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To properly evaluate a potential product upgrade, consumers should compare the upgraded option with the product they already own to assess the upgrade's added utility. However, although consumers explicitly and spontaneously acknowledge the importance of comparing the upgrade with the status quo, the authors find that they often fail to do so. Consequently, consumers frequently buy product upgrades that they would not have bought had they followed their own advice. Five experiments, involving both real and hypothetical upgrade decisions, show that even when the status quo option is represented in the decision context, if consumers are not explicitly prompted to reflect on it or compare it with the upgraded option, they often do not compare it with the upgrade and thus show an elevated likelihood of upgrading. The experiments suggest that this "comparison neglect" increases upgrade likelihood by making people overlook the similarities between the upgraded and status quo options and that it persists even when deliberation effort is high. The findings have important implications for theory, marketing practice, and consumer welfare.

Keywords: status quo bias, comparison, product upgrades, focalism, consumerism

Comparison Neglect in Upgrade Decisions

Consumers often must decide whether to upgrade products they own. They frequently make decisions such as whether to upgrade their smartphone to the latest model, buy a new car instead of getting more miles out of the old one, or replace the still-functional couch in their living room. In such cases, common as well as economic sense would suggest that people should compare the expected benefit from the new option with that of the option they already own (i.e., the status quo option) and upgrade only if the added utility from the upgrade exceeds its cost. Indeed, when we asked 40 consumers to describe, using their own words, how they would go about making upgrade decisions, 78% spontaneously said that comparing the upgrade with the status quo option would be a necessary component in the decision (e.g., "see to what extent the product is better than what you already own"). Such data suggest that no prompts are required for people to understand the importance of comparing the upgrade with the status quo option. However, do consumers follow their own recommendation? Do they compare product upgrades with the status quo when making upgrade decisions, as they explicitly prescribe?

In this research, we propose that consumers often fail to sufficiently compare upgrades with options they already possess. Instead, they focus more heavily on the upgrade than on the status quo option, and they tend not to notice the similarities between the options. Consequently, they buy product upgrades that they would not have bought had they compared the options.

We demonstrate this phenomenon, which we name "comparison neglect," by showing that simple cues that prompt consumers to actively compare the upgraded option with the status quo option cause them to notice the similarities between the two and decrease their tendency to buy product upgrades. If people spontaneously compared upgrades with the status quo when making upgrade decisions, then prompting them to do so should be redundant and have no effect on their decision. By showing that prompting people to compare upgrades with the status quo decreases upgrade attractiveness, we demonstrate that people often fail to make such comparisons. We further find (1) that the tendency to insufficiently compare arises in upgrade decisions (i.e., when one option is perceived as the status quo) but not in regular choice between two options, (2) that it leads people to incorrectly perceive some of the "old"

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features (that already existed in the status quo) as "new," and (3) that it does not disappear even when people carefully deliberate about the decision in general.

In addition to showing the tendency to neglect comparisons and illustrating material consequences for consumers, the current research furthers the understanding of how people evaluate options. A great deal of research has suggested that decision makers often find it difficult to evaluate options in isolation, and they consequently tend to rely heavily on comparisons with salient alternatives (Hsee 1996; Simonson et al. 2013). Because the status quo option is a key point of reference in upgrade decisions, one would expect consumers to be particularly likely to use it as a basis for comparison. We demonstrate an important exception to this principle by showing that in some cases—and particularly when the transaction in question is perceived as an upgrade—consumers insufficiently engage in comparison, even when they explicitly and spontaneously acknowledge the importance of comparison and even when the status quo option is explicitly represented in the decision context.

In the next sections, we present the theoretical background for our proposition and develop predictions regarding factors that influence the tendency to insufficiently compare upgrades with the status quo. We then report five studies, using both consequential and hypothetical decisions, that test these predictions and rule out several alternative explanations. Finally, we consider important boundary conditions and discuss the theoretical implications of our findings as well as their implications for marketing practice and consumer welfare.

THEORETICAL BACKGROUND

We define upgrade decisions as choices to replace a functional option in a given category (i.e., the status quo option) with a newer and presumably better option in the same category. By definition, the status quo option in use provides at least some positive utility (though we also consider cases in which it might not). Typically, the upgrade option provides some overlapping functionality or utility as well as unique features and benefits not provided by the status quo option. A new car, for example, provides the same basic utility as an older car (e.g., transportation, cargo space, air conditioning) and offers additional utility on other dimensions (e.g., more advanced specifications, increased comfort, better fuel economy). A new smartphone provides the same basic functionality as an older model (e.g., cellular communication, Internet access, global positioning system [GPS]) in addition to several unique benefits (e.g., better camera, faster browsing, fingerprint sensor).

Consequently, whether consumers evaluate the upgrade option by itself or in comparison to the status quo option should influence its valuation. In the typical case, in which the status quo option is reasonably functional, the recognition that a portion of the utility offered by the upgrade option is already provided by the status quo option is likely to diminish the perceived added utility of the upgrade (e.g., "I already have many of those features"). Conversely, when consumers are extremely dissatisfied with the status quo option (i.e., they derive disutility from the status quo), comparing the upgrade with the status quo may increase the upgrade's attractiveness.

Our analysis suggests that comparing the upgrade with the status quo option should influence how the upgrade is evaluated. Moreover, consumers spontaneously acknowledge the importance of such comparisons. But to what extent do they actually compare the utility received from the upgrade with that received from the status quo option?

An extensive body of work would predict that consumers should spontaneously draw such comparisons. Decades of research have suggested that decision makers often find it difficult to evaluate options in isolation and consequently tend to rely heavily on comparisons with salient alternatives, whether present (Hsee 1996; Tversky, Sattath, and Slovic 1988) or recalled (Simonson and Tversky 1992). Moreover, comparisons are intuitive and require little cognitive effort, often manifesting under cognitive load and when consumers evaluate affect-rich products (Saini and Thota 2010). The role of comparisons is so central that decisions are often made on the basis of the attributes or options that have corresponding alternatives with which they can be easily compared (Simonson et al. 2013): attributes and options with comparable alternatives receive a particularly large weight in the decision, whereas those without direct comparables are often ignored (Kivetz and Simonson 2000; Nowlis and Simonson 1997). The status quo option is an obvious point of reference in upgrade decisions. Thus, one would expect the general tendency to rely on comparisons to further increase consumers' likelihood of using the status quo as a basis of comparison.

Further support for this idea comes from work on the status quo bias and the endowment effect, which shows that decision makers tend to attach a particularly high value to their current options and states, resulting in a preference for the status quo (Chernev 2004; Gourville 2006; Kahneman, Knetsch, and Thaler 1991; Samuelson and Zeckhauser 1988; Weaver and Frederick 2012). Although this prior research has focused on how people value the status quo rather than on whether they compare prospects with the status quo, one might expect that the tendency to overvalue the status quo would also make people more likely to attend to it in general and to use it as a basis for comparison when considering upgrade offers.

As we detail in the next section, however, we propose that consumers tend to insufficiently compare potential upgrades with the status quo. Our proposition is consistent with prior evidence indicating that decision makers often fail to consider relevant information (Kahneman and Frederick 2002; Slovic 1972). For example, when evaluating a focal event (e.g., whether to watch a movie), people often focus on that event and neglect possible alternatives (e.g., visiting a museum; Legrenzi, Girotto, and Johnson-Laird 1993; see also Fischhoff, Slovic, and Lichtenstein 1978; Tversky and Koehler 1994). Similarly, affective forecasters tend to overestimate the affective impact of focal events, in part because they do not think about mundane occurrences that are likely to offset or dilute the impact of the focal event (Gilbert et al. 1998). In addition, when making purchase decisions, consumers do not usually generate alternative uses for their money unless prompted to do so (Frederick et al. 2009). Comparison neglect can thus be considered a form of focalism (Wilson et al. 2000), or the tendency to pay too much attention to the focal entity in question (here, the upgrade itself) and to neglect other relevant—but less

accessible—information (Gilbert 1991; Kahneman and Miller 1986; Koehler 1991).

COMPARISON NEGLECT

We suggest that when people encounter an upgrade to an option they already possess, they tend to insufficiently compare the upgrade with the status quo option. First, although, from an economic point of view, an upgrade decision may not be distinguishable from a choice between two options that simply differ on features and price, a consumer's perception of a transaction as a product upgrade may change the decision process, making one of the options (i.e., the upgraded option) seem focal and thus in need of evaluation, and the other option (i.e., the status quo) seem nonfocal or a given. This shift in processing may lead people to evaluate the upgraded prospect in isolation (e.g., "What is good and bad about it?") instead of relative to the status quo option (e.g., "Which of these is better?"). Importantly, we argue that upgrades change not how effortfully people think, but what they think about.

Comparison may also be neglected because an upgrade context may not make consumers feel that they have to give up their old product (i.e., the status quo option) to receive a new product. After all, the upgrade is often marketed as an improvement on the status quo. Thus, unlike the typical situation studied in research on status quo bias and the endowment effect, in which consumers must decide whether to move away from the status quo or part with one good to receive money or a qualitatively different good (Kahneman, Knetsch, and Thaler 1991), upgrade decisions may lead consumers to perceive that they do not have to give up anything. Although the "lost" value of the status quo option may be salient in specific product replacement situations (Okada 2001, 2006), disposal of the status quo option is not a salient outcome or a necessary condition in most product upgrade decisions (Roster and Richins 2009). Consequently, consumers may not spontaneously compare the upgrade with the status quo option and may focus too heavily and exclusively on the benefits offered by the upgrade option itself.

