There Ain't No Such Thing as a Free Lunch: Consumers' Reactions to Pseudo Free Offers

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ABSTRACT

We examine how consumers respond to pseudo-free offers—offers that are presented to consumers as free, but that require consumers to make a non-monetary payment (such as completing a survey or providing personal information) in order to receive the "free" good or service. Across six studies, we find that consumers are generally just as likely to accept pseudo-free offers (with non-monetary costs) as comparable truly free offers (with no costs), as long as the costs of the pseudo-free offers are below some threshold. Additionally, we find that consumers are significantly more likely to accept pseudo-free offers (with non-monetary costs) than comparable non-free offers (with monetary costs). We provide evidence that consumers respond to pseudo-free offers in this way because, in general, consumers generate neutral or positive attributions for why firms make these offers, and these attributions, in turn, lead consumers to perceive the pseudo-free offers as fair. However, when contextual influences, characteristics of the pseudo-free offer, or individual dispositions increase the likelihood of negative attributions, consumers' preference for pseudo-free offers is attenuated.

Keywords: Pseudo-Free, Free, Pricing, Attributions, Zero

Word Count: 172

Free offers abound in the marketplace. Google offers free email (Gmail); some airports provide free Wi-Fi; Facebook allows users to connect with friends, follow celebrities, and post pictures for free; and many apps allow consumers to play games, follow the news, and stream music at no monetary cost. But are these offers truly free? To use Gmail, consumers must agree to allow Google to scan their emails, which it then uses to direct targeted advertisements to them (Kelly 2014). Similarly, to use the free Wi-Fi at some airports, travelers must "register" by providing personal information (Keflavik International Airport 2017). Furthermore, in order to use Facebook, consumers must provide the company with valuable personal information—which can fall into the hands of unscrupulous firms that use the data for nefarious purposes (Granville 2018)—and allow Facebook to conduct research on them without notice (BBC 2014; Bower 2014). Moreover, in order to use many "free" apps, consumers must allow the app to track their location and device information (Arthur 2013). Thus, as CNN's Heather Kelly said about Gmail, many of these "free" offers may not "cost any money to use, but [they're] not free" (Kelly 2014).

In this research, we examine how consumers respond to such offers, which we label "pseudo-free," since they are framed as free, but nonetheless require a non-monetary payment or cost. Specifically, in order to receive the supposedly free good, consumers must make a non-monetary payment, by either giving the firm something (i.e., information, time, attention) or by performing a task (i.e., completing a survey). This is in contrast to truly free offers, which involve no payments (i.e., a free t-shirt at a sports game), and non-free offers, which involve monetary payments (i.e., a t-shirt at a sports game for $25). Thus, the non-monetary payment or cost component is what distinguishes pseudo-free offers from truly free and non-free offers.

Given the prevalence of pseudo-free offers—and their distinction from truly free and non-free offers—research is needed to better understand how consumers respond to them.

Previous research has demonstrated that consumers highly value truly free offers (i.e., Chandran and Morwitz 2006; Nicolau and Sellers 2012; Shampanier, Mazar, and Ariely 2007), but no research has examined whether they similarly value pseudo-free offers. Notably, pseudo-free offers raise many questions that are not applicable to truly free offers. For example, do consumers respond to pseudo-free offers rationally, carefully weighting the offers' non-monetary costs against their benefits and only accepting such offers when the benefits outweigh the costs? Or do consumers generally disregard and ignore the non-monetary costs as long as they are below some threshold, treating such offers as if they are truly free? And, if so, do consumers ever respond irrationally to pseudo-free offers, accepting them even when their non-monetary costs exceed their benefits? If so, why is this the case? The goal of this research is to answer these important practical and theoretical questions.

In the next section, we summarize some relevant literature and develop our hypotheses. We then detail six studies that test our hypotheses before we conclude by discussing the implications, limitations, and future directions of this research.

THEORETICAL DEVELOPMENT

The Number Zero and Free as a Special Price

Previous research has found that consumers treat the number zero fundamentally differently than other numbers (Kahneman and Tversky 1979; Palmeira 2011). For example, Kahneman and Tversky (1979) found that people treat zero probability as substantially different from a very small probability. For instance, people are more likely to select a gamble with a certain positive outcome (0% chance of losing) over one with a small probability of losing (1%

chance of losing), even when the latter has a higher expected value. Similarly, Palmeira (2011) found that assigning a zero-value to a product attribute can lead to irrational preference reversals, such that assigning a zero-value to an attribute that makes a product objectively worse (i.e., a coffee maker with 0 free coffee pods vs. 1 free coffee pod) can increase its choice share, while assigning a zero-value to an attribute that makes a product objectively better (i.e., a CD changer with an audio signal distortion of 0 vs. .003) can decrease its choice share.

Given that free is simply a zero-value on the price attribute, it should be no surprise that consumers also treat free products differently than non-free ones (Ariely, Loewenstein, and Prelec 2006; Chandran and Morwitz 2006; Heyman and Ariely 2004; Nicolau and Sellers 2012; Palmeira and Srivastava 2013; Raghubir 2004; Shampanier et al. 2007). For example, when products are free, consumers use social norms to determine their choices, whereas they use market norms when they are non-free (Ariely et al. 2006; Heyman and Ariely 2004). In addition, although consumers may discount a product's quality if it is free (Kamins, Folkes, and Fedorikhin 2009), and may express a lower willingness to pay for it after it is offered as a free gift (Raghubir 2004; but see Palmeira and Srivastava 2013), there is little question that consumers are highly receptive to truly free offers and, in general, are dramatically more likely to select a product when it is offered for free (vs. non-free, even when the monetary cost is trivially low; Chandran and Morwitz 2006; Shampanier et al. 2007). Indeed, Shampanier et al. (2007) demonstrated that consumers are overly attracted to free products and that, when the price of a product is reduced to zero (i.e., free), irrational preference reversals can occur. The authors found evidence that these preference reversals were caused by the additional positive affect consumers derive from free products, and Nicolau and Sellers (2012) replicated this effect with product bundles.

Characteristics of Pseudo-Free Offers

The critical question for this research is whether consumers similarly over-value pseudo-free offers. Although pseudo-free offers are similar to truly free ones in their framing (i.e., they are presented to consumers as "free"), they differ from free offers in one very important way—they involve non-monetary payments or costs. These costs may be in the form of time (i.e., "free" Wi-Fi if you watch a 3 minute promotional video), effort (i.e., receive a "free" t-shirt if you complete a survey), personal information (i.e., use Facebook for "free" if you hand over a wealth of personal information), or privacy (i.e., a "free" app that tracks your location), to name a few. Although the non-monetary costs of pseudo-free offers can vary widely in terms of magnitude and form, all pseudo-free offers involve a non-monetary cost component. Because of this non-monetary cost component, consumers should respond differently to pseudo-free offers than truly free offers, weighing the cost against the benefit of the offer. Consistent with this idea, consumers treat offers with even trivially small monetary costs (i.e., $0.01) as fundamentally different than truly free offers (Shampanier et al. 2007).

However, we do not expect this to be the case. Given their non-monetary nature, the costs of pseudo-free offers may be ambiguous and difficult to quantify. Indeed, research that has compared time to monetary costs has found that consumers treat them differently (Leclerc, Schmitt, and Dube 1995; Okada 2005; Okada and Hoch 2004; Soman 2001), and that time (vs. money) costs are more ambiguous and difficult to assess (Okada and Hoch 2004; Saini and Monga 2008; Soman 2001). We suggest that the non-monetary costs of pseudo-free offers—of which time is one type—are similarly ambiguous and difficult to assess. For instance, it is unlikely that consumers regularly think about how valuable personal information is to them, and how much they would need to be paid to be willing to hand over such information to a firm.

The Role of Attributions

Given the ambiguous nature of pseudo-free offers' non-monetary costs—and the fact that ambiguity/uncertainty can lead people to generate attributions (Bohner et al. 1988; Gooding and Kinicki 1995; Weiner 1985)—we suggest that pseudo-free offers trigger an attributional process that influences how consumers respond to them. Indeed, a large literature has found that attributions can have a large impact on behavior generally (i.e., Heider 1958; Kelley 1967; Weiner 1985), and in the realm of consumption behaviors specifically (i.e., Folkes 1984; Morales 2005; Weiner 2000). Although consumers may generate a wide range of different attributions regarding pseudo-free offers, we suggest that, in general, consumers generate neutral or positive attributions regarding them. Specifically, when exposed to pseudo-free offers, consumers are likely to disproportionately focus on the offers' highly salient "free" aspect (Chandran and Morwitz 2006), as opposed to their ambiguous, and difficult to assess, non-monetary costs (Okada and Hoch 2004; Saini and Monga 2008). Given that free offers are highly attractive to consumers (Chandran and Morwitz 2006; Shampanier et al. 2007), we suggest that this disproportionate focus on the "free" aspect will generally lead consumers to spontaneously generate neutral or positive attributions regarding why the firm is providing the offer (Morgan, Mullen, and Skitka 2010; Pyszcznski and Greenberg 1987). We propose that these neutral or positive attributions then, in turn, lead consumers to perceive pseudo-free offers as fair, which leads them to respond to them as if they were truly free (Campbell 1999; Darke and Dahl 2003).

Now, responding positively to pseudo-free offers is largely rational as long as the benefits of the offers exceed their non-monetary costs. For example, for some consumers, using "free" services that involve sacrificing some privacy and personal information, such as Gmail and Facebook, may be rational if they perceive that their benefits exceed their non-monetary costs.

However, we make the novel prediction that consumers' tendency to spontaneously generate neutral or positive attributions regarding pseudo-free offers—which, in turn, leads them to perceive such offers as fair (Campbell 1999)—is so strong that, at least in some cases, consumers will accept pseudo-free offers that are more costly than beneficial. However, it is likely that consumers' willingness to accept pseudo-free offers that are more costly than beneficial is only up to a certain threshold (i.e., consumers will not accept a pseudo-free offer for which the non-monetary cost greatly exceeds the benefit).

Given that we hypothesize that consumers will respond similarly to free and pseudo-free offers, we also predict that consumers will be significantly more likely to accept pseudo-free offers (with non-monetary costs) than comparable non-free ones (with monetary costs). Specifically, we suggest that consumers' tendency to spontaneously generate neutral or positive attributions regarding pseudo-free offers will lead them to prefer pseudo-free to non-free offers, consistent with the well-established finding that consumers regularly prefer truly free offers to non-free ones (i.e., Chandran and Morwitz 2006; Nicolau and Sellers 2012; Shampanier et al. 2007). This hypothesis is also consistent with research indicating that consumers prefer spending time (i.e., a non-monetary cost) to spending money on hedonic goods (Okada 2005; Okada and Hoch 2004). Indeed, recognizing the power of "free," many apps and online services have adopted a "freemium" model (Kumar 2014; Wagner, Benlian, and Hess 2013; Wilson 2006), whereby a basic version is "free," but a premium version can be purchased. Although the basic, "free" version of the service may be very popular, only approximately 5% of users, on average, decide to upgrade and pay for the premium version (Wagner et al. 2013), even though the premium version may be trivially cheap and have several advantages over the basic version.

Thus, it appears that consumers are willing to bear non-monetary costs in order to avoid monetary costs.

Hypotheses

Accordingly, we have hypothesized the following to this point:

H1a: In general, consumers are just as likely to accept pseudo-free offers (with non-monetary costs) as comparable truly free offers (with no costs).

Indeed, we even predict that this will occur, at least in some cases, when the non-monetary cost of the pseudo-free offer exceeds the benefit of the offer. Given that we predict that consumers will respond similarly to free and pseudo-free offers, we also hypothesize that:

H1b: In general, consumers are more likely to accept pseudo-free offers (with non-monetary costs) than comparable non-free offers (with monetary costs).

In addition, we hypothesize that the attributions consumers generate regarding pseudo-free offers drive these effects. Stated formally:

H2: These effects (H1a and H1b) occur because, in general, consumers spontaneously generate neutral or positive attributions regarding pseudo-free offers and, as a result, perceive such offers as fair.

However, what happens when contextual influences, characteristics of the pseudo-free offer, or consumers' dispositions lead them to generate negative attributions regarding a pseudo-free offer, such that consumers believe that the firm is using the pseudo-free offer to exploit or take advantage of them? In these situations, when negative attributions are generated, we do not expect consumers to respond to pseudo-free offers as if they are truly free because, in this case, they will be suspicious of the firm's intent and will perceive the pseudo-free offer as relatively unfair (Campbell 1999). We therefore expect them to be significantly less likely to accept the

pseudo-free offer than a comparable truly free one (we are agnostic with respect to the pseudo-free vs. non-free comparison). Thus, stated formally, we hypothesize that:

H3: When—because of dispositional factors, contextual influences, or offer characteristics—consumers generate negative attributions regarding a pseudo-free offer, they will perceive the offer as relatively unfair, and they will be less likely to accept it than a comparable truly free offer.

Overview of the Studies

We next describe six studies that were designed to test these hypotheses. Study 1—which was conducted in the field—provides a preliminary test of H1 by examining whether consumers are just as likely to accept a pseudo-free offer with a non-monetary effort/information cost as a comparable truly free offer (with no cost; H1a), and significantly more likely to accept the pseudo-free offer than a comparable non-free offer (with a monetary cost; H1b). In studies 2A and 2B, we test whether, at least in some cases, consumers respond irrationally to pseudo-free offers, accepting them even when their costs exceed their benefits. In study 3, we begin to investigate the mechanism underlying the pseudo-free effect by utilizing a mediation-based approach that pits our attributional process account against several alternative explanations (i.e., affect, quality perceptions, motivated reasoning). In studies 4-5, we test process through moderation and identify boundary conditions by examining whether consumers who generate negative attributions regarding pseudo-free offers because of contextual influences (study 4) or offer characteristics (study 5) are significantly less likely to accept them than comparable truly free offers (H3).

STUDY 1

The goal of study 1 was twofold. First, we wanted to determine, in a field setting, whether consumers respond similarly to pseudo-free and to truly free offers (H1a) and whether they would be more likely to accept free and pseudo-free offers than a non-free offer with a clear monetary cost (H1b). Second, we wanted to examine whether the order in which the cost and the benefit of the pseudo-free offer are presented has any effect on consumers' likelihood of accepting the offer. In particular, a pseudo-free offer can specify the benefit before the cost (i.e., "Receive a free mug [benefit] if you complete a short survey [cost]") or specify the cost before the benefit (i.e., "If you complete a short survey [cost], you'll receive a free mug [benefit]"). Given that previous research has demonstrated that the order in which information is presented can impact the relative salience of the information and the weight that consumers place on it when making subsequent decisions (Asch 1946; Dallas, Liu, and Ubel forthcoming; Hammond, Keeney, and Raiffa 1998; Lee, Frederick, and Ariely 2006), we wanted to test whether highlighting and making salient the non-monetary cost of the pseudo-free offer—by presenting it before the benefit of the offer—would decrease consumers' likelihood of accepting the offer.

Method

Participants and design. Six hundred individuals who graduated between 1957 and 2016 from a private high school in the United States were randomly selected from an alumni database. The database did not contain gender information, but did contain the year in which each individual graduated, so we were able to determine (approximately) the age distribution of the sample (M_{Age} = 34.88, SD_{Age} = 11.74). Participants were randomly assigned to one of four conditions (free, pseudo-free with cost second, pseudo-free with cost first, or non-free).

Procedure. Participants received an email from the school with the subject line "Get a

[School's Name] Mug!" The email thanked the alums for their support and also contained the critical manipulation in the form of a mug offer, which varied across conditions. In the free condition, it said, "…we would like to offer you a FREE [School's Name] mug as a small token of our appreciation… (please click here to receive your mug)." In the pseudo-free with cost second condition, it said, "…we would like to offer you a Free [School's Name] mug as a small token of our appreciation if you complete a short alumni survey at this link (please click here)." Note that in this condition the offer was framed as free, but participants were required to do something (i.e., complete a survey) in order to obtain it. In the pseudo-free with cost first condition, it said "… if you complete a short alumni survey at this link (please click here), we would like to offer you a FREE [School's Name] mug as a small token of our appreciation." In the non-free condition, it said, "…we would like to offer you a [School's Name] mug as a small token of our appreciation if you contribute $5 to [the school] at this link (please click here)." See the web appendix for the complete procedure for this and all other studies. The dependent variable was whether the participant accepted or rejected the mug offer.

Results and Discussion

As predicted, the effect of condition on likelihood to accept the mug offer was significant ($X^2(3) = 11.35$, $p = .010$). Participants in the free (6.00%) and pseudo-free with cost second (8.67%) and cost first (8.67%) conditions were significantly more likely to accept the offer than those in the non-free condition (0.67%; all X^2s > 6.62, all ps < .011). None of the differences between the free and pseudo-free conditions were significant (all X^2s < 1, all ps > .370).

These results demonstrate that participants respond similarly to free and pseudo-free offers (H1a), and that they are significantly more likely to accept an offer when it is presented as "free" with a non-monetary cost (in this case, one's personal information and effort) than when it

has a monetary cost (in this case, a $5 donation) (H1b). In addition, participants responded similarly to the pseudo-free offer regardless of whether the benefit or the cost of the pseudo-free offer was presented first. Since a message that communicates the cost of the offer first makes that cost more salient, it does not seem that participants treated the pseudo-free offer similarly to a free offer because they did not notice it had a cost. Instead, it is likely that even when the non-monetary cost was made slightly more salient, the "free" aspect of the pseudo-free offers was still the primary focus of participants' attention (Chandran and Morwitz 2006). Importantly, this study was conducted in the field with people who were simply going about their normal, daily lives, and it involved a real, consequential choice.

Now, it makes complete sense that consumers would respond similarly to the free and pseudo-free offers if the cost of the pseudo-free offer (i.e., providing personal information) was perceived to be negligible—which may have been the case here (indeed, alums may have even valued the opportunity to have their voices heard by their alma mater)—or if the benefit of the pseudo-free offer was perceived to be substantial (which does not appear to have been the case here, given that only 6.00% of alums accepted the mug offer even when it was truly free). However, we suggest that consumers will respond similarly to free and pseudo-free offers even when the non-monetary cost component of the pseudo-free offer (relative to the benefit of the offer) is non-negligible and, at least in some cases, even when it outweighs the offer's benefit. The aim of the next two studies, therefore, is to replicate and extend these findings by providing evidence that consumers, at least in some cases, respond irrationally to pseudo-free offers, accepting them even when their non-monetary costs exceed their benefits. We also examine whether the results extend to a different type of non-monetary cost, namely time.

STUDY 2A

Method

Participants and design. One hundred and thirty-two undergraduate students at a university in the northeastern United States (51.5% female, M_{Age} = 20.23, SD_{Age} = .97) participated in this study in exchange for partial course credit. Participants were randomly assigned to one of four conditions (free, pseudo-free, non-free, or survey-only).

Procedure. As part of a course requirement, participants entered the lab to complete a series of unrelated studies for one hour. Midway through this session, participants were exposed to an offer that varied based on random assignment. In the free [non-free] condition, participants were offered a Hershey's Chocolate bar for free [$0.50]. In the pseudo-free condition, participants were offered a Hershey's Chocolate bar for free if they agreed to complete an additional 5 minute survey at the end of the session. Participants in the free, pseudo-free, and non-free conditions then indicated whether they accepted or rejected the chocolate bar offer. Importantly, the results from two pretests (detailed in the web appendix) provided evidence that (a) the cost of completing an additional 5 minute survey exceeded the attractiveness (i.e., benefit) of receiving a Hershey's Chocolate bar, and (b) completing an additional 5 minute survey was perceived to be significantly more costly than paying $0.50 to receive a Hershey's Chocolate bar.

Participants in the survey-only condition, on the other hand, were asked whether they would be willing to complete the additional 5 minute survey without any incentive. As a result, this condition served as a baseline for willingness to complete an additional 5 minute survey.

Results and Discussion

The effect of condition on likelihood to accept the offer was significant ($X^2(3) = 11.99$, $p = .007$). As predicted, participants in the free (50.00%) and pseudo-free (40.63%) conditions

were significantly more likely to accept the offer than those in the non-free condition (17.65%; vs. free: $X^2(1) = 7.95$, $p = .005$; vs. pseudo free: $X^2(1) = 4.25$, $p = .039$). The difference between the free and pseudo-free conditions was not significant ($X^2(1) = .58$, $p = .445$). Participants responded similarly to the free and pseudo-free offers even though the latter's cost (i.e., completing the additional 5 minute survey) was perceived to exceed its benefit (i.e., a chocolate bar). Moreover, even though the pseudo-free offer's non-monetary cost was perceived to be greater than the monetary cost of the non-free offer, participants were still significantly more likely to accept the former. Thus, consumers seem likely to accept pseudo-free offers, at least in some cases, even when a simple cost-benefit analysis reveals that such behavior is irrational.

In addition, a post-hoc test revealed that participants were marginally significantly more likely to complete the additional 5 minute survey when they were offered a Hershey's Chocolate bar in return for participation (40.63%) than when they were not offered anything in return (18.75%; $X^2(1) = 3.67$, $p = .055$). This once again suggests that completing an additional 5 minute survey was relatively costly to our participants (as the pretests suggested), and is not something that many people are willing to do without some incentive. Indeed, this result suggests it is unlikely that participants accepted the pseudo-free offers in this study and study 1 simply because they wanted to help out their alma mater (study 1) and the research team (study 2A).

As a result, this study provides preliminary evidence supporting our hypothesis that, at least in some cases, consumers accept pseudo-free offers that are more costly than beneficial. However, our assertion that some participants responded irrationally to the pseudo-free offer is primarily based off the results of the pretest self-reports regarding the costs and benefits. Since self-reports can at times be suspect (Nisbett and Wilson 1977), further behavioral evidence for this claim would be more convincing. We attempt to provide such evidence in the next study.

STUDY 2B

Method

Participants and design. Ninety-five undergraduate students at a university in the northeastern United States (63.2% female, M_{Age} = 20.01, SD_{Age} = 1.28) participated in this study in exchange for partial course credit. This study's design was the same as study 2A's, except for one critical difference. Specifically, we changed the survey-only condition from offering no tangible incentive to complete the survey to offering $0.50 to do so. Thus, participants were randomly assigned to receive one of four offers: (free) a free Hershey's Chocolate bar; (pseudo-free) a "free" Hershey's Chocolate bar if they completed an additional 5 minute survey; (non-free) a Hershey's Chocolate bar for $0.50; or (paid-survey) $0.50 if they completed an additional 5 minute survey. There will be further evidence that consumers respond irrationally to pseudo-free offers if they are unwilling to pay $0.50 for the chocolate bar (i.e., the benefit of the chocolate bar is less than $0.50), they are unwilling to complete the additional survey for $0.50 (i.e., the cost of the additional 5 minute survey is greater than $0.50), but they are willing to complete the additional 5 minute survey for a "free" chocolate bar (i.e., they accept the pseudo-free offer even though the non-monetary cost exceeds the benefit).

