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## Regulating regret via decreasing goal level: Comparing maximizers and satisficers

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### ABSTRACT

Regret is an important emotion in the context of decision making and has many implications for the behavior of consumers. Although regret may be an inevitable outcome, it is possible to cope with it through various regulation strategies. This research investigates one of those strategies, namely, decrease the goal level strategy (DGL), in which one regulates regret by reevaluating the negativity of an outcome. Two properly powered and preregistered experimental studies find that the DGL strategy effectively works in regulating individuals' post-decisional regret. Besides, the DGL effect is moderated by individuals' maximizing tendency. When maximizers engaged in the DGL strategy, by reappraising their decision and recognizing positive alternative goals, they regulated their regrets more successfully. For satisficers, in contrast, who are by default more prone to adopt the protective "good enough" choice, engaging in a DGL strategy did not affect their regrets. These results contribute to the literature on regret by empirically testing DGL as an effective regret regulation strategy, showing mechanisms that can help individuals to effectively cope with regret.

### 1. Introduction

In everyday life, consumers are faced with numerous decisions that may lead to positive or negative outcomes and emotions. Regret is a prime example of such decision-related emotions. Individuals experience regret when they make a comparison between "what is" and "what could have been" and realize that the best decision among possible alternatives was not made (Loomes & Sugden, 1982). Regret is an important emotion in this context because it is uniquely tied to decision making. Other negative emotions can be experienced without choice, but regret cannot (Zeelenberg & Pieters, 2007).

After a bad experience, consumers may try to ameliorate their negative feelings by returning the product or by switching brands in the next purchase. Such behaviors correct their bad decisions or prevent similar bad decisions in the future (Zeelenberg & Pieters, 2007). In the US, 95% of product returns are ultimately unconnected to product defects, and 27% were associated with "buyer's remorse" (Accenture, 2011). This regret-based motivation to return a product to the store can lead to problems, such as heightened shipping costs, negative word-of-mouth about a brand, brand-switching intentions and negative

purchase evaluation (e.g., Bui et al., 2011). In many situations, choices are not reversible. Experiential purchases are a good example, simply because an individual cannot "return the experience" to the provider (Rosenzweig & Gilovich, 2012). Therefore, the question is how do individuals cope with their regrets in situations of irreversibility?

Given the implications of regret, many research efforts have been dedicated to understanding how and when individuals regret (e.g., Feeney et al., 2005; Gilovich & Medvec, 1995; Kedia & Hilton, 2011; Komiya et al., 2013; Pierro et al., 2008; Zeelenberg & Pieters, 2007). In contrast, far less attention has been addressed to the prevention and management of regret in decision making. That is the central topic in this article.

Based on the assumption that regret is an aversive emotion that individuals are motivated to regulate in order to maximize outcomes, Zeelenberg and Pieters (2006, 2007, 2008; Pieters & Zeelenberg, 2007) proposed the Regret Regulation Theory (RRT). RRT argues that individuals are regret averse and when they fail to avoid regret from happening, at least they could try to regulate it through ameliorative behaviors that are labeled regret regulation strategies (see also, Inman, 2007; Roese et al., 2007). Despite the theorizing in RRT about the

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various strategies that consumers can use to cope with regret, few empirical studies have addressed these strategies (for exceptions, see: Bjalkbebring et al., 2013, 2016).

In the current research, we aim to empirically investigate a goal-focused strategy proposed by Pieters and Zeelenberg (2007) that is centered on making regret less likely, or less painful. The strategy is to decrease one's goal level (DGL). The main idea behind this strategy is that one can still "decide" to be satisfied with what one has (i.e., decrease their current goal level) after realizing that a bad decision was made, and hence lessen the regret. In our examination, we suggest that the tendency to maximize (Schwartz et al., 2002) is an important moderator of the DGL strategy. Maximizers are those who have a tendency to pursue only the best, while satisficers are those who are more prone to be satisfied with the good enough. Ample research has shown that maximizers experience more regret than satisficers (e.g., Besharat et al., 2014; Chowdhury et al., 2009; Schwartz et al., 2002), and this amplified regret is likely to be the result of setting higher goal levels by maximizers.

