between the prepurchase and usage stages, our results demonstrate that envisioning situations in which product usage may be judged by others increases the importance of product usability, shifting preferences toward simpler products.

Related Literature Streams

On a more general level, our research adds to literature suggesting that behavior that seems suboptimal at the individual level may be better understood by considering the social context in which such decisions are made. For example, the notion that people engage in too much variety-seeking behavior—leading them to be less happy than if they simply chose more of their favorite options—can be explained at least partly because others view those who choose variety more positively (Ratner and Kahn 2002). Compromise and attraction effects are heightened when people anticipate having to explain their decisions to others (Simonson 1989), indicating another instance of how these effects may be better understood by considering people's desire for social utility. Whether consumers prefer to seem open to new experiences by choosing feature-rich products or greater variety or logical by choosing options that people can easily justify to others, understanding consumer decision making is enriched by accounting for social utility in addition to other sources of individual utility.

How do our findings relate to research exploring consumers' desire to conform to social norms such as the norm of self-interest? The norm of self-interest predicts that consumers who anticipate that their behavior will be evaluated by others are more likely to select products that are consistent with their material self-interest because others expect them to behave self-interestedly (Miller 1999; Ratner and Miller 2001). Consistent with this stream of research, our results demonstrate a situation in which consumers adjust their behavior to appeal to others. However, unlike previous research in which the self-interested behavior is unambiguous and manipulated through a monetary incentive or having a stake in a cause (e.g., group membership), in our studies, the self-interested option is less obvious. Additional features signal technological skills and openness, but they cost more and decrease perceived product usability. Thus, it

is unclear whether observers would expect additional features to maximize an actor's material self-interest. In both product display and product usage situations, consumers may expect that usability-oriented observers believe that feature-rich products have negative material consequences because consumers may not use the product as much as expected. Alternatively, consumers might expect that capability-oriented observers believe that feature-rich products provide consumers with greater flexibility over time, maximizing utility across usage situations. In the context of our research, the self-interested option depends on which evaluative dimension consumers consider more important.

Our findings also inform previous research on firms' incentives to offer additional features. Amaldoss and Jain (2008) show analytically that the presence of reference groups can motivate firms to add costly product features. According to their model, followers derive social utility by emulating the actions of elite consumers, displaying a strong desire to assimilate with leaders, whereas leaders derive social utility by choosing products that help them distinguish themselves from followers. Adding costly product features can make followers less able to afford the product and help the firm sell only to leaders. Amaldoss and Jain's model assumes that a follower emulates a leader to feel like a leader, not necessarily to signal specific traits to others. In contrast, our studies show that feature numerosness can be used to signal a consumer type by conveying specific traits, such as openness to experience and the consumer's technological skills. Moreover, our findings suggest that contexts in which interpersonal impressions are formed on the basis of product use rather than product display provide leaders (i.e., experts) with a greater opportunity to differentiate themselves from followers (i.e., novices): Leaders are more likely to reveal that they actually know how to use feature-rich products, while followers are more likely to reveal their novice status by fumbling over such products. Although novices and experts equally avoided the feature-rich option in Study 4, our results in tandem with Amaldoss and Jain's (2008) model suggest that feature-rich products may be more likely to serve as effective signals of expertise in situations of public use compared with those of public display.

Further Research and Managerial Implications

There are several noteworthy boundary conditions of our results that are worth exploring in further research. Our studies focused on electronics whose features added capability to the product and were not unambiguously useless. Simonson, Carmon, and O'Curry (1994) show that clearly unnecessary features that appeal only to a small segment of consumers have a negative effect on choice by providing reasons against buying the product. Therefore, it is not clear whether unambiguously useless features would offer consumers social utility if they are not valued by others. Moreover, in our studies, additional features did not explicitly weaken the product in any way except by lowering its perceived usability. Further research could examine whether the social benefits from feature numerosness are robust to situations in which additional features have other negative effects, such as leading to an undesirable product appearance. Finally, although our studies did not show a significant moderating effect of expertise, it is reasonable to expect that

over time, as consumers master how to use a given set of product features, increasing the observability of product use may not mitigate preference for feature-rich products.

Managerially, our findings suggest that highlighting public consumption can increase or decrease the attractiveness of feature-rich options. We expect public display situations, in which consumers' preferences are made visible to others, to enhance feature-seeking behavior. In this context, marketers should emphasize the presence of additional features in the product through distinctive product design, packaging, and advertising. For example, Verizon's recent advertising campaign capitalizes on this notion, encouraging consumers to "become the envy of their neighbors" by subscribing to the Verizon Fios TV premium package. In contrast, directing consumers' attention to how their performance interacting with the product may be judged by others (e.g., navigating the television menu options in the presence of others) can significantly increase the attractiveness of feature-poor options by increasing the importance of product usability.