Procedure. The procedure for this study was identical to that of study 2A, except that the survey-only condition was replaced with the paid-survey condition.

Results and Discussion

As predicted, the effect of condition on likelihood to accept the offer was significant ($X^2(3) = 9.75$, $p = .021$). First, consistent with study 2A, relatively few participants were willing

to pay \$0.50 for the chocolate bar (31.82%), suggesting that the chocolate bar's benefit was less than \$0.50 for most participants. Next, relatively few participants were willing to complete the additional 5 minute survey for \$0.50 (16.00%), suggesting that the cost of completing the survey, for most participants, was greater than \$0.50. Despite these results—which indicate that the non-monetary cost of the pseudo-free offer (i.e., completing a survey) exceeds its benefit (i.e., the chocolate bar)—the majority of participants in the pseudo-free condition accepted the offer (58.33%). Indeed, participants were significantly more likely to complete the additional survey for a "free" chocolate bar ($p_{\text{pseudo-free}} = 58.33\%$) than for \$0.50 ($p_{\text{paid survey}} = 16.00\%$; $X^2(1) = 9.44$, $p = .002$) and were marginally more likely to accept the pseudo-free than the non-free offer ($p_{\text{non-free}} = 31.82\%$; $X^2(1) = 3.25$, $p = .071$). Moreover, there was no significant difference between the free (37.50%) and the pseudo-free (58.33%; $X^2(1) = 2.09$, $p = .149$) conditions.

These findings provide further evidence that consumers, at least in some cases, respond irrationally to pseudo-free offers. Even though the non-monetary cost of the pseudo-free offer (as evidenced by the paid survey condition) exceeded its benefit (as evidenced by the non-free condition), participants responded similarly to the pseudo-free and the truly free offers. These results, in combination with those from study 2A, suggest that, similar to truly free offers, there is something special about pseudo-free offers that transcends standard economic thought (Shampanier et al. 2007).

However, to this point, it is unclear why consumers respond to pseudo-free offers in the way that they do. We propose that the key driver of consumers' responses to pseudo-free offers is the attributions they generate regarding why the firm is providing the pseudo-free offer. Specifically, we hypothesize that, in general, consumers generate neutral or positive attributions regarding pseudo-free offers which, in turn, leads them to perceive such offers as fair (Campbell

1999). As a result, they respond to pseudo-free offers as if they are truly free (H1a). However, there are other plausible drivers, such as positive affect (Shampanier et al. (2007) found that positive affect explained consumers' irrational responses to truly free offers), quality perceptions, motivated reasoning, and schemer schema (consumers' intuitive theories about marketers' influence tactics; Wright 1986). In the next study, we use a mediation-based approach to pit our attributions account against several of these competing accounts (i.e., affect, quality perceptions, motivated reasoning, and the salience of the offer's cost).

STUDY 3

Method

Participants and design. One hundred and sixty-one undergraduate students at a university in the northeastern United States (55.3% female, M_{Age} = 19.96, SD_{Age} = 1.19) participated in this study in exchange for partial course credit. Participants were randomly assigned to one of four conditions (free, pseudo-free with cost second, pseudo-free with cost first, or non-free). Although study 1 found that consumers responded similarly to a pseudo-free offer regardless of whether the cost or the benefit of the offer was presented first, we once again tested whether highlighting the cost of the pseudo-free offer—by presenting it prior to the benefit of the offer—would have an effect to provide an additional test of the cost salience explanation.

Procedure. Participants were asked to imagine that they were at an airport waiting for a flight. In the free condition, participants were told that, as they were waiting, they saw a sign that said, "Free Wi-Fi." In the pseudo-free with cost second condition, participants were told that the sign said, "Free Wi-Fi if you register with the airport. All you need to do is provide your name

and email address." In the pseudo-free with cost first condition, the sign said, "Register with the airport by providing your name and email address. Once you've registered with the airport you'll receive free Wi-Fi." In the non-free condition, the sign said, "Wi-Fi for $3.50." After reading the scenario, all participants were asked the primary dependent variable: "How likely are you to accept the airport's Wi-Fi offer and use the internet?" (1 = Not at all, 7 = Extremely).

Participants were then asked a series of questions intended to help elucidate the mechanism underlying their reactions to the pseudo-free offer. First, in order to capture participants' spontaneous attributions regarding the offer, they were asked in an open-ended way, "Why do you think the airport has this Wi-Fi offer?" Participants' responses were completely unconstrained, and they could write whatever—and however much—they wanted. A quality check found that almost every participant provided a reasonable response (this was also the case in subsequent studies, presented next, that used the same open-ended attributions measure). After responding to the other scaled measures (presented next), each participant was presented with his/her response and asked to what extent he/she meant it as a positive, negative, or neutral attribution (-2 = Very negative, 0 = Neutral, +2 = Very positive). This self-coded measure of participants' attributions was the first mediator in our serial mediation model.

Next, to capture participants' affective reactions to the Wi-Fi offer, they completed both the positive ($\alpha = .93$) and the negative ($\alpha = .92$) affect PANAS scales (Watson, Clark, and Tellegen 1988). To capture how fair the offer was perceived to be, participants indicated the extent to which they agreed or disagreed (-3 = Strongly disagree, 0 = Neither agree nor disagree, +3 = Strongly agree) that the offer was: fair, questionable (reverse-coded), justified, honest, unfair (reverse-coded), a "rip-off" (reverse-coded), and suspicious (reverse-coded) (adapted from Darke and Dahl 2003). Responses to these measures were averaged to create a perceived fairness

index (α = .86), which served as the second mediator in our serial mediation model.

To determine whether motivated reasoning could help explain consumers' responses to pseudo-free offers, participants were asked, "How valuable is access to Wi-Fi in this situation?" and "How costly is it to provide the airport with your name and email address?" (both measured on 7-point scales with 1 = Not at all and 7 = Extremely). If participants in the pseudo-free conditions indicate that Wi-Fi is more valuable to them or that providing the airport with their name and email is less costly (compared to participants in the free and non-free conditions), there may be some evidence that motivated reasoning is—at least in part—driving the effect.

Finally, in order to capture participants' quality perceptions, participants were asked, "How high or low quality do you think the Wi-Fi is?" (-3 = Extremely low quality, +3 = Extremely high quality).

Results and Discussion

Replicating our previous findings, a one-way ANOVA revealed a significant effect of condition on likelihood to use the airport's Wi-Fi ($F(3, 157) = 64.36$, $p < .001$). Participants in the free (M = 6.15, SD = 1.25), pseudo-free with cost second (M = 6.18, SD = 1.11), and pseudo-free with cost first (M = 5.43, SD = 1.72) conditions were significantly more likely to accept the offer than those in the non-free condition (M = 2.17, SD = 1.84; Tukey's HSD q's > 13.64, all *p*s < .001). There were no significant differences between any of the other conditions (Tukey's HSD q < 3.15, all *p*s > .120). This suggests that the salience of the non-monetary cost of the pseudo-free offer once again did not affect how consumers responded to the pseudo-free offer.

Attributional process explanation. We next conducted a series of analyses to try to determine why consumers respond similarly to free and pseudo-free offers, and why they are significantly more likely to accept an offer with a non-monetary cost (i.e., a pseudo-free offer)

than one with a monetary cost (i.e., a non-free offer). To do this, we first examined our proposed attributional process account. Specifically, we tested whether participants' attributions regarding the pseudo-free offer were generally neutral or positive, and whether these attributions, in turn, led participants to perceive the pseudo-free offer as fair, which, ultimately, led them to respond to the pseudo-free offer as if it was truly free. Because there was no significant difference between the pseudo-free with cost second and cost first conditions (similar to study 1), we collapsed across these conditions for these subsequent analyses.

First, a descriptive analysis revealed that, consistent with our theorizing, only 30.00% of participants exposed to the pseudo-free offer spontaneously generated a negative attribution, whereas 70.00% generated neutral (32.50%) or positive (37.50%) attributions. Next, a one-way ANOVA on participants' ratings of their own spontaneous attributions ($F(2, 158) = 10.27$, $p < .001$) revealed that those in the free (M = .68, SD = .89) and pseudo-free (M = .16, SD = 1.07) conditions made significantly more positive attributions regarding the Wi-Fi offer than did those in the non-free condition (M = -.34, SD = .99; both Fs > 6.76, both ps < .028). The difference between the free and pseudo-free conditions was also significant ($F(1, 158) = 6.88$, $p = .010$). Similarly, a one-way ANOVA on fairness perceptions ($F(2, 158) = 9.33$, $p < .001$) revealed that participants perceived the free (M = .71, SD = .80) and pseudo-free (M = .51, SD = 1.01) offers as significantly fairer than the non-free offer (M = -.15, SD = 1.04; both Fs > 12.87, both ps < .001). Their fairness perceptions did not significantly vary in the free and pseudo-free conditions ($F(1, 158) = 1.12$, $p = .291$), and participants' fairness perceptions were significantly correlated with their attributions ($r(159) = .45$, $p < .001$).

Next, using the PROCESS Macro for SPSS (Model 6; Hayes 2013) and a bootstrap sample of $n = 10{,}000$, two tests of serial mediation were conducted with offer (pseudo-free vs.

free; pseudo-free vs. non-free) as the independent variable, spontaneous attributions as the first mediator, fairness perceptions as the second mediator, and likelihood to use the Wi-Fi as the dependent variable. As shown in Figures S1A and S1B in the web appendix, and supporting our proposed process account, the serial mediation was significant for both pseudo-free versus free (B = .07, SE = .04, CI (95%) = [.02, .20]) and pseudo-free versus non-free (B = -.04, SE = .02, CI (95%) = [-.10, -.01]). Specifically, the pseudo-free offer led consumers to generally spontaneously generate neutral/positive attributions, which subsequently led them to perceive the offer as fair, which, in turn, led them to respond to the offer as if it was truly free.

Alternative process accounts. One-way ANOVAs revealed no significant effect of condition on the positive ($F(2, 158) = .63$, $p = .535$) or negative ($F(2, 158) = .17$, $p = .847$) affect indices, nor on quality perceptions ($F(2, 156) = 1.21$, $p = .301$). Thus, neither affect nor quality perceptions seem to drive consumers' responses to pseudo-free offers.

Next, we investigated the potential role of motivated reasoning. A one-way ANOVA on the perceived costliness of providing the airport with one's name and email address revealed no significant effect of condition ($F(2, 158) = .84$, $p = .434$), suggesting that consumers presented with a pseudo-free offer do not minimize the cost of the offer. On the other hand, a one-way ANOVA on the perceived value of the Wi-Fi ($F(2, 158) = 14.38$, $p < .001$) did reveal that participants in the free (M = 5.68, SD = 1.12) and pseudo-free (M = 5.38, SD = 1.59) conditions perceived the Wi-Fi as significantly more valuable than did those in the non-free condition (M = 3.98, SD = 1.88; both Fs > 21.47, both ps < .001), and there was no significant difference between the free and pseudo-free conditions ($F(1, 158) = .97$, $p = .326$). However, a test of mediation revealed that motivated reasoning could not account for the full pattern of results. Specifically, although the perceived value of the Wi-Fi mediated the difference between the

pseudo-free and non-free conditions in terms of likelihood to use the airport's Wi-Fi (B = -.63, SE = .19, CI (95%) = [-1.08, -.32]), the perceived value of the Wi-Fi could not explain participants' responses to the pseudo-free offer relative to the free offer (B = .14, SE = .12, CI (95%) = [-.07, .40]) (see the web appendix for complete details). As a result, we found evidence that our attributional process model best accounts for the full pattern of results.

This study built on and extended the results of the prior studies in important ways. First, it demonstrates the robustness of the pseudo-free effect. In particular, whereas the benefits of the pseudo-free offers used in studies 1-2B (i.e., a mug, a chocolate bar) could have been perceived as rewards for performing a task (i.e., a short survey or study) for the offering party, it is unlikely that the benefit of the pseudo-free offer used in this study (i.e., Wi-Fi) was perceived as a reward. Rather, it is more likely that it was perceived as a service that was purchased with their non-monetary payment of personal information. Despite these differences, the results were similar.

More importantly, the findings provide initial support for our attributional process model. Specifically, whereas cost salience, affect, quality perceptions, and motivated reasoning could not account for the study's full pattern of results, our attributional model could. Consistent with H2, we found that, in general, participants spontaneously generated neutral or positive attributions regarding the pseudo-free offer which, in turn, led them to perceive the offer as fair, which, ultimately, led them to respond to the offer as if it was truly free.

However, it is important to note that we did find that a relatively small percentage of participants (30.00%) generated negative attributions regarding the pseudo-free offer, perhaps because they are naturally suspicious. We examined whether these attributions were consequential in order to test H3 and because in a separate study (S1 reported in the web appendix) we found that consumers high in dispositional suspicion do not treat pseudo-free

offers as if they are truly free. Consistent with our process explanation and H3, we found that participants who generated negative attributions (M = .02, SD = .99) perceived the pseudo-free offer as significantly less fair than those who generated neutral or positive attributions (M = .72, SD = .94; $t(78) = 3.03$, $p = .003$). Also, participants in the pseudo-free condition who made negative attributions were significantly less likely to accept the offer (M = 5.17, SD = 2.22) than those in the free condition (M = 6.15, SD = 1.25; $t(62) = 2.27$, $p = .027$) while those in the pseudo-free condition who made neutral or positive attributions (M = 6.07, SD = .93) were similarly likely to accept the Wi-Fi offer as those presented with the free offer (M = 6.15; $t(94) = .35$, $p = .725$). Thus, we have preliminary evidence that if consumers generate negative attributions, they perceive the pseudo-free offer as relatively unfair, and they are significantly less likely to accept it than the free offer (H3). However, self-selection may explain these results, since participants generated their own attributions. As a result, to provide further support for our attributional process account (H2-H3), as well as to more clearly delineate the boundaries of the pseudo-free effect (H3), we next manipulate the proposed mediator (i.e., attributions).

STUDY 4

To further test our proposed explanation, in this study, we manipulated the proposed mediator—consumers' attributions—and examined its effect on reactions to a pseudo-free offer. We predicted that, consistent with our previous studies, when consumers are induced to generate positive attributions or are free to generate their own attributions (which tend to be neutral or positive), they will perceive the pseudo-free offer as fair, and will respond to it as if it is truly free (H1-H2). On the other hand, when a contextual influence induces consumers to generate

negative attributions, they will perceive the pseudo-free offer as relatively unfair, and will be significantly less likely to accept it than a truly free offer (H3). Moreover, in addition to testing our attributions-based process account, we also tested whether schemer schema (Wright 1986)—consumers' intuitive theories about marketers' influence tactics—could account for the results.

Method

Participants and design. Four hundred and thirty-eight Amazon Mechanical Turk workers (42.3% female, M_{Age} = 34.25, SD_{Age} = 10.90) participated in this study in exchange for $0.27. Participants were randomly assigned to one of nine conditions in a 3 (offer: free, pseudo-free, non-free) x 3 (attributions: control, negative, positive) between-subjects design.

Procedure. Participants were told to imagine that they were in a mall and their cell phone battery was dying. In the free condition, they read, "You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free." In the pseudo-free condition, participants read the same scenario, but were told that "Using the ChargeItSpot is free—all you need to do is complete a short customer satisfaction survey before you retrieve your phone." This pseudo-free promotion is offered by many retailers (Wharton Magazine 2017). In the non-free condition, participants instead read, "Using the ChargeItSpot costs $3 for every 20 minutes of use" (a common price for charging stations; Brustein 2011). In the negative [positive] attributions conditions, participants also read, "You recently read an article about these ChargeItSpots which said that retailers have suspect [sincere] motives for offering them—their aim is to profit off their customers [their aim is to help their customers]." All participants then responded to the dependent variable: "How likely are you to use the ChargeItSpot to charge your phone?" with 1 = Not at all and 7 = Extremely. To measure their spontaneous attributions, participants were next

asked, "Why do you think this retailer provides a ChargeItSpot for customers?" Participants next self-coded their open-ended response as a negative, neutral, or positive attribution (-2 = Very negative, 0 = Neutral, +2 = Very positive), and then responded to the fairness perceptions scale (α = .91; Darke and Dahl 2003). Finally, they indicated the extent to which they agreed that "This retailer has ChargeItSpots in order to take advantage of consumers" (-3 = Strongly disagree with that statement to +3 = Strongly agree with that statement), in order to measure their schemer schema (Wright 1986).

Results and Discussion

Manipulation check. A one-way ANOVA on participants' spontaneous attributions indicated that the attributions manipulation was successful ($F(2, 435) = 23.29$, $p < .001$). Participants in the positive attributions condition (M = .55, SD = 1.16) made significantly more positive attributions than those in the control attributions condition (M = .22, SD = 1.06; $F(1, 435) = 6.11$, $p = .014$) who, in turn, made significantly more positive attributions than those in the negative attributions condition (M = -.35, SD = 1.19; both Fs > 18.53, both ps < .001).

Overall analysis. As shown in Figure 1, a two-way ANOVA on likelihood to use the ChargeItSpot revealed significant main effects of offer ($F(2, 429) = 11.96$, $p < .001$) and attributions ($F(2, 429) = 17.13$, $p < .001$). These main effects were qualified by a significant interaction ($F(4, 429) = 3.54$, $p = .007$), which we next decompose in planned comparisons.

[Insert Figure 1 about here]

Control attributions condition. A one-way ANOVA revealed that, when participants generated their own attributions, there was a significant effect of offer on likelihood to use the ChargeItSpot ($F(2, 429) = 14.22$, $p < .001$). Participants indicated that they were significantly more likely to use the ChargeItSpot when it was free (M = 3.69, SD = 2.13) or pseudo-free (M =

4.31, SD = 2.12) than when it was non-free (M = 2.37, SD = 1.69; *F*s > 12.94, *p*s < .001). The difference between the free and pseudo-free conditions was not significant ($F(1, 429) = 2.57$, $p = .110$). Thus, in this condition, we replicated the results from the prior studies.

Pseudo-free condition. Next, we examined the effect of the attributions manipulation on participants' likelihood of accepting the pseudo-free offer. A one-way ANOVA revealed a significant effect of attributions ($F(2, 429) = 10.95$, $p < .001$), with participants in the positive (M = 4.33, SD = 1.67) and control (M = 4.31, SD = 2.12) attributions conditions significantly more likely to use the ChargeItSpot than those in the negative attributions condition (M = 2.81, SD = 1.77; *F*s > 15.75, *p*s < .001). There was no significant difference between the positive and control attributions conditions ($F(1, 429) < .01$, $p = .970$), which was likely due to the attributions participants in the control attributions condition spontaneously generated. Specifically, consistent with our theorizing and study 3, whereas only 15.56% of participants in the control attributions condition generated negative attributions regarding the pseudo-free offer, 84.44% of them spontaneously generated neutral (42.22%) or positive attributions (42.22%).

Moreover, consistent with study 3, we found that participants in the control (M = 1.31) and positive (M = 1.16) attributions conditions perceived the pseudo-free offer as significantly fairer than did those in the negative attributions condition (M = .15; both *F*s > 17.78, both *p*s < .001), and that these fairness perceptions mediated the significant differences in likelihood to use the ChargeItSpot between both the control and negative attributions conditions (B = 1.02, SE = .25, CI (95%) = [.58, 1.56]) and the positive and negative attributions conditions (B = .88, SE = .23, CI (95%) = [.47, 1.36]). Thus, we found further evidence that the attributions consumers generate regarding pseudo-free offers are consequential because they influence how fair the offer

is perceived to be which, in turn, influences how likely it is to be accepted. See web appendix and Figures S2A and S2B for the complete results.

Pseudo-free vs. free. Next, we further examined our primary hypothesis that consumers respond similarly to free and pseudo-free offers when they make neutral or positive attributions regarding the pseudo-free offer (H2), whereas they are significantly more likely to accept a free than a pseudo-free offer when they make negative attributions regarding the latter (H3). To do this, we conducted a series of planned contrasts comparing the various pseudo-free conditions (negative, control, and positive attributions) to the free control attributions condition. There was no significant differences between the pseudo-free control (M = 4.31, SD = 2.12) and the free control attributions (M = 3.69, SD = 2.13; $F(1, 429) = 2.57$, $p = .110$) conditions, or between the pseudo-free positive (M = 4.33, SD = 1.67) and the free control attributions (M = 3.69; $F(1, 429) = 2.73$, $p = .099$) conditions. However, there was a significant difference between the pseudo-free negative (M = 2.81, SD = 1.77) and the free control attributions conditions (M = 3.69; $F(1, 429) = 5.71$, $p = .017$). As shown in Figure S2C, this significant difference was mediated by the perceived fairness of the offers (free control attributions: M = 1.24, SD = .95 vs. pseudo-free negative attributions: M = .15; B = -1.07, SE = .27, CI (95%) = [-1.67, -.62]) (PROCESS Macro; Model 4; Hayes 2013). This supports our contention that consumers do not always respond similarly to free and pseudo-free offers. Rather, when a contextual factor induces them to make negative attributions regarding a pseudo-free offer, they are significantly less likely to accept it than a comparable truly free offer (H3).

Schemer schema. Finally, we examined whether participants' schemer schemas (Wright 1986) could explain our results. To do this, we examined whether, among participants in the control attributions condition, there was an effect of offer on the extent to which consumers

believed that the retailer's ChargeItSpot offer was intended to take advantage of consumers. A one-way ANOVA revealed no significant effect of condition ($F(2, 145) = 1.34$, $p = .266$).

Discussion. The results from this study replicate and extend the results of our previous studies in a few important ways. First, we replicated our main finding that participants respond similarly to free and pseudo-free offers. Importantly, though, we found that this was dependent on participants' attributions. Specifically, when they generated neutral or positive attributions regarding the pseudo-free offer, they perceived the offer as relatively fair, and they responded to it as if it was truly free (H1-H2). However, when they were induced to make negative attributions, they did not treat the pseudo-free offer as if it was free, since they perceived the offer as relatively unfair (H3). Importantly, it appears that consumers, in general, naturally tend to spontaneously generate neutral or positive attributions when exposed to pseudo-free offers, which helps explain why our participants have responded similarly to the free and pseudo-free offers across our studies.