We predict that the tendency to insufficiently compare product upgrades with the status quo option will typically result in increased upgrade likelihood. We demonstrate this by contrasting instances in which consumers are prompted to compare the upgrade with the status quo with instances in which they consider upgrade offers unaided but are still aware of the status quo (for a similar approach, see Frederick et al. [2009]; Wilson et al. [2000]). If upgrade decisions are inflated because people neglect to compare the status quo with the upgrade, then prompting consumers to compare the upgrade with the status quo option should generally reduce upgrade likelihood. We further predict that comparison neglect increases upgrade likelihood not because people fail to appreciate or value the status quo option but because they fail to account for the similarities between the upgrade and the status quo option. Comparing the options highlights their common features, making the upgrade seem more similar to the status quo and thus less appealing.

The effect of prompted comparison on upgrade likelihood may be moderated, however, by people's baseline satisfaction with the status quo option. Specifically, prompted comparison should be especially likely to decrease upgrade likelihood when people are satisfied with the status quo (and thus, the upgrade has relatively little to add). However, the effect may attenuate (or even reverse) when people are highly dissatisfied with the status quo because a prompt to compare the upgrade with an unsatisfactory status quo may make the upgrade look even more attractive.

THE CURRENT RESEARCH

To summarize our core arguments thus far, we propose that upgrade likelihood may be inflated because, in upgrade contexts, people focus more heavily on the upgrade than they do on the status quo option. People thus tend not to fully compare the upgrade with the status quo option (comparison neglect) and tend not to notice the similarities between the two options. This makes the upgrade appear more attractive than it would have had full comparisons occurred, and it often inflates upgrade likelihood.

We further propose that the effects of comparison neglect can be attenuated, and upgrade likelihood can be reduced, by prompting people to compare the upgrade with the status quo. We predict that such a comparison will prompt people to notice the similarities between the two options, which should decrease the attractiveness of the upgrade.

We test our predictions about why upgrade likelihood is inflated and how this bias can be attenuated in five studies, using different manipulations in both consequential and hypothetical decisions. Study 1 uses a decision with real monetary consequences to test our prediction that prompting people to reflect on the status quo option during upgrade decisions decreases upgrade likelihood without affecting perceptions of the status quo option. Study 2 contrasts a decision framed as an upgrade with an equivalent decision framed as a choice and examines whether this prompted comparison effect is specific to an upgrade context.

The next few studies examine the processes that inflate upgrade likelihood and rule out alternative explanations of the effects of our comparison prompts. Study 3 tests whether people truly make inadequate comparisons at the baseline, or whether they merely overcompare when prompted to do so. Study 3 also directly demonstrates the distorting effect of comparison neglect on perceptions of the upgraded option: comparison neglect leads people to fail to acknowledge the extent of overlap between the upgrade and the status quo.

Study 4 demonstrates the mediating role of perceived similarity between the upgrade and status quo options and rules out explanations of our effects that are based on superficial processing and perceived loss. Study 5 bolsters this result using a different manipulation and examines the underlying role of product comparisons in upgrade decisions.

All our studies use familiar products that the participants actually own. Thus, the status quo option is always a real, highly familiar product. Furthermore, participants explicitly identified themselves as owners of the status quo option at the beginning of each study, regardless of condition, making the potential for its salience and accessibility quite high. These features underscore the persistence of the tendency to neglect to compare in upgrade decisions, even when the status quo option is an explicit component of the decision.

Note that the term "comparison neglect" does not mean that people necessarily fail to compare completely but, rather, that they compare insufficiently. Just like immune

neglect (Gilbert et al. 1998) and opportunity cost neglect (Frederick et al. 2009), comparison neglect denotes a tendency to insufficiently attend to important cues in certain cases. Note also that while the studies examine the basic comparison neglect phenomenon and illustrate its effect on upgrade likelihood, we are cautious in making claims regarding how it may ultimately affect long-term consumer welfare. Whether product upgrades (justified or not) increase or decrease long-term happiness will depend on the qualities of people's purchases in specific cases. We return to this point in the "General Discussion" section.

STUDY 1: COMPARISON NEGLECT IN CONSEQUENTIAL CHOICE

Study 1 has two goals. First, it uses a decision with real consequences to test our proposition that consumers often fail to compare prospective upgrades with the status quo option. We offered smartphone users the option to buy the premium version of a smartphone app for which they already owned the basic (i.e., free) version. We predicted that prompting consumers to reflect on features of the status quo option would decrease their tendency to upgrade by making them realize the extent of feature overlap between the upgrade and the status quo. If people spontaneously evaluate upgrades by comparing them with the status quo option, as they commonly advocate, then prompting them to reflect on the status quo should have no effect. However, we hypothesize that people do not often spontaneously make such comparisons; thus, such a prompt will increase comparisons with the status quo and decrease upgrades. Second, we included measures to test an alternative account, according to which prompting people to reflect on the status quo option may change their perception of the status quo option itself or their attitudes toward it.

Method

Ninety students (mean age = 23 years; 51% female) completed this study in exchange for extra course credit. In addition, we paid the participants $.50 and told them that they had the option (but not the obligation) to use the money to buy various items during the study.

Participants had been prescreened such that all of them were iPhone users who owned at least one of the free iPhone apps used in the study. We used five of the most popular free iPhone apps (based on Apple's iTunes program) for which both a free version and a paid "premium" version existed. These included both utilitarian apps (Craigslist Pro, Dictionary.com, and The Weather Channel) and games (Draw Something and Words with Friends). We did not include users of other smartphone types in this study because some of the app versions used were unavailable on other smartphone platforms.

The study had two between-subjects conditions (comparison prompt: with vs. without). First, all participants saw a list of the five free apps, each described by its name and icon, and they selected one free app that was currently installed on their phone. In the comparison prompt condition, participants then described the main features and capabilities of the chosen app (i.e., the status quo option). In the no prompt (i.e., control) condition, participants continued directly to the next page.

On the next page, we offered participants the opportunity to buy, for $.25, the premium version of the free app they had previously selected. This price represented a considerable discount from the usual selling price. Each participant saw a list of the premium features of the relevant app, followed by a list of the features that existed in both the free and premium versions of the app. The information presented on this page was drawn directly from the app's page on Apple's App Store and did not vary by condition (see Appendix A).

Our focal dependent measure was whether participants chose to buy the upgrade or forgo the offer (and keep their entire $.50). We predicted that people in the comparison prompt condition would be less likely to upgrade because increasing the salience of features of the status quo option should increase the likelihood that participants referred to these features as a basis for comparison when contemplating the upgrade—and should thereby make the upgrade less attractive.

On a separate screen, we measured participants' perceptions of the status quo option (i.e., the free version of the app). Specifically, we measured the perceived frequency of using the app, satisfaction with the app, and the extent to which participants felt attached to the app. Apps were delivered to participants as promised.

Results

Consumers overwhelmingly and spontaneously acknowledge the need to compare a potential upgrade with the existing status quo. However, consistent with our hypothesis that they often neglect to do so, participants' likelihood of buying an upgrade was greater in the control condition than when they were simply asked to describe the features of their current free app before considering the upgrade (37.0% vs. 15.9%; $\chi^2(1) = 5.09$, $p < .03$). All participants had just stated that they owned the app in question, but being prompted to list its features decreased upgrade likelihood relative to the baseline, suggesting that, at the baseline, participants were not explicitly considering the status quo's features and comparing them with the upgrade. This result suggests a tendency to insufficiently compare upgrades with the status quo, even when the status quo option is explicitly represented in the decision context.

Next, we examined whether asking participants to reflect on the status quo option increased perceptions of usefulness, satisfaction, or attachment regarding the status quo option. A series of analyses of variance (ANOVAs) revealed no effects of condition on usage frequency ($F(1, 88) = 1.47$, n.s.), satisfaction ($F(1, 88) = .26$, n.s.), or attachment ($F(1, 88) = 1.30$, n.s.). This suggests that the effect on the buying decision was not driven by changes in participants' perceptions of the status quo option or by their attitudes toward it.

Discussion

If consumers compare the status quo option with potential upgrades, as they advocate, then prompts that encourage comparison should be redundant. Participants in both conditions had actively identified and selected their status quo app before receiving the upgrade offer. One might expect that this cue alone would prompt participants to use the status quo option as a reference point when evaluating the upgrade. Moreover, the upgrade offer listed the premium

features separately from the more basic features, which could have further prompted participants to compare the two versions.

However, the results suggest that upgrades decreased by 57% when we prompted participants to think actively about features of their current options. Our results further suggested that this effect was not accompanied by changes in perceptions of or attitudes toward the status quo itself. We suggest instead that the comparison manipulation made the upgrade and the status quo seem more similar, thereby reducing the upgrade's appeal.

One possible concern about Study 1 is that the instruction to reflect on the features of the current app may have created experimental demand. Perhaps participants felt that we were suggesting that they should engage in comparisons or should not upgrade. In our view, the fact that we used a real offer with monetary consequences suggests that the results are more likely to reflect true preferences than attempts to please the experimenters. Nevertheless, to address this concern, in the following studies, we examine the demand explanation further.

STUDY 2: UPGRADE VERSUS CHOICE

Study 1 shows that merely adding a comparison prompt reduced upgrade likelihood, suggesting that, at the baseline, consumers do not spontaneously compare the upgrade with the status quo. Study 2 examines whether this comparison neglect phenomenon is unique to upgrade contexts. We hypothesized that comparison neglect arises from people perceiving a transaction as a product upgrade. The upgrade context may make the upgraded product itself seem more focal; this may lead people to merely consider the potential benefits offered by the upgrade and to (at least partly) fail to acknowledge the similarity of the upgrade to what they already have. Accordingly, we expect to observe comparison neglect when the offer is framed as an upgrade because consumers tend to overly focus on features of the upgraded option in isolation.

However, when the very same offer is framed as a choice between two options (neither of which is the status quo), we expect people to be more likely to spontaneously compare the two options, given that neither is likely to be especially focal. In this case, the comparison manipulation should have an attenuated effect. That is, according to our theorizing, the comparison manipulation should affect the decision when the basic option is framed as the status quo and not when it is just another option in the set.