Consistent findings in maximizing research reveal that maximizing individuals devote more time and effort to their decision making than do satisficers (Cheek & Schwartz, 2016; Dar-Nimrod et al., 2009; Iyengar et al., 2006; Luan & Li, 2019; Weaver et al., 2015). Notwithstanding, the need for extensive pre-decision search is one of the reasons for maximizers' psychological trouble, because it brings light to all the other (possibly better) discarded alternatives (Nenkov et al., 2008). Even if the decision outcome is not entirely negative, the use of extra cognitive effort might result in a more negative evaluation of the outcome (Botti & McGill, 2006; Sagi & Friedland, 2007). For maximizers, the experience of regret might be more intense because they are those who spend more energy, time, or money to seek alternative paths (Moyano-Díaz et al., 2014).

When faced with negative decision outcomes, maximizers might experience intense regret because they put more effort into the decision, but also because they perceive this effort as wasted (Arkes, 1996; Park & Hill, 2018). However, when maximizers engage in the DGL strategy, by reappraising their decision and recognizing positive alternative goals, we expect that they would put their decision in a better light and, retrospectively lowering the goal level could be especially helpful for maximizers to successfully down-regulate their regrets. Satisficers, in contrast, adopt the protective "good enough" strategy as a first step when making their decisions, hence reaching a floor effect for their regrets.

In two high powered and preregistered experiments we examined how the DGL strategy works in regulating individuals' post-decisional regret. Additionally, we find that the DGL effect is moderated by individuals' maximizing tendency. When maximizers engage in the DGL strategy, they reappraise their decision and recognize positive aspects of the obtained outcome, successfully regulating their regret. In contrast, for satisficers engaging in a DGL-strategy does not affect their regret. This research thus informs us that regret is not a pre-determined outcome for maximizers.

### 1.1. Regret regulation

Zeelenberg (1999, p. 94) defines regret as "a negative, cognitively based emotion that we experience when realizing or imagining that our present situation would have been better, had we decided differently". Facing regretful decisions during a lifetime might be an inevitable outcome, but one that is possible to cope with. To cope with regret is stressful though. Individuals might adopt thoughts and actions to manage or alter the reason for discomfort (problem-focused) or thoughts and actions to regulate the emotional response to the problem (emotion-focused) (Folkman et al., 1986).

In marketing contexts, actions related to problem-focused efforts may occur when consumers return the product after realizing that they should have not bought it (Bui et al., 2011). In emotion-focused coping,

individuals usually try to reappraise the negative outcome by developing thoughts such as "I decided there are more important things to worry about" or "I considered how much worse things could be" (Lazarus & Folkman, 1984a, 1984b, p. 150).

When individuals cannot carry out reparative action, they engage in regret regulation using one or more of the following strategies: trying to identify silver linings, focusing on important lessons learned, letting the regret persist in the back of their minds, trying to deal with the regret either by thinking about the events differently, or seeing a therapist (e.g., Davidai & Gilovich, 2018; Gilovich & Medvec, 1995). Based on these different means to cope with regret, some regulation strategies were summarized and proposed in RRT.

Regulation strategies involve thoughts and actions that solve problems and thereby reduce stress (Lazarus & Folkman, 1984a, 1984b). Individuals may not always engage in reparative actions to mitigate their negative experiences. Sometimes, for example, their choices are irreversible (e.g., Gilbert & Ebert, 2002; Rosenzweig & Gilovich, 2012) or they cannot delay or avoid decisions (Pieters & Zeelenberg, 2007), impeding individuals to cope effectively with regret. The act of decreasing one's goal level (DGL) is presented by Pieters and Zeelenberg (2007) as one of the strategies that individuals can adopt to cope with regret elicited in situations when reparative actions are less feasible.

Take as example the situation described by Huang and Tseng (2007, p. 487). In a given situation, Jack had to choose one of three distributors to cooperate with (Alpha, Beta, and Gamma). After some consideration, he chose Alpha, the one that was expected to increase sales by 6% within the next year. A year later, Alpha's sales growth rate was 3%, Beta's 12% and Gamma's -4%. In this scenario, Jack would feel regret when comparing his actual outcome (a 3% gain) to the one that he would have been obtained if he had cooperated with Beta (a 12% gain). Jack would feel rejoicing (the opposite of regret) when comparing his actual outcome to the outcome that he could have been obtained if he had cooperated with Gamma (a 4% loss).