In this study, we found that a contextual influence could induce consumers to generate negative attributions regarding the pseudo-free offer, which led them to treat it differently than a truly free offer. However, it is likely that characteristics of the pseudo-free offer itself—such as a non-monetary cost that is substantial relative to the benefit of the offer—can also lead consumers to generate negative attributions regarding a pseudo-free offer, leading them to be significantly less likely to accept the pseudo-free offer than a comparable truly free offer. We test this other potential boundary condition to the pseudo-free effect in our next, and final, study.

STUDY 5

The goal of study 5 was to identify a boundary for the pseudo-free effect. We hypothesized that if the non-monetary cost of a pseudo-free offer becomes substantial relative to its benefit, consumers will be more likely to make negative attributions regarding the offer, the offer will be perceived as relatively unfair, and consumers will be significantly less likely to accept it than a comparable truly free offer (H3), as well as a pseudo-free offer with a lower cost. To test this, we used pseudo-free offers with varying time and personal information costs.

Method

Participants and design. Two hundred and ninety-five Amazon Mechanical Turk workers (51.5% female, M_{Age} = 35.32, SD_{Age} = 11.21) participated in this study in exchange for $0.27. Participants were randomly assigned to one of six conditions in a 2 (size of pseudo-free non-monetary cost: smaller, larger) x 2 (type of pseudo-free non-monetary cost: time, personal information) + 2 (free offer, non-free offer) between-subjects design. As a result, there were four pseudo-free offer conditions, one free offer condition, and one non-free offer condition.

Procedure. Participants read the same ChargeItSpot scenario as in study 4, and the free and non-free offers were exactly the same as those used in study 4. The pseudo-free offers, however, were slightly different. In the pseudo-free with smaller [larger] time cost condition, participants were informed that, "Using the ChargeItSpot is free—all you need to do is complete a 1-2 [15-20] minute customer satisfaction survey before you retrieve your phone." In the pseudo-free with smaller [larger] personal information cost condition, participants were told that, "Using the ChargeItSpot is free—all you need to do is enter your zip code [name, gender, home address, and income information] before you retrieve your phone." All participants then indicated their likelihood of using the ChargeItSpot, as in study 4. Importantly, a pretest found that whereas the smaller time and personal information costs were not perceived as substantial,

relative to the pseudo-free offer's benefit (i.e., access to the ChargeItSpot), the larger time and personal information costs were (see web appendix for details).

Next, participants responded to the same open-ended question used in studies 3 and 4 to capture their spontaneous attributions regarding the offer, and they subsequently self-coded their open-ended attributions as negative, neutral, or positive (-2 = Very negative, 0 = Neutral, +2 = Very positive). Participants then completed the fairness perceptions scale used in studies 3 and 4 ($\alpha = .90$; Darke and Dahl 2003), and responded to a manipulation check intended to measure the perceived cost of the offer with which they were just presented: "How costly would it be to use the ChargeItSpot that you just read about?" (1 = Not at all costly, 7 = Extremely costly).

Results and Discussion

Manipulation check. Two independent samples *t*-tests revealed that our manipulation was generally successful. Specifically, the non-monetary cost of the pseudo-free offer was perceived as marginally greater in the larger time cost condition (M = 3.02, SD = 1.62) than the smaller time cost condition (M = 2.45, SD = 1.56; $t(94) = 1.77$, $p = .081$), and significantly greater in the larger personal information cost condition (M = 3.65, SD = 1.99) than the smaller personal information cost condition (M = 2.21, SD = 1.61; $t(96) = 3.90$, $p < .001$).

Overall analysis. As shown in Figure 2, a one-way ANOVA revealed a significant effect of condition on likelihood to use the ChargeItSpot ($F(5, 289) = 6.40$, $p < .001$).

[Insert Figure 2 about here]

Time cost pseudo-free conditions. Next, using planned comparisons, we compared responses to the two pseudo-free offers with time costs (smaller, larger), the free offer, and the non-free offer. Consistent with the previous studies, there was no significant difference in terms of likelihood to accept the free (M = 3.88, SD = 2.07) and pseudo-free offer with smaller time

cost (M = 4.41, SD = 1.95; $F(1, 289) = 1.84$, $p = .176$), and both were significantly more likely to be accepted than the non-free offer (M = 2.75, SD = 1.86; $F(1, 289) > 8.67$, $ps < .005$). On the other hand, participants were significantly less likely to accept the pseudo-free offer with the larger time cost (M = 3.00, SD = 1.93) than either the free (M = 3.88; $F(1, 289) = 5.00$, $p = .026$) or the pseudo-free offer with the smaller time cost (M = 4.41; $F(1, 289) = 12.69$, $p < .001$). There was no significant difference in likelihood to accept the pseudo-free offer with larger time cost (M = 3.00) and the non-free offer (M = 2.75; $F(1, 289) = .42$, $p = .516$).

Additional analyses found that the difference in likelihood to accept the pseudo-free offers with smaller and larger time costs was driven by the fact that participants in the pseudo-free offer with larger (vs. smaller) time cost condition generated significantly more negative attributions regarding the offer ($M_{Larger} = -.13$ vs. $M_{Smaller} = .51$; $t(94) = 3.24$, $p = .002$), and perceived it as significantly less fair ($M_{Larger} = .47$ vs. $M_{Smaller} = 1.26$; $t(94) = 3.36$, $p = .001$). Consistent with our previous studies, we found that the effect of condition (smaller vs. larger time cost) on likelihood to accept the pseudo-free offer was mediated by attributions and fairness perceptions (B = -.19, SE = .10, CI (95%) = [-.47, -.06]; PROCESS Model 6; Hayes 2013). See the web appendix and Figure S3A for complete details.

Personal information cost pseudo-free conditions. We next conducted similar comparisons for the pseudo-free offers with information costs. As with the prior studies, there was no significant difference in likelihood to accept the free (M = 3.88) and pseudo-free offer with smaller personal information cost (M = 3.96, SD = 2.00; $F(1, 289) = .04$, $p = .844$), and both were significantly more likely to be accepted than the non-free offer (M = 2.75; $F(1, 289) > 8.67$, $ps < .005$). In contrast, participants were significantly less likely to accept the pseudo-free offer with the larger personal information cost (M = 2.84, SD = 1.80) than either the free (M =

3.88; $F(1, 289) = 7.24$, $p = .008$) or the pseudo-free with smaller personal information cost (M = 3.96; $F(1, 289) = 8.10$, $p = .005$) offers. There was no significant difference between the pseudo-free with larger personal information cost (M = 2.84) and non-free (M = 2.75; $F(1, 289) = .07$, $p = .798$) offers.

Additional analyses found that the difference in likelihood to accept the pseudo-free offers with smaller and larger personal information costs was driven by the fact that participants in the pseudo-free offer with larger (vs. smaller) personal information cost condition generated significantly more negative attributions regarding the offer ($M_{Larger} = -.55$ vs. $M_{Smaller} = .43$; $t(96) = 4.14$, $p < .001$), and perceived it as significantly less fair ($M_{Larger} = -.17$ vs. $M_{Smaller} = 1.07$; $t(96) = 4.79$, $p < .001$). Consistent with our previous studies, we found that the effect of condition (smaller vs. larger personal information cost) on likelihood to accept the pseudo-free offer was mediated by attributions and fairness perceptions (B = -.36, SE = .14, CI (95%) = [-.73, -.15]; PROCESS Model 6; Hayes 2013). See the web appendix and Figure S3B for complete details.

These findings extend the results of our previous studies in a number of important ways. First, they identify another boundary condition of the pseudo-free effect. Specifically, when the non-monetary cost of the pseudo-free offer is substantial relative to its benefit, consumers do not respond to the pseudo-free offer as if it is truly free because they then are more likely to make negative attributions and to perceive the offer as relatively unfair (H3). We replicated these findings in study S2 in the web appendix, in which we varied across more levels the time cost of the pseudo-free offer that participants were exposed to (a 1, 5, 10, 15, or 20 minute survey). Thus, characteristics of the pseudo-free offer itself can lead consumers to generate negative attributions, resulting in them being significantly less likely to accept it than a comparable truly

free offer. Importantly, though, we suggest that the perceived burden of the non-monetary cost of a pseudo-free offer—and resulting attributions—is assessed relative to its perceived benefit. If the pseudo-free offer involves a large benefit (i.e., a "free" vacation), it is likely that consumers will generate neutral or positive attributions regarding the offer even for relatively large non-monetary costs (i.e., attending an all-day time share sales presentation). Indeed, study S3 in the web appendix demonstrates that consumers are just as likely to accept such a pseudo-free offer as a truly free vacation offer.

GENERAL DISCUSSION

To our knowledge, this is the first paper to examine how consumers respond to pseudo-free offers. Such research is important, given the increasing prevalence of these offers in the marketplace (Anderson 2008). In general, we find that consumers treat pseudo-free offers as if they are truly free. When presented with an offer that is framed as "free" but has a clear non-monetary cost—for example, completing a survey (studies 1, 4-5), completing an additional 5 minute study (studies 2A and 2B), or providing personal information (studies 3 and 5)—our participants generally treated the offer as if there was no cost, and they were significantly more likely to accept it than a comparable non-free offer (H1a-H1b).

Moreover, consumers can be irrational in their reactions to pseudo-free offers. Even when the cost of the pseudo-free offer exceeded its benefit, participants were willing to accept it (studies 2A-2B). This may help explain why some consumers continue to use services, such as Facebook, even when the benefits of the "free" service may be less than the costs—loss of privacy, the threat of data being harvested for nefarious ends, exposure to targeted

advertisements and fake news, and emotional manipulation (BBC 2014).

However, our participants only responded to pseudo-free offers as if they were truly free when they made neutral or positive attributions regarding them (studies 3-5). Although most consumers' default, spontaneous attributions regarding pseudo-free offers appear to be neutral or positive, contextual influences (study 4), characteristics of the pseudo-free offer itself (study 5), and dispositional factors (study S1) can all lead consumers to generate negative attributions regarding a pseudo-free offer, resulting in them being significantly less likely to accept it than a comparable truly free offer (H3). We found evidence that consumers' attributions regarding pseudo-free offers are consequential because they influence how fair the offers are perceived to be which, in turn, influences consumers' likelihood of accepting the offers (studies 3-5).

Theoretical and Practical Implications

There are many theoretical and practical implications of the present research. First, our research contributes to the literature regarding free as a special price. Consistent with Chandran and Morwitz (2006) and Shampanier et al. (2007), we find that consumers are overly willing to accept "free" offers, even to the point of being irrational. Moreover, we contribute to this literature by demonstrating that free as a special price can be expanded. Even when the offer clearly has a non-monetary cost, simply presenting the offer as "free" causes consumers to respond to the offer as if it were truly free, as long as they make neutral or positive attributions about it. Accordingly, it seems that pseudo-free can at times be as special a price as truly free. In addition, whereas Shampanier et al. (2007) found that consumers were sensitive to even the smallest monetary costs (i.e., $0.01), and did not respond to offers with such costs as if they were truly free, we found that consumers were insensitive to most of the non-monetary costs attached to the pseudo-free offers that were used in our studies, even when they were relatively costly

(i.e., completing an additional 5 minute survey). Only when the burden of the non-monetary cost, relative to the benefit of the pseudo-free offer, reached some threshold did consumers no longer treat the pseudo-free offer as if it was truly free. It appears that this was driven by consumers' increased likelihood to generate negative attributions and perceive the pseudo-free offer as unfair when this threshold was passed.

Indeed, it appears that pseudo-free is generally as special a price as truly free for a reason that had not previously been identified in the literature. While prior research attributed consumers' positive reactions to free offers to positive affect (Shampanier et al. 2007) and their salience (Chandran and Morwitz 2006), the current research rules out positive affect (study 3) and salience (studies 1 and 3) as reasons why consumers respond to pseudo-free offers as if they are truly free. In addition, we also rule out the possible roles of perceived quality (study 3), motivated reasoning (study 3), and schemer schema (study 4). Instead, we consistently find that the attributions consumers make about why the firm has the offer determine how they respond to it, because these attributions influence how fair the offer is perceived to be.

Attributions also likely play a role in how consumers react to truly free offers. However, in contrast to pseudo-free offers, the findings from studies 4 and S3 suggest that consumers may not be as inclined to spontaneously generate neutral/positive attributions for truly free offers, especially when they appear to be "too good to be true," such as a free hotel stay (study S3). Accordingly, future research should examine the attributions consumers make about truly free offers, and how such attributions vary with the size of the free giveaway and influence consumers' likelihood of accepting the offer. Future research should also examine whether negative attributions eliminate the positive affect that is usually derived from truly free offers.

In addition, our findings suggest that the non-monetary costs of pseudo-free offers—

similar to time costs (Okada and Hoch 2004; Saini and Monga 2008)—are ambiguous and difficult to assess, which affects how consumers respond to them. Although we found a similar pattern of results regardless of whether a pseudo-free offer's non-monetary cost was time/effort (studies 1-2B, 4-5, S2-S3), personal information (studies 1, 3 and 5), or privacy (study S1), it is possible that consumers have different psychological responses to these different types of non-monetary costs. Examining these differences could be a fruitful avenue for future research.

Moreover, our research has clear marketing implications for firms who use or who are considering using such promotions. For instance, if a company is planning a free promotion, it may get the same positive results through a pseudo-free promotion instead. Such a promotion is likely to be just as successful as a truly free promotion, while also allowing the firm to gain something of value from its customers. Similarly, companies often try to persuade consumers to do something for them—such as follow them on Twitter or write a review on Yelp. Our results suggest that companies should offer consumers "free" perks for carrying out these tasks.

However, our results also highlight the need for regulators and public policy officials to protect consumers from manipulative, malevolent pseudo-free offers. First, it is worth noting that whereas the non-monetary costs of the pseudo-free offers used in this research were made abundantly clear to participants, the non-monetary costs of pseudo-free offers in the marketplace are often buried in fine print that is easy to overlook and difficult to interpret. A positive first step to protect consumers is to mandate that companies make the non-monetary costs of pseudo-free offers (i.e., the personal information that will be collected) explicitly clear to consumers. As study 5 demonstrated, when the non-monetary cost of a pseudo-free offer is substantial relative to its benefit, consumers will not respond to it as if it is truly free. Indeed, it is likely that consumers have a threshold for the non-monetary cost, which is influenced by the benefit of the

offer, beyond which they will no longer accept the pseudo-free offer. In addition, an informational campaign that informs people that "free" does not always mean free, and that educates them regarding how their personal information is used by companies and the potential costs of sacrificing one's privacy, could lead consumers to view pseudo-free offers through a more critical lens. Indeed, our research clearly demonstrates that consumers should be attentive to the costs—whether hidden or explicit—of "free" offers, and think hard about whether the offer's benefits outweigh its costs. Finally, legal recourse should be made available to protect consumers from malevolent firms who use pseudo-free offers to exploit consumers. These protections may be especially important for the poor and elderly, who may be even more susceptible to these offers. To be clear, we are not suggesting that pseudo-free offers should generally be rejected. Instead, we are advocating that consumers' responses to pseudo-free offers should be informed by a careful analysis of the costs and benefits of the offers.

Limitations and Future Research Directions

Although our findings are robust across studies, our research has limitations. First, most of the "free" products and services in our studies were relatively low value, and frequently are "free" to consumers. For example, consumers likely are used to receiving Wi-Fi and chocolate bars for low or no cost. Future research, involving real, consequential choices, should examine whether similar effects are found for more valuable products and services, such as a "free" laptop or "free" cell phone. One may expect that consumers would be even more likely to accept such valuable products when they are presented as pseudo-free, but consumers may also be more skeptical and likely to generate negative attributions when the offer appears to be "too good to be true." As we found in study S3 in the web appendix, in which participants in the pseudo-free condition were offered a "free" vacation if they attended a day-long sales presentation,

participants generally indicated lower likelihood of accepting the offer than for other studies, perhaps because it seemed a little too good to be true. However, these participants still indicated that they were significantly more likely to accept the vacation offer than those who were offered the vacation for $425. As a result, future research should determine the situations under which non-free offers are preferred to pseudo-free offers, and whether consumers scrutinize pseudo-free offers that appear too good to be true more closely, influencing how they respond to them.

In addition, most of our studies involved pseudo-free offers with relatively small non-monetary costs (i.e., completing a short survey). As a result, even though we demonstrated that situations exist in which consumers act irrationally and accept pseudo-free offers that are more costly than beneficial (studies 2A-2B), it is likely that our findings only occur within a certain range, when the non-monetary cost of the pseudo-free offer is less than, equal to, or only slightly greater than the benefit of the offer. When the non-monetary cost of the pseudo-free offer, relative to the benefit of the offer, reaches a certain threshold (which may be the point at which consumers begin to generate negative attributions regarding the offer), it is likely that consumers will not accept the pseudo-free offer anymore. Although studies 5 and S2 begin to address this conjecture, future research should use pseudo-free offers with larger non-monetary costs and should investigate consumers' thresholds more precisely.

Furthermore, our research primarily examined consumers' responses to pseudo-free offers that benefited firms (i.e., offers that encouraged consumers to complete surveys or provide personal information to firms). Future research should investigate whether pseudo-free offers can be used to encourage consumers to engage in prosocial behaviors. For example, consumers may be unwilling to limit their consumption of water in order to save a few dollars on their monthly water bill, but they may be willing to reduce their water usage in return for a "free" reward or

gift. Similarly, consumers may be hesitant to sign up for health care coverage, but a "free" inducement may successfully increase the rate at which people get insured.

Finally, although we did not find that pseudo-free offers were perceived as higher quality than truly free offers, a future research direction could be to investigate whether, in some cases, such a perceived quality difference is observed. Given that there is a relationship between price and perceived quality (Kardes et al. 2004), it is possible that, in certain situations, the non-monetary cost of pseudo-free offers leads them to be perceived as higher quality than truly free offers. This could have important practical implications, since quality perceptions influence the use and benefit that consumers derive from products (Shiv, Carmon, and Ariely 2005). Thus, for products that could benefit consumers' well-being and health—mosquito nets, contraception, medications—transforming free offers into pseudo-free offers by including a non-monetary cost may increase the perceived quality of the products which, in turn, may increase usage rates. This is an exciting direction for future research.

Pseudo-free offers appear to be the wave of the future (Anderson 2008). We hope that this work is only a first step in trying to understand the way consumers respond to them.

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FIGURE 1

STUDY 4: LIKELIHOOD TO USE THE CHARGEITSPOT AS A FUNCTION OF CONDITION (FREE, PSEUDO-FREE, NON-FREE) AND ATTRIBUTIONS (CONTROL, NEGATIVE, POSITIVE)

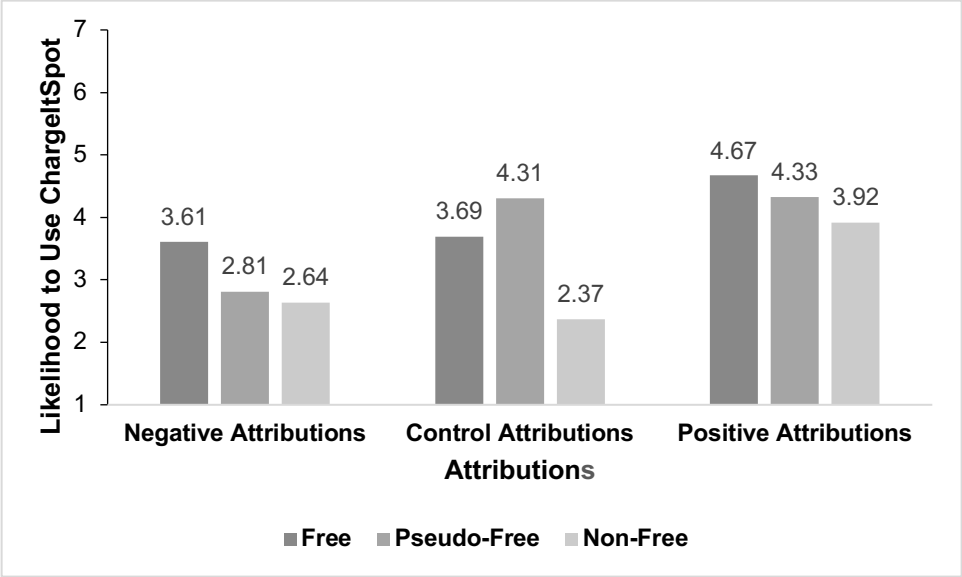
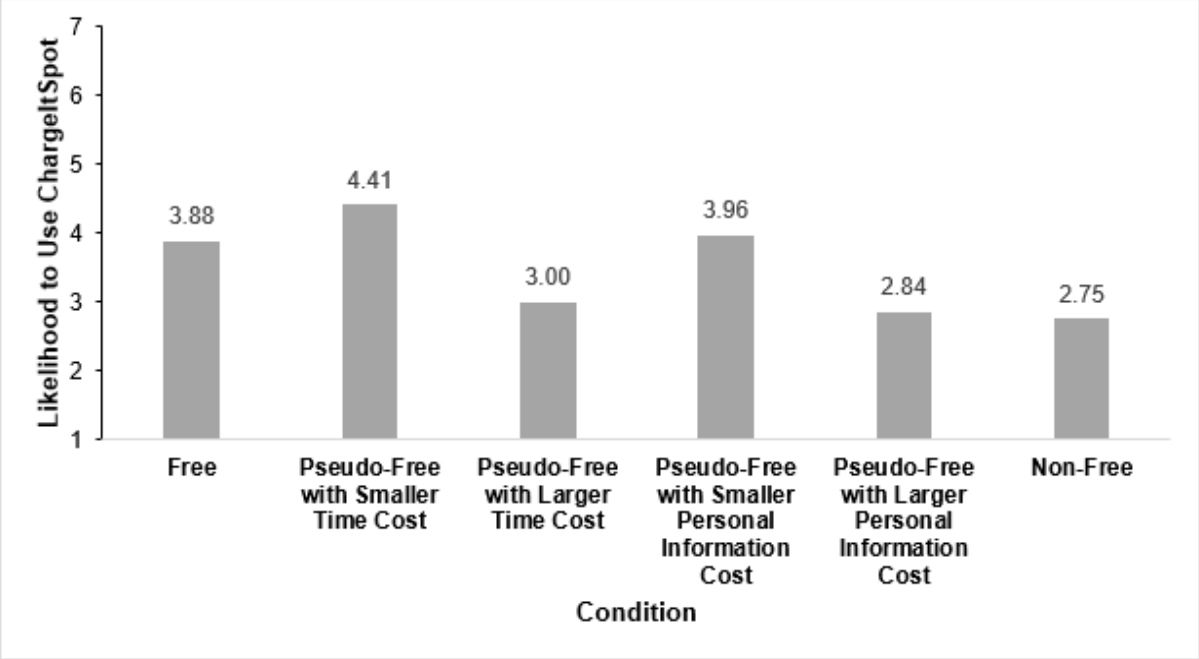


FIGURE 2

STUDY 5: LIKELIHOOD TO USE THE CHARGEITSPOT AS A FUNCTION OF CONDITION (FREE, PSEUDO-FREE WITH SMALLER TIME COST, PSEUDO-FREE WITH LARGER TIME COST, PSEUDO-FREE WITH SMALLER PERSONAL INFORMATION COST, PSEUDO-FREE WITH LARGER PERSONAL INFORMATION COST, NON-FREE)



Web Appendix

This web appendix has been provided by the authors to give readers additional information about their work.