Study 2 also extends our investigation into a new product category, using a smartphone upgrade decision. Smartphones are a particularly useful product category for testing our propositions because they are used daily (often multiple times each day) and users are typically well acquainted with their main features. Consequently, knowledge concerning one's own smartphone (i.e., the status quo option) is likely to be highly accessible. This provides a strong test of comparison neglect.

Finally, Study 2 tests several alternative explanations. Specifically, we test alternative accounts based on changes in perception or valuation of the status quo option, superficial processing, experimental demand, and motivated reasoning.

Method

Three hundred eighteen respondents (mean age = 33 years; 50% female) completed this study on Amazon's Mechanical Turk (MTurk) in the United States. All participants were initially asked if they owned a smartphone and indicated the type of smartphone they used. We accepted participants who owned an iPhone to ensure that the features of their current phone were compatible with the features of the status quo option used in the study. Participants were randomly assigned to one cell of a 2 (comparison: baseline vs. prompted) × 2 (frame: upgrade vs. choice) between-subjects design.

We showed participants information about "a new, cutting-edge smartphone model" which presumably had just been introduced. This upgraded phone had several novel features, identified through a pretest (e.g., eye tracking, wireless charging), as well as other features commonly available on standard existing smartphones (e.g., GPS, camera, Wi-Fi, USB charging). In all conditions, the upgraded option was priced at $299 (Appendix B).

In the upgrade framing conditions, we asked participants to assume that they could upgrade their current phone to a new model (for $299), and we showed them the full list of new and existing features included in the new phone. We told participants that they could choose whether to upgrade to the new phone or stay with their current phone, which we described with a subset of standard features commonly available on iPhone.

In the choice framing conditions, we framed the question as a choice between two phones, described using the same two lists of features. Participants could choose between the enhanced "new, cutting-edge model" (which cost $299) and an older smartphone option, which they could get at no cost. The two framing conditions were thus equivalent in terms of participants' required expenditures and resulting outcomes: in both cases, participants chose between a slightly older phone that had all the standard features, at no cost, and a new, upgraded model priced at $299.

In the prompted comparison conditions, participants were asked to describe how their phone compared with the upgraded option (in the upgrade condition) or how the older phone compared with the new one (in the choice condition). In the baseline conditions, participants skipped this step and went directly to the main dependent measures.

Participants rated on a seven-point scale whether they preferred the status quo (older) phone or the upgrade (newer) phone. This item was our focal dependent measure.

To examine whether our comparison prompt changed perceptions of the status quo option, all the participants rated how happy and how satisfied they were with their current phone and indicated how much they thought it was worth (in dollars). Finally, to test the possibility that our comparison prompt created experimental demand, participants indicated whether they felt that the researchers wanted them to decide one way or the other (yes/no)—and, if so, how (i.e., choose the upgraded [cutting-edge] phone, stay with their current [choose the older] phone, or "I don't know").

Results

Upgrade likelihood. A 2 (frame) × 2 (comparison) ANOVA on upgrade likelihood revealed a main effect of frame ($F(1, 314) = 11.65$, $p = .001$) and a marginally significant

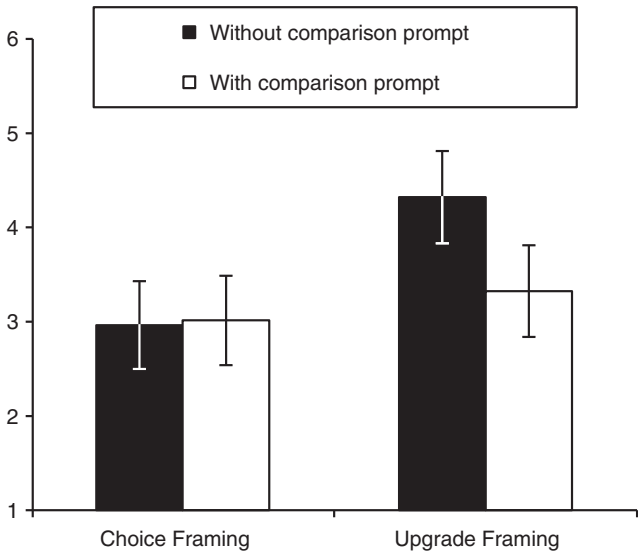
main effect of comparison prompt ($F(1, 314) = 3.76$, $p = .053$), which were qualified by the predicted framing × comparison interaction ($F(1, 314) = 4.74$, $p = .033$; see Figure 1). Consistent with our prediction, under an upgrade frame, prompting participants to compare the options decreased upgrade likelihood ($M_{compare} = 3.33$) compared with the baseline ($M_{baseline} = 4.32$; $F(1, 314) = 8.27$, $p = .004$). However, under a choice frame, our comparison prompt had no effect ($M_{compare} = 3.01$ vs. $M_{baseline} = 2.96$; $F(1, 314) = .02$, $p = .88$). Looking at the data another way, whereas the baseline upgrade tendency was higher under an upgrade framing than under a choice framing ($F(1, 314) = 16.01$, $p < .001$), prompting participants to compare the options decreased upgrade tendency under an upgrade framing to a level similar to the choice framing ($F(1, 314) = .78$, $p = .38$).

Alternative accounts. We examined whether prompting participants in the upgrade condition to compare the status quo option with the upgrade influenced perceptions of satisfaction or happiness with the status quo option or perceptions of the status quo option's value. A series of ANOVAs revealed no effects of comparison prompt on satisfaction and happiness with the status quo ($F(1, 156) = 1.22$, $p = .27$; $F(1, 156) = .49$, $p = .48$, respectively) or on the perceived value of the status quo option ($F(1, 156) = .13$, $p = .72$). This suggests that the effect of our manipulation on the upgrade decision was not driven by changes in participants' perceptions of the status quo option or by their attitudes toward it.

One may wonder whether our results merely reflect participants' superficial processing or failure to pay attention unless they are explicitly prompted to compare. However, our pattern of results rules out this possibility: a superficial processing account should equally apply to both the upgrade and choice framing conditions, and it cannot explain the frame × comparison interaction.

Figure 1

UPGRADE LIKELIHOOD AS A FUNCTION OF COMPARISON AND DECISION FRAMING (STUDY 2)



Notes: Error bars represent 95% confidence intervals.

One may also wonder whether experimental demand played a role in our results in the upgrade condition. Perhaps prompting participants to compare the two options led participants to feel that we were suggesting that they should not upgrade. Note, however, that our pattern of results rules out this possibility as well, because an experimental demand account of the effects of the comparison prompt should equally apply to both the upgrade and choice framing conditions (i.e., it cannot explain the frame × comparison interaction). Moreover, analysis of our experimental demand measure in the upgrade condition casts further doubt on this alternative account. Our comparison manipulation had no effect on participants' perception that the researchers wanted them to decide in a particular way (prompted comparison = 44.2% vs. baseline = 45.7%; $\chi^2(1) = .037$, $p = .85$). Even among participants who did indicate such a general belief (i.e., 44.9% of participants), our comparison manipulation had no effect on perceptions of which specific option the researchers were presumably trying to favor, and most of these respondents believed that the researchers wanted them to choose the upgrade, not the status quo, regardless of comparison condition (prompted comparison = 80.0% vs. baseline = 73.1%; $\chi^2(2) = 1.34$, $p = .51$). Taken together, these findings rule out the possibility that our comparison prompt decreased upgrade tendency by introducing experimental demand.

Finally, we examined whether our results could be driven by motivated reasoning. We suggested that an upgrade framing leads people to overly focus on the prospect and thus to insufficiently compare it with the status quo, resulting in failure to appreciate the extent of overlap between the two options. However, one could argue that rather than reflecting distorted *perception* of feature overlap, comparison neglect could be driven by a *motivation* to upgrade and to strategically overlook reasons not to do so (Kunda 1990; Lord, Ross, and Lepper 1979). We tested this motivated reasoning account by examining how satisfaction with the status quo option influenced the effect of our comparison prompt in the upgrade condition. Specifically, a motivated reasoning account would predict that comparison neglect—and thus, the effect of our comparison prompt—should be most pronounced among participants who are most motivated to upgrade (i.e., those who are least happy and satisfied with the status quo). However, a satisfaction × comparison prompt regression analysis revealed the opposite pattern: although a main effect of satisfaction with the status quo confirmed that less satisfied users were indeed more motivated to upgrade in general ($B = -.31$, $SE = .12$, $p = .007$), our comparison prompt had a pronounced effect among participants who were satisfied with their current phone (i.e., one standard deviation above the mean [$B = -1.28$, $SE = .44$, $p = .004$] as well as at the mean level of satisfaction [$B = -.93$, $SE = .31$, $p = .003$]), but it was nonsignificant among participants who were dissatisfied with the status quo and, therefore, most motivated to upgrade ($B = -.58$, $SE = .44$, $p = .19$).[1] This pattern of results is inconsistent with an alternative account

[1]The satisfaction × comparison prompt interaction term did not reach significance in this case. However, we find similar results and a significant interaction in Study 4. Taken together, these results cast doubt on a motivated reasoning account.

that is based on motivation to upgrade. However, the results are consistent with our more "perceptual" comparison neglect account: prompting people to compare the prospect with the status quo decreases upgrade likelihood when people are satisfied with the status quo, but when people are dissatisfied with the status quo, prompting them to compare the upgrade with the unsatisfactory status quo does not detract from the prospect's attractiveness.

Discussion

Although, from an economic point of view, an upgrade decision is not different from a choice between a free basic option and a costlier enhanced option, we proposed that perceiving a transaction as an upgrade changes the decision process, leading people to focus on the prospect in isolation and to insufficiently compare it with the status quo. Consistent with our theorizing, Study 2 shows that prompting participants to engage in comparisons decreased preference for the enhanced option in an upgrade context, when one of the options was framed as the status quo. The same manipulation had no effect when the decision was framed as a choice between two economically comparable options, suggesting that people more naturally engage in comparisons in a choice context. In addition, compared with a choice frame, an upgrade frame inflated the likelihood of choosing the enhanced option at the baseline.