APPENDIX A: PRODUCT FEATURES IN STUDIES 1 AND 2

Digital Camera A (15 Features)

- Built-in retractable auto flash
- Built-in red eye reduction
- Self timer
- Auto and manual exposure mode (settings for automatic, portrait, landscape, close-up, sports, and night portrait)
- White balance settings for daylight, shade, and overcast
- Photo effect settings for color, sepia, and black and white
- Wide-area auto focus with automatic and manual point selection
- Custom controls for aperture priority and shutter speeds
- Two movie modes to capture up to 80 minutes of video
- On-camera movie playback
- Review modes include album, image storage and slide show
- Shot burst mode captures up to six pictures at 3fps
- Adjustable color saturation and contrast
- Time lapse feature (takes shots in a certain interval of time)
- Compression settings to control resolution at which image is stored

Digital Camera B (30 Features)

- Same 15 features from camera A, plus the following:
- On-camera share button to tag photos for printing or e-mail
 - Storage of up to 32 album names and e-mail addresses
 - Built-in microphone
 - Annotation feature (touch-sensitive LCD screen to allow user to write notes on images)
 - Time lapse feature (takes shots with a certain interval of time)
 - Built-in Wi-Fi for cable-free image transfer
 - Vibration reduction to minimize the effect of camera shaking
 - Face priority mode (automatically finds and focus on faces)
 - D-lighting technology (lightens dark images in-camera for printing out of the camera)
 - One-button small Picture Function to save photos at reduced sizes for e-mailing.
 - Voice recorder
 - Built-in speaker
 - Remote control
 - Auto power off (turns off the camera after selected period of inactivity)
 - USB 2.0 interface

Cell Phone A (15 features)

- Calendar

- Phone book/contacts
- Alarm clock
- Calculator
- Call logs (keeps lists of dialed, received, and missed calls)
- Speed dialing
- Conference call
- Automatic redial
- Mute/hold button
- Wireless Internet capability/high-speed connection
- Text messaging
- Downloadable ringtones
- Walkie-talkie function
- Integrated hands-free speaker
- Integrated digital camera and flash

Cell Phone B (30 features)

Same 15 features from cell phone A, plus the following:

- Digital stereo microphone
- Digital music player
- Synchronize music library with Windows Media Player
- One-click CD ripping (converting and transferring music to your device)
- FM radio
- GSM for international roaming
- Voice-activated dialing
- Photo phone book and picture caller ID
- Timer
- Custom graphics wallpaper
- Voice recorder
- Stopwatch function
- Integrated camcorder
- Video download and playback capabilities
- Video and still image editors

APPENDIX B: PRODUCT FEATURES IN STUDY 3

Digital Video Player A (7 features)

- Playback control buttons
- Frame advance
- Audio navigation menu
- Choice of playback formats
- Digital recording capability
- 3D sound function
- Removal of video from playlist

Digital Video Player B (21 features)

- Same 7 features from feature-poor model, plus the following:
- Date and time functions
 - Aspect-ratio control
 - Picture zoom
 - Slow motion
 - Forward frame-by-frame
 - One-button replay
 - Recording modes
 - Block noise reduction
 - Bookmarks
 - Reverse frame-by-frame
 - Multi-angle capability
 - Built-in memory stick
 - Digital video enhancer
 - Hybrid variable bit rate encoder system

APPENDIX C: PRODUCT FEATURES IN STUDY 4

GPS A (6 features)

Garmin nüvi® 275T

- Turn-by-turn voice prompts
- 2D and 3D mapping

- Choice of route setup (e.g., faster time, shorter distance, off road)
- Points of interest loader (user can update GPS with, e.g., the latest restaurants, safety camera locations, tourist destinations)
- FM traffic receiver
- Emergency locator (user can tap the screen to get, e.g., exact latitude and longitude coordinates, the nearest address and intersection, closest hospitals, police stations)

GPS B (18 features)

Garmin nüvi® 755T

- Same 6 basic features as GPS A, plus the following:
- Lane assist feature (guides user to the correct lane for an approaching turn or exit)
- Multiple route planning so that user can plan ahead
- MP3 player
- 3D building view
- Route avoidance (e.g., avoid highways, tolls)
- Speed limit indicator
- ecoRoute (calculates a more fuel-efficient route)
- The Garmin Garage (finds a variety of vehicles to personalize your Garmin GPS, from dune buggies to dirt bikes)
- Bluetooth wireless technology with a built-in microphone and speaker
- Currency converter
- Calculator
- World clock and automatic time zone transition

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