Supplement to: There Ain't No Such Thing as a Free Lunch: Consumers' Reactions to Pseudo Free Offers

This Web Appendix includes procedures and findings for the pretests and supplementary studies, additional analyses, and the materials and all of the questions that were asked in all of the studies included in the main text and the Web Appendix.

PRETESTS FOR STUDIES REPORTED IN THE MAIN TEXT

PRETEST 1 FOR STUDY 2A

Method

Participants and design. Pretest 1 for study 2A was completed by 109 undergraduate business students from a private university in the northeastern United States (60.6% female, M_{Age} = 20.09, SD_{Age} = 1.01) in return for partial course credit. No manipulation was involved in this pretest.

Procedure. After consenting to participate, participants read, "Imagine that I asked you to complete an additional 5 minute survey once you're done with this hour long session. How costly (i.e., annoying, effortful) would it be to complete this additional 5 minute survey?" (1 = Not at all, 7 = Extremely). Participants were then asked, "Imagine I offered you something in return for completing the 5 minute survey. How valuable (i.e., attractive) are the following items?" (measured on a scale with 1 = Not at all, 7 = Extremely):

"A Hershey's Chocolate Bar"

"A bag of Cheez-It Crackers"

"A relatively nice pen"

"A slice of pizza"

"A free music download on iTunes"

"A bag of 5 apple slices"

"A banana"

"A stress ball"

"A pack of gum"

All participants were then asked the following demographic questions:

"What is your age?"

"What is your gender?" Male, Female, Other

"What is your race/ethnicity?" Asian, African American, Caucasian, Hispanic, Native American, Other

"Is English your native language?" Yes, No

Results

A paired-samples *t*-test found that the cost of completing an additional 5 minute survey (M = 4.18, SD = 1.86) exceeded the attractiveness (i.e., benefit) of receiving a Hershey's Chocolate bar (M = 3.54, SD = 2.02; $t(108) = 2.26$, $p = .026$).

PRETEST 2 FOR STUDY 2A

Method

Participants and design. Pretest 2 for study 2A was completed by 58 undergraduate business students from a private university in the northeastern United States (48.3% female, $M_{Age} = 20.12$, $SD_{Age} = 1.04$) in exchange for partial course credit. No manipulation was used in this pretest.

Procedure. After consenting to participate, participants read the following, "When deciding whether to do something, many people analyze the costs and benefits of performing the action. The costs can be monetary, such as the amount of money one must spend in order to receive a good or service, or non-monetary, such as annoyance, effort, or time. Similarly, the benefits can be monetary, such as money won or earned, or non-monetary, such as happiness and

pleasure. For the following questions, please focus on the costs involved in order to receive a Hershey's Chocolate Bar."

Participants then responded to the following questions: "How costly would it be to have to complete an additional five minute survey at the end of this hour session in order to receive a Hershey's Chocolate Bar?" (-3 = Completing an additional five minute survey would not be costly at all, +3 = Completing an additional five minute survey would be extremely costly)

"How costly would it be to have to pay $0.50 to receive a Hershey's Chocolate Bar?" (-3 = Paying $0.50 would not be costly at all, +3 = Paying $0.50 would be extremely costly)

"Which do you consider more costly: completing an additional five minute survey or paying $0.50 in order to receive a Hershey's Chocolate Bar?" (-3 = Definitely completing an additional five minute survey, +3 = Definitely paying $0.50)

All participants were then asked the following demographic questions:

"What is your age?"

"What is your gender?" Male, Female, Other

"What is your race/ethnicity?" Asian, African American, Caucasian, Hispanic, Native American, Other

"Is English your native language?" Yes, No

"Do you have any comments or suggestions for us?"

Results

A paired samples *t*-test revealed that completing an additional 5 minute survey in order to receive a Hershey's Chocolate bar (M = .45, SD = 1.93) is significantly more costly than paying $0.50 in order to receive a Hershey's Chocolate bar (M = -.22, SD = 2.00; $t(57) = 2.00$, $p = .050$).

PRETEST FOR STUDY 5

Method

Participants and design. The pretest for study 5 was completed by 191 Amazon Mechanical Turk workers (52.4% female, M_{Age} = 35.62, SD_{Age} = 11.92) in exchange for $0.27. Participants were randomly assigned to one of four conditions in a 2 (size of pseudo-free non-monetary cost: smaller, larger) x 2 (type of pseudo-free non-monetary cost: time, personal information) between-subjects design.

Procedure. After consenting to participate, participants were told that they were about to read a scenario, and they were asked to imagine that they were actually in the scenario.

In the smaller [larger] time cost condition, participants read, "Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free—all you need to do is complete a 1-2 [15-20] minute customer satisfaction survey before you retrieve your phone.

"As with most offers, this offer has both costs and benefits. Specifically, the cost of this offer is that you must complete a 1-2 [15-20] minute customer satisfaction survey before you retrieve your phone, and the benefit of this offer is that you will be able to charge your phone."

In the smaller [larger] personal information cost condition, participants read, "Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free—all you need to do is enter your zip code [name, gender, home address, and income information] before you retrieve your phone.

"As with most offers, this offer has both costs and benefits. Specifically, the cost of this offer is that you must provide the retailer with your zip code [name, gender, home address, and income information] before you retrieve your phone, and the benefit of this offer is that you will be able to charge your phone."

Participants then responded to the following three questions (α = .79), which were identical across conditions:

"Thinking just about the cost of this offer, how substantial would you say it is?" (-3 = Not at all substantial, +3 = Very substantial)

"Thinking just about the cost of this offer, how burdensome would you say it is?" (-3 = Not at all burdensome, +3 = Extremely burdensome)

"Thinking just about the cost of this offer, how large would you say it is?" (-3 = Extremely small, 0 = Neither large nor small, +3 = Extremely large)

Participants then responded to the following three questions (α = .86), which were identical across conditions:

"Relative to the benefit of this offer (being able to charge your phone), how substantial is the cost of this offer?" (-3 = Not at all substantial, +3 = Very substantial)

"Relative to the benefit of this offer (being able to charge your phone), how burdensome is the cost of this offer?" (-3 = Not at all burdensome, +3 = Extremely burdensome)

"Relative to the benefit of this offer (being able to charge your phone), how large is the cost of this offer?" (-3 = Extremely small, 0 = Neither large nor small, +3 = Extremely large)

Participants were then asked the following demographic questions:

"What is your age?"

"What is your gender?" Male, Female, Other

"What is your race/ethnicity? (Please check all that apply.)" Asian, African American, Caucasian, Hispanic, Native American, Other

"On the scale below, please indicate your HOUSEHOLD'S approximate yearly income before taxes." Less than $20,000, $20,000-$40,000, $40,000-$60,000, $60,000-$90,000, $90,000-$120,000, $120,000-$150,000, $150,000-$200,000, Greater than $200,000

"Is English your native language?" Yes, No

"Do you have any comments/suggestions for us?"

Results

When the perceived costliness measures were averaged (substantial, burdensome, large), one-sample *t*-tests (with 0 as the test value) revealed that whereas the smaller time (M = -1.05, SD = 1.68; $t(48) = 4.37$, $p < .001$) and smaller personal information (M = -1.31, SD = 1.42; $t(48) = 6.42$, $p < .001$) costs were not perceived as substantial, burdensome, or large, the larger time (M = .82, SD = 1.20; $t(48) = 4.81$, $p < .001$) and larger personal information (M = .80, SD = 1.30; $t(43) = 4.10$, $p < .001$) costs were perceived as substantial, burdensome, and large.

Similarly, when the relative costliness measures were averaged (how substantial, burdensome, and large the cost of the offer is relative to the benefit of the offer), one-sample *t*-tests (with 0 as the test value) revealed that whereas the smaller time (M = -1.11, SD = 1.68; $t(48) = 4.60$, $p < .001$) and smaller personal information (M = -1.13, SD = 1.60; $t(48) = 4.95$, $p < .001$) costs were not perceived as substantial, burdensome, or large relative to the benefit of the offer (i.e., being able to charge one's phone), the larger time (M = .88, SD = 1.05; $t(48) = 5.84$, $p < .001$) and larger personal information (M = .83, SD = 1.63; $t(43) = 3.36$, $p = .002$) costs were perceived as substantial, burdensome, and large relative to the benefit of the offer.

ADDITIONAL ANALYSES FOR SELECT STUDIES

STUDY 3

As stated in the main text, a one-way ANOVA on the perceived value of the Wi-Fi in the given situation revealed a significant effect of condition ($F(2, 158) = 14.38$, $p < .001$). Planned comparisons revealed that participants in the free (M = 5.68, SD = 1.12) and pseudo-free (M = 5.38, SD = 1.59) conditions perceived the Wi-Fi as significantly more valuable than those in the non-free condition (M = 3.98, SD = 1.88; both Fs > 21.47, both ps < .001). There was no significant difference between the free and pseudo-free conditions ($F(1, 158) = .97$, $p = .326$).

To test whether the perceived value of the Wi-Fi mediated the pseudo-free effect, a test of multilevel categorical variable indirect effects was conducted (Hayes and Preacher 2014). Using the MEDIATE macro for SPSS (Hayes and Preacher 2014), we conducted the test based on dummy coding (comparing the free to pseudo-free and pseudo-free to non-free conditions) using a bootstrap sample n = 10,000. Mediation analysis revealed that the (nonsignificant) difference between the free and pseudo-free conditions on likelihood to use the airport's Wi-Fi was not mediated by the perceived value of the Wi-Fi (B = .14, SE = .12, CI (95%) = [-.07, .40]). However, the difference between the free and non-free conditions was mediated by perceived value (B = -.63, SE = .19, CI (95%) = [-1.08, -.32]), since one has evidence of mediation when a bootstrap confidence interval does not contain zero (Hayes and Preacher 2014). Thus, although motivated reasoning—operationalized, in this case, as the perceived value of the Wi-Fi—may help explain why participants were significantly more likely to accept the free and pseudo-free offers than the non-free offer, it does not appear to explain why consumers respond to pseudo-free offers (vs. free offers) in the way that they do. Instead, our attributional process model,

which is presented in Figures S1A and S1B, best accounts for the full pattern of results.

Note that the means and standard deviations for all of the variables analyzed in this study are presented in Table S1.

FIGURE S1A

STUDY 3: PATHS DEMONSTRATING EFFECT OF CONDITION (PSEUDO-FREE VS. FREE) ON LIKELIHOOD TO ACCEPT THE AIRPORT'S WI-FI TERMS THROUGH ATTRIBUTIONS AND FAIRNESS PERCEPTIONS

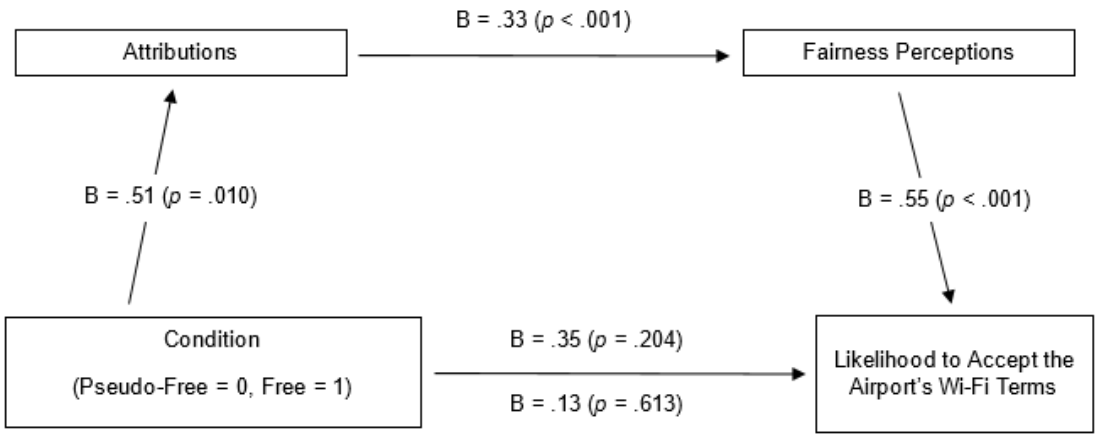


FIGURE S1B

STUDY 3: PATHS DEMONSTRATING EFFECT OF CONDITION (PSEUDO-FREE VS. NON-FREE) ON LIKELIHOOD TO ACCEPT THE AIRPORT'S WI-FI TERMS THROUGH ATTRIBUTIONS AND FAIRNESS PERCEPTIONS

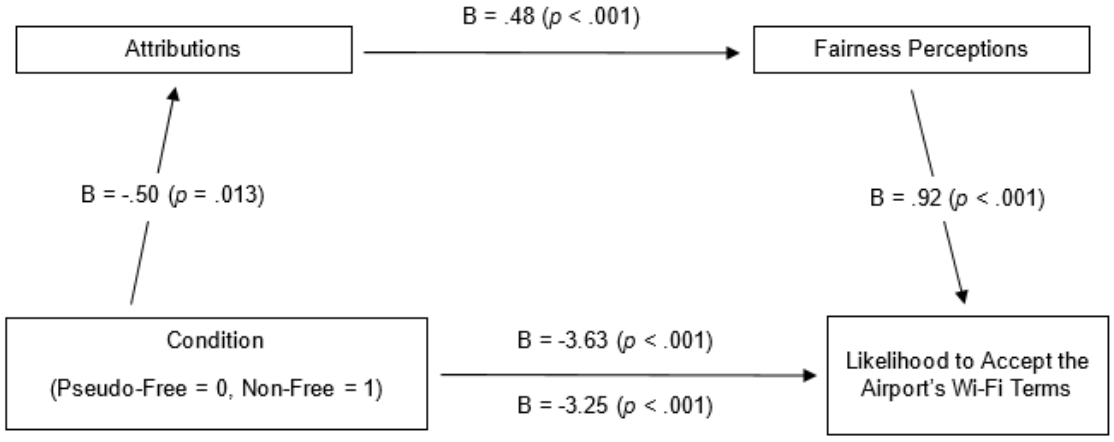


TABLE S1

STUDY 3: MEANS AND STANDARD DEVIATIONS FOR ANALYZED VARIABLES

	Free Condition	Pseudo-Free with Cost Second Condition	Pseudo-Free with Cost First Condition	Non-Free Condition
Likelihood to Use Airport's Wi-Fi	6.15 (1.25)[a]	6.18 (1.11)[b]	5.43 (1.72)[c]	2.17 (1.84)[a,b,c]
Attributions	.68 (.89)[a]	.23 (1.00)	.10 (1.15)	-.34 (.99)[a]
Perceived Fairness of Offer	.71 (.80)[a]	.59 (1.04)[b]	.44 (.98)[c]	-.15 (1.04)[a,b,c]
Positive Affect	22.43 (9.39)	20.98 (8.87)	24.88 (9.10)	21.07 (6.52)
Negative Affect	18.38 (10.08)	16.53 (7.87)	18.25 (8.45)	17.83 (9.17)
Motivated Reasoning: Perceived Value of Wi-Fi	5.68 (1.12)[a]	5.63 (1.56)[b]	5.13 (1.60)[c]	3.98 (1.88)[a,b,c]
Motivated Reasoning: Perceived Cost of Providing Airport with Name and Email Address	3.08 (1.49)	2.85 (1.58)	2.88 (1.62)	3.27 (1.94)
Perceived Quality of Wi-Fi	-.95 (1.43)	-.56 (1.37)	-.70 (1.51)	-1.02 (1.51)

[a]Tukey's HSD post-hoc tests revealed a significant difference ($p < .05$) between Free Condition and Non-Free Condition
[b]Tukey's HSD post-hoc tests revealed a significant difference ($p < .05$) between Pseudo-Free with Cost Second Condition and Non-Free Condition
[c]Tukey's HSD post-hoc tests revealed a significant difference ($p < .05$) between Pseudo-Free with Cost First Condition and Non-Free Condition

STUDY 4

As reported in the main text, a one-way ANOVA revealed a significant effect of attributions condition on fairness perceptions ($F(2, 141) = 14.21$, $p < .001$), with participants in the positive attributions (M = 1.16, SD = 1.14) and control attributions (M = 1.31, SD = 1.19) conditions perceiving the pseudo-free offer as significantly fairer than participants in the

negative attributions condition (M = .15, SD = 1.23; both *F*s > 17.78, both *p*s < .001). Using the MEDIATE Macro for SPSS (Hayes and Preacher 2014), and as shown in Figures S2A and S2B, a test of mediation revealed that the significant differences in likelihood to use the ChargeItSpot between both the control attributions and negative attributions conditions (B = 1.02, SE = .25, CI (95%) = [.58, 1.56]) and positive attributions and negative attributions conditions (B = .88, SE = .23, CI (95%) = [.47, 1.36]) were mediated by the perceived fairness of the pseudo-free offer. Thus, we found further evidence that the attributions consumers generate regarding pseudo-free offers are consequential because they influence how fair the offer is perceived to be which, in turn, influences how likely it is to be accepted.

FIGURE S2A

STUDY 4: PATHS DEMONSTRATING EFFECT OF PSEUDO-FREE CONDITION (NEGATIVE ATTRIBUTIONS VS. CONTROL ATTRIBUTIONS) ON LIKELIHOOD TO USE CHARGEITSPOT THROUGH FAIRNESS PERCEPTIONS

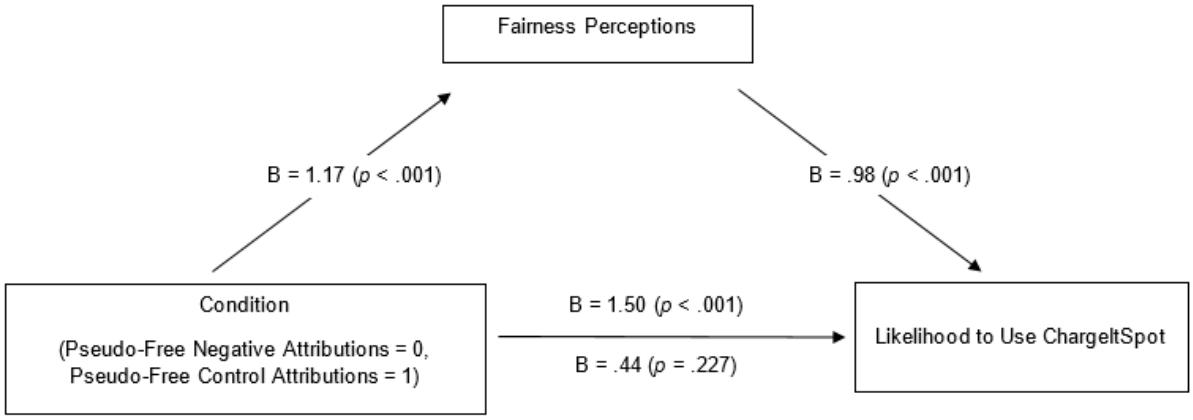
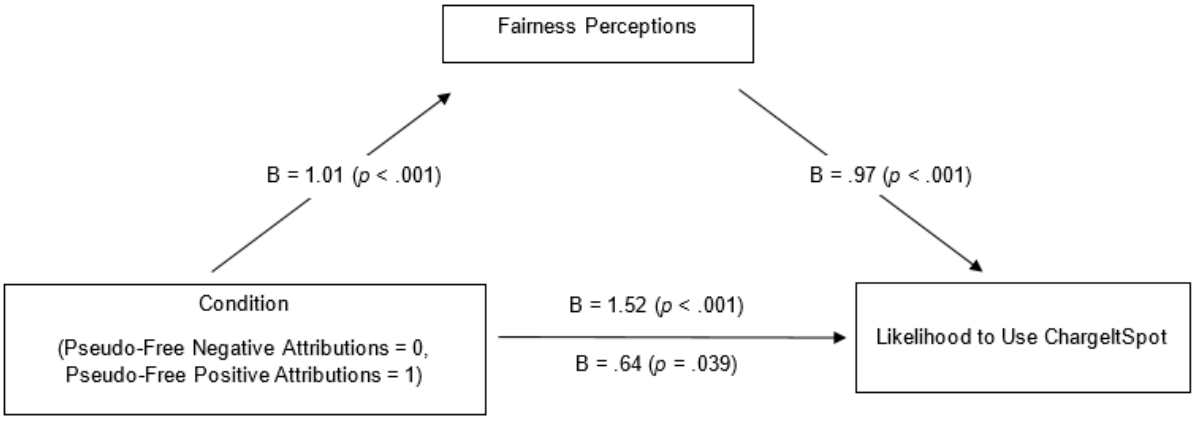


FIGURE S2B

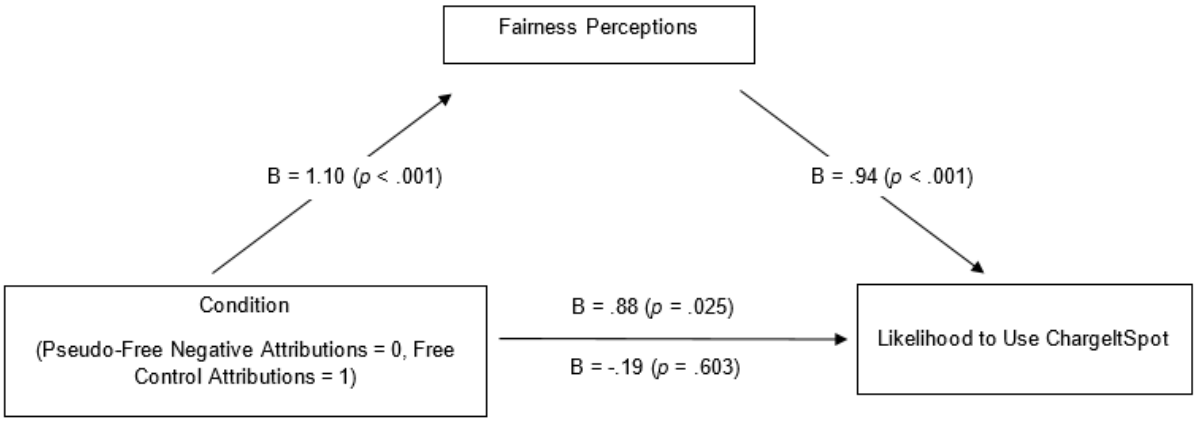
STUDY 4: PATHS DEMONSTRATING EFFECT OF PSEUDO-FREE CONDITION (NEGATIVE ATTRIBUTIONS VS. POSITIVE ATTRIBUTIONS) ON LIKELIHOOD TO USE CHARGEITSPOT THROUGH FAIRNESS PERCEPTIONS



Moreover, as shown in Figure S2C, the significant difference in likelihood to use the ChargeItSpot between the free control attributions condition and pseudo-free negative attributions condition was mediated by the perceived fairness of the offers (free control attributions: M = 1.24, SD = .95 vs. pseudo-free negative attributions: M = .15; B = -1.07, SE = .27, CI (95%) = [-1.67, -.62]) (PROCESS Macro; Model 4; Hayes 2013).

