

THE EFFECT OF ANTICIPATING REGRET AND SATISFACTION ON CONSUMER PREFERENCE FOR DEFAULT OPTIONS

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ABSTRACT

In this research, we juxtapose anticipation of regret with anticipation of satisfaction and examine the decision-making process when choosing between a default vs. alternate, non-default option. We propose that anticipating satisfaction pushes consumer preferences towards default options, while anticipating regret shifts consumer preference to the alternative, non-default option. This preference shift occurs as anticipating satisfaction tends to focus individuals on the positives of the chosen option, and anticipating regret tends to focus individuals on the negatives of the default option and the positives of the alternate option, which they would miss out on if they choose the default option. Therefore, anticipating regret, compared to anticipating satisfaction, leads to a shift in preference away from the default option toward the alternate option. Results from three studies provide robust support to our predictions. Theoretical and practical implications are discussed.

Imagine, it is a Friday evening after a hard week of work, and Matt is sitting in his cubicle, deciding whether he should go home and watch television or go to the gym and exercise. For tonight, watching television is the more naturally preferred, default option, but would Matt change his mind if he thinks about how satisfied he would be or about whether he would regret his choice? Imagine a slightly different scenario. Matt is making plans for a Friday evening three months from now and has to decide between the same two activities. For this distant-future scenario, going to the gym tends to be the naturally preferred, default option, but again, how might anticipating satisfaction vs. regret affect his decision?

Prior research and marketing practices have focused primarily on satisfaction and regret as post-decision measures and on what leads to customer satisfaction and regret. A question that tends to be overlooked in the literature is how anticipating satisfaction and regret prior to making a decision influences consumer preferences and choices. In this paper, we will compare the anticipation of regret with the anticipation of satisfaction and examine how they differentially affect consumer preference for the default vs. alternate, non-default options.

We find that anticipating satisfaction pushes consumer preferences towards default options, while anticipating regret shifts consumer preference to the alternative, non-default option. We posit that the process underlying this effect of anticipating regret vs. satisfaction is the differential focus on particular aspects of the decision. More specifically, we build on the notion that regret stems from counterfactual comparisons between the chosen option and the foregone option (Zeelenberg and Pieters 2007) and posit that, whereas anticipating satisfaction tends to focus individuals on the positives of the chosen option, anticipating regret tends to focus individuals on the negatives of the default option and the positives of the alternate option, which they would miss out on if they choose the default option. Therefore, anticipating regret, compared to anticipating satisfaction, leads to a shift in preference away from the default option toward the alternate option.

In the remainder of the paper, we review the relevant prior research on satisfaction and regret, which leads to several hypotheses that are tested across three studies. We examine decision contexts that present two choice options: one default option and one alternate, non-default option.

Building on prior research showing that the decision context can naturally create a preference for particular options, we allow the decision context to dictate which option will be the naturally preferred default option. More specifically, we rely on time-dependent contexts and goal-driven decision contexts to identify a default option. Study 1 provides an initial test of our proposition using goal priming to manipulate the default option and shows that, when the primed salient goal favors studying, anticipating regret (satisfaction) results in a greater preference for the goal-inconsistent behavior of socializing (studying); but that, when the primed salient goal is socializing, anticipating regret (satisfaction) results in a greater preference for the goal-inconsistent behavior of studying (socializing). Studies 2 and 3 use both the near- and distant-future temporal frames to manipulate the salience of short-term, enjoyment goals vs. long-term, health-related goals to determine default preference. In these studies, we again find that individuals who anticipate regret (vs. satisfaction) are more likely to shift their preference away from the default option—the option that is more consistent with the goals salient to that temporal frame. Study 3 also provides evidence for the underlying process regarding the differential focus on the positive vs. negative aspect of the default or the non-default option. In closing, we discuss the theoretical and practical implications of this research.

CONCEPTUAL FRAMEWORK

Decision making, by definition, requires trade-offs. When a consumer chooses a chocolate cake over a fruit smoothie during dessert, she has traded off or foregone the benefits of the fruit smoothie and has acquired the benefits of the chocolate cake. And the process of making trade-offs can vary depending on the choice context and other surrounding factors. For instance, consumers choosing between two equally attractive or equally unattractive options may spend more time evaluating each option compared to when choosing between two options that differ markedly on attractiveness. In this research, we examine the decision making process when choosing between two options where one of the options is considered the naturally preferred default option.

Much research has documented the default bias – the influence of and preference for the default option – in a variety of domains ranging from everyday decisions to infrequent, one-time decisions with long-term consequences. For example, Yang and Benjamin-Neelon (2019) find that children’s choice of healthy beverages increased when the healthy option was set as the default. Other research demonstrates how the default options have large-scale implications for the well-being of societies and the environment. Li et al. (2013) find that having to opt-out to not participate in organ donation programs vs. having to opt-in to participate significantly increases participation rates. Restaurants that default to not giving diners straws (vs. defaulting to giving straws) with their beverages observe a significant decline in straw consumption and, in turn, waste production (Wagner and Toews 2018).

Other research delves deeper beyond the phenomenon and examines the underlying reasons for why the default bias is so prevalent. One reason is loss aversion. Consumers are more sensitive to losses than they are to equal gains. And because consumers often perceive the default option as the reference point, other non-default options are perceived as a loss and as such are less likely to be chosen. Thus, the default bias can be likened to a preference or a bias for the status quo. This preference for inaction and staying with the status quo occurs even when it is not in their best interest. Johnson et al. (1993) find that consumers stay with the default auto insurance plan for extended periods of time even though it would be beneficial to switch to a different plan.

Another reason for the prevalence of the default bias is the perception of defaults as the “safe” option. Consumers often borrow from the wisdom of the masses and conclude that the (default) option must have been chosen repeatedly for a (good) reason. Social norm theory states that consumers pay attention to the actions and decisions of others and develop a shared understanding of what is deemed “normal” (Bicchieri 2005; Cialdini and Trost 1998; Interis 2011; Lieberman 2000) and appropriate (e.g., Aarts and Dijksterhuis 2003; Eriksson, Strimling, and Caoultas 2015). One such normative behavior is mimicking others’ choices and choosing what others choose (Chartrand and Bargh 1999). The option that others choose repeatedly, over time, becomes the default option, which is then further reinforced by the default bias. And for decisions where consumers have no prior experience or familiarity, and especially so when decision errors could be costly, the default option is a logical, and perhaps even a wise decision.

Even when the consumer chooses not to select the default option, the mere presence of the default option “influences the decision maker’s beliefs about his own preferences” (Gorn et al. 2012). That is, a consumer will first consider how well the default option fits her preferences, and then adjust as needed. But much like the anchoring effect, those adjustments are still heavily influenced by the initial anchor, the default option. Indeed, research shows that a consumer’s decision to potentially switch away from the default and more prevalent traditional exchange economy to the sharing economy is determined by concerns and considerations of the sacrifices of deviating from the default (Kim and Yoon 2022).