By highlighting the unique role of the upgrade context, Study 2 rules out the possibility that the effect of the comparison prompt reflects a general failure to pay attention to the overlapping features or a general lack of processing motivation at baseline. Such explanations cannot explain why prompting people to compare the options influenced the decision under the upgrade frame but not under the choice frame. Multiple findings also rule out the possibility that our manipulation decreased the tendency to upgrade by introducing experimental demand or influencing participants' perceptions or valuations of the status quo option itself. Finally, the findings are inconsistent with a motivated reasoning account because our effect was least pronounced among participants who had the strongest motivation to upgrade.

STUDY 3: FAILING TO SEE THE REDUNDANCIES

Study 3 extends Studies 1 and 2 in two important ways. First, we used a different manipulation of comparison. We induced comparison by showing participants a list of the upgrade's features and asking them to mark all the features that their own smartphone has.

Second, Study 3 examines our proposition that comparison neglect represents a bias—namely, that consumers indeed insufficiently compare the upgrade with the status quo at the baseline. Our previous studies show that prompting consumers to compare the upgrade with the status quo option decreases their upgrade likelihood, but it is possible that the degree of comparison made without the prompt is already sufficient, and consumers are overcomparing in the prompted comparison condition.

We thus tested our proposition regarding inadequate comparison by introducing a new benchmark condition. Specifically, we had the baseline condition and the prompted comparison conditions, as before, but we added a third condition in which participants are offered an upgrade described only by its unique features, without showing the features that overlap with the status quo option.[2] The logic behind this design is as follows: the baseline condition (new and existing features) represents a larger bundle of features than the new condition (new features only) and therefore should seem more attractive if consumers solely focus on the upgrade option and do not compare it with what they already own. That is, if people neglect to compare the upgrade with the status quo, they will not appreciate that the additional features in the baseline condition already exist in the status quo option; thus, the upgrade described by new and existing features will seem better than the upgrade described by new features only (i.e., simply because the former description lists more features than the latter). This would suggest that consumers are making inadequate comparisons with the status quo at the baseline. If, however, people do spontaneously compare the upgrade with the status quo, then the inclusion of already-existing features in the baseline condition should not make the upgrade more attractive than in the new features only condition (i.e., because people in each condition should realize that the number of new features is the same). We thus predict that upgrade likelihood will be greater in the baseline (new and existing features) condition than in the prompted comparison condition and in the new features only condition.

In addition to measuring upgrade likelihood, we also directly tested the underlying perceptual bias by measuring how many nonredundant features people perceived. If, as we argue, people insufficiently compare the upgrade with the status quo option at the baseline and consequently fail to fully recognize the similarities between the two, then they should perceive a larger number of nonredundant features in the baseline condition than in the prompted comparison condition or the unique features condition.

Method

Two hundred twenty-one respondents (mean age = 33 years; 51% female) in the United States completed this study on MTurk. All participants were asked if they owned a smartphone and indicated the type of smartphone they used. Participants who indicated that they did not own a smartphone were screened out.

Participants were randomly assigned to one of three between-subjects conditions (condition: baseline vs. unique features vs. prompted comparison). They were told that they would be evaluating an offer ostensibly from their cellular phone carrier.

We showed participants information about "a new, cutting-edge smartphone model" that presumably had just been introduced. The phone had several novel features, identified through a pretest (e.g., eye tracking, wireless charging) as well as other features commonly available on standard existing smartphones (e.g., GPS, camera, Wi-Fi, USB charging). In all conditions, the upgrade offer was priced at $199.

In the baseline condition, participants saw both the new and existing features. In the unique features condition, participants saw only the new features. In the prompted

[2]We thank an anonymous reviewer for suggesting this design.

comparison condition, participants saw the new and existing features, but we asked participants to mark all the features that their current smartphone had (see Appendix C). We expected the prompted comparison condition (in which people checked off features) to increase comparisons beyond the baseline (in which people only read the features); that is, we expected that unless participants were explicitly asked to note which features already existed in the status quo, they would mentally represent the existing features as mainly being features of the new phone and would neither explicitly note that their current phone already had many of these features nor actively compare their current phone's features with those of the upgraded phone.

Participants rated on seven-point scales how interested they would be in upgrading their phone, which served as our focal dependent variable. We then asked participants to indicate, on a separate screen, how many novel features the upgraded phone had that their current phone did not have. Participants entered a number in a box. We eliminated five participants who did not enter a valid response and one who entered an invalid number of novel features (i.e., 150), leaving a valid sample of 215 respondents. Drawing on our proposition that, at the baseline, participants insufficiently compare the upgrade with the status quo option and consequently fail to fully recognize the similarities between the two, we predicted that participants in the baseline condition would perceive a larger number of novel features than those in the prompted comparison condition or the unique features condition. If, without a comparison prompt, consumers in the baseline condition perceive more features as novel than in the prompted comparison condition, this would suggest that consumers make inadequate comparisons at the baseline. Furthermore, it would indicate that comparison neglect distorts the perception of the upgrade, inflating the perceived extent of novel features. Finally, to examine whether our manipulation changed perceptions of the status quo option, participants rated how happy they were with their current phone and indicated how much they thought it was worth (in dollars).

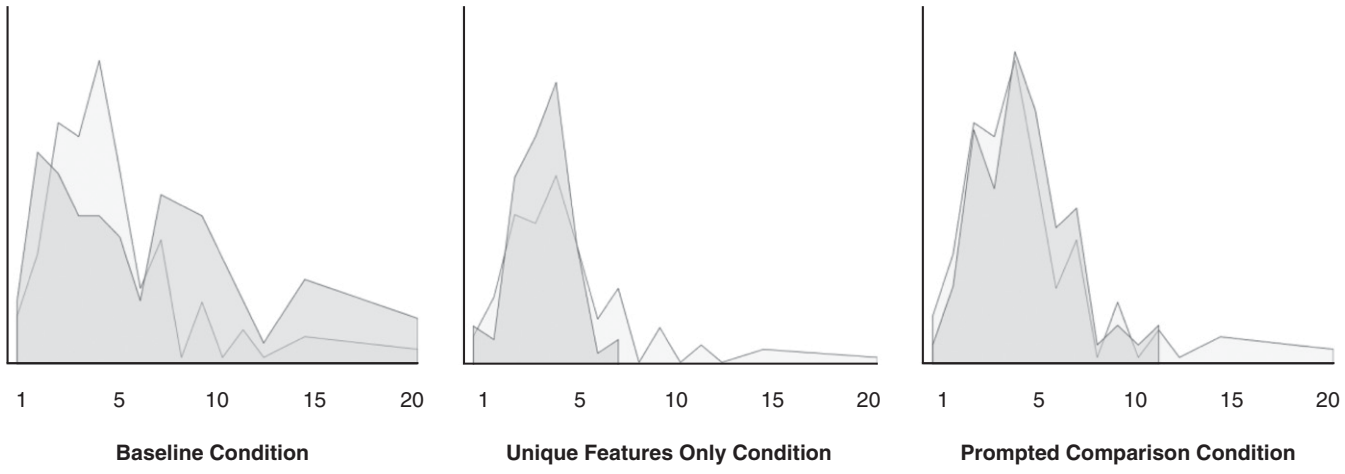
Results

An ANOVA on upgrade likelihood revealed the predicted effect of condition ($F(2, 212) = 5.73$, $p = .004$). In support of our proposition that people fail to sufficiently compare at the baseline, planned contrasts indicate that upgrade likelihood in the baseline condition ($M_{baseline} = 4.31$) was higher than in the prompted comparison condition ($M_{check\_overlapping\_features} = 3.21$, $t(212) = 3.36$, $p < .001$) as well as the unique features condition ($M_{unique\_features} = 3.61$, $t(212) = 2.09$, $p = .037$). There was no difference between the prompted comparison condition and the unique features condition ($t(212) = 1.21$, $p = .23$). These findings suggest that comparison neglect represents a bias at the baseline rather than an artifact of our comparison prompt: if participants had been comparing the upgrade with the status quo at the baseline, then the superfluous features listed in the baseline condition should not have increased upgrade likelihood relative to the unique features condition.

Participants' estimate of the number of nonredundant features provides further insight into the underlying bias. An ANOVA revealed the predicted main effect of condition ($F(2, 212) = 8.88$, $p < .001$). Participants perceived a larger number of features as novel (i.e., nonredundant) in the baseline condition ($M_{baseline} = 6.47$) than in either the prompted comparison condition ($M_{check\_overlapping\_features} = 5.47$, $t(212) = 2.01$, $p = .045$) or unique features condition ($M_{unique\_features} = 4.33$, $t(212) = 4.21$, $p < .001$) (see Figure 2). The contrast between the baseline condition and the prompted comparison condition is particularly informative because the total number of displayed features is the same, but the perceived novelty of the upgrade is nevertheless inflated in the baseline condition. These findings directly illustrate how comparison neglect distorts the perception of the upgraded option: unless participants are

Figure 2

HISTOGRAMS OF THE PERCEIVED NUMBER OF NOVEL (NONREDUNDANT) FEATURES, ACROSS CONDITIONS (STUDY 3)



Notes: The x-axis represents the number of perceived nonredundant features. The dark gray shaded area represents the distribution of participants' perceptions of nonredundant features in each condition. The light gray shaded area represents the cumulative distribution across all three conditions.

prompted to compare the upgrade with the status quo, they fail to appreciate the extent of overlap between the two.