FIGURE S2C

STUDY 4: PATHS DEMONSTRATING EFFECT OF CONDITION (PSEUDO-FREE NEGATIVE ATTRIBUTIONS VS. FREE CONTROL ATTRIBUTIONS) ON LIKELIHOOD TO USE CHARGEITSPOT THROUGH FAIRNESS PERCEPTIONS



Note that the means and standard deviations for the variables analyzed in study 4 are presented in Table S2.

TABLE S2

STUDY 4: MEANS AND STANDARD DEVIATIONS FOR ANALYZED VARIABLES

	Free Condition			Pseudo-Free Condition			Non-Free Condition		
	Negative Attributions	Control Attributions	Positive Attributions	Negative Attributions	Control Attributions	Positive Attributions	Negative Attributions	Control Attributions	Positive Attributions
Likelihood to Use ChargeItSpot	3.61 (1.78)[a,b,c,d]	3.69 (2.13)[e,f,g,h]	4.67 (1.95)[a,e,i,j,k]	2.81 (1.77)[b,f,i,l,m,n]	4.31 (2.12)[l,o,p]	4.33 (1.67)[m,q,r]	2.64 (1.65)[c,g,j,o,q,s]	2.37 (1.69)[d,h,k,p,r,t]	3.92 (2.01)[n,s,t]
Attributions	-.13 (1.14)[a,u,v]	.35 (1.05)[f,g]	.67 (1.07)[a,i,j,k]	-.32 (1.27)[f,i,l,m,n]	.33 (.91)[l,o]	.48 (1.21)[m,q,r,u]	-.52 (1.13)[g,j,o,q,s,w]	.02 (1.17)[k,r,w]	.46 (1.26)[n,s,v]
Fairness Perceptions	.56 (1.01)[a,c,x,y,z]	1.24 (.95)[f,g,h,x,aa]	1.43 (1.08)[a,i,j,k,ab]	.15 (1.23)[f,i,l,m,ac]	1.31 (1.19)[l,y,o,p,ad]	1.16 (1.14)[m,z,q,r,ae]	-.40 (1.49)[c,g,j,o,q,s,ac]	.05 (1.37)[h,k,p,r]	.42 (1.44)[s,aa,ab,ad,ae]
Schemer Schema	.03 (1.31)[a,c]	-.16 (1.55)[e,f,g]	-1.17 (1.59)[a,e,i,j,k,ab,af,ag]	.64 (1.67)[f,i,l,m,n]	-.44 (1.60)[l,o,af]	-.50 (1.55)[m,q,ag]	.75 (1.60)[c,g,j,o,q,s,w]	.09 (1.72)[k,w]	-.27 (1.73)[n,s,ab]

[a]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Free, Positive Attributions Condition
[b]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Pseudo-Free, Negative Attributions Condition
[c]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Non-Free, Negative Attributions Condition
[d]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Non-Free, Control Attributions Condition
[e]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Control Attributions Condition and the Free, Positive Attributions Condition
[f]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Control Attributions Condition and the Pseudo-Free, Negative Attributions Condition
[g]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Control Attributions Condition and the Non-Free, Negative Attributions Condition
[h]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Control Attributions Condition and the Non-Free, Control Attributions Condition
[i]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Pseudo-Free, Negative Attributions Condition
[j]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Non-Free, Negative Attributions Condition
[k]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Non-Free, Control Attributions Condition

[l]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Negative Attributions Condition and the Pseudo-Free, Control Attributions Condition
[m]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Negative Attributions Condition and the Pseudo-Free, Positive Attributions Condition
[n]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Negative Attributions Condition and the Non-Free, Positive Attributions Condition
[o]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Control Attributions Condition and the Non-Free, Negative Attributions Condition
[p]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Control Attributions Condition and the Non-Free, Control Attributions Condition
[q]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Positive Attributions Condition and the Non-Free, Negative Attributions Condition
[r]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Positive Attributions Condition and the Non-Free, Control Attributions Condition
[s]Planned comparisons revealed a significant difference ($p < .05$) between the Non-Free, Negative Attributions Condition and the Non-Free, Positive Attributions Condition
[t]Planned comparisons revealed a significant difference ($p < .05$) between the Non-Free, Control Attributions Condition and the Non-Free, Positive Attributions Condition
[u]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Pseudo-Free, Positive Attributions Condition
[v]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Non-Free, Positive Attributions Condition
[w]Planned comparisons revealed a significant difference ($p < .05$) between the Non-Free, Negative Attributions Condition and the Non-Free, Control Attributions Condition
[x]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Free, Control Attributions Condition
[y]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Pseudo-Free, Control Attributions Condition
[z]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Pseudo-Free, Positive Attributions Condition
[aa]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Control Attributions Condition and the Non-Free, Positive Attributions Condition
[ab]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Non-Free, Positive Attributions Condition
[ac]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Negative Attributions Condition and the Non-Free, Negative Attributions Condition
[ad]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Control Attributions Condition and the Non-Free, Positive Attributions Condition
[ae]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Positive Attributions Condition and the Non-Free, Positive Attributions Condition

[af]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Pseudo-Free, Control Attributions Condition

[ag]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Pseudo-Free, Positive Attributions Condition

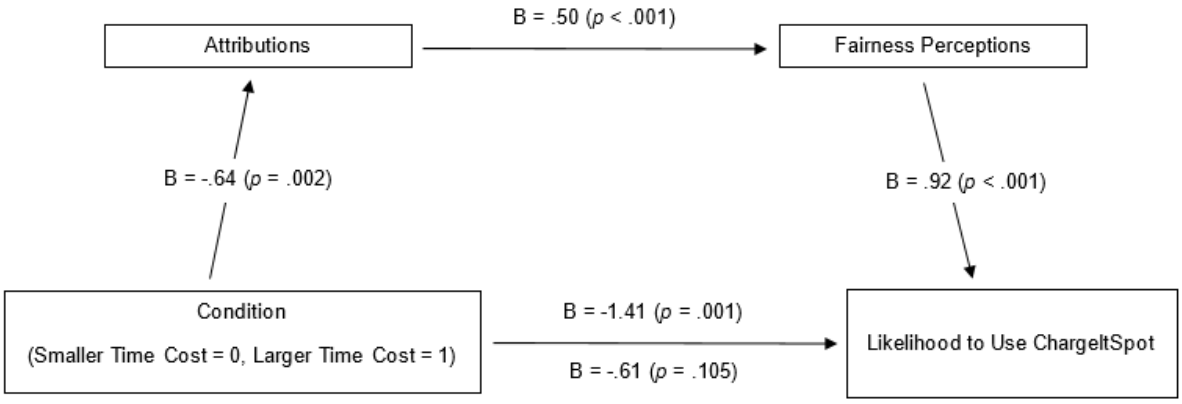
STUDY 5

Time Cost Pseudo-Free Conditions

Whereas 83.7% of participants in the smaller time cost condition generated neutral (26.5%) or positive (57.2%) attributions regarding the pseudo-free offer, only 61.7% of participants in the larger time cost condition generated neutral (38.3%) or positive (23.4%) attributions regarding the pseudo-free offer. Thus, participants in the smaller time cost condition (M = .51, SD = 1.02) generated significantly more positive attributions regarding the pseudo-free offer than did those in the larger time cost condition (M = -.13, SD = .90; $t(94) = 3.24$, $p = .002$). Similarly, participants in the smaller time cost condition (M = 1.26, SD = 1.04) perceived the pseudo-free offer as significantly fairer than did those in the larger time cost condition (M = 4.47, SD = 1.25; $t(94) = 3.36$, $p = .001$). A test of serial mediation with a bootstrap sample n = 5000 revealed that there was a significant indirect effect of pseudo-free time cost condition (smaller, larger) on likelihood to use the ChargeItSpot through participants' attributions and fairness perceptions (B = -.19, SE = .10, CI (95%) = [-.47, -.06]; PROCESS Model 6; Hayes 2013). See Figure S3A.

FIGURE S3A

STUDY 5: PATHS DEMONSTRATING EFFECT OF PSEUDO-FREE CONDITION (SMALLER TIME COST VS. LARGER TIME COST) ON LIKELIHOOD TO USE CHARGEITSPOT THROUGH ATTRIBUTIONS AND FAIRNESS PERCEPTIONS



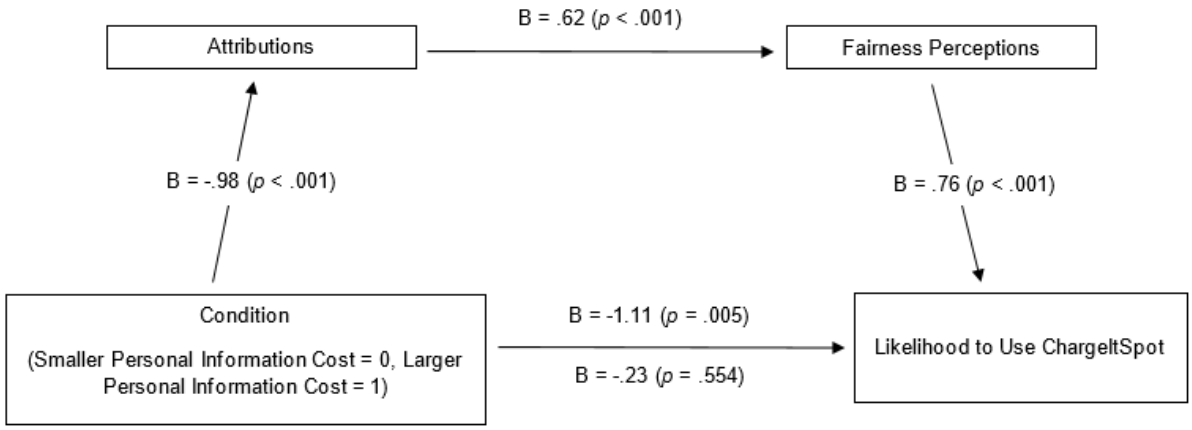
Personal Information Cost Pseudo-Free Conditions

Similarly, whereas 80.8% of participants in the smaller personal information cost condition generated neutral (29.8%) or positive (51.0%) attributions regarding the pseudo-free offer, only 41.2% of participants in the larger personal information cost condition generated neutral (15.7%) or positive (25.5%) attributions regarding the pseudo-free offer. Thus, participants in the smaller personal information cost condition (M = .43, SD = 1.12) generated significantly more positive attributions regarding the pseudo-free offer than did those in the larger personal information cost condition (M = -.55, SD = 1.21; $t(96) = 4.14$, $p < .001$). Similarly, participants in the smaller personal information cost condition (M = 1.07, SD = 1.15) perceived the pseudo-free offer as significantly fairer than did those in the larger personal information cost condition (M = -.17, SD = 1.39; $t(96) = 4.79$, $p < .001$). A test of serial mediation with a bootstrap sample $n = 5000$ revealed that there was a significant indirect effect of pseudo-free personal information cost condition (smaller, larger) on likelihood to use the

ChargeItSpot through participants' attributions and fairness perceptions (B = -.36, SE = .14, CI (95%) = [-.73, -.15]; PROCESS Model 6; Hayes 2013). See Figure S3B.

FIGURE S3B

STUDY 5: PATHS DEMONSTRATING EFFECT OF PSEUDO-FREE CONDITION (SMALLER PERSONAL INFORMATION COST VS. LARGER PERSONAL INFORMATION COST) ON LIKELIHOOD TO USE CHARGEITSPOT THROUGH ATTRIBUTIONS AND FAIRNESS PERCEPTIONS



Note that the means and standard deviations for the variables analyzed in study 5 are presented in Table S3.

TABLE S3

STUDY 5: MEANS AND STANDARD DEVIATIONS FOR ANALYZED VARIABLES

	Free	Pseudo-Free with Lower Personal Information Cost	Pseudo-Free with Higher Personal Information Cost	Pseudo-Free with Lower Time Cost	Pseudo-Free with Higher Time Cost	Non-Free
Likelihood to Use ChargeItSpot	3.88 (2.07)[a,b,c]	3.96 (2.00)[d,e,f]	2.84 (1.80)[a,d,g]	4.41 (1.95)[g,h,i]	3.00 (1.93)[b,e,h]	2.75 (1.86)[c,f,i]
Attributions	.38 (1.14)[a,b]	.43 (1.12)[d,e]	-.55 (1.21)[d,g,j]	.51 (1.02)[g,h]	-.13 (.90)[b,e,h]	.08 (1.31)[j]
Fairness Perceptions	1.22 (1.11)[a,b,c]	1.07 (1.15)[d,e,f]	-.17 (1.39)[a,d,g,k]	1.26 (1.04)[g,h,i]	.47 (1.25)[b,e,k,h]	.18 (1.30)[c,f,i]

[a]Planned comparisons revealed a significant difference ($p < .05$) between the Free Condition and the Pseudo-Free with Higher Personal Information Cost Condition

[b]Planned comparisons revealed a significant difference ($p < .05$) between the Free Condition and the Pseudo-Free with Higher Time Cost Condition

[c]Planned comparisons revealed a significant difference ($p < .05$) between the Free Condition and the Non-Free Condition

[d]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free with Lower Personal Information Cost Condition and the Pseudo-Free with Higher Personal Information Cost Condition

[e]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free with Lower Personal Information Cost Condition and the Pseudo-Free with Higher Time Cost Condition

[f]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free with Lower Personal Information Cost Condition and the Non-Free Condition

[g]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free with Higher Personal Information Cost Condition and the Pseudo-Free with Lower Time Cost Condition

[h]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free with Lower Time Cost Condition and the Pseudo-Free with Higher Time Cost Condition

[i]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free with Lower Time Cost Condition and the Non-Free Condition

[j]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free with Higher Personal Information Cost Condition and the Non-Free Condition

[k]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free with Higher Personal Information Cost Condition and the Pseudo-Free with Higher Time Cost Condition

SUPPLEMENTAL PRETESTS AND STUDIES

PRETEST FOR STUDY S1

Method

Participants and design. Seventy-eight Amazon Mechanical Turk workers (41.0% female, M_{Age} = 31.41, SD_{Age} = 11.15) participated in this pretest in exchange for $0.25. Participants were randomly assigned to one of three conditions (expect to pay, willingness to pay, or need to pay).

Procedure. After consenting to participate, participants completed the following questionnaire. The questionnaire was identical for all of the conditions except where it is noted otherwise.

Participants read, "You are about to read a scenario. Please imagine that you are actually in the scenario, and answer the following questions as accurately as possible."

Participants in the expect to pay condition read, "Imagine that you are at an airport waiting for a flight. You have used up your data for this month, but you would love to check your Facebook and Twitter." They were then asked, "How much would you expect to have to pay to use the airport's Wi-Fi?" "What is the least that you would expect to have to pay to use the airport's Wi-Fi?" and "What is the most that you would expect to have to pay to use the airport's Wi-Fi?" These questions were answered on a sliding scale with $0.00 and $20.00 as the endpoints.

Participants in the willingness to pay condition read the same scenario, but were asked, "How much would you be willing to pay to use the airport's Wi-Fi?" on a sliding scale with $0.00 and $20.00 as the endpoints.

Participants in the need to pay condition read the same scenario, except that an additional sentence was tacked on. The sentence said, "As you are waiting at your gate, you see a sign that says the airport is trying to get people to download its app." They were then asked, "How much would the airport have to pay you in cash or credit toward airport services (e.g. Wi-Fi) in order for you to be willing to download the airport's app?" on a sliding scale with $0.00 and $20.00 as the endpoints.

All participants were then asked the following demographic questions:

"Do you have a Facebook account?" Yes, No

"Do you have a Twitter account?" Yes, No

"How often do you use your Facebook account?" Never, Rarely, Sometimes, Often, All of the Time, 2-3 Times a Week, Daily

"How often do you use your Twitter account?" Never, Rarely, Sometimes, Often, All of the Time, 2-3 Times a Week, Daily

"What is your age?"

"What is your gender?" Male, Female, Other

"What is your race/ethnicity? (Please check all that apply.)" Asian, African American, Caucasian, Hispanic, Native American, Other

"On the scale below, please indicate your HOUSEHOLD'S approximate yearly income before taxes." Less than $20,000, $20,000-$40,000, $40,000-$60,000, $60,000-$90,000, $90,000-$120,000, $120,000-$150,000, $150,000-$200,000, Greater than $200,000

"Is English your native language?" Yes, No

"Do you have any comments/suggestions for us?"

Results

The pretest results revealed that consumers on average expect to pay $3.30 for Wi-Fi at an airport (SD = 3.86), would expect to pay, on average, no less than $0.80 to use an airport's Wi-Fi (SD = 1.35), and would expect to pay, on average, no more than approximately $5.80 to access an airport's Wi-Fi (SD = 4.51). Moreover, in the scenario presented, participants would be willing to pay approximately $3.50 to use the airport's Wi-Fi (M = 3.54, SD = 2.44), but would need to be paid approximately $7.50 to be willing to download the airport's app (M = 7.50, SD = 6.81).

STUDY S1

The goal of study S1 was to further test H3 and to examine another potential boundary of the pseudo-free effect. Specifically, we investigated whether an individual difference variable—dispositional suspicion—that should be highly related to the attributions that consumers naturally generate moderates the pseudo-free effect. In particular, we hypothesized that individuals low in dispositional suspicion—those most likely to naturally generate neutral or positive attributions—would respond to the pseudo-free offer as if it was truly free (H1-H2). On the other hand, we predicted that individuals high in dispositional suspicion—those most likely to naturally generate negative, suspicious attributions—would be significantly less likely to accept the pseudo-free offer than a comparable truly free offer (H3). Thus, whereas previous studies found that contextual influences (study 4) and characteristics of the pseudo-free offer itself (study 5) led

consumers to generate more negative attributions regarding the offer—which ultimately caused consumers to no longer treat the pseudo-free offer as if it was truly free—this study investigated whether consumers' dispositions could also lead to negative attributions regarding the pseudo-free offer, attenuating the pseudo-free effect.

Method

Participants and design. One hundred and forty-eight Amazon Mechanical Turk workers (52.0% female, M_{Age} = 34.42, SD_{Age} = 10.15) participated in this study in exchange for $0.30. Participants were randomly assigned to one of six conditions in a 3 (offer: free, pseudo-free, non-free) x 2 (elaboration: yes, no) x measured dispositional suspicion between-subjects design. The elaboration factor was included to see whether asking participants to think about the firm's motives behind the pseudo-free offer would induce participants to make negative attributions regarding the pseudo-free offer. If thinking about the firm's motives is enough to induce people to make negative attributions, participants in the elaboration condition should respond less positively to the pseudo-free offer (vs. participants in the no elaboration condition). However, if just thinking about the firm's motives is not enough to induce people to make negative attributions, then elaboration should not change participants' responses to the pseudo-free offer.

Procedure. Participants were asked to imagine that they were at an airport waiting for a flight and that they had used up their data for this month, but that they would love to check their Facebook and Twitter. In the free condition, participants read, "As you are waiting at your gate, you see a sign that says, 'Free Wi-Fi.' All you need to do is click the standard accept terms statement." In the pseudo-free condition, the sign instead said, "Free Wi-Fi if you download the airport's app." In the non-free condition, the sign said, "Wi-Fi for $3.50" (this price was based on a pretest; see above for details).

Participants in the elaboration condition then read, "As you are deciding whether to accept or reject the offer, you think about why the airport is offering this Wi-Fi deal. Specifically, you think about the airport's motives behind the offer. Please take a moment to think about the potential reasons why the airport has these Wi-Fi terms and is offering this Wi-Fi deal." Those in the no elaboration condition did not receive these instructions. All participants then responded to the dependent variable, "How likely are you to accept the terms and use the airport's Wi-Fi?" (1 = Not at all and 7 = Extremely).

Participants then completed a nine-item dispositional suspicion scale ($\alpha = .86$) (McKnight, Kacmar, and Choudhury 2004). The complete set of questions is available below.

Results and Discussion

Preliminary analysis. Prior to conducting our main analyses, we first examined whether participants' self-reported levels of dispositional suspicion were affected by the offer and elaboration manipulations. Accordingly, a 3 (offer: free, pseudo-free, non-free) x 2 (elaboration: yes, no) ANOVA was conducted on level of dispositional suspicion, and this two-way ANOVA revealed no significant main effect of offer ($F(2, 142) = .24$, $p = .787$), no significant main effect of elaboration ($F(1, 142) = .51$, $p = .479$), and no significant interaction ($F(2, 142) = 1.34$, $p = .266$). Given that condition did not affect participants' levels of dispositional suspicion, we were able to use this measure of dispositional suspicion as an individual difference variable in our subsequent main analyses.