In this paper, we seek to understand when consumers would be more (vs. less) likely to choose the default option. In particular, we examine how anticipating regret or satisfaction prior to making a choice can systematically influence consumer choice and preference for default vs. Non-default options. While much research has studied the antecedents and downstream consequences of post-decision regret (e.g. Gilovich and Medvec 1995; Keinan and Kivetz 2006; Ma and Roesse 2014; Schwartz et al. 2002; Tsiros and Mittal 2000; Zeelenberg and Pieters 2007) and post-decision satisfaction (e.g. Kim Cho, Khan, and Dhar 2013; Liberman and Forster 2006; Taylor 2012; Taylor and Sirmans 2019; Valenzuela, Dhar, and Zettelmeyer 2009), relatively little has been done on the consequences of anticipating regret and satisfaction pre-decision. Furthermore, the few studies on the effects of anticipating regret and satisfaction on choice focus either on regret or satisfaction only and do not examine the two in conjunction (e.g. Keinan and Kivetz 2008; Shiv and Huber 2000). In order to remedy these scholarly gaps, we build on the view that regret and satisfaction are not simply two sides of the same coin but rather two distinct constructs (Tsiros and Mittal 2000) and directly compare the effect of anticipating satisfaction with the effect of anticipating regret on consumer preferences. Below, we outline prior work on the effects of anticipating satisfaction and anticipating regret, and then integrate this prior research to develop our hypotheses.

Anticipating Satisfaction and Preference Enhancement

Prior research has found that individuals who anticipate satisfaction prior to making a choice engage in mental imagery of the available options and focus more of their attention on the vivid attributes (Shiv and Huber 2000). Dhar and Wertenbroch (2000) suggest that hedonic attributes are typically more vivid and easier to imagine. But the effect of anticipating satisfaction is not limited to hedonic attributes or products. In this respect, Shiv and Huber (2000) have shown that individuals anticipating satisfaction prior to making a decision will give more attention to any attribute that is rendered easier to imagine. For example, people who anticipated satisfaction prior to choosing a computer indicated a greater preference for computers with better power

protection—an attribute that is more vivid and easier to imagine than price, even though they do not differ in their hedonic nature (Shiv and Huber 2000). Moreover, it is important to note that any attribute can be rendered easier to imagine by external factors. For instance, attributes or alternatives that are consistent with and instrumental to a salient goal in a particular decision context can indeed become the focus of the decision (e.g. Brendl et al. 2003; van Osselaer and Janiszewski 2012). In sum then, prior research shows that anticipating satisfaction increases attention to attributes and options that are made easier to imagine, and thus more salient, in that given decision context.

Anticipating Regret and Preference for Action

Prior research on the influences of anticipating regret focuses primarily on consumers' motivation for action vs. inaction. More specifically, research shows that individuals who anticipate regret, compared to those who do not anticipate regret, experience increased motivation to take action in order to avoid potential negative outcomes of not taking action. For example, people are more likely to use contraceptives if they are asked to anticipate the regret of not engaging in safe sex as opposed to if they are not (Bakker, Buunk, and Manstead 1997; Richard, van der Pligt, and de Vries 1996). Similarly, people are more likely to purchase insurance if they first imagine losing a treasured possession because they had not bought insurance (Hetts, et al. 2000). Anticipating regret has also been shown to negatively affect consumers' desire and intention to be loyal (Taylor 2012). Furthermore, anticipating regret can cause consumers to feel the urge to act now to avoid potential regret, even at the expense of the overall quality of the outcome (Cooke, Meyvis, and Schwartz 2001). Simonson (1992) finds that consumers who anticipate the regret and responsibility they would feel for making a wrong choice, compared to those who do not, are more likely to purchase an item that is currently on sale rather than wait for a potentially better sale next month. Similarly, Keinan and Kivetz (2008) demonstrate that individuals who anticipate (long-term) regret become more likely to spend money now. In sum, past research has found that anticipating regret leads consumers to prefer action over inaction.

Thus, we build on these two streams of research to arrive at our main proposition. Because the default option is the one that is naturally preferred, it is very likely to be the more salient option and the one that consumers naturally pay more attention to. Therefore, we expect that anticipating satisfaction will lead consumers to prefer the default option over the non-default option. Also, since the default option is the naturally preferred status quo option, explicit effort and action is typically needed to shift away from it. Therefore, we expect that anticipating regret will lead consumers to shift away from the default toward the non-default option. More formally, we predict that:

H1: *Anticipating satisfaction results in greater preference towards the default option in the decision context, whereas anticipating regret shifts preference away from the default towards the non-default option.*

Focus on the Positives and Negatives

In order to understand the underlying psychological process as to why anticipating regret leads to a shift away from the default option relative to anticipating satisfaction, we must consider the cognitive processes for satisfaction and regret. Both satisfaction and regret are cognitive emotions that are experienced in response to making a comparison. But the locus of the comparison in these two emotions is quite different. Satisfaction, by definition, arises from comparing the

expected and the actual performance of a chosen option. If the actual performance meets or exceeds expectations, the individual is satisfied (Oliver 1980). Regret, by definition, arises from comparing the chosen option and the foregone option. In particular, regret arises from thinking about how one's current situation could have been better had one acted differently (Zeelenberg and Pieters 2007). In other words, regret arises from comparing the negative aspects of the chosen option with the positive aspects of the foregone option. Therefore, we predict that individuals anticipating regret, relative to those anticipating satisfaction, will be more likely to consider the negative aspects of the default option as well as the positive aspects of the non-default option. We predict that this, in turn, will lead those individuals to shift their preference away from the default option. Accordingly, we predict that:

H2: *The extent to which individuals consider the negative aspects of the default and the positive aspects of the non-default option mediates the effect of anticipating regret vs. satisfaction on consumer preference.*

Current Research

We test our hypotheses in three studies. We use consumer goals to manipulate which option becomes the default vs. non-default option in the presented choice set. Consumers' choices are goal-driven (cf. Bagozzi and Dholakia 1999) and the activation or salience of specific goals causes individuals to evaluate goal-relevant options more positively (Ferguson and Bargh 2004) and to devalue options that are goal irrelevant (Brendl et al. 2003). It follows then, that the goal-consistent option is the default option. And we demonstrate how anticipating satisfaction (regret) leads consumers to prefer this goal-consistent, default (goal-inconsistent, non-default) option. In Study 1, we prime individuals with either a studying goal or a socializing goal to determine the naturally preferred default option. Consistent with our hypotheses, we find that anticipating regret, compared to anticipating satisfaction, shifts preferences away from the default option. Studies 2 and 3 manipulate consumer goals, and thus the corresponding default option, through the temporal frame of the decision (near future vs. distant future). According to prior work on preference over time, in decisions regarding the near-future, the short-term enjoyment goals are more salient, whereas in decisions regarding the distant-future, long-term goals such as health are more salient (e.g. Trope and Liberman 2003). Thus, for near-future decisions, the option that is consistent with short-term enjoyment goals becomes the default option and the option that is consistent with long-term health goals – and inconsistent with the short-term enjoyment goals – becomes the non-default option. For distant-future decisions, the opposite is true such that the option that is consistent with long-term health goals becomes the default option and the option that is consistent with short-term enjoyment goals becomes the non-default option.