Casting doubt on the possibility that comparison influenced perceptions of or attitudes toward the status quo option, there was no effect of condition on valuation of ($F(2, 212) = .29$, $p = .75$) or happiness with ($F(2, 212) = .72$, $p = .49$) the current phone. Happiness with the status quo did not moderate the effect of comparison condition on upgrade likelihood (B = .04, SE = .24, $p = .86$).[3]

Discussion

Study 3 addresses several important issues. First, it establishes a clear benchmark for the existence of a bias, in support of our proposition that people insufficiently compare at the baseline, in the absence of explicit prompts. We used a product with which people are highly familiar and found that adding superfluous features to a list of novel features increased upgrade likelihood. This suggests that, at the baseline, consumers were not relating those familiar and frequently used features to their existing phone.

These findings underscore our proposition that comparison neglect represents a bias. If consumers had been spontaneously comparing the upgrade with the status quo, then adding existing features to the list of new features should have either decreased or had no effect on upgrade likelihood; however, upgrade likelihood decreased only when we encouraged people to indicate whether their phones had those features. Merely reading a list that included the status quo option's features was not enough to prompt comparisons.

Furthermore, Study 3 not only demonstrates the existence of a bias but also identifies where it occurs. The findings suggest that comparison neglect distorts people's perception of the upgrade option (i.e., it distorts the perceived extent of the upgrade's novelty vs. redundancy) rather than the way people interpret this information (e.g., it seems not to distort the *valuation* of the status quo features or the novel ones). Our ancillary measures do not support a motivated reasoning account.

Study 3 also rules out several other alternative accounts. An account based on experimental demand, as well as an account based on superficial processing, cannot explain the contrast between the baseline condition and the new features only condition, which did not include a comparison manipulation. Furthermore, our effect was not driven by changes in consumers' valuation of, or satisfaction with, their current phones. Namely, it is not that people undervalue or fail to appreciate the status quo option in the absence of an explicit comparison prompt; rather, they seem to perceive the upgrade option as more attractive without the comparison prompt, apparently failing to account for the redundancy of overlapping features.

[3]A previous version of this experiment (N = 138) revealed a significant comparison × satisfaction with status quo interaction effect on upgrade (B = −.68, SE = .31, $p = .03$), such that prompted comparison decreased upgrade likelihood at the mean level of satisfaction (B = −1.46, SE = .34, $p = .0001$) as well as one standard deviation above the mean (B = −2.24, SE = .46, $p < .0001$) but had no significant effect one standard deviation below mean satisfaction (B = −.55, SE = .57, $p = .34$). As we discussed in Study 2, this pattern is consistent with our comparison neglect account, but it is inconsistent with an alternative motivated reasoning account.

STUDY 4: UNDERLYING PROCESS AND ALTERNATIVE EXPLANATIONS

Study 4 has three goals. First, it further examines the process involved in upgrade decisions. We argue that unless people are explicitly prompted to compare the upgrade with the status quo option, they perceive the two as relatively dissimilar and therefore have a heightened desire to upgrade. In Study 4, we directly measure perceived similarity and examine whether it is greater at the baseline than after prompted comparison and whether changes in similarity mediate the debiasing effect of our comparison prompt.

Second, Study 4 addresses an alternative explanation based on careful deliberation. One could argue that explicitly prompting comparison decreases upgrade likelihood simply because it induces more careful processing of the decision in general. Study 2's interaction casts doubt on this possibility, but we test this alternative explanation further by introducing a new condition, in which people were asked to carefully evaluate the offer and to generate arguments for and against upgrading. We suggest that people in this new condition will process the decision rather carefully (as a result of being asked to generate these arguments) but will not necessarily engage in extensive comparisons with the status quo. That is, generating arguments for and against upgrading may cause them to extensively consider the upgrade itself (i.e., Is it good?) but may not focus them more than usual on the status quo or on comparisons between the status quo and the upgrade. Consequently, we predict that this sort of careful deliberation will not, in and of itself, greatly reduce the likelihood of upgrading.

Note that this prediction is derived from our theorizing that upgrade decisions make the upgrade seem focal and the status quo seem nonfocal: we suggest that the important factor is not how carefully people deliberate but what they focus on when deliberating. Thus, in addition to addressing a careful deliberation account, the arguments generated by participants in Study 4 can potentially provide support for our theory by showing what people focus on when considering whether to upgrade.

We compare the baseline condition and the careful deliberation condition with a check overlapping features condition, similar to that used in Study 3, as well as with another prompted comparison condition, similar to the one used in Study 2, in which participants were instructed to describe how the upgrade compared with their existing option. We expect that both these prompted comparison conditions will similarly reduce people's likelihood of upgrading relative to the baseline and careful deliberation conditions. Thus, a third goal of Study 4 is to broaden our set of debiasing manipulations and demonstrate generalizability.

Method

Participants were 241 smartphone users (mean age = 32 years; 43% female), recruited from MTurk and screened using the same procedure described in Study 3. They were randomly assigned to one of four between-subjects conditions

(baseline vs. careful deliberation vs. check overlapping features vs. general comparison).

The procedure and materials were similar to those used in Studies 2 and 3. Participants evaluated an upgrade offer for "a new, cutting-edge smartphone model" that presumably had just been introduced. They saw a list of several novel features of the new phone as well as other features commonly available on many existing phones. In the baseline condition, participants did not receive special instructions and simply responded to our dependent measures (described next). In the careful deliberation condition, we asked participants to carefully evaluate the offer and to list pros and cons of upgrading. In the check features conditions, participants checked features that their current smartphone had. In the general comparison condition, participants described how the upgraded option compared with the status quo option. To measure the extent of deliberation across conditions, we measured the amount of text entered by participants in the careful deliberation condition and general comparison condition and found no difference ($M_{increased\_deliberation}$ = 171 characters vs. $M_{general\_comparison}$ = 189 characters; t(111) = .81, p = .42), suggesting that the amount of deliberation did not reliably differ between the two conditions.

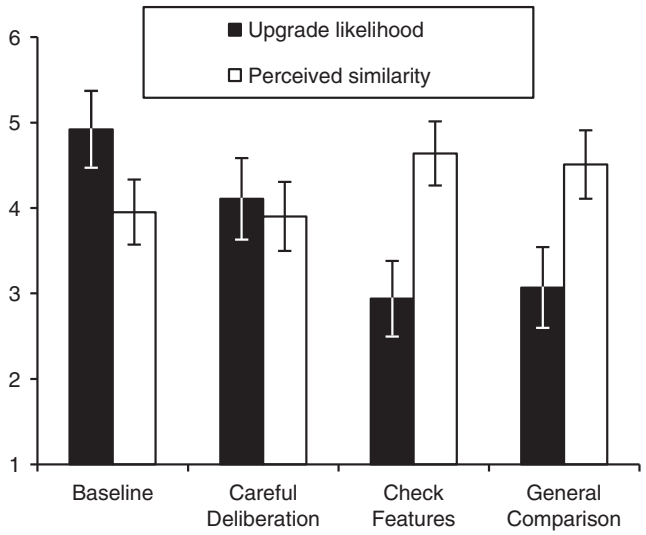
As in Study 3, participants rated on a seven-point scale how interested they would be in upgrading their phone. To measure perceived similarity, participants also rated how similar they thought the new phone was to their existing phone and how similar the features of the new phone were to the features of their existing phone (1 = "not at all similar," and 7 = "very similar"; r = .81, averaged to an index). Finally, participants rated how happy they were with their current phone.

Results

Upgrade. A four-condition (baseline vs. careful deliberation vs. check overlapping features vs. general comparison) one-way ANOVA on upgrade likelihood revealed a main effect of condition (F(3, 237) = 16.35, p < .001). Planned contrasts indicate that although upgrade likelihood in the careful deliberation condition (4.11) was lower than in the baseline condition (4.92; t(237) = 2.43, p < .02), upgrade likelihood in both the baseline and careful deliberation conditions was higher than in the check features condition (2.94; t(237) = 6.16, p < .001; t(237) = 3.52, p = .001, respectively) and general comparison condition (3.07; t(237) = 5.56, p < .001; t(237) = 3.03, p = .003, respectively). There was no difference between the check features and general comparison conditions (t(237) = .40, p = .69; see Figure 3). These results suggest that although prompting people to carefully deliberate decreased their upgrade likelihood, prompting them to compare the upgrade with the status quo had a unique effect, decreasing upgrade likelihood even beyond careful deliberation. Put differently, even when people deliberate carefully about an upgrade, their upgrade likelihood may be inflated because they still neglect to compare it with the status quo. Obtaining the same results using two different comparison manipulations bolsters our proposition and suggests that the results are not due to one specific operationalization.

Perceived similarity. A parallel four-condition ANOVA on perceived similarity between the upgrade and status quo options revealed the predicted main effect of condition (F(3, 237) = 3.64, p = .013). Planned contrasts indicate that perceived similarity in both the baseline (3.95) and careful deliberation (3.90) conditions was lower than in the check features condition (4.64; t(237) = 2.52, p = .013; t(237) = 2.62, p = .009, respectively) and general comparison condition (4.51; t(237) = 1.97, p = .050; t(237) = 2.09, p = .037, respectively). There was no difference between the baseline and careful deliberation conditions (t(237) = .18, p = .86) or between the check features and general comparison conditions (t(237) = .46, p = .64) (see Figure 3). These findings again highlight the unique effect of comparison prompts on perceived similarity, beyond careful deliberation.

Figure 3
UPGRADE LIKELIHOOD AND PERCEIVED SIMILARITY AS A FUNCTION OF COMPARISON AND CAREFUL DELIBERATION (STUDY 4)



Notes: Error bars represent 95% confidence intervals.

Mediation. To examine whether perceived similarity mediated the effect of prompted comparison on upgrade likelihood, we ran a bootstrapping mediation analysis combining the baseline with careful deliberation conditions and the check features with general comparison conditions. As we predicted, an analysis with 5,000 samples indicated that the indirect effect of comparison on upgrade likelihood was mediated by perceived similarity (ab = −.17, 95% confidence interval [CI] = [−.36, −.06]).