Main analyses. We next conducted hierarchical regressions to determine the effects of offer, elaboration, dispositional suspicion, and their interactions on likelihood to accept the airport's Wi-Fi offer. Our primary prediction was that there would be a dispositional suspicion by offer interaction. Specifically, we predicted that, among participants low in dispositional

suspicion, there would be no significant difference in terms of likelihood to accept the free and pseudo-free offers. On the other hand, we predicted that participants high in dispositional suspicion would be significantly more likely to accept the free offer than the pseudo-free offer. We had no a priori predictions regarding how the elaboration manipulation would affect participants' likelihood of accepting the airport's Wi-Fi offer.

For the hierarchical regressions, likelihood to accept the airport's Wi-Fi offer was used as the dependent variable (Aiken and West 1991). The main effects of dispositional suspicion (mean-centered), offer (first offer dummy (1 = free, 0 = pseudo free, 0 = non-free), second offer dummy (0 = free, 1 = pseudo free, 0 = non-free)), and elaboration (1 = yes, 0 = no) were entered simultaneously in step 1. The five two-way interactions between dispositional suspicion (mean-centered), the two offer dummy variables, and the elaboration dummy variable were entered simultaneously in step 2. The two three-way interactions between dispositional suspicion (mean-centered), the two offer dummy variables, and the elaboration dummy variable were entered in step 3. There were no significant three-way interactions ($F(2, 136) = .29$, $p = .746$).

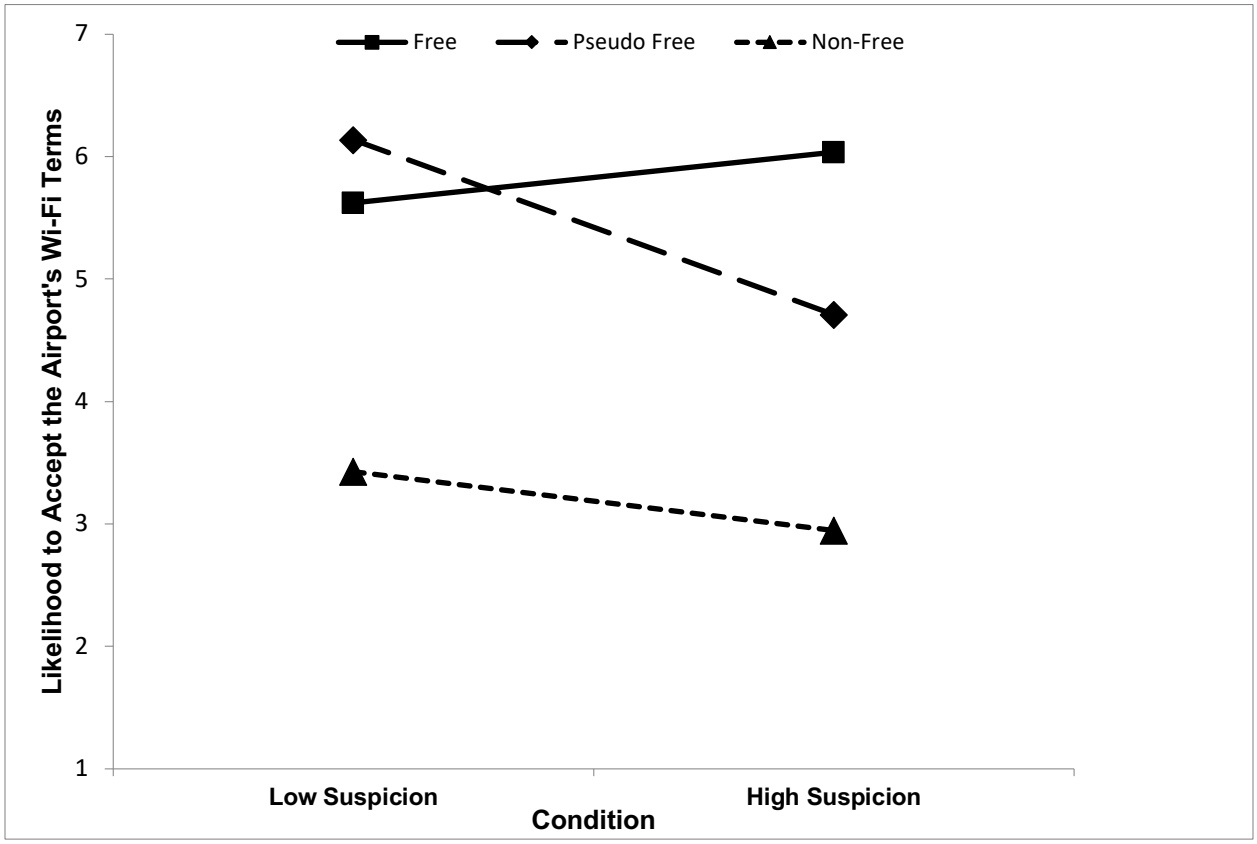
We next examined the two-way interactions, and we found that the two-way interactions between elaboration and dispositional suspicion ($F(1, 144) = 2.07$, $p = .152$) and elaboration and offer ($F(2, 142) = .02$, $p = .976$) were not significant. However, as predicted, the two-way interaction between dispositional suspicion and offer was significant ($F(2, 142) = 3.32$, $p = .039$). This interaction was significant when comparing the pseudo-free and free conditions (B = .86, SE = .34, $t = 2.58$, $p = .011$), but was not significant when the pseudo-free and non-free (B = .44, SE = .36, $t = 1.24$, $p = .219$) and non-free and free conditions (B = .419, SE = .34, $t = 1.22$, $p = .223$) were compared. Thus, participants responded similarly to the free offer regardless of their level of dispositional suspicion, and participants also responded similarly to the non-free offer

regardless of their level of dispositional suspicion. In contrast, how participants responded to the pseudo-free offer (vs. free offer) depended on their level of dispositional suspicion.

To further decompose the significant offer by dispositional suspicion interaction, we tested our main hypothesis that consumers low in dispositional suspicion will respond similarly to the pseudo-free and the truly free offers, whereas those high in dispositional suspicion will react more negatively to the pseudo-free than the free offer, presumably because they will be more suspicious of it and more likely to generate negative attributions about it. Thus, we conducted spotlight analyses comparing participants' likelihood to accept the airport's free, pseudo-free, and non-free Wi-Fi offers for those low in dispositional suspicion (1 SD below the mean (3.93) of dispositional suspicion) and those high in dispositional suspicion (1 SD above the mean) (Spiller et al. 2013). As shown in Figure S4, these spotlight analyses revealed that participants low in dispositional suspicion responded similarly to the pseudo-free and the free offers. Those low in dispositional suspicion were significantly more likely to accept the free (B = 2.20, SE = .50, $t = 4.36$, $p < .001$) and the pseudo-free (B = 2.71, SE = .54, $t = 5.04$, $p < .001$) offers than the non-free offer. However, there was no significant difference between their likelihood to accept the free and pseudo-free offers (B = -.52, SE = .52, $t = -.99$, $p = .324$). On the other hand, participants high in dispositional suspicion did not respond to the pseudo-free offer as if it was truly free. Although they were significantly more likely to accept the free (B = 3.09, SE = .52, $t = 5.93$, $p < .001$) and pseudo-free (B = 1.76, SE = .53, $t = 3.36$, $p = .001$) offers than the non-free offer, importantly they were also significantly more likely to accept the free offer than the pseudo-free offer (B = 1.33, SE = .51, $t = 2.60$, $p = .010$).

FIGURE S4

STUDY S1: LIKELIHOOD TO ACCEPT THE AIRPORT'S WI-FI TERMS AS A FUNCTION OF DISPOSITIONAL SUSPICION AND WHETHER THE WI-FI IS FREE, PSEUDO-FREE, OR NON-FREE



Thus, study S1 demonstrates that dispositional factors (in this case, dispositional suspicion) can moderate the pseudo-free effect, and that consumers high in dispositional suspicion do not respond to pseudo-free offers as if they are truly free.

Based on our previous studies, it is likely that a consumer's level of dispositional suspicion is consequential because it influences the attributions that he/she generates regarding the pseudo-free offer. Specifically, whereas those low in dispositional suspicion likely make neutral or positive, non-suspicious attributions regarding pseudo-free offers—leading them to respond positively to them—those high in dispositional suspicion likely make negative, more suspicions attributions—leading them to respond less positively. Thus, our findings are consistent with the idea that consumers respond similarly to free and pseudo-free offers when they make neutral or positive attributions about pseudo-free offers (which it appears most people do; H2), but that they are significantly less likely to accept pseudo-free offers (vs. free offers) if they generate negative attributions about the pseudo-free offers (H3). In addition, this study may offer some clues regarding what distinguishes the 70.00% of participants who generated neutral or positive attributions regarding the pseudo-free offer in study 3 and the 30.00% of participants who generated negative attributions regarding the pseudo-free offer in study 3. In particular, it may be that the 70.00% of participants who generated neutral or positive attributions are relatively low in dispositional suspicion, whereas the 30.00% of participants who generated negative attributions are relatively high in dispositional suspicion.

Interestingly, explicitly asking participants to consider the airport's motives for offering the deal had no significant effect on their likelihood of accepting the offer, and the elaboration manipulation did not interact with dispositional suspicion. This suggests that consumers' propensity to generate neutral or positive attributions in response to pseudo-free offers (if they

are low in dispositional suspicion) continues even in the face of such explicit inducements to consider the firm's motives for offering such a deal and also is likely not caused simply by a lack of thinking about why the firm made the offer. In addition, highly suspicious consumers' propensity to make negative attributions regarding pseudo-free offers does not appear to be affected by prompting them to consider the airport's motives.

The means and standard deviations for the variables analyzed in study S1 are presented in Table S4.

TABLE S4

STUDY S1: MEANS AND STANDARD DEVIATIONS FOR ANALYZED VARIABLES

	Free		Pseudo-Free		Non-Free	
	No Elaboration	Elaboration	No Elaboration	Elaboration	No Elaboration	Elaboration
Likelihood to Accept the Airport's Wi-Fi Terms	5.74 (2.14)[a,b]	5.91 (1.13)[c,d]	5.33 (1.71)[e,f]	5.40 (1.53)[g,h]	3.08 (2.26)[a,c,e,g]	3.31 (2.04)[b,d,f,h]
Dispositional Suspicion	3.77 (1.23)	4.02 (1.08)	4.26 (1.23)	3.80 (.91)	3.99 (1.05)	3.82 (.92)

[a]Planned comparisons revealed a significant difference ($p < .05$) between the Free, No Elaboration Condition and the Non-Free, No Elaboration Condition
[b]Planned comparisons revealed a significant difference ($p < .05$) between the Free, No Elaboration Condition and the Non-Free, Elaboration Condition
[c]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Elaboration Condition and the Non-Free, No Elaboration Condition
[d]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Elaboration Condition and the Non-Free, Elaboration Condition
[e]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, No Elaboration Condition and the Non-Free, No Elaboration Condition
[f]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, No Elaboration Condition and the Non-Free, Elaboration Condition
[g]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Elaboration Condition and the Non-Free, No Elaboration Condition
[h]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Elaboration Condition and the Non-Free, Elaboration Condition

STUDY S2

Study S2 was conducted in order to follow up on the results of study 5. Specifically, the goal of study S2 was to compare consumers' responses to a range of pseudo-free offers with varying time costs in order to more precisely identify the point at which the non-monetary cost of the pseudo-free offer, relative to the benefit of the offer, becomes substantial, and consumers no longer respond to the pseudo-free offer as if it is truly free.

Method

Participants and design. Three hundred and fifty-one Amazon Mechanical Turk workers (54.3% female, M_{Age} = 36.75, SD_{Age} = 10.98) participated in this study in exchange for $0.27. Participants were randomly assigned to one of seven conditions in a 5 (pseudo-free time cost: 1 minute, 5 minutes, 10 minutes, 15 minutes, 20 minutes) + 2 (free offer, non-free offer) between-subjects design. Accordingly, there were five pseudo-free offer conditions, a free offer condition, and a non-free offer condition.

Procedure. Participants read the same ChargeItSpot scenario that was used in studies 4 and 5, and the free and non-free offers were exactly the same as those used in studies 4 and 5. The pseudo-free offers, however, were slightly different. In the pseudo-free conditions, participants were informed that, "Using the ChargeItSpot is free—all you need to do is complete a 1 [5, 10, 15, 20] minute customer satisfaction survey before you retrieve your phone." The time cost of the pseudo-free offer (1 minute, 5 minutes, 10 minutes, 15 minutes, 20 minutes) varied across the pseudo-free offer conditions. All participants then indicated their likelihood of using the ChargeItSpot to charge their phone.

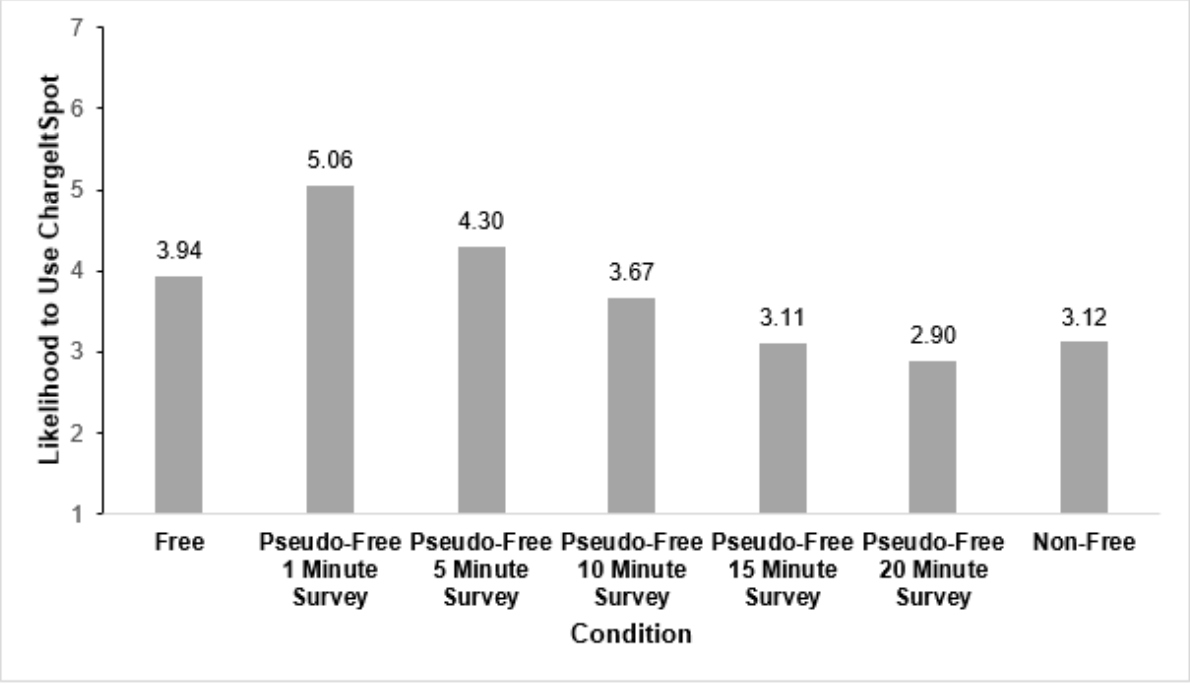
Next, participants responded to the same open-ended question used in studies 3-5 to capture their spontaneous attributions regarding the offer, and they subsequently self-coded their open-ended attributions as negative, neutral, or positive (-2 = Very negative, 0 = Neutral, +2 = Very positive). Participants then completed the fairness scale used in studies 3-5 (α = .92).

Results and Discussion

Overall analysis. As shown in Figure S5, a one-way ANOVA on likelihood to use the ChargeItSpot revealed a significant effect of condition ($F(6, 344) = 7.97$, $p < .001$).

FIGURE S5

STUDY S2: LIKELIHOOD TO USE THE CHARGEITSPOT AS A FUNCTION OF CONDITION (FREE; PSEUDO-FREE WITH 1, 5, 10, 15, OR 20 MINUTE TIME COST; NON-FREE)



Free versus pseudo-free conditions. Planned comparisons revealed that participants in the pseudo-free offer condition with the 1 minute time cost (M = 5.06, SD = 1.83) were significantly

more likely to use the ChargeItSpot than participants in the free offer condition (M = 3.94, SD = 1.99; $F(1, 344) = 8.46$, $p = .004$). In addition, there was no significant difference in terms of likelihood to use the ChargeItSpot between the free condition (M = 3.94) and the pseudo-free offers with 5 minute (M = 4.30, SD = 2.10) and 10 minute (M = 3.67, SD = 2.15; both Fs < .88, both ps > .349) time costs. However, participants were significantly more likely to use the ChargeItSpot when it was free (M = 3.94) than when it was pseudo-free and had a time cost of 15 (M = 3.11, SD = 1.77) or 20 minutes (M = 2.90, SD = 1.88; both Fs < 4.42, both ps < .037).

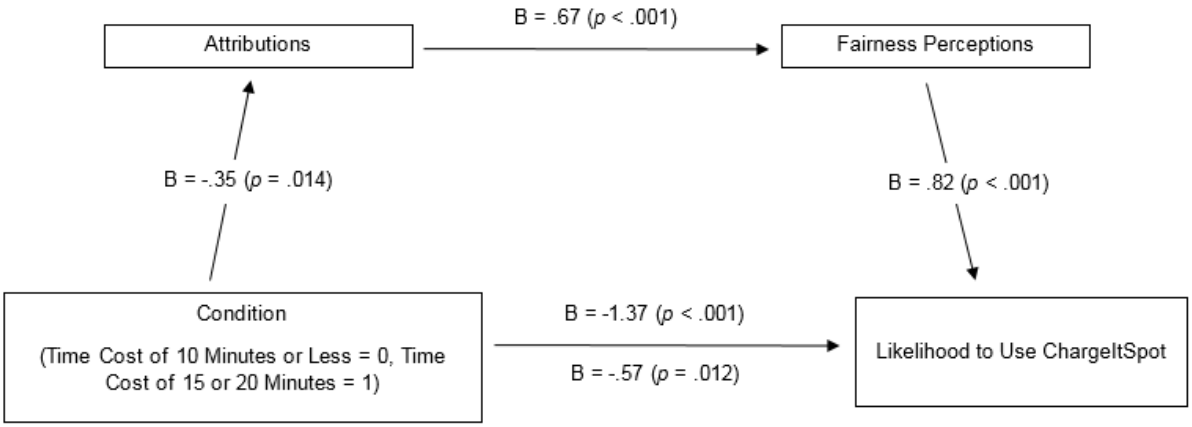
Pseudo-free conditions. We next examined what differentiated the pseudo-free offers that participants responded to as if they were free from those that they did not treat as free and were significantly less likely to accept than the truly free offer. Specifically, we examined whether participants' attributions and fairness perceptions were driving the results. For these subsequent analyses, the pseudo-free offers that participants treated as free (i.e., those with 1, 5, and 10 minute time costs) were combined, and those that participants did not treat as free (i.e., those with 15 and 20 minute time costs) were combined. For expository purposes, we subsequently refer to these combined conditions as the 10 minutes or less conditions and 15 and 20 minutes conditions, respectively.

An independent samples t-test revealed that participants in the 10 minutes or less conditions (M = .26, SD = .98) generated significantly more positive attributions regarding the pseudo-free offer than did participants in the 15 and 20 minutes condition (M = -.08, SD = 1.23; $t(249) = 2.47$, $p = .014$). Specifically, whereas 80.1% of participants in the 10 minutes or less conditions generated neutral (42.3%) or positive (37.8%) attributions regarding the pseudo-free offer, only 61.1% of participants in the 10 and 20 minutes conditions generated neutral (26.3%) or positive (34.7%) attributions regarding the pseudo-free offer. Moreover, participants in the 10

minutes or less conditions (M = 1.21, SD = 1.18) perceived the pseudo-free offer to be significantly fairer than did participants in the 10 and 20 minutes conditions (M = .25, SD = 1.37; $t(249) = 5.92$, $p < .001$). Consistent with our previous studies, we found that the difference in likelihood to accept these pseudo-free offers was mediated by participants' attributions and fairness perceptions (B = -.14, SE = .06, CI (95%) = [-.28, -.03]). See Figure S6.

FIGURE S6

STUDY S2: PATHS DEMONSTRATING EFFECT OF PSEUDO-FREE CONDITION (TIME COST OF 10 MINUTES OR LESS VS. TIME COST OF 15 OR 20 MINUTES) ON LIKELIHOOD TO USE CHARGEITSPOT THROUGH ATTRIBUTIONS AND FAIRNESS PERCEPTIONS



Accordingly, study S2 once again demonstrates that characteristics of the pseudo-free offer itself—specifically, the magnitude of its non-monetary cost—can lead consumers to generate relatively negative attributions which, in turn, lead them to perceive the offer as relatively unfair, which, ultimately, makes them significantly less likely to accept the pseudo-free offer than a comparable truly free offer. Although we can only speculate, it is likely that consumers stopped responding to the pseudo-free offer as if it was truly free when the time cost

was 15 minutes or higher because it was at that point that the non-monetary cost of the pseudo-free offer was perceived as substantial relative to the benefit of the offer.

The means and standard deviations for the variables analyzed in study S2 are presented in Table S5.