More specifically, Study 2 examines a decision between watching television and exercising in the near future and provides evidence that individuals anticipating regret, compared to those anticipating satisfaction, are more likely to prefer going to the gym (i.e. the non-default option). Lastly, Study 3 finds that, for a near-future decision, anticipating regret increases preference for the healthy dinner (the non-default option for the near-future), whereas, for a distant-future decision, anticipating regret increases preference for the tasty but less healthy dinner (the non-default option for the distant-future). More importantly, Study 3 tests the underlying process and measures the extent to which individuals consider the negative aspects of the default option and the positive aspects of the non-default option. We find that these two measures, in sequence,

mediate the effect. The paper concludes with a discussion of the theoretical and practical implications of these findings.

STUDY 1: PRIMING GOALS TO SET THE DEFAULT OPTION

The purpose of Study 1 was to provide an initial test of our main hypothesis. We use a choice scenario that requires a trade-off between two commonly competing goals—a goal to study and a goal to socialize. We expect that when the goal to study is primed, the goal-consistent behavior of going to class will be the default response, whereas when the goal to socialize is primed, the goal-consistent behavior of spending time with friends will be the default response. Further, we predict that, anticipating regret, relative to anticipating satisfaction, will shift preferences away from these default responses toward the alternate non-default options.

Method

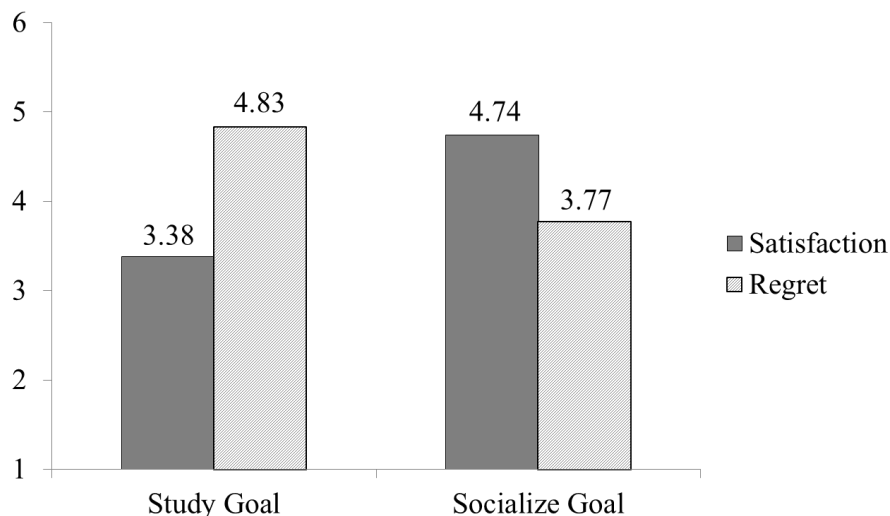
Ninety-six undergraduate students at a large North American university were recruited to participate in this study in exchange for partial fulfillment of course requirements. Participants were randomly assigned to one of four conditions in a 2 (Anticipation type: satisfaction vs. regret) x 2 (Goal prime: study vs. socialize) between-participants design. First, half of the participants were randomly assigned to the study goal while the other half was assigned to the socialize goal. Those in the study goal condition read a paragraph about how being a good student and studying hard during college would lead to numerous benefits post-college. Those in the socialize goal condition read a paragraph about how being a good friend and building relationships during college would lead to numerous benefits post-college. After reading the paragraph, participants were asked to think of the best title for the paragraph and to summarize the key idea of the paragraph. Then, all participants completed a filler task where they saw images of various landscapes and rated the quality of each image.

Next, participants proceeded to a purportedly unrelated study where they were asked to imagine that they had just received an email from a friend, who attends another university, saying that he/she would be coming into town for a day and wanted to have lunch together. Participants further read that unfortunately, although the friend's visit excites them, they have an important class at that time, and they would have to choose either to go to class or go to lunch with their friend. Prior to indicating their preference between the two options, participants visualized each option in turn. Participants in the anticipating satisfaction conditions visualized how much satisfaction they would feel if they were to choose that option. Participants in the anticipating regret prime conditions visualized how much regret they would feel if they were to choose that option. The order in which the options were visualized was counterbalanced and had no effect. All participants then indicated which activity they would prefer (1—strongly prefer to go to class; 9—strongly prefer to go to lunch with the friend). To assess whether anticipating regret and satisfaction might create different levels of decision difficulty we asked all participants to indicate how difficult it was to form a preference between the options (1—not at all; 9—very). We also measured for potential differences in the extent of mental involvement in and imagery of the scenario (e.g. “To what extent did you envision the details of the scenario?”, “How easy was it to imagine the scenario?”, and “How mentally involved were you in your imagery of the scenario?” 1—not at all; 9—very).

Results

Relative Preference. We expected that going to class was the default for those primed with the studying goal, while going to lunch with a friend was the default for those primed with the socializing goal. As such, we predicted that regardless of the primed goal, anticipating regret, compared to anticipating satisfaction, would cause preferences to shift away from the default option towards the alternate non-default option. Consistent with our predictions, there was a significant anticipation type by goal prime interaction on relative preference ($F(1, 95) = 6.81; p = .01$; see Figure 1). We further conducted planned contrasts to gain detailed insight. Note that for the relative preference scale, lower numbers represent greater preference towards the class option and higher numbers represent greater preference towards the lunch option. We found that when the goal to study was primed and thus going to class was the default preference, those anticipating regret were more likely to prefer having lunch with their friend compared to those anticipating satisfaction ($M_{\text{regret}} = 4.83, SD = 2.41; M_{\text{satisfaction}} = 3.38, SD = 1.91; t(45) = 2.30; p = .03$). However, when the goal to socialize was primed and thus having lunch with friend was the default preference, those anticipating regret were more likely to prefer going to class compared to those anticipating satisfaction ($M_{\text{regret}} = 3.77, SD = 1.80; M_{\text{satisfaction}} = 4.74, SD = 2.88; t(47) = 1.43; p = .10$).