Thought listing. To examine what participants were thinking about in the careful deliberation (i.e., pros and cons) and general comparison conditions, we asked two independent judges, blind to condition, to assign a binary score on the basis of whether participants explicitly made comparisons to their current phone in their arguments. Judges were instructed to categorize arguments as representing a comparison if they explicitly referred to a feature or capability of the current phone in comparison to the new option (e.g., "My phone has most of these features," "This phone can do everything that my current

phone can do," "It seems very similar to the smartphone that I have, with the exception of a few features that don't really sound that necessary for my needs"). Arguments that did not make an explicit comparison were categorized as representing noncomparisons. Interjudge agreement rate was 96%, and the remaining cases were resolved through discussion.

Only 25.0% of participants in the careful deliberation condition compared the upgrade with the status quo option, whereas 94.7% did so in the general comparison condition ($\chi^2(1) = 57.33$, $p < .0001$). In other words, 75% of participants did not spontaneously compare the upgrade with the status quo even when carefully deliberating about the decision.

Examination of participants' arguments in the careful deliberation condition sheds light on what people focus on when deliberating carefully without being explicitly prompted to compare the upgrade with the status quo. Both negative and positive arguments in this condition tended to focus on the reliability, functionality, and desirability of the new features offered (e.g., "near field exchange sounds dangerous" [negative], "The features sound very cool" [positive]) or the cost of the upgrade (e.g., "I cannot afford it"). In contrast, arguments in the general comparison condition, whether favorable or unfavorable, focused on the comparison (e.g., "My phone can do all the basics that most smartphones can. Compared to the phone they're offering, it would be obsolete. The eye scrolling would be amazing as would be the fingerprint scanning."). This finding directly supports our suggestion that unless people are prompted to compare, they tend to overly focus on evaluating the prospect by itself—even when carefully deliberating—rather than comparing it with the status quo.

To examine whether verbal comparisons mediated the effect of condition on upgrade likelihood, we ran another mediation analysis, focusing this time only on the careful deliberation and general comparison conditions. We used a two-stage mediation model with verbal comparisons and similarity perceptions, in this order, as two sequential mediators. A bias-corrected bootstrapping analysis with 5,000 samples revealed an indirect effect (B = −.15, 90% CI = [−.413, −.017]). Verbal comparisons mediated the effect of condition on perceived similarity between the upgrade and status quo options, which in turn predicted upgrade likelihood.

Satisfaction with the status quo. Condition had no effect on how happy people were with their current phone (F = .63, $p = .60$), showing again that the effects were not driven by changes in people's perceptions of the status quo option. We investigated whether prompted comparison may increase rather than decrease upgrade likelihood when people are extremely unhappy with the status quo. Indeed, a regression analysis on upgrade likelihood, with happiness with the status quo and condition as independent variables (combining the control and careful deliberation conditions as well as the check features and general comparison conditions), revealed a condition × satisfaction interaction (B = −.38, SE = .15, $p = .015$). Specifically, whereas prompted comparison decreased upgrade likelihood at the mean level of happiness with the status quo (B = −1.34, SE = .22, $p < .0001$) as well as at one standard deviation above (B = −1.86, SE = .30, $p < .0001$) and below (B = −.81, SE = .31, $p = .001$) the mean, the effect was significantly attenuated among participants who were relatively dissatisfied with the status quo. The analysis also suggests that the effect should reverse at 2.49 standard deviations below the mean level of happiness with the status quo. That is, when happiness with the status quo option is very low (in this case, lower than 2.13 on a 7-point scale), prompted comparison may increase, rather than decrease, upgrade likelihood. In addition to demonstrating a boundary condition that is consistent with our conceptual framework, this result again argues against a motivated reasoning account.

Discussion

Study 4 suggests that prompted comparison reduces upgrade likelihood by increasing the perceived similarity between the upgraded and status quo options. In other words, at the baseline, comparison neglect leads people to perceive the upgrade as less similar to the status quo than it seems when the two options are compared. Prompting people to compare the upgrade with the status quo led them to perceive the two options as more similar, which in turn decreased upgrade likelihood. Using two different comparison manipulations further bolsters the robustness and generalizability of our results.

Importantly, Study 4 casts doubt on an alternative explanation based on processing depth or attention: although careful deliberation decreased upgrade likelihood compared with the baseline, explicitly comparing the upgrade with the status quo option decreased upgrade likelihood even further. Our findings suggest that careful cognitive deliberation increased attention to the upgrade without markedly increasing comparisons between the upgrade and the status quo. Comparison neglect in upgrade decisions thus appears to be different from general inattention or superficial processing, in that it seems to persist even when deliberation is increased. Our findings also bolster our theorizing that an upgrade framing makes the upgrade option seem focal and the status quo nonfocal: participants' open-ended responses revealed that even when they carefully deliberate, they tend to contemplate the upgrade in isolation unless they are prompted to compare it with the status quo.

Study 4 also casts doubt on an alternative account based on perceived loss. One may wonder whether comparing the status quo with the upgrade evoked a sense of loss—and thus, a reluctance to part with the status quo—in a way that simply considering the upgrade in isolation did not. However, perceived loss cannot explain why the effect of comparison on reducing upgrade likelihood was mediated by greater perceived similarity. If anything, an account based on perceived loss would predict that upgrade likelihood should be lower as dissimilarity increases (i.e., when the status quo option seems more unique and irreplaceable; Chapman 1998). A loss-based account is also inconsistent with the finding that prompted comparison—in all our studies thus far—had no effect on valuation or perceptions of the status quo option itself (cf. Kahneman, Knetsch, and Thaler 1991). Taken together, our results cast doubt on the possibility that our effects are driven by perceived loss.

STUDY 5: THE ROLE OF FEATURE COMPARISON

Study 5 extends Study 4 in two ways. First, to further illuminate the differences between the baseline and prompted comparison conditions, we again collected participants' verbal reports of the pros and cons of upgrading their phones. This time, we collected these verbal reports in both the baseline and prompted comparison (check overlapping features) conditions. We coded these verbal reports for comparisons between the upgrade and the status quo. We predicted that, although some explicit mentions of comparison may occur spontaneously, prompting people to think about the status quo's features would further increase the tendency to compare, which would decrease upgrade likelihood.

Second, Study 5 includes a new condition, in which people checked the features of the upgrade that are related to photography or productivity. We added this condition to examine whether the mere act of checking features or thinking concretely about any specific features of the upgrade option, outside of a comparison context, is sufficient to eliminate the biasing effect of comparison neglect on upgrade likelihood (e.g., by increasing attention to details, by shifting people toward more concrete processing).

Method

Participants were 112 smartphone users (mean age = 28 years; 50% women), recruited and screened using the same procedure described in Study 4. Participants were randomly assigned to one of three between-subjects conditions: a baseline condition, a condition in which we prompted participants to compare the prospective option with the status quo option by checking the features of the status quo option, and a third condition in which we asked participants to check features without prompting them to compare the upgrade with the status quo (all described next).

We used a decision similar to that used in Study 4. Participants read information about "a new, cutting-edge smartphone model" that presumably had just been introduced. They saw several novel features of the phone (e.g., fingerprint scanning, eye tracking, wireless charging) as well as other features commonly available on many existing phones (e.g., GPS, camera, Wi-Fi, USB charging). In all conditions, the upgrade offer was priced at $199.

In the baseline condition, as in Study 4, participants simply saw the features of the upgrade option (new and overlapping). In the prompted comparison condition, we asked participants to mark all the features that their current smartphone had. Participants checked 7.1 features on average, suggesting that those features were indeed familiar. In the third condition, we asked participants to mark all the features that they saw as related to photography or productivity. We included this condition to examine whether the mere act of marking or thinking concretely about any specific features of the upgrade, as opposed to thinking about how it compares with the status quo, is sufficient to debias comparison neglect (i.e., to increase comparisons and decrease upgrade likelihood). Note that this condition did not ask people to consider whether their current phone had these features, and thus, it should not increase comparisons between the current phone and the upgrade. Participants in this condition marked 6.3 features on average, suggesting that they paid a similar level of attention to detail as participants in the prompted comparison condition.

Participants rated on seven-point scales how interested they would be in upgrading their phone, which served as our focal dependent variable. We then asked participants to list pros and cons for upgrading their phone. Coding these pros and cons enabled us to directly examine whether increased explicit comparisons of the upgrade with the status quo option mediated the effect of our manipulation. Finally, to examine whether our manipulation changed perceptions of the status quo option, participants rated how happy they were with their current phone and indicated how much they thought it was worth.

Results

Effect on upgrade likelihood. An ANOVA on upgrade likelihood revealed the predicted effect of prompted comparison ($F(2, 109) = 15.70$, $p < .001$). Planned contrasts indicate that although checking photography features decreased upgrade likelihood ($M_{check\_photography\_features} = 4.14$) compared with the baseline ($M_{baseline} = 5.02$; $t(109) = 2.06$, $p = .042$), asking participants to check the features of their current phone decreased upgrade likelihood ($M_{check\_overlapping\_features} = 2.68$) compared with either of these conditions ($M_{baseline} = 5.02$, $t(109) = 5.57$, $p < .001$; $M_{check\_photography\_features} = 4.14$, $t(109) = 3.36$, $p = .001$). These results suggest that explicitly comparing the upgrade with the status quo option decreases upgrade likelihood beyond the mere act of checking or attending to specific features. This finding converges with Study 4's finding that although careful deliberation reduced upgrade likelihood a bit, comparisons reduced it much more.

Thought listing. Experimental condition had no effect on the amount of text participants generated when listing pros and cons ($F(2, 109) = .45$, n.s.). Two independent judges, blind to condition, rated participants' arguments as representing either comparisons or noncomparisons, using the same procedure described in Study 4.