TABLE S5

STUDY S2: MEANS AND STANDARD DEVIATIONS FOR ANALYZED VARIABLES

	Free	Pseudo-Free					Non-Free
		1 Minute Survey	5 Minute Survey	10 Minute Survey	15 Minute Survey	20 Minute Survey	
Likelihood to Use ChargeItSpot	3.94 (1.99)[a,b,c,d]	5.06 (1.83)[a,e,f,g,h,i]	4.30 (2.10)[e,j,k,l]	3.67 (2.15)[f]	3.11 (1.77)[b,g,j]	2.90 (1.88)[c,h,k]	3.12 (1.97)[d,i,l]
Attributions	.47 (1.14)[b,c,d]	.41 (.94)[h,i]	.25 (.96)[k]	.12 (1.03)	.02 (1.19)[b]	-.19 (1.27)[c,h,k]	-.12 (1.15)[d,i]
Fairness Perceptions	1.43 (1.16)[b,c,d]	1.40 (1.12)[g,h,i]	1.28 (.98)[j,k,l]	.94 (1.40)[m,n,o]	.40 (1.20)[b,g,j,m]	.10 (1.52)[c,h,k,n]	.11 (1.56)[d,i,l,o]

[a]Planned comparisons revealed a significant difference ($p < .05$) between the Free Condition and the Pseudo-Free 1 Minute Survey Condition

[b]Planned comparisons revealed a significant difference ($p < .05$) between the Free Condition and the Pseudo-Free 15 Minute Survey Condition

[c]Planned comparisons revealed a significant difference ($p < .05$) between the Free Condition and the Pseudo-Free 20 Minute Survey Condition

[d]Planned comparisons revealed a significant difference ($p < .05$) between the Free Condition and the Non-Free Condition

[e]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 1 Minute Survey Condition and the Pseudo-Free 5 Minute Survey Condition

[f]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 1 Minute Survey Condition and the Pseudo-Free 10 Minute Survey Condition

[g]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 1 Minute Survey Condition and the Pseudo-Free 15 Minute Survey Condition

[h]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 1 Minute Survey Condition and the Pseudo-Free 20 Minute Survey Condition

[i]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 1 Minute Survey Condition and the Non-Free Condition

[j]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 5 Minute Survey Condition and the Pseudo-Free 15 Minute Survey Condition

[k]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 5 Minute Survey Condition and the Pseudo-Free 20 Minute Survey Condition

[l]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 5 Minute Survey Condition and the Non-Free Condition

[m]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 10 Minute Survey Condition and the Pseudo-Free 15 Minute Survey Condition

[n]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 10 Minute Survey Condition and the Pseudo-Free 20 Minute Survey Condition

[o]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free 10 Minute Survey Condition and the Non-Free Condition

STUDY S3

The goal of study S3 was to replicate the primary results of study 4 using a scenario involving a pseudo-free offer with a substantial non-monetary cost for consumers (being forced to attend a day-long sales presentation for a timeshare). In addition, we used a slightly different manipulation of attributions in this study.

Method

Participants and design. Five hundred and sixty-two Amazon Mechanical Turk workers (57.9% female, M_{Age} = 36.57, SD_{Age} = 11.81) participated in this study in exchange for $0.30. Participants were randomly assigned to one of nine conditions in a 3 (offer: free, pseudo-free, non-free) x 3 (attributions: control, negative, positive) between-subjects design.

Procedure. After consenting to participate, participants were told to read and imagine that they were actually in a scenario. In the free condition, participants read that they received a telephone call from Hilton Hotels and Resorts and were asked whether they would like to sign up for a free 3 day vacation in Orlando, Florida. In the pseudo-free condition, participants read the same scenario, except that they were told that the vacation was free if they attended a full day sales presentation for a timeshare. In the non-free condition, participants were told that the vacation cost $425 (the price for the non-free condition was commensurate with a three-day stay at the Hilton Orlando; Hilton 2016). This was all that was presented to participants in the control attributions conditions. In the negative attributions conditions, participants also read, “You know someone who agreed to this offer and said that it was not what he expected and that it was definitely not worth it.” Participants in the positive attributions conditions instead read, “You know someone who agreed to this offer and said that it was what he expected and that it was

definitely worth it." All participants then responded to the dependent variable: "How likely are you to sign up for the vacation?" with 1 = Not at all and 7 = Extremely. After that they were asked, "How costly (i.e., aversive) is missing one full day of your vacation to attend a sales presentation?" (-3 = Not at all costly, +3 = Extremely costly) and "How costly (i.e., aversive) is exposure to high pressure sales tactics?" (-3 = Not at all costly, +3 = Extremely costly). Finally, they responded to a few demographic questions before being debriefed and thanked for their participation.

Results and Discussion

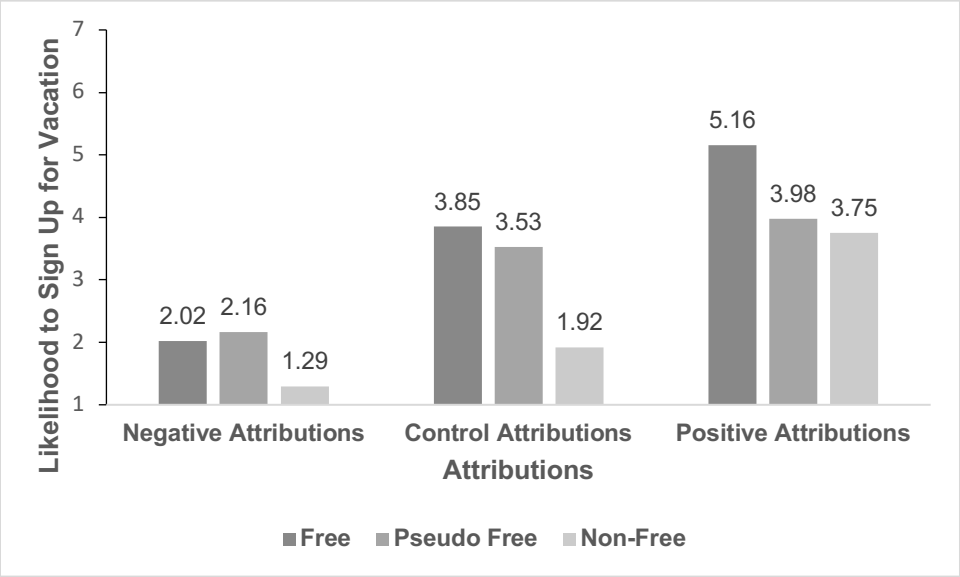
Preliminary analyses. First, we conducted a series of one-sample *t*-tests (using 0 as the comparison value) to determine whether missing a full day of vacation to attend a sales presentation and exposure to high-pressure sales tactics are costly to consumers. A one-sample *t*-test revealed that, regardless of condition, participants considered missing a full day of vacation to attend a sales presentation costly (M = 1.16, SD = 1.70; $t(561) = 16.18$, $p < .001$). Importantly, participants in the pseudo-free condition, regardless of which attributions condition they were in, also considered missing a full day of vacation to attend a sales presentation costly (control attributions: M = 1.06, SD = 1.72; $t(63) = 4.95$, $p < .001$; negative attributions: M = .89, SD = 1.88; $t(62) = 3.76$, $p < .001$; positive attributions: M = .64, SD = 1.97; $t(65) = 2.62$, $p = .011$). Similarly, participants, regardless of condition, considered exposure to high-pressure sales tactics costly (M = 1.64, SD = 1.57; $t(561) = 24.80$, $p < .001$). Once again, participants in the pseudo-free condition, regardless of which attributions condition they were in, also considered exposure to high-pressure sales tactics costly (control attributions: M = 1.53, SD = 1.58; $t(63) = 7.74$, $p < .001$; negative attributions: M = 1.92, SD = 1.56; $t(62) = 9.78$, $p < .001$; positive attributions: M = 1.67, SD = 1.67; $t(65) = 8.12$, $p < .001$). Thus, the evidence suggests that the non-monetary

cost of the pseudo-free offer (i.e., attending a day-long sales presentation) was perceived to be costly, and that those presented with such offers, regardless of the attributions they make, recognize the cost.

Main analyses. As shown in Figure S7, a two-way ANOVA revealed a significant main effect of offer ($F(2, 553) = 33.33$, $p < .001$) and a significant main effect of attributions ($F(2, 553) = 105.74$, $p < .001$) on likelihood to sign up for the vacation. These main effects were qualified by a significant interaction ($F(4, 553) = 4.95$, $p = .001$). Replicating our previous studies, planned contrasts revealed that when participants generated their own attributions (i.e., the control attributions condition), participants in the free (M = 3.85, SD = 1.79) and pseudo-free (M = 3.53, SD = 2.01) conditions were significantly more likely to report that they would sign up for the vacation than participants in the non-free condition (M = 1.92, SD = 1.21; versus free: $F(1, 553) = 44.76$, $p < .001$; versus pseudo-free: $F(1, 553) = 31.52$, $p < .001$). The difference between the free and pseudo-free conditions was not significant ($F(1, 553) = 1.24$, $p = .266$).

FIGURE S7

STUDY S3: LIKELIHOOD TO ACCEPT THE VACATION OFFER AS A FUNCTION OF CONDITION (FREE, PSEUDO FREE, NON-FREE) AND ATTRIBUTIONS (CONTROL, NEGATIVE, POSITIVE)



Next, we wanted to determine whether we replicated our finding that consumers' initial, spontaneous attributions regarding pseudo-free offers tend to be neutral or positive. Accordingly, planned contrasts were conducted comparing the pseudo-free positive attributions condition and pseudo-free negative attributions condition to the pseudo-free control attributions condition in which participants generated their own attributions. These planned contrasts revealed that participants responded similarly to the pseudo-free offer when they generated their own attributions (M = 3.53) and when they were induced to make positive attributions (M = 3.98, SD = 2.12; $F(1, 553) = 2.51$, $p = .114$), but participants were significantly less likely to indicate that they would sign up for the pseudo-free vacation when they made negative attributions (M = 2.16, SD = 1.47) than when they generated their own attributions (M = 3.53; $F(1, 553) = 22.47$, $p <$

.001). These results support our contention that consumers are inclined to generate neutral or positive attributions when they are exposed to pseudo-free offers.

Moreover, participants in the pseudo-free positive attributions condition (M = 3.98, SD = 2.12) responded to the vacation offer similarly to those in the free condition who generated their own attributions (M = 3.85; $F(1, 553) = .20$, $p = .653$), but those in the pseudo-free negative attributions condition (M = 2.16, SD = 1.47) reported being significantly less likely to sign up for the vacation than participants in the free condition who generated their own attributions (M = 3.85; $F(1, 553) = 33.77$, $p < .001$). Thus, participants only respond similarly to free and pseudo-free offers when they make neutral or positive attributions. When they make negative attributions about a pseudo-free offer, they do not respond to it as if it is truly free.

For completeness, we also compared the control attributions, negative attributions, and positive attributions conditions for the free and non-free conditions. For the free condition, participants reported being significantly more likely to sign up for the vacation in the positive attributions condition (M = 5.16, SD = 1.63) than the control attributions condition (M = 3.85; $F(1, 553) = 19.03$, $p < .001$), and more likely to sign up in the control than the negative attributions condition (M = 2.02, SD = 1.55; $F(1, 553) = 35.80$, $p < .001$). Similarly, for the non-free condition, participants reported being significantly more likely to sign up for the vacation in the positive attributions (M = 3.75, SD = 1.76) than the control attributions condition (M = 1.92; $F(1, 553) = 41.18$, $p < .001$), and significantly more likely to sign up in the control attributions than in the negative attributions condition (M = 1.29, SD = .65; $F(1, 553) = 5.02$, $p = .025$). Whereas participants respond similarly to the pseudo-free offer regardless of whether they generate their own attributions or are induced to make positive attributions, they are significantly more likely to accept a free or non-free offer when they are induced to make positive attributions

than when they generate their own attributions. Thus, it appears that whereas consumers spontaneously generate relatively positive attributions regarding pseudo-free offers, they do not necessarily automatically generate such positive attributions when they are exposed to free or non-free offers.

The results from this study replicate and extend the results of our previous studies in a few important ways. First, this study replicated our main finding—that consumers respond similarly to free and pseudo-free offers—in a new, different domain that entails a substantial cost if the pseudo-free offer is accepted. Indeed, across conditions, participants rated the non-monetary cost of the pseudo-free offer (i.e., losing a full day of one's vacation to attend a sales presentation) as very costly. More importantly, although participants in the pseudo-free condition rated the cost of the pseudo-free offer as substantial, they too responded to the pseudo-free offer in a way that was similar to how participants responded to the truly free offer.

However, we once again found that consumers do not always respond to pseudo-free offers as if they are truly free (H3). Specifically, consumers only respond to pseudo-free offers as if they are truly free if they make neutral or positive attributions about the offer (H1-H2). If consumers make negative attributions about a pseudo-free offer, in this case because of a contextual/social influence, they are significantly less likely to accept it than a free offer. However, it appears that consumers' natural inclination is to make neutral or positive attributions regarding pseudo-free offers, and they only make negative attributions if they are dispositionally suspicious (study S1) or are induced to make negative attributions because of characteristics of the offer (studies 5 and S2) or contextual/social influences (this study and study 4). This is in contrast to how participants responded to the free (and non-free) offers, for which they did not

appear to as consistently spontaneously generate positive attributions. We briefly discuss this finding in the General Discussion of the main text.

The means and standard deviations for the variables analyzed in study S3 are presented in Table S6.

TABLE S6

STUDY S3: MEANS AND STANDARD DEVIATIONS FOR ANALYZED VARIABLES

	Free			Pseudo-Free			Non-Free		
	Negative Attributions	Control Attributions	Positive Attributions	Negative Attributions	Control Attributions	Positive Attributions	Negative Attributions	Control Attributions	Positive Attributions
Likelihood to Accept Vacation Offer	2.02 (1.57)[a,b,c,d,e,f]	3.88 (1.77)[a,g,h,i,j]	5.17 (1.62)[b,g,k,l,m,n,o,p]	2.20 (1.50)[h,k,q,r,s,t]	3.55 (1.99)[c,l,q,u,v]	3.99 (2.11)[d,m,r,w,x]	1.37 (.81)[e,i,n,s,u,w,y,z]	2.00 (1.34)[j,o,v,x,y,aa]	3.69 (1.75)[f,p,t,z,aa]
Perceived Cost of Attending a Day-Long Sales Presentation	1.12 (1.53)[e]	.90 (1.86)[i]	.84 (1.78)[n,o,p]	.89 (1.88)[s]	1.06 (1.72)[u]	.64 (1.97)[w,x,ab]	2.02 (1.25)[e,i,n,s,u,w]	1.45 (1.51)[o,x]	1.45 (1.32)[p,ab]
Perceived Cost of Exposing Oneself to High Pressure Sales Tactics	1.58 (1.68)[e]	1.37 (1.67)[h,i]	1.07 (1.94)[k,m,n,o]	1.92 (1.56)[h,k]	1.53 (1.58)[u]	1.67 (1.67)[m]	2.15 (1.19)[e,i,n,u,z]	1.79 (1.27)[o]	1.60 (1.34)[z]

[a]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Free, Control Attributions Condition
[b]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Free, Positive Attributions Condition
[c]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Pseudo-Free, Control Attributions Condition
[d]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Pseudo-Free, Positive Attributions Condition
[e]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Non-Free, Negative Attributions Condition

[f]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Negative Attributions Condition and the Non-Free, Positive Attributions Condition
[g]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Control Attributions Condition and the Free, Positive Attributions Condition
[h]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Control Attributions Condition and the Pseudo-Free, Negative Attributions Condition
[i]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Control Attributions Condition and the Non-Free, Negative Attributions Condition
[j]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Control Attributions Condition and the Non-Free, Control Attributions Condition
[k]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Pseudo-Free, Negative Attributions Condition
[l]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Pseudo-Free, Control Attributions Condition
[m]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Pseudo-Free, Positive Attributions Condition
[n]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Non-Free, Negative Attributions Condition
[o]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Non-Free, Control Attributions Condition
[p]Planned comparisons revealed a significant difference ($p < .05$) between the Free, Positive Attributions Condition and the Non-Free, Positive Attributions Condition
[q]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Negative Attributions Condition and the Pseudo-Free, Control Attributions Condition
[r]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Negative Attributions Condition and the Pseudo-Free, Positive Attributions Condition
[s]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Negative Attributions Condition and the Non-Free, Negative Attributions Condition
[t]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Negative Attributions Condition and the Non-Free, Positive Attributions Condition
[u]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Control Attributions Condition and the Non-Free, Negative Attributions Condition
[v]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Control Attributions Condition and the Non-Free, Control Attributions Condition
[w]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Positive Attributions Condition and the Non-Free, Negative Attributions Condition
[x]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Positive Attributions Condition and the Non-Free, Control Attributions Condition
[y]Planned comparisons revealed a significant difference ($p < .05$) between the Non-Free, Negative Attributions Condition and the Non-Free, Control Attributions Condition

[z]Planned comparisons revealed a significant difference ($p < .05$) between the Non-Free, Negative Attributions Condition and the Non-Free, Positive Attributions Condition
[aa]Planned comparisons revealed a significant difference ($p < .05$) between the Non-Free, Control Attributions Condition and the Non-Free, Positive Attributions Condition
[ab]Planned comparisons revealed a significant difference ($p < .05$) between the Pseudo-Free, Positive Attributions Condition and the Non-Free, Positive Attributions Condition

MATERIALS FOR ALL OF THE STUDIES

STUDY 1

Free condition:

As 2017 gets underway, we would like to take this time to thank our alumni community. The vibrant, innovative, and compassionate [redacted] that exists today is a result of the foundation you helped lay and the standard you set. Through your support, [redacted] commitment to providing students with the best educational experience possible is stronger than ever. Although the world around us may change, [redacted] commitment to community, camaraderie, mentorship, and diversity will never be compromised, and, with your help, our dedication to providing students with small class sizes and accessible faculty members who inspire students to achieve their full potential will never yield.

As we move towards this brighter future, the importance of an engaged alumni base cannot be overstated. Your contributions have made [redacted] the distinct place it is today, and your support moving forward will take it to new heights.

As a result, we would like to offer you a FREE [redacted] mug as a small token of our appreciation (please click here to receive your mug). We hope that this mug will remind you on a daily basis of all the great experiences that you had as a student at [redacted].

Once again, thank you for everything you've done for the school, and we look forward to your continued involvement as we take [redacted] to even greater heights!

Pseudo-Free with Cost Second condition:

As 2017 gets underway, we would like to take this time to thank our alumni community. The vibrant, innovative, and compassionate [redacted] that exists today is a result of the foundation you helped lay and the standard you set. Through your support, [redacted] commitment to providing students with the best educational experience possible is stronger than ever. Although the world around us may change, [redacted] commitment to community, camaraderie, mentorship, and diversity will never be compromised, and, with your help, our dedication to providing students with small class sizes and accessible faculty members who inspire students to achieve their full potential will never yield.

As we move towards this brighter future, the importance of an engaged alumni base cannot be overstated. Your contributions have made [redacted] the distinct place it is today, and your support moving forward will take it to new heights.

As a result, we would like to offer you a FREE [redacted] mug as a small token of our appreciation if you complete a short alumni survey at this link (please click here). We hope that this mug will remind you on a daily basis of all the great experiences that you had as a student at [redacted]

Once again, thank you for everything you've done for the school, and we look forward to your continued involvement as we take [redacted] to even greater heights!

Pseudo-Free with Cost First condition:

As 2017 gets underway, we would like to take this time to thank our alumni community. The vibrant, innovative, and compassionate [redacted] that exists today is a result of the foundation you helped lay and the standard you set. Through your support, [redacted] commitment to providing students with the best educational experience possible is stronger than ever. Although the world around us may change, [redacted] commitment to community, camaraderie, mentorship, and diversity will never be compromised, and, with your help, our dedication to providing students with small class sizes and accessible faculty members who inspire students to achieve their full potential will never yield.

As we move towards this brighter future, the importance of an engaged alumni base cannot be overstated. Your contributions have made [redacted] the distinct place it is today, and your support moving forward will take it to new heights.

As a result, if you complete a short alumni survey at this link (please click here), we would like to offer you a FREE [redacted] mug as a small token of our appreciation. We hope that this mug will remind you on a daily basis of all the great experiences that you had as a student at [redacted]

Once again, thank you for everything you've done for the school, and we look forward to your continued involvement as we take [redacted] to even greater heights!

Non-Free condition:

As 2017 gets underway, we would like to take this time to thank our alumni community. The vibrant, innovative, and compassionate [redacted] that exists today is a result of the foundation you helped lay and the standard you set. Through your support, [redacted] commitment to providing students with the best educational experience possible is stronger than ever. Although the world around us may change, [redacted] commitment to community, camaraderie, mentorship, and diversity will never be compromised, and, with your help, our dedication to providing students with small class sizes and accessible faculty members who inspire students to achieve their full potential will never yield.

As we move towards this brighter future, the importance of an engaged alumni base cannot be overstated. Your contributions have made [redacted] the distinct place it is today, and your support moving forward will take it to new heights.

As a result, we would like to offer you a [redacted] mug as a small token of our appreciation if you contribute $5 to [redacted] at this link (please click here). We hope that this mug will remind you on a daily basis of all the great experiences that you had as a student at [redacted].

Once again, thank you for everything you've done for the school, and we look forward to your continued involvement as we take [redacted] to even greater heights!

STUDIES 2A and 2B

Procedure.

Midway through the hour-long session of studies, participants were presented with the following message, which varied based on condition:

Free condition: "As a reward for your participation, we are offering FREE Hershey's Chocolate bars."

Pseudo-Free condition: "As a reward for your participation, we are offering FREE Hershey's Chocolate bars if you agree to complete an additional 5 minute survey at the end of this session."

Non-Free condition: "As a reward for your participation, we are offering Hershey's Chocolate bars for $0.50."

These participants were then asked: "Would you like to receive a Hershey's Chocolate bar? Your choice is completely voluntary; you do not have to accept the offer if you do not want to." (Yes, No)

Participants in the survey-only condition (only included in study 2A) read, "Thank you so much for participating in the studies today! Would you be willing to complete an additional 5 minute survey at the end of this session? Your choice is completely voluntary; you do not have to accept if you do not want to." (Yes, No)

Participants in the paid survey condition (only included in study 2B) read, "As a reward for your participation, we are offering $0.50 if you agree to complete an additional five minute survey at the end of this session." These participants were then asked, "Would you like to receive

$0.50? Your choice is completely voluntary; you do not have to accept the offer if you do not want to." (Yes, No)

All participants were then asked the following demographic questions:

"What is your age?"

"What is your gender?" Male, Female, Other

"What is your race/ethnicity? (Please check all that apply.)" Asian, African American, Caucasian, Hispanic, Native American, Other

"Is English your native language?" Yes, No

"Are you currently on a diet?" Yes, No

"Have you ever been on a diet?" Yes, No

"What is your height?"

"What is your current weight (in pounds)?"

"Do you have any comments/suggestions for us?"

STUDY 3

Procedure

After consenting to participate, participants read, "You are about to read a scenario. Please imagine that you are actually in the scenario, and answer the following questions as accurately as possible."

In the free condition, participants then read, "Imagine that you are at an airport waiting for a flight. As you are waiting at your gate, you see a sign that says, 'Free Wi-Fi.'" All you need to do is click the standard accept terms statement."

In the pseudo-free with cost second condition, participants read, “Imagine that you are at an airport waiting for a flight. As you are waiting at your gate, you see a sign that says, ‘Free Wi-Fi if you register with the airport. All you need to do is provide your name and email address.’”