Figure 1: Relative Preference for Going to Lunch with Friend



Difficulty and Involvement. In terms of the perceived difficulty of forming a preference, we did not find main effects of goal prime, anticipation type prime, or their interaction (all p 's $> .33$), suggesting that anticipating regret or satisfaction did not affect decision difficulty. In terms of mental involvement and imagery, we combined the individual questions into a single measure ($\alpha = .84$). There were no main effects of goal prime, anticipation type prime, or their interaction (all p 's $> .29$), which suggests that anticipating regret or satisfaction did not influence mental involvement in and imagery of the scenario.

Discussion

The results of Study 1 provide initial evidence that compared to anticipating satisfaction, anticipating regret prior to making a decision can shift consumers' preferences away from the default option towards the non-default option. When the salient goal was studying and thus going to class is the naturally preferred goal-consistent option, anticipating regret (vs. satisfaction) caused a shift away from this option and resulted in a greater preference for having lunch with one's friend; on the other hand, when the salient goal was socializing and thus having lunch with one's friend is the goal-consistent option, anticipating regret (vs. satisfaction) caused a shift away from this option and increased preference for going to class.

The purpose of the next study is threefold. First, Study 2 builds on the findings of Study 1 and seeks to show further support of H1 in a different choice context. Rather than directly priming goals, Study 2 uses the near-future temporal frame of the decision to indirectly prime short-term enjoyment and pleasure goals and, thereby, set the default option as the one consistent with those goals. Second, Study 2 provides an initial test of H2 and demonstrates the underlying process of why anticipating regret shifts consumer preference away from the default option. Third, we include a control condition to gain a clearer understanding of how anticipating regret vs. anticipating satisfaction compare vis-a-vis no explicit anticipatory processing pre-decision.

STUDY 2: CHOOSING FOR THE NEAR-FUTURE

Study 2 features a time-dependent decision context of choosing a Saturday afternoon activity: watching television or going to the gym. Pretests confirmed that watching television is more pleasurable than going to the gym ($M_{tv} = 7.09$, $SD = 1.71$; $M_{gym} = 6.45$, $SD = 1.88$; $t(96) = 2.21$; $p = .03$), but that going to the gym is better for long-term health than watching television ($M_{tv} = 4.60$, $SD = 1.34$; $M_{gym} = 8.42$, $SD = 1.01$; $t(96) = 21.03$; $p < .001$). Based on prior research (e.g., Trope and Liberman 2003), for a near-future decision, pleasure and having fun are likely to be the salient goal. Therefore, watching television will be the default option in this near-future scenario. We expect to find that anticipating regret will lead to a greater focus on the long term and in turn shift people's preference away from the television (default) option towards the exercise (non-default) option.

Method

One hundred fourteen undergraduate students at a large North American university were randomly assigned to one of three anticipation type conditions: anticipating satisfaction, anticipating regret, or no anticipation (control). All participants were asked to choose how they would like to spend their upcoming Saturday afternoon: either watching television or going to the gym. Prior to deciding, participants in the satisfaction and regret conditions were asked to visualize partaking in each activity in turn and then write down what they had visualized. Participants assigned to the satisfaction condition were asked to visualize each option and consider how much satisfaction they would feel if they were to choose that activity. Participants in the regret condition visualized each option and considered how much regret they would feel if they were to not choose that activity. Participants in the control condition directly proceeded to the next part of the study. Next, all participants rated the attractiveness of each activity (1—not at all; 9—very), and chose one activity. Lastly, as a measure of individuals' consideration of the currently salient pleasure goals vs. the non-salient long-term goals, all participants rated the extent to which current vs. future

concerns influenced their evaluations (1—current concerns are important; 9—future concerns are important).

Results

Choice. We predicted that participants in the anticipating regret condition would be more likely to choose the non-default gym option compared to those in the satisfaction condition because of a greater consideration of future concerns. As expected, participants in the anticipating regret condition were more likely to choose the gym option (59%) compared to those in the anticipating satisfaction condition (38%; $\chi^2(1) = 3.41$; $p = .06$). This was also more than the proportion of participants choosing the gym option in the control condition (39%; $\chi^2(1) = 2.98$; $p = .08$). There was no difference between those in the control and satisfaction conditions ($p = .89$). These results support H1.

Relative Preferences. As a measure of relative preference, we calculated the difference in the attractiveness of the two options. We subtracted the attractiveness rating of the gym option from the attractiveness rating of the television option so that the lower the number, the lesser the preference for the default option (TV option). Consistent with H1, the attractiveness of the options varied across the three conditions ($F(2, 111) = 3.99$, $p = .02$; see Figure 2). Planned contrasts revealed that participants in the regret condition found the television option relatively less attractive than the gym option compared to those in both the satisfaction ($M_{\text{regret}} = -.47$, $SD = 3.65$; $M_{\text{satisfaction}} = 1.61$, $SD = 2.76$; $t(71) = 2.77$; $p = .007$) and control conditions ($M_{\text{control}} = 1.12$, $SD = 3.27$; $t(71) = 1.96$; $p = .05$). There was no difference between the satisfaction and control conditions ($p = .47$).

Figure 2: Relative Preference for the Television Option



Future Concern. We also predicted that participants in the anticipating regret condition would consider the naturally non-salient future concerns to a greater extent compared to those in the anticipating satisfaction and control conditions. As expected, thoughts of future concerns

differed across the three conditions ($F(2, 111) = 2.91, p = .06$). A series of planned contrasts showed that participants in the regret condition were more likely to base their evaluations on future concerns, compared to those in either the satisfaction ($M_{\text{regret}} = 6.19, SD = 1.97; M_{\text{satisfaction}} = 5.20, SD = 2.12; t(71) = 2.04; p = .04$) or control conditions ($M_{\text{control}} = 5.12, SD = 2.04; t(71) = 2.25; p = .03$). There was no difference between the satisfaction and control conditions ($p = .87$).

Furthermore, the data showed that future concerns mediated the effect of anticipation type (satisfaction vs. regret) on participants' relative preference. First, a regression with preference as the dependent variable and the anticipation type as the independent variable re-validated the main effect of anticipation type on preference ($\beta = -2.07, t(112) = -2.77, p = .007$). A second regression showed that type of anticipation also significantly affected future concerns ($\beta = .99, t(112) = 2.04, p = .04$). Further, a regression showed that future concerns affected preference ($\beta = -.46, t(112) = -2.64, p = .01$). Finally, when option preference was regressed on both the anticipation type and concerns for the future, the effect of anticipation type decreased ($\beta = -1.62, t(112) = -2.18, p = .03$) whereas the effect of future concerns remained unchanged ($\beta = -.47, t(112) = 2.64, p = .01$) showing that future concerns mediated the effect of anticipation type on preference. We established that this mediation was indeed significant, as the bias-corrected confidence interval (CI) of the bootstrapping mediation test (Preacher and Hayes 2008; Model 4) did not include zero (CI95% = -1.13, -.07; 5,000 re-samples). This suggests that anticipating regret did lead people to think about the naturally non-salient decision aspect (i.e., future concerns in this scenario), which in turn impacted their preferences away from the default option.