Participants in the prompted comparison condition were more likely to explicitly refer to comparisons between the upgrade and the status quo ($M_{check\_overlapping\_features} = 51.4\%$) than were those in the other two conditions ($M_{baseline} = 25.0\%$, $\chi^2(1) = 5.69$, $p < .02$; $M_{check\_photography\_features} = 31.4\%$, $\chi^2(1) = 2.94$, $p < .09$). There was no difference between the baseline and check photography features conditions ($\chi^2(1) = .38$, n.s.). This finding supports our proposition that consumers often neglect to compare the status quo with the upgrade unless they are explicitly prompted to do so.

A bootstrapping mediation analysis with 5,000 samples combining the baseline and check photography features conditions provided support for our suggestion that the effect of our manipulation was driven by the extent to which people actively compared the upgrade with the status quo option. The analysis revealed that comparisons, as coded in the verbal reports, mediated the effect of condition on upgrade likelihood (−.22, 95% CI = [−.56, −.03]).

Alternative accounts. There was no effect of condition on either valuation of ($F(2, 109) = 1.41$, n.s.) or happiness with ($F(2, 109) = 1.54$, n.s.) the current phone. These results suggest that the effects were not driven by changes in people's perceptions of the status quo option.

Discussion

Study 5 further bolsters the evidence for the mechanism underlying our results. The analysis of participants' arguments provides direct evidence that, unless consumers are prompted to compare the upgrade to the status quo option, most of them neglect to do so even when they pay close attention to specific, concrete features and details. Our prompted comparison manipulation increased people's tendency to make these comparisons and thereby decreased upgrade likelihood.

GENERAL DISCUSSION

As product life cycles in many categories shorten, consumers are frequently bombarded with product upgrade offers (Ülkü, Dimofte, and Schmidt 2012). The current research shows that although consumers spontaneously and explicitly acknowledge the importance of comparing upgraded options to the options they are supposed to replace, they often fail to do so sufficiently. Consequently, they may buy product upgrades that they would not have bought had they followed their own advice.

Five experiments, using consequential (Study 1) and hypothetical (Studies 2–5) decisions, suggest that consumers fail to sufficiently compare upgrades with the status quo unless explicitly prompted to do so. Such "comparison neglect" seems to influence decisions framed as upgrade decisions in which one of the options is construed as the status quo, but not economically comparable decisions that are framed as a choice between two options (Study 2).

We demonstrated this phenomenon by showing that inflating the description of an upgraded option with superfluous features that already exist in the status quo option increases upgrade likelihood, compared with a description that only includes the novel features, unless people are reminded to compare the upgrade with what they already possess (Study 3). We also demonstrated that comparison neglect distorts perceptions of the upgrade, leading people to perceive it as more novel than it actually is, failing to properly account for feature redundancy (Study 3). Analysis of verbal protocols and of ancillary measures confirms that relatively few people make comparisons at the baseline, unless they are prompted to do so. Consequently, they fail to fully appreciate the similarities between the upgrade and the status quo, which in turn increases their upgrade likelihood (Studies 4 and 5).

As we predicted, prompting comparisons tended to decrease upgrade likelihood when consumers were reasonably satisfied with the status quo option, but this effect was often attenuated when consumers were very dissatisfied with the status quo. Our analysis further suggests that the effect of prompted comparison on upgrade likelihood may even reverse when baseline satisfaction is extremely low (Study 4).

Taken together, the findings suggest that comparison neglect distorts perceptions of upgrades, inflating the perception of novelty. Across studies, our findings cannot be explained by overvaluation of the novel features, undervaluation of the incumbent features, or motivated reasoning (although both may contribute to comparison neglect in other instances). The effects also cannot be accounted for by increased cognitive deliberation in the prompted comparison conditions (Studies 2 and 4), attention to details (Studies 2 and 5), perceived loss (Study 4), and changes in attitudes toward the status quo option or experimental demand (Studies 1–5). Rather, the manipulation mainly seemed to have made people realize that the upgrade was not so attractive after all, as it had many features that coincided with the status quo.

Our findings speak to the robustness of comparison neglect in upgrade decisions, even when the status quo option is explicitly represented in the decision context and even when consumers are made aware that they own the status quo option before deciding. Our findings suggest that successful debiasing depends on the extent to which situational cues make the features of the status quo option, categorized as such, mentally accessible. This should increase the likelihood that consumers notice the similarities and acknowledge the overlaps between the status quo and the upgrade. Careful deliberation (Study 4) or attention to specific features of the upgrade (Study 5) are not sufficient, by themselves, to debias comparison neglect. Nevertheless, further research could examine whether a very light prompt, such as "Consider your current phone before making this choice," might be sufficient to trigger comparisons and to lower upgrade likelihood. Similarly, future studies could explore whether there is some minimal number of new features that an upgrade must have for it to become focal and for comparison to be neglected: Would an upgrade that just had one or two new features still trigger the current effects because it is, indeed, an upgrade? Or is a greater number of new features necessary?

Theoretical Contributions and Boundary Conditions

Decades of research have suggested that decision makers have a strong tendency to gravitate toward comparisons when evaluating options (Hsee 1996; Saini and Thota 2010; Simonson and Tversky 1992; Simonson et al. 2013; Tversky, Sattath, and Slovic 1988). Our research demonstrates an important exception to this principle by showing that when the decision is perceived as an upgrade, consumers often neglect to compare the upgrade with an obvious reference point—here, the status quo—and instead tend to evaluate the prospect in isolation.

Of course, there are times when the status quo option is more likely to be especially salient and when comparisons to it may be more natural. Comparison neglect may thus be less likely to occur when the status quo option has been recently purchased, when the price paid for it is more salient (Okada 2006), and when it contains important or unique features that are absent in the upgrade. People may also be less likely to neglect the status quo option when they actively negotiate a trade-in price for the used product as part of the upgrade process (e.g., trading in a car; Zhu, Chen, and Dasgupta 2008). Such contexts are likely to draw attention to features of the status quo option, but even when the upgrade ultimately involves a trade-in, the initial decision to upgrade is often made long before negotiations begin. Thus, comparison neglect may well affect the initial decision to upgrade.

Our research also extends prior notions of focalism. Prior work on information neglect has shown that people sometimes fail to consider information that is useful but is not an

explicit or obvious component of the decision. For example, alternative uses for money (Frederick et al. 2009) or mundane circumstances that may offset the affective impact of salient future events (Gilbert et al. 1998; Wilson et al. 2000) are not explicitly represented in the decision context, and neither is particularly obvious. Extending these notions, we show that focalism may persist even when the neglected information is explicitly referenced in the decision context, and even when the need to consider the neglected information is highly accessible and intuitive for people.

Practical and Welfare Implications

People face upgrade decision in many domains, including cell phones and apps, as well as when considering whether to upgrade rental car reservations, flights, hotel rooms, entertainment packages, domestic appliances, and more. Our findings suggest that comparison neglect and inflated upgrade likelihood may be the default for many people facing an upgrade decision. Nevertheless, to the extent that marketers of upgrades want to increase upgrade likelihood, they could highlight nonalignable features of their products, making it more difficult and even less intuitive for consumers to compare new options with products they already own. Marketers may also benefit from crafting communications that draw consumers' attention away from the status quo, focusing on the upgrade option while, paradoxically, avoiding direct comparisons with previous versions. Whether marketers *should* do these things raises ethical issues, however, because marketers should generally allow consumers to assess the offer's true value. To the extent possible, marketers should provide consumers with cues that encourage such comparisons, such as side-by-side tables that compare the features of the two versions of a product.

Does comparison neglect, insofar as it increases the tendency to upgrade, necessarily harm consumers? On the one hand, a tendency to always think about the utility that can still be derived from options one already owns and to postpone product upgrades until the status quo option has completely deteriorated could potentially undermine well-being. New purchases often deliver unforeseen and nontangible benefits, such as pride and delight, of which consumers may deprive themselves if they make upgrade decisions solely on the basis of perceptions of incremental functionality (Thompson and Norton 2011). Postponing the purchase of a new couch just because the old one, however ragged, is still functional may be a sign of stinginess more than good judgment.