Other studies also investigated the effect of upward and downward counterfactual comparisons – conditions in which individuals compare their actual state to a hypothetical state of the world that improve on reality – and downward counterfactuals – those which worsen reality – on individuals' regret (Bauer et al., 2008; Krott & Oettingen, 2018; Lin et al., 2006; Markman et al., 1993). However, it is important to point out that the DGL strategy is not the same as mentally contrasting counterfactual opportunities or identifying silver linings. Put differently, it is not thinking about what "could have been worse". As in Gilovich and Medvec's (1995, p. 385) example, a person who marries Mr. Wrong could say, "But I have these wonderful children I would not have had otherwise" and this argument is a way of rationalizing or reducing dissonance for a bad decision. The DGL strategy, conversely, is not rationalizing a bad decision by thinking "at least..." (Lin et al., 2006). Instead, the DGL strategy implies thoughts that assess the choice in a good light, leading the individual to realize that the decision was not in fact that bad because she "still can...", regardless of the possible inferior quality of the discarded alternatives.

The DGL strategy shares similarities with *bracing for loss* (e.g., Shepperd et al., 2000). Bracing for loss refers to consumers strategically lowering their expectations in order to prevent negative feelings about undesired outcomes (see also, Van Dijk et al., 2003). Bad news feels bad, but unexpected bad news feels even worse (Shepperd & McNulty, 2002). Carroll et al. (2006) applied this reasoning to regret and argued that "people may also brace to avoid regret in case their action (or inaction) fails to produce a desired consequence" (p. 63). Thus, regret can be prevented by psychologically preparing for a negative decision outcome via lowering one's goal level. The main difference between the two strategies is that bracing for loss deals with expectations or probabilities of negative outcomes occurring, while decreasing the goal level deals with the evaluated negativity of the outcome.

RRT was formulated as an attempt to increase the understanding of the psychology of regret and its idiosyncratic regulatory processes.

Regret regulation requires mobilization and effort instead of automatized behaviors. To cope with regret, individuals need to manage their current state through attempts to minimize, avoid, tolerate, or accept the stressful conditions. Here we propose an empirical investigation of the DGL's effect on individuals' regret regulation. Formally we expect that, in the face of decisions negative outcomes, individuals that use the DGL strategy experience less regret ( $H_1$ ).

### 1.2. Maximizing tendency and regret regulation

Individuals' ability to adjust their goals may be contingent upon traits that may influence how individuals engage and effectively cope with regret. Some individuals have a tendency to expect only the best when making decisions (maximizers), whereas others are usually satisfied with the good enough (satisficers). According to Schwartz et al. (2002) and Zeelenberg and Pieters (2007), dispositional tendencies to maximize one's outcomes influence the intensity of regret that individuals experience.

Consistent findings suggest that this "good enough" rather than the "best" as a criterion is related to differences in regret intensity (Besharat et al., 2014; Chowdhury et al., 2009; Hassan et al., 2019; Huang & Zeelenberg, 2012; Ma & Roese, 2014; Parker et al., 2007; Polman, 2010). A better-unchosen option seems not to elicit satisficers' regret as intense as maximizers' regret (Schwartz et al., 2002).

In order to achieve the best option, individuals need to engage in an exhaustive search of the possibilities, although this is hardly possible in any particular domain (Nenkov et al., 2008). Thus, the attempts to increase decision quality and find the best option engenders unrealistically high expectations (Iyengar et al., 2006). Maximizers usually examine more alternatives and are more likely to find alternatives that outperform the chosen one. Therefore, rather than preventing regret, the extended search of alternatives might increase regret (cf. Zeelenberg & Pieters, 2007, p. 31).

A recent study found that post-decisional doubts increased the intensity of regret while pre-decisional doubts were unrelated to it (Van de Calseyde et al., 2018). Extrapolating these findings to maximizing tendencies (Schwartz et al., 2002), once satisficers make a decision expecting something "good enough", they should not doubt their decision because they would not expect their decisions would be the best ones. Maximizers, in contrast, would be more prone to doubt their decision quality because of their unrealistically high expectations. The more options there are, the more likely one will make a nonoptimal choice (Schwartz et al., 2002, p. 1179). Put differently, after a decision, maximizers may have more counterfactual thoughts about "