Discussion

The results of Study 2 are consistent with those of Study 1 and provide further evidence, in a different choice domain, that compared to anticipating satisfaction, anticipating regret prior to making a decision can shift consumers' preference away from the default option towards the non-default option. It further shows that the shift in preference is caused by an increase in the consideration of the non-salient decision aspect. Moreover, our data show that there was no difference between participants instructed to anticipate satisfaction and those in the control condition who were not given any explicit instructions. This suggests that anticipating satisfaction is the natural strategy with which individuals approach decisions, and that anticipating regret causes a shift in preference away from the default option by evoking thoughts of what is being missed out on.

While Study 2 only tested a near-future decision, Study 3 examines both near-future and distant-future decisions involving food choices. For decisions regarding the distant-future, long-term goals such as health are more salient and short-term pleasure goals less salient compared to near-future decisions (e.g. Trope and Liberman 2003). Thus, when choosing between two food options, the indulgent option will be the default in near-future decisions and the healthy option will be the default in distant-future decisions. In both temporal frames, we expect that compared to anticipating satisfaction, anticipating regret will cause a shift in preferences away from the default option towards the non-default option.

Study 3 also tests our proposition that this preference shift occurs because anticipating regret vs. satisfaction focuses individuals on different aspects of the decision. In particular, regret causes individuals to think about the negative aspects of the default option and the positive aspects of the other option that would be missed. These two considerations, in turn, shift preferences away from the default option.

STUDY 3: THINKING ABOUT THE NEGATIVES OF THE DEFAULT AND THE POSITIVES OF THE NON-DEFAULT

The primary goal of Study 3 was to directly test the underlying process proposed in H2 that involves two mediators operating sequentially, namely, the consideration of the negative aspects of the default option and the consideration of the positive aspects of the other option that would be missed out on. We hypothesize that anticipating regret, compared to anticipating satisfaction, triggers thoughts of the negatives of the default option, which triggers thoughts of the positives of the other option that would be missed out on, and ultimately leads to a shifting away of preferences from the default towards the non-default option.

Method

Three hundred and eighteen adult participants were recruited through the online survey platform Amazon Mechanical Turk. Participants were randomly assigned to one of four conditions in a 2 (Anticipation type: satisfaction vs. regret) x 2 (Temporal frame: tomorrow vs. three months later) between-participants design. Using a similar design from Study 2, we manipulated the temporal frame of the decision, near-future vs. distant-future, to vary whether an indulgent or a healthy option would be perceived as the default option. Participants were asked to imagine that they had been invited to a dinner party for which they had to pre-order one of two available entrees: a juicy 10 oz. steak or a whole wheat organic pasta dish with vegetables. Half of the participants were told that the dinner party would be held tomorrow, while the other half was told it would be held three months later. As in the previous study, prior to indicating their preference between the two dinner options, participants visualized each option in turn. Participants in the anticipating satisfaction conditions visualized how much satisfaction they would feel if they were to choose that entree. Participants in the anticipating regret conditions visualized how much regret they would feel if they were to choose that option. The order in which the options were visualized was counterbalanced and had no effect. All participants then rated the attractiveness of each option (1—not at all; 9—very).

Subsequently, we asked all participants to rate the extent to which they considered different aspects of the steak and the pasta, respectively, while they were visualizing each option and trying to make a decision. To measure participants' considerations of the positives of the options, we asked them to rate the extent to which they considered the positive aspects, and the extent to which they considered not wanting to miss out on the positive aspects. To measure their considerations of the negatives of the options, we asked them to rate the extent to which they considered the negative aspects, and the extent to which they considered wanting to avoid the negative aspects. All questions were based on 9-point scales (1—not at all; 9—very much). Depending on the temporal perspective participants were given (near- vs. distant-future), they were either evaluating their considerations about the default or the non-default when they evaluated the steak and the pasta. In other words, for participants in the near- (distant-) future conditions, considerations of the positives and negatives of the steak (pasta) would be the positive and negative considerations of the default option, while considerations of the positives and negatives of the pasta (steak) would be the positive and negative considerations of the non-default option.

As manipulation checks, all participants indicated when the purported dinner party was scheduled to take place (1—immediately; 9—very distant-future), and rated each entree on how healthy, how good it was for them in the long run, how tasty, and how special it was (1—not at

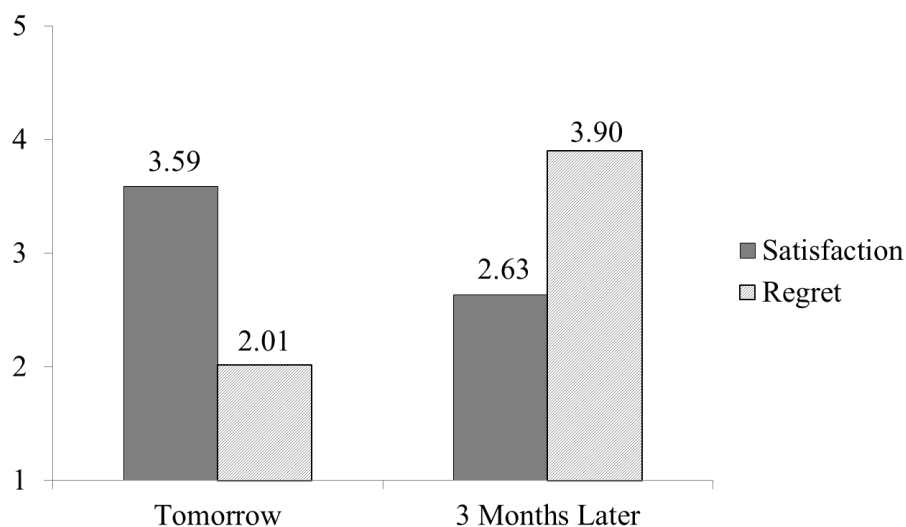
all; 9—very). Lastly, as control measures, participants rated their general liking of steak dishes and pasta dishes (1—not at all; 9—very).