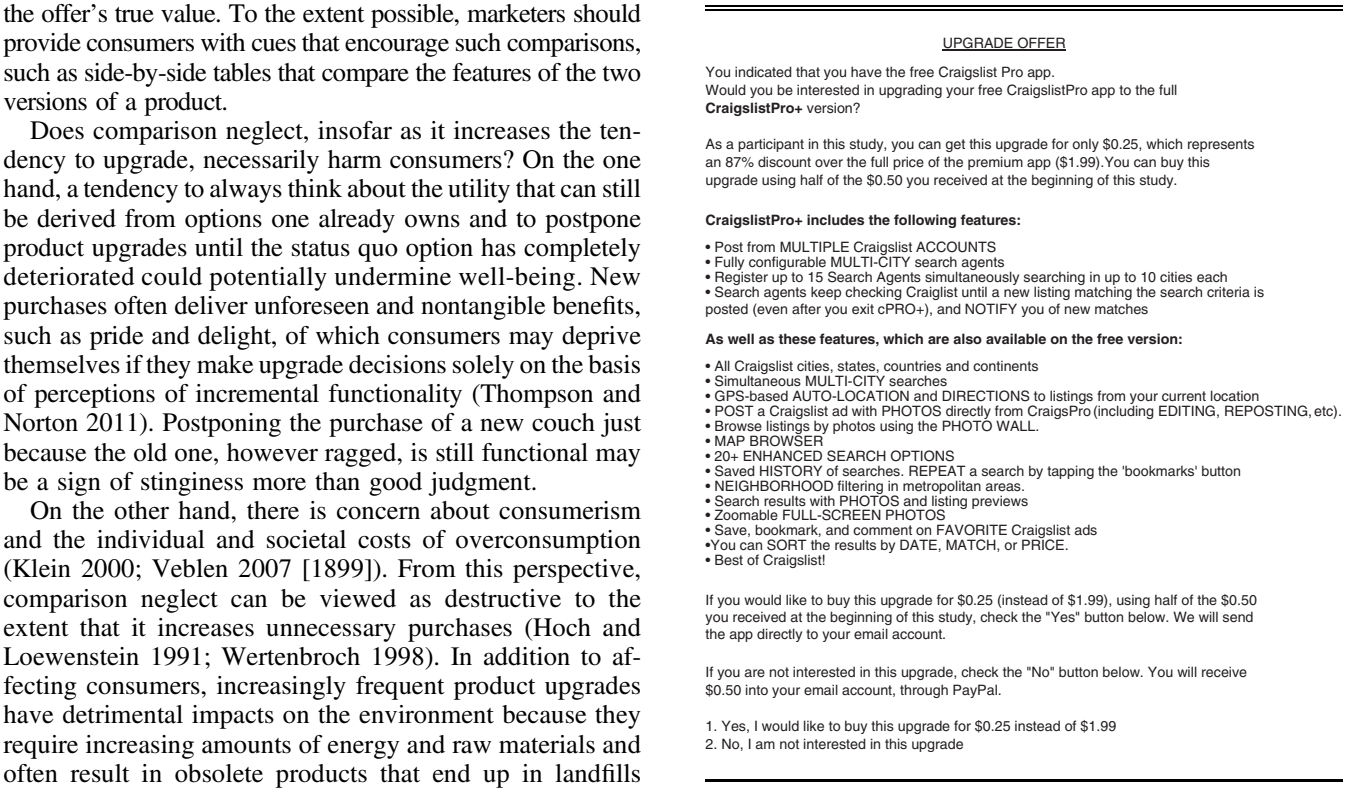
On the other hand, there is concern about consumerism and the individual and societal costs of overconsumption (Klein 2000; Veblen 2007 [1899]). From this perspective, comparison neglect can be viewed as destructive to the extent that it increases unnecessary purchases (Hoch and Loewenstein 1991; Wertenbroch 1998). In addition to affecting consumers, increasingly frequent product upgrades have detrimental impacts on the environment because they require increasing amounts of energy and raw materials and often result in obsolete products that end up in landfills (Slade 2007). Indeed, from a normative perspective, it seems implausible to argue that consumers should not compare upgrade offers with their status quo options.

How comparison neglect affects consumers' long-term satisfaction in specific cases ultimately depends, however, on the qualities of their purchases. Countering comparison neglect by actively reflecting on the status quo option may increase long-term consumer welfare when the upgrade seems attractive at first but provides little added utility in the long run (Meyer, Zhao, and Han 2008). Conversely, it may lead consumers to forgo upgrades that appear incremental at first but prove quite delightful or valuable with use.

While the current article focused on comparison neglect in product upgrades, we believe that comparison neglect plays a role in many other purchase decisions in which the target purchase is particularly focal, even when it is not strictly an upgrade decision. Consumers' propensity to buy yet another handbag, for example, or add another pair of shoes to the many they already have at home, may be facilitated by the tendency to overlook current possessions when contemplating new purchases. Further research could examine the role of comparison neglect in these and other contexts and explore factors that moderate the impact of this behavior on consumer welfare.

Appendix A

AN EXAMPLE OF AN APP UPGRADE OFFER USED IN STUDY 1



UPGRADE OFFER

You indicated that you have the free Craigslist Pro app.
Would you be interested in upgrading your free CraigslistPro app to the full **CraigslistPro+** version?

As a participant in this study, you can get this upgrade for only $0.25, which represents an 87% discount over the full price of the premium app ($1.99).You can buy this upgrade using half of the $0.50 you received at the beginning of this study.

CraigslistPro+ includes the following features:

- Post from MULTIPLE Craigslist ACCOUNTS
- Fully configurable MULTI-CITY search agents
- Register up to 15 Search Agents simultaneously searching in up to 10 cities each
- Search agents keep checking Craiglist until a new listing matching the search criteria is posted (even after you exit cPRO+), and NOTIFY you of new matches

As well as these features, which are also available on the free version:

- All Craigslist cities, states, countries and continents
- Simultaneous MULTI-CITY searches
- GPS-based AUTO-LOCATION and DIRECTIONS to listings from your current location
- POST a Craigslist ad with PHOTOS directly from CraigsPro (including EDITING, REPOSTING, etc).
- Browse listings by photos using the PHOTO WALL.
- MAP BROWSER
- 20+ ENHANCED SEARCH OPTIONS
- Saved HISTORY of searches. REPEAT a search by tapping the 'bookmarks' button
- NEIGHBORHOOD filtering in metropolitan areas.
- Search results with PHOTOS and listing previews
- Zoomable FULL-SCREEN PHOTOS
- Save, bookmark, and comment on FAVORITE Craigslist ads
- You can SORT the results by DATE, MATCH, or PRICE.
- Best of Craigslist!

If you would like to buy this upgrade for $0.25 (instead of $1.99), using half of the $0.50 you received at the beginning of this study, check the "Yes" button below. We will send the app directly to your email account.

If you are not interested in this upgrade, check the "No" button below. You will receive $0.50 into your email account, through PayPal.

1. Yes, I would like to buy this upgrade for $0.25 instead of $1.99
2. No, I am not interested in this upgrade

Appendix B

STUDY 2 STIMULI

Upgrade Framing Condition

Suppose you could upgrade your current phone to a new, cutting-edge model, for $299. This smartphone's features include:

- Automatically adjusts the volume as you move the phone away from your ear
- Near Field Communication (able to wirelessly exchange information and data between closely located devices)
- Eye-tracking: scroll and control your device using your eyes only
- Wireless charging
- Ultra-thin, transparent display
- Bluetooth 4.0 wireless technology
- Wi-Fi
- Location services through built in GPS, Wi-Fi, and Cellular
- Camera
- Tap to focus video or still images
- LED flash
- Charging via USB to computer system or power adapter
- Viewable Document Types: images, Microsoft Word, web pages, Keynote, Numbers, PDF (Acrobat), Microsoft PowerPoint, Microsoft Excel

Or, you could stay with your current smartphone, which includes the following features:

- Bluetooth 4.0 wireless technology
- Wi-Fi
- Location services through built in GPS, Wi-Fi, and Cellular
- Camera
- Tap to focus video or still images
- LED flash
- Charging via USB to computer system or power adapter
- Viewable Document Types: images, Microsoft Word, web pages, Keynote, Numbers, PDF (Acrobat), Microsoft PowerPoint, Microsoft Excel

Choice Framing Condition

Suppose you could choose between two smartphones.

The first smartphone option is a new, cutting-edge model. It costs $299. This smartphone's features include:

- Automatically adjusts the volume as you move the phone away from your ear
- Near Field Communication (able to wirelessly exchange information and data between closely located devices)
- Eye-tracking: scroll and control your device using your eyes only
- Wireless charging
- Ultra-thin, transparent display
- Bluetooth 4.0 wireless technology
- Wi-Fi
- Location services through built in GPS, Wi-Fi, and Cellular
- Camera
- Tap to focus video or still images
- LED flash
- Charging via USB to computer system or power adapter
- Viewable Document Types: images, Microsoft Word, web pages, Keynote, Numbers, PDF (Acrobat), Microsoft PowerPoint, Microsoft Excel

The second smartphone model has been around for a few years. You can get it at no cost. This phone includes the following features:

- Bluetooth 4.0 wireless technology
- Wi-Fi
- Location services through built in GPS, Wi-Fi, and Cellular
- Camera
- Tap to focus video or still images
- LED flash
- Charging via USB to computer system or power adapter
- Viewable Document Types: images, Microsoft Word, web pages, Keynote, Numbers, PDF (Acrobat), Microsoft PowerPoint, Microsoft Excel

Appendix C

SMARTPHONE DESCRIPTION USED IN STUDY 3

Baseline Condition

A new, cutting-edge smartphone model has just been introduced. This smartphone's features include:

- Automatically adjusts the volume as you move the phone away from your ear
- Fingerprint scanning for ultimate security
- Near Field Communication (able to wirelessly exchange information and data between closely located devices)
- Eye-tracking: scroll and control your device using your eyes only
- Wireless charging
- Ultra-thin, transparent display
- Bluetooth 4.0 wireless technology
- Wi-Fi
- Location services through built in GPS, Wi-Fi, and Cellular triangulation
- 8-megapixel camera
- Tap to focus video or still images
- LED flash
- Charging via USB to computer system or power adapter
- Viewable Document Types: images, Microsoft Word, web pages, Keynote, Numbers, PDF (Acrobat), Microsoft Power Point, Microsoft Excel

New Features Condition

A new, cutting-edge smartphone model has just been introduced. This smartphone's new features include:

- Automatically adjusts the volume as you move the phone away from your ear
- Fingerprint scanning for ultimate security
- Near Field Communication (able to wirelessly exchange information and data between closely located devices)
- Eye-tracking: scroll and control your device using your eyes only
- Wireless charging
- Ultra-thin, transparent display

Prompted Comparison Condition

A new, cutting-edge smartphone model has just been introduced. This smartphone's features include:

- ☐ Automatically adjusts the volume as you move the phone away from your ear
- ☐ Fingerprint scanning for ultimate security
- ☐ Near Field Communication (able to wirelessly exchange information and data between closely located devices)
- ☐ Eye-tracking: scroll and control your device using your eyes only
- ☐ Wireless charging
- ☐ Ultra-thin, transparent display
- ☐ Bluetooth 4.0 wireless technology
- ☐ Wi-Fi
- ☐ Location services through built in GPS, Wi-Fi, and Cellular triangulation
- ☐ 8-megapixel camera
- ☐ Tap to focus video or still images
- ☐ LED flash
- ☐ Charging via USB to computer system or power adapter
- ☐ Viewable Document Types: images, Microsoft Word, web pages, Keynote, Numbers, PDF (Acrobat), Microsoft PowerPoint, Microsoft Excel

Please go over the list above and check all the features that your current phone has.

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