In the pseudo-free with cost first condition, participants read, “Imagine that you are at an airport waiting for a flight. As you are waiting at your gate, you see a sign that says, ‘Register with the airport by providing your name and email address. Once you’ve registered with the airport you’ll receive free Wi-Fi.’”

In the non-free condition, participants read, “Imagine that you are at an airport waiting for a flight. As you are waiting at your gate, you see a sign that says, ‘Wi-Fi for $3.50.’”

All participants were then asked, “How likely are you to accept the airport’s Wi-Fi offer and use the internet?” (1 = Not at all, 7 = Extremely)

Participants were then asked the following open-ended question in order to gauge their spontaneous attributions regarding the offer:

“Why do you think the airport has this Wi-Fi offer?”

Participants then responded to the PANAS scale (Watson, Clark, and Tellegen 1988), with the order of the adjectives randomized across participants:

“This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment” (1= Very slightly or not at all, 2 = A little, 3 = Moderately, 4 = Quite a bit, 5 = Extremely):

“Interested”

“Distressed”

“Excited”

"Upset"

"Strong"

"Guilty"

"Scared"

"Hostile"

"Enthusiastic"

"Proud"

"Irritable"

"Alert"

"Ashamed"

"Inspired"

"Nervous"

"Determined"

"Attentive"

"Jittery"

"Active"

"Afraid"

Participants then responded to the following seven-item fairness perceptions scale (-3 = Strongly disagree, 0 = Neither agree nor disagree, +3 = Strongly agree; Darke and Dahl 2003):

"Please indicate the extent to which you agree or disagree with the following statements:"

"The offer I was presented with was fair."

"The offer I was presented with was questionable."

"The offer I was presented with was justified."

"The offer I was presented with was honest."

"The offer I was presented with was unfair."

"The offer I was presented with was 'a rip-off.'"

"The offer I was presented with was suspicious."

Participants then responded to the following four questions (1 = Not at all, 7 = Extremely):

"To what extent did you think that the airport had an ulterior motive when they made you this offer?"

"To what extent did you think that the airport had a good reason for this offer?"

"How valuable is access to Wi-Fi in this situation?"

"How costly is it to provide the airport with your name and email address?"

Participants were then asked, "How high or low quality do you think the Wi-Fi is?" (-3 = Extremely low quality, +3 = Extremely high quality)

Participants were then asked to self-code their spontaneous attribution regarding the offer they were presented in the scenario:

"Earlier in this study you gave the following reason when asked why the airport has this offer: [their response to the open-ended attributions question was piped in here]. To what extent did you mean this as a positive attribution (i.e., the airport is doing this to benefit consumers), a negative attribution (i.e., the airport is doing this to take advantage of consumers), or a neutral attribution (i.e., neither positive nor negative) about the airport?" (-2 = Very negative, 0 = Neutral, +2 = Very positive).

Participants were then asked, "Earlier in this study you were presented with an offer. What was the offer you were presented?" (Free Wi-Fi, Free Wi-Fi if you registered with the

airport by providing your name and email address, Wi-Fi for $3.50, Other (with text entry allowed))

All participants were then asked the following demographic questions:

"What is your age?"

"What is your gender?" Male, Female, Other

"Are you currently trying to eat healthy?" Yes, No

"Are you currently on a diet?" Yes, No

"What is your race/ethnicity? (Please check all that apply.)" Asian, African American, Caucasian, Hispanic, Native American, Other

"On the scale below, please indicate your HOUSEHOLD'S approximate yearly income before taxes." Less than $20,000, $20,000-$40,000, $40,000-$60,000, $60,000-$90,000, $90,000-$120,000, $120,000-$150,000, $150,000-$200,000, Greater than $200,000

"Is English your native language?" Yes, No

"Do you have any comments/suggestions for us?"

STUDY 4

Procedure

After consenting to participate, participants completed the following questionnaire. The questionnaire was identical for all of the conditions except where it is noted otherwise.

Participants read, "You are about to read a scenario. Please imagine that you are actually in the scenario, and answer the following questions as accurately as possible."

Participants in the free condition then read, “Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free.”

Participants in the pseudo-free condition read, “Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free—all you need to do is complete a short customer satisfaction survey before you retrieve your phone.”

Participants in the non-free condition read, “Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot costs $3 for 20 minutes of use.”

Participants in the negative attributions condition also read, “You recently read an article about these ChargeItSpots which said that retailers have suspect motives for offering them—their aim is to profit off their customers.”

Participants in the positive attributions condition also read, “You recently read an article about these ChargeItSpots which said that retailers have sincere motives for offering them—their aim is to help their customers.”

All participants were then asked, “How likely are you to use the ChargeItSpot to charge your phone?” on a seven point scale with 1 = Not at all and 7 = Extremely.

They were also asked the following open-ended question:

“Why do you think this retailer provides a ChargeItSpot for customers?”

Participants then responded to the following seven-item fairness perceptions scale (-3 = Strongly disagree, 0 = Neither agree nor disagree, +3 = Strongly agree; Darke and Dahl 2003):

"Please indicate the extent to which you agree or disagree with the following statements:"

"The offer I was presented with was fair."

"The offer I was presented with was questionable."

"The offer I was presented with was justified."

"The offer I was presented with was honest."

"The offer I was presented with was unfair."

"The offer I was presented with was 'a rip-off.'"

"The offer I was presented with was suspicious."

Participants were then asked to self-code their spontaneous attribution regarding the offer they were presented in the scenario:

"Earlier in this study you gave the following reason when asked why the store has this offer: [their response to the open-ended attributions question was piped in here]. To what extent did you mean this as a positive attribution (i.e., that the retailer is doing this to benefit consumers), a negative attribution (i.e., that the retailer is doing this to take advantage of consumers), or a neutral attribution (i.e., neither positive nor negative) about the retailer?" (-2 = Very negative, 0 = Neutral, +2 = Very positive).

Participants then responded to the following four questions:

"To what extent is completing a customer satisfaction survey for a retailer costly (i.e., aversive)?" (1 = Not at all costly, 7 = Extremely costly)

"To what extent is providing personal information about yourself to a retailer costly (i.e., aversive)?" (1 = Not at all costly, 7 = Extremely costly)

"To what extent do you agree with the following statement: 'The retailer has ChargeItSpots in order to take advantage of consumers.'" (-3 = Strongly disagree with that statement, 0 = Neither agree nor disagree with that statement, +3 = Strongly agree with that statement)

"To what extent do you agree with the following statement: 'There's no such thing as a free lunch.'" (-3 = Strongly disagree with that statement, 0 = Neither agree nor disagree with that statement, +3 = Strongly agree with that statement)

All participants were then asked the following demographic questions:

"What is your age?"

"What is your gender?" Male, Female, Other

"What is your race/ethnicity? (Please check all that apply.)" Asian, African American, Caucasian, Hispanic, Native American, Other

"On the scale below, please indicate your HOUSEHOLD'S approximate yearly income before taxes." Less than $20,000, $20,000-$40,000, $40,000-$60,000, $60,000-$90,000, $90,000-$120,000, $120,000-$150,000, $150,000-$200,000, Greater than $200,000

"Is English your native language?" Yes, No

"Do you have any comments/suggestions for us?"

STUDY 5

Procedure

After consenting to participate, participants completed the following questionnaire. The questionnaire was identical for all of the conditions except where it is noted otherwise.

Participants read, “You are about to read a scenario. Please imagine that you are actually in the scenario, and answer the following questions as accurately as possible.”

Participants in the free condition then read, “Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free.”

Participants in the pseudo-free smaller [larger] time cost condition read, “Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free—all you need to do is complete a 1-2 [15-20] minute customer satisfaction survey before you retrieve your phone.”

Participants in the pseudo-free smaller [larger] personal information cost condition read, “Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free—all you need to do is enter your zip code [name, gender, home address, and income information] before you retrieve your phone.”

Participants in the non-free condition read, “Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot costs $3 for 20 minutes of use.”

All participants were then asked, “How likely are you to use the ChargeItSpot to charge your phone?” on a seven point scale with 1 = Not at all and 7 = Extremely.

They were also asked the following open-ended question:

"Why do you think this retailer provides a ChargeItSpot for customers?"

Participants then responded to the following seven-item fairness perceptions scale (-3 = Strongly disagree, 0 = Neither agree nor disagree, +3 = Strongly agree; Darke and Dahl 2003):

"Please indicate the extent to which you agree or disagree with the following statements:"

"The offer I was presented with was fair."

"The offer I was presented with was questionable."

"The offer I was presented with was justified."

"The offer I was presented with was honest."

"The offer I was presented with was unfair."

"The offer I was presented with was 'a rip-off.'"

"The offer I was presented with was suspicious."

Participants were then asked to self-code their spontaneous attribution regarding the offer they were presented in the scenario:

"Earlier in this study you gave the following reason when asked why the store has this offer: [their response to the open-ended attributions question was piped in here]. To what extent did you mean this as a positive attribution (i.e., that the retailer is doing this to benefit consumers), a negative attribution (i.e., that the retailer is doing this to take advantage of consumers), or a neutral attribution (i.e., neither positive nor negative) about the retailer?" (-2 = Very negative, 0 = Neutral, +2 = Very positive).

Participants then responded to the following five questions:

"How costly is it to use the ChargeItSpot in the store that you just read about?" (1 = Not at all costly, 7 = Extremely costly)

"Sometimes goods and services have no costs (i.e., are free), whereas other times they have costs, requiring consumers to hand over something of value (i.e., money, information) in order to use the good or service. How costly would it be to use the ChargeItSpot that you just read about?" (1 = Not at all costly, 7 = Extremely costly)

"To what extent is completing a customer satisfaction survey for a retailer costly (i.e., aversive)?" (1 = Not at all costly, 7 = Extremely costly)

"To what extent is providing personal information about yourself to a retailer costly (i.e., aversive)?" (1 = Not at all costly, 7 = Extremely costly)

"To what extent do you agree with the following statement: 'There's no such thing as a free lunch.'" (-3 = Strongly disagree with that statement, 0 = Neither agree nor disagree with that statement, +3 = Strongly agree with that statement)

Participants were then asked the following demographic questions:

"What is your age?"

"What is your gender?" Male, Female, Other

"What is your race/ethnicity? (Please check all that apply.)" Asian, African American, Caucasian, Hispanic, Native American, Other

"On the scale below, please indicate your HOUSEHOLD'S approximate yearly income before taxes." Less than $20,000, $20,000-$40,000, $40,000-$60,000, $60,000-$90,000, $90,000-$120,000, $120,000-$150,000, $150,000-$200,000, Greater than $200,000

"Is English your native language?" Yes, No

"Do you have any comments/suggestions for us?"

STUDY S1

Procedure

After consenting to participate, participants completed the following questionnaire. The questionnaire was identical for all of the conditions except where it is noted otherwise.

Participants read, "You are about to read a scenario. Please imagine that you are actually in the scenario, and answer the following questions as accurately as possible."

Participants in the free condition then read, "Imagine that you are at an airport waiting for a flight. You have used up your data for this month, but you would love to check your Facebook and Twitter. As you are waiting at your gate, you see a sign that says, 'Free Wi-Fi.' All you need to do is click the standard accept terms statement."

Participants in the pseudo-free condition read, "Imagine that you are at an airport waiting for a flight. You have used up your data for this month, but you would love to check your Facebook and Twitter. As you are waiting at your gate, you see a sign that says, 'Free Wi-Fi if you download the airport's app.'"

Participants in the non-free condition read, "Imagine that you are at an airport waiting for a flight. You have used up your data for this month, but you would love to check your Facebook and Twitter. As you are waiting at your gate, you see a sign that says, 'Wi-Fi for $3.50.'"

Participants in the thoughts about motives present condition then read the following instructions, "As you are deciding whether to accept or reject the offer, you think about why the airport is offering this Wi-Fi deal. Specifically, you think about the airport's motives behind the offer. Please take a moment to think about the potential reasons why the airport has these Wi-Fi terms and is offering this Wi-Fi deal."

All participants were then asked, “How likely are you to accept the terms and use the airport’s Wi-Fi?” on a seven point scale with 1 = Not at all and 7 = Extremely.

They were also asked the following three questions:

“When thinking about how likely you are to accept the terms and use the airport’s Wi-Fi, why did you say that you were likely or unlikely to accept the terms and use the airport’s Wi-Fi?” as an open-ended question.

“When thinking about your likelihood of accepting the airport’s offer, how suspicious were you of the airport’s motives behind the Wi-Fi offer?” on a seven point scale with 1 = Not at all suspicious and 7 = Extremely suspicious.

“How satisfied are you with the airport’s Wi-Fi terms?” on a seven point scale with -3 = Not at all and +3 = Extremely.

Participants then responded to the dispositional suspicion scale (McKnight, Kacmar, and Choudhury 2004):

“Please select the response that best reflects the extent to which you agree or disagree with the following statements” (1 = Strongly disagree, 7 = Strongly agree).

“I usually trust people until they give me a reason not to trust them.” (reverse coded)

“I generally give people the benefit of the doubt when I first meet them.” (reverse coded)

“My typical approach is to trust new acquaintances until they prove I should not trust them.” (reverse coded)

“People are usually out for their own good.”

“People pretend to care more about one another than they really do.”

“Most people inwardly dislike putting themselves out to help other people.”

“Most people would tell a lie if they could gain by it.”

"People don't always hold to the standard of honesty they claim."

"Most people would cheat on their income tax if they thought they could get away with it."

All participants were then asked the following demographic questions:

"Do you have a Facebook account?" Yes, No

"Do you have a Twitter account?" Yes, No

"How often do you use your Facebook account?" Never, Rarely, Sometimes, Often, All of the Time, 2-3 Times a Week, Daily

"How often do you use your Twitter account?" Never, Rarely, Sometimes, Often, All of the Time, 2-3 Times a Week, Daily

"What is your age?"

"What is your gender?" Male, Female, Other

"What is your race/ethnicity? (Please check all that apply.)" Asian, African American, Caucasian, Hispanic, Native American, Other

"On the scale below, please indicate your HOUSEHOLD'S approximate yearly income before taxes." Less than $20,000, $20,000-$40,000, $40,000-$60,000, $60,000-$90,000, $90,000-$120,000, $120,000-$150,000, $150,000-$200,000, Greater than $200,000

"Is English your native language?" Yes, No

"Do you have any comments/suggestions for us?"

STUDY S2

Procedure

After consenting to participate, participants completed the following questionnaire. The questionnaire was identical for all of the conditions except where it is noted otherwise.

Participants read, "You are about to read a scenario. Please imagine that you are actually in the scenario, and answer the following questions as accurately as possible."

Participants in the free condition then read, "Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free."

Participants in the pseudo-free condition read, "Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free—all you need to do is complete a [1, 5, 10, 15, 20] minute customer satisfaction survey before you retrieve your phone." The number of minutes that participants were told it would take to complete the customer satisfaction survey varied across the five pseudo-free conditions.

Participants in the pseudo-free smaller [larger] personal information cost condition read, "Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot is free—all you need to do is enter your zip code [name, gender, home address, and income information] before you retrieve your phone."

Participants in the non-free condition read, "Imagine that you are at the mall and your cell phone battery is dying. You step into the nearest store, and you see that it has a

ChargeItSpot, which would allow you to leave your phone to charge while you continue shopping. Using the ChargeItSpot costs $3 for 20 minutes of use."

All participants were then asked, "How likely are you to use the ChargeItSpot to charge your phone?" on a seven point scale with 1 = Not at all and 7 = Extremely.

They were also asked the following open-ended question:

"Why do you think this retailer provides a ChargeItSpot for customers?"

Participants then responded to the following seven-item fairness perceptions scale (-3 = Strongly disagree, 0 = Neither agree nor disagree, +3 = Strongly agree; Darke and Dahl 2003):

"Please indicate the extent to which you agree or disagree with the following statements:"

"The offer I was presented with was fair."

"The offer I was presented with was questionable."

"The offer I was presented with was justified."

"The offer I was presented with was honest."

"The offer I was presented with was unfair."

"The offer I was presented with was 'a rip-off.'"

"The offer I was presented with was suspicious."

Participants were then asked to self-code their spontaneous attribution regarding the offer they were presented in the scenario:

"Earlier in this study you gave the following reason when asked why the store has this offer: [their response to the open-ended attributions question was piped in here]. To what extent did you mean this as a positive attribution (i.e., that the retailer is doing this to benefit consumers), a negative attribution (i.e., that the retailer is doing this to take advantage of

consumers), or a neutral attribution (i.e., neither positive nor negative) about the retailer?" (-2 = Very negative, 0 = Neutral, +2 = Very positive).

Participants then responded to the following six questions:

"How costly is it to use the ChargeItSpot in the store that you just read about?" (1 = Not at all costly, 7 = Extremely costly)

"Sometimes goods and services have no costs (i.e., are free), whereas other times they have costs, requiring consumers to hand over something of value (i.e., money, information, time) in order to use the good or service. How costly would it be to use the ChargeItSpot that you just read about?" (1 = Not at all costly, 7 = Extremely costly)

"How substantial is the cost of using the ChargeItSpot in the scenario that you just read?" (1 = Not at all substantial, 7 = Extremely substantial)

"Offers have costs (i.e., what you must give the firm) and benefits (i.e., what you receive from the firm). In the scenario that you just read, did the benefits of the ChargeItSpot offer outweigh the costs, or did the costs of the ChargeItSpot offer outweigh the benefits?" (-3 = Costs definitely outweighed benefits, 0 = Costs and benefits were equal, +3 = Benefits definitely outweighed costs)

"To what extent is completing a customer satisfaction survey for a retailer costly (i.e., aversive)?" (1 = Not at all costly, 7 = Extremely costly)

"To what extent do you agree with the following statement: 'There's no such thing as a free lunch.'" (-3 = Strongly disagree with that statement, 0 = Neither agree nor disagree with that statement, +3 = Strongly agree with that statement)

Participants were then asked the following demographic questions:

"What is your age?"

"What is your gender?" Male, Female, Other

"What is your race/ethnicity? (Please check all that apply.)" Asian, African American, Caucasian, Hispanic, Native American, Other

"On the scale below, please indicate your HOUSEHOLD'S approximate yearly income before taxes." Less than $20,000, $20,000-$40,000, $40,000-$60,000, $60,000-$90,000, $90,000-$120,000, $120,000-$150,000, $150,000-$200,000, Greater than $200,000

"Is English your native language?" Yes, No

"Do you have any comments/suggestions for us?"

STUDY S3

Procedure

After consenting to participate, participants read, "You are about to read a scenario. Please imagine that you are actually in the scenario, and answer the following questions as accurately as possible."

In the free condition, participants then read, "Imagine that you receive a telephone call from Hilton Hotels and Resorts. The representative from Hilton asks you whether you would like to sign up for a free 3 Day Beach Vacation in Orlando, Florida. You ask the salesperson about the vacation, and she tells you that the lodging is free."

In the pseudo-free condition, participants then read, "Imagine that you receive a telephone call from Hilton Hotels and Resorts. The representative from Hilton asks you whether you would like to sign up for a free 3 Day Beach Vacation in Orlando, Florida—all you have to

do is attend a sales presentation. You ask the salesperson about the vacation, and she tells you that the lodging is free if you attend a full day sales presentation for a timeshare."

In the non-free condition, participants then read, "Imagine that you receive a telephone call from Hilton Hotels and Resorts. The representative from Hilton asks you whether you would like to sign up for a 3 Day Beach Vacation in Orlando, Florida for $425. You ask the salesperson about the vacation, and she tells you that the lodging is $425" (the price for the non-free condition was commensurate with a three-day stay at the Hilton Orlando; Hilton 2016). This was all that was presented to participants in the control attribution conditions.

In the negative attribution conditions, participants also read, "You know someone who agreed to this offer and said that it was not what he expected and that it was definitely not worth it."

In the positive attribution conditions, participants instead read, "You know someone who agreed to this offer and said that it was what he expected and that it was definitely worth it."

All participants then responded to the dependent variable: "How likely are you to sign up for the vacation?" with 1 = Not at all and 7 = Extremely.

Participants then responded to the following questions:

"When thinking about how likely you are to sign up for the vacation, why did you say that you were likely or unlikely to sign up?"

"Please indicate your level of agreement with the following statements" (-3 = Strongly disagree, +3 = Strongly agree):

"Hilton has this vacation deal so that travelers have a pleasant travel experience."

"Hilton has this vacation deal to help travelers get a good deal."

"Hilton has this vacation deal to increase its profits."

"Hilton has this vacation deal to scam travelers."

"Is this vacation deal better for the consumer or the Hilton?" (1 = Definitely better for the Hilton, 7 = Definitely better for the consumer)

"Please take a moment to think about what you must give the Hilton in order to receive the vacation deal. What you must give the Hilton in order to receive the vacation deal can be considered the cost of the vacation offer. Accordingly, how costly is the Hilton's vacation offer?" (-3 = Not at all costly, +3 = Extremely costly)

"How costly (i.e., aversive) is missing one full day of your vacation to attend a sales presentation?" (-3 = Not at all costly, +3 = Extremely costly)

"How costly (i.e., aversive) is exposure to high pressure sales tactics?" (-3 = Not at all costly, +3 = Extremely costly)

"How high or low quality do you think the Hilton Orlando is?" (1 = Very low quality, 7 = Very high quality)

"When thinking about your likelihood of accepting the Hilton's offer, how suspicious were you of the Hilton's motives behind the vacation offer?" (1 = Not at all suspicious, 7 = Extremely suspicious)

"When thinking about your likelihood of accepting the Hilton's offer, how suspicious were you that the vacation offer was a scam?" (1 = Not at all suspicious, 7 = Extremely suspicious)

"To what extent do you agree with the following statement: 'There's no such thing as a free lunch.'" (-3 = Strongly disagree with that statement, +3 = Strongly agree with that statement)

All participants were then asked the following demographic questions:

"What is your age?"

"What is your gender?" Male, Female, Other

"What is your race/ethnicity? (Please check all that apply.)" Asian, African American, Caucasian, Hispanic, Native American, Other

"On the scale below, please indicate your HOUSEHOLD'S approximate yearly income before taxes." Less than $20,000, $20,000-$40,000, $40,000-$60,000, $60,000-$90,000, $90,000-$120,000, $120,000-$150,000, $150,000-$200,000, Greater than $200,000

"Is English your native language?" Yes, No

"Do you have any comments/suggestions for us?"

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