Results

Manipulation checks. As expected, participants in the near-future condition indicated that the dinner party felt less distant than those in the distant-future condition ($M_{\text{near-future}} = 2.70$, $SD = 2.12$; $M_{\text{distant-future}} = 6.09$, $SD = 2.34$; $t(316) = 13.52$; $p < .001$). We combined the measures of how healthy and how good in the long run into a single measure of healthiness for each entrée (steak: $r = .52$, $p < .001$; pasta: $r = .47$, $p < .001$); and combined the measures of how tasty and how special into a single measure of enjoyment for each entrée (steak: $r = .25$, $p < .001$; pasta: $r = .16$, $p = .004$). As expected, the steak was rated as being more enjoyable than the pasta ($M_{\text{steak}} = 7.82$, $SD = 1.38$; $M_{\text{pasta}} = 4.47$, $SD = 1.72$; $t(317) = 24.85$; $p < .001$), but less healthy ($M_{\text{steak}} = 4.64$, $SD = 1.91$; $M_{\text{pasta}} = 6.41$, $SD = 1.75$; $t(317) = 10.71$; $p < .001$).

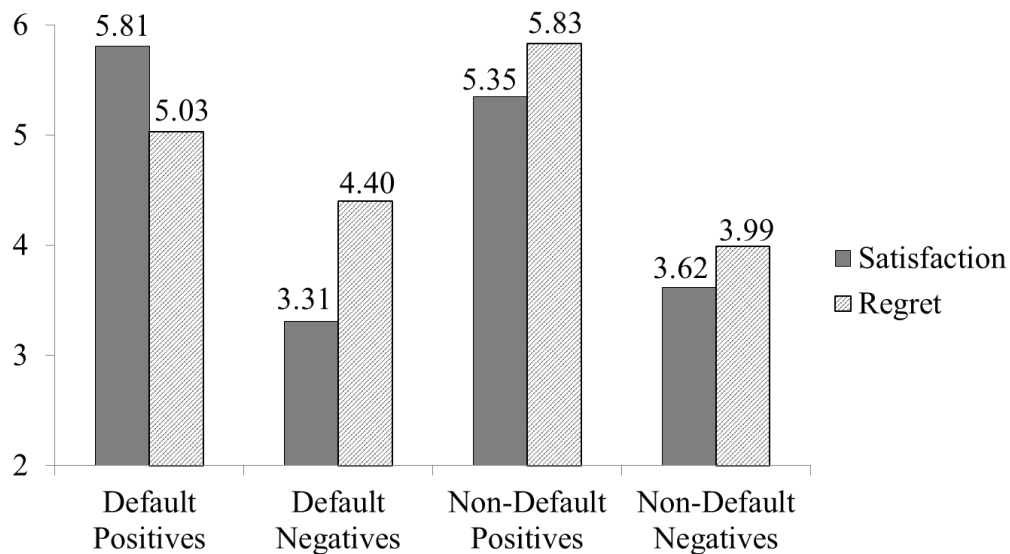
Relative preferences. We predicted that regret would shift preferences away from the default option towards the non-default because of more consideration of the negatives of the default and the positives of the non-default option that would be missed out. As a measure of relative preference, we calculated the difference in attractiveness of the two options. We subtracted the attractiveness rating of the pasta entrée from the attractiveness rating of the steak entrée so that the larger (smaller) the number, the greater the preference for the steak (pasta). Consistent with Study 2 and H1, there was a significant anticipation type by temporal frame interaction on preferences ($F(1, 317) = 11.17$; $p = .001$; see Figure 3). More importantly, when the dinner was scheduled for tomorrow, those anticipating regret were less likely to prefer the default steak compared to those anticipating satisfaction ($M_{\text{regret}} = 2.01$, $SD = 3.85$; $M_{\text{satisfaction}} = 3.59$, $SD = 3.56$; $t(157) = 2.69$; $p = .008$). However, when the dinner was scheduled for three months later, those anticipating regret were more likely to prefer the steak (which is the non-default option) compared to those anticipating satisfaction ($M_{\text{regret}} = 3.90$, $SD = 4.00$; $M_{\text{satisfaction}} = 2.63$, $SD = 3.78$; $t(157) = 2.06$; $p = .04$). These results provide further support to H1.

Figure 3: Relative Preference for the Steak



Positives and Negatives of the Options. We further examined how anticipating regret vs. satisfaction impacted participants' consideration of the positives and negatives of the default and non-default options. Depending on the temporal frame of the decision, participants' raw ratings of their considerations of the steak and pasta either represented their considerations of the default or non-default option. We thus converted the raw scores into a set of measures on considerations of the default option and considerations of the non-default option and collapsed both time frames. That is, for participants who were deciding for the dinner scheduled for tomorrow where the steak was supposed to be the default, their considerations of the steak (pasta) were converted into considerations of the default (non-default), whereas for participants who were deciding for the dinner scheduled for three months later, their considerations of the pasta (steak) were converted into considerations of the default (non-default). We further combined the measures of decision aspect consideration into: considerations of the positives (based on the items of "considered the positive aspects", and "considered not wanting to miss out the positive aspects"; $r = .52, p < .001$ for the default; and $r = .59, p < .001$ for the non-default), and considerations of the negatives (based on the items of "considered the negative aspects", and "considered wanting to avoid the negative aspects"; $r = .36, p < .001$ for the default; and $r = .39, p < .001$ for the non-default). This aggregation resulted in four new measures across both time frames: consideration of the positives and negatives for the default option as well as for the non-default option.

Figure 4: Considering the Positives and Negatives of the Options



We conducted a set of two-way ANOVAs to determine how anticipating satisfaction vs. regret influences participants' consideration of the positives and negatives of the options. The results showed incidental main effects of time for all four measures ($p < .001$) and an interaction between anticipation type and time for consideration of the positives of the non-default ($p = .05$). More central to our hypotheses regarding the effect of regret vs. satisfaction on the shifting considerations of the default vs. non-default options, we found that, anticipation type significantly influenced participants' considerations of the positives and negatives of the default, as well as the positives of the non-default (see Figure 4). Specifically, we found that those anticipating regret, relative to those anticipating satisfaction, were less likely to think about the positives of the default

($M_{\text{regret}} = 5.03$, $SD = 2.59$; $M_{\text{satisfaction}} = 5.81$, $SD = 2.66$; $F(1, 314) = 10.28$; $p < .001$), but more likely to think about the negatives of the default ($M_{\text{regret}} = 4.40$, $SD = 2.21$; $M_{\text{satisfaction}} = 3.31$, $SD = 2.20$; $F(1, 314) = 20.34$; $p < .001$, and the positives of the non-default ($M_{\text{regret}} = 5.83$, $SD = 2.61$; $M_{\text{satisfaction}} = 5.35$, $SD = 2.83$; $F(1, 314) = 3.66$; $p < .001$). Type of anticipation did not impact the considerations of the negatives of the non-default option ($M_{\text{regret}} = 3.99$, $SD = 2.21$; $M_{\text{satisfaction}} = 3.62$, $SD = 2.46$; $F(1, 314) = 2.26$; $p > .10$).

Mediation analyses. Based on the results that anticipating regret vs. satisfaction impacted considerations of the positives and negatives of the default, as well as the positives of the non-default (but not considerations on the negatives of the non-default), we conducted a series of mediation analyses based on the first three significant measures. To test our proposed serial process in H2, we first conducted a multistep mediation analysis using the PROCESS macro (model 6, Hayes 2013). The dependent variable was the relative meal preference. The potential mediators were the extent to which the negatives of the default options were considered and the extent to which the positives of the non-default option were considered. The independent variable was a dummy variable representing the two anticipation type conditions (1= regret; 0= satisfaction).

Controlling for participants general liking of steak and pasta dishes, the results confirmed the proposed chain of mediators. Thinking of the negatives of the default (M_1) and the positives of the non-default (M_2) mediated the effect of anticipation type on relative preference. Anticipating regret increased thoughts about the negatives of the default ($B = 1.04$; $p < .001$). The increased thoughts of the default's negatives increased thoughts of the non-default's positives that would be missed out on ($B = .68$; $p < .001$). And we found that the increased thoughts of the missed positives of the non-default had a significant effect on shifting preference from the default towards the non-default meal option ($B = -.14$; $p = .04$). The 95% CI for the indirect effect was obtained with 5000 bootstrap resamples and supported the suggested multistep mediation ($B = -.10$; 95% CI [-.25, -.009]). No other indirect or direct effects were significant. In addition, we tested whether anticipation type could affect relative preference through thoughts about the positives of the default. However, there was no indirect effect ($B = .05$; 95% CI [-.03, .18]). This non-mediating effect of positive thoughts of the default on relative preference is not surprising given that participants thought more about the positives of the default, yet still preferred the non-default option (due to additional negative thoughts of the default and positive thoughts of the non-default).

Discussion

The results of Study 3 further confirmed H1 and provided direct support for the underlying process proposed in H2. We find that anticipating regret, compared to anticipating satisfaction, shifts preferences away from the default towards the non-default option, leading people to prefer the healthy pasta for near-future decisions and the indulgent steak for distant-future ones. Increases in thoughts of the negative aspects of the default option and increases in thoughts of the missed positives of the non-default option, operating sequentially, mediate the shifts in preference. These findings are consistent with the prior work suggesting that satisfaction focuses attention on the chosen option (e.g. Oliver 1980) and on aspects that are consistent with the salient goal and therefore easier to elaborate on (Shiv and Huber 2000). More importantly, they add new insights that regret focuses more attention on the negatives of the default and the positives of the other option.

GENERAL DISCUSSION

Our findings suggest that whatever the default option may be and however it is determined, anticipating satisfaction promotes preference toward the default option whereas anticipating regret shifts preference away from the default toward the naturally less-preferred option. We obtained converging evidence to support this pattern of effects by priming goals (Study 1) and by using temporal frames (near- vs. distant-future in Studies 2 and 3) to manipulate the default. Our findings are robust across different consumer domains—such as activity choice (going to class vs. having lunch with a friend in Study 1 and watching television vs. exercising in Study 2) or food decisions (steak vs. organic pasta in Study 3)—and with different types of measures, ranging from relative preferences between two options (Studies 1 and 3) to binary choice (Study 2) and separate evaluations of each option (Studies 2 and 3). Further, Studies 2 and 3 tested the underlying process and showed that anticipating regret increased consideration of the naturally less salient decision aspect—future concern in an immediate choice scenario (Study 2), or the positives of the non-default option (Study 3); and that these considerations of the naturally less salient decision aspects mediated the effect of anticipating regret (vs. satisfaction) on relative preferences.

Contribution

Our current research contributes to the existing literature on the default bias. Using goals, primed both directly and indirectly, we demonstrate a novel means through which a particular option becomes the default option in a given choice set. As previously shown, consumers' choices are goal-driven (cf. Bagozzi and Dholakia 1999) and the activation or salience of specific goals causes individuals to evaluate goal-relevant options more positively (Ferguson and Bargh 2004) and to devalue options that are goal irrelevant (Brendl et al. 2003). It follows then, that the goal-consistent option is the default option. And we demonstrate how anticipating satisfaction (regret) leads consumers to prefer this goal-consistent, default (goal-inconsistent, non-default) option. Therefore, not only do we document the occurrence of the default bias in this novel context, but we also provide more insight into when and why the default bias might be more vs. less prevalent. Our findings also contribute to the regret literature. By identifying the role of the default option in a given scenario and delineating how anticipating regret highlights the naturally ignored decision aspects, we have improved our understanding of how and why anticipating regret (vs. satisfaction) influences consumer preferences. Further, we have directly juxtaposed the effect of anticipating regret with anticipating satisfaction to provide a clearer distinction between the two constructs.

More broadly, our findings add to the existing literature on self-control and choice over time. Self-control is often understood as the conflict between the goals of pleasure, on the one hand, and the goals of willpower, virtue, and rationality, on the other (Hoch and Loewenstein 1991; Loewenstein, 1996; Metcalfe and Mischel 1999). Prior research has examined how the relative salience of these two goals can affect self-control. For example, the availability of a temptation causes counteractive devaluation of the temptation and increases valuation of the higher-order goal of virtue and, as a consequence, promotes self-control (Myrseth, Fishbach, and Trope 2009). Similarly, a higher-level mental construal increases focus on values and virtues and increases self-control (Fujita et al. 2006). Other research finds that happiness can enhance the influence of already salient goals (pleasure or virtue) and thereby influence self-control (Fishbach and Labroo 2007). We extend this stream of research by demonstrating that, regardless of which goal is salient in a given decision, anticipating regret will shift preferences away from the goal-consistent default option toward the other option. When the indulgent option is the default option, anticipating regret

can enhance self-control, but, in a context where the virtuous option is the default option, anticipating regret can undermine self-control. Thus, anticipating regret (vs. satisfaction) plays a critical role in decisions involving indulgent and virtuous options.

Moreover, our research contributes to the vast existing body of work on choice over time. Previous research has identified various negative consequences of inconsistent preferences over time, including regret, dissatisfaction, and failure to fulfill a goal (Soman 2004; Zauberma and Lynch 2005). Accordingly, a number of strategies have been proposed to overcome preference inconsistency over time—e.g., mentally rehearsing or forming implementation intentions when making a decision for a distant-future task (Gollwitzer 1999; Trope and Liberman 2003), focusing on long-term benefits to strengthen self-control (Hoch and Loewenstein 1991), and practicing process vs. outcome simulation at a different point in time (Zhao et al. 2007). We extend this stream of research. We demonstrate that prompting consumers to anticipate the regret they might feel enhances their consideration of decision aspects that might otherwise be overlooked in a given context. This, in turn, can increase preference consistency over time.

LIMITATIONS AND FUTURE DIRECTIONS

While the current research focuses mainly on how anticipating satisfaction vs. regret affects the decision making process and the final choice itself, future research could examine consumers' post-decision regret and satisfaction. Are consumers who switch from the default to the non-default after anticipating regret more or less likely to regret their decision than those who do not switch? Some research finds that consumers experience less regret when they have maintained the status quo—maintained or repeated a past decision (e.g., Kahneman and Miller 1986; Luce 1998). However, Inman and Zeelenberg (2002) suggest that, when there is sufficient justification or motivation to warrant a switch, switching leads to less regret than staying with the status quo, even when the outcome is negative. It is possible that anticipating regret prior to choice and the ensuing consideration of the negatives of the default option and the positives of the non-default option is the sufficient motivation that warrants a switch and moderates post-decision regret.

Also, we note that, although there may appear to be similarities or parallels between anticipating regret vs. anticipating satisfaction and various decision strategies, closer examination suggests otherwise. The first potential parallel is the strategy to select vs. reject. Shafir (1993) shows that a select strategy weights the positive dimensions of the options more heavily than the negatives, while a reject strategy weights the negative dimensions more heavily than the positives. As a result, a reject strategy, compared to a select strategy, can increase the salience of the negatives of the foregone option and lead to greater post-decision satisfaction (Machin 2016). If anticipating regret indeed aligns with a reject strategy, then anticipating regret may increase focus on the negatives relative to the positives of each option. And if anticipating satisfaction were to align with a select strategy, anticipating satisfaction may increase focus on the positives relative to the negatives of each option. However, the data from Study 3 does not support this potential alternative explanation. For the steak option, both anticipation types reported higher focus on the positives than the negatives (p 's < .001). For the pasta option, both anticipation types in the near-future condition reported higher focus on the negatives than the positives (p 's < .09). Thus, it seems unlikely that our findings can be explained by a reject vs. select strategy.

The second potential parallel is the strategy to maximize vs. satisfice. Schwartz et al. (2002) show that satisficers ask the question “Is this a *good* outcome?” In contrast, maximizers ask “Is this *the best* outcome?” and are more sensitive to regret—both anticipated and experienced. It

should be noted, however, that Schwartz et al. (2002) focuses mainly on the post-decisional consequences experienced by maximizers and satisficers, whereas our research examines preference formation and the choice process. As such, it is difficult to compare these two works. We also note that related work by Ma and Roese (2014) suggests that a maximizing mindset may increase choice difficulty. However, as mentioned in Study 1, we find no difference on choice difficulty across anticipation type. Further, as each of the options in our studies were consistent with different goals (e.g. pleasure vs. virtue), it is unclear whether one option clearly dominated or was “better” than the other. Thus, although additional research may be conducted, it appears unlikely that anticipating regret (vs. satisfaction) aligns directly with maximizing (vs. satisficing).

Lastly, we acknowledge a potential limitation of our current research is that it relies on the external manipulation or instruction to individuals to anticipate regret vs. satisfaction. We believe that the act of anticipating regret (vs. satisfaction) can be readily practiced and achieved through consumers’ own initiatives as well as through marketers’ strategic communications efforts. However, future research could examine decisions contexts or select individuals and groups in which the anticipation of regret (vs. satisfaction) could occur more organically. For example, in Study 1, where undergraduate student participants were asked to choose between attending an important class and having lunch with a friend, the “Fear of Missing Out” (FOMO), could influence the tendency to anticipate regret. FOMO, defined as the pervasive apprehension that others might be having rewarding experiences, especially in a social setting, when one is absent (Przybylski et al. 2013), is frequently felt especially in Generation Z-ers and Millennials (Gilbert 2023). Thus, it is possible that for such individuals, decisions regarding social experiences are more likely to induce anticipation of regret. Similarly, given that individual personality traits affect one’s willingness to re-engage after service failures (Agarwal, Mehrota, and Barger 2016), it may be that certain individuals are more (vs. less) inclined to anticipate regret or satisfaction. Future studies could test these interesting differences across individuals and groups.

More broadly, decisions involving social considerations of any kind may be likely to naturally encourage anticipation of regret vs. satisfaction. Johnson and Ross (2015) find that decisions influenced by social ties can lead to negative consequences including relationship atrophy and trust decay. It follows then, that consumers could be more likely to anticipate the regret of those adverse outcomes prior to making decisions. We can also examine the flip side and identify how social considerations may naturally foster anticipation of satisfaction. For example, Frechette and Wingate (2022) show that interacting with a human service provider (vs. a non-human computer-generated provider) can mitigate consumers’ dissatisfaction with service failures. Based on previous findings, we can conjecture that this occurs because consumers adopt an empathy lens (Costello and Reczek 2020) for human-to-human interactions. This lens, in turn, could naturally lead to anticipation of satisfaction and the subsequent adjustment of service expectations (Palan and Teas 2005). Future research can examine these factors in more detail.

PRACTICAL IMPLICATIONS

Our findings offer interesting and readily applicable implications for marketing managers and policy makers. When consumers make their decisions, they often overly focus on one aspect of the decision and ignore others. Our findings suggest that marketers can encourage consumers to think about the potential regret they might experience with their choices, which would highlight the naturally ignored decision aspect. Especially for near-future and immediate decisions where the natural default preference is for short-term pleasure and enjoyment, consumers often

experience self-control failures such as excessive spending and unhealthy eating. Obesity, for example, highlights both. In addition to the physical and emotional toll obesity can levy, it also exacts a significant financial toll. Figures show that obesity costs the US nearly \$210 billion annually due to health care costs alone (Shah 2014). Our findings suggest that encouraging consumers to think about how much they might regret their decisions before they engage in indulgent consumption will highlight their long-term goals and help them act according to their long-term welfare. This can be implemented as messages on product packaging and websites, through social media campaigns, or through interactions with service providers.

Our findings also offer important implications for how to leverage the power of default options. A variety of factors can set and determine default options, including goals and biases held by the consumer and the goals and biases introduced by the situation. For example, a brand that is the market share leader for a particular category can expect to be the default option for that category. Likewise, certain brands in product categories where consumers engage in habitual decision making (e.g., household cleaners, toothpastes) are especially likely to enjoy default status. For marketing managers of such “default” brands, our research suggests that encouraging consumers to anticipate satisfaction can help them retain customers. On the other hand, for marketing managers of new brands or underdog brands which are trying to acquire customers, our research suggests that comparative advertising and, in particular, advertising that encourages consumers to anticipate regret prior to choosing may be an effective strategy to unfreeze consumers’ habitual decisions and shift their preferences away from the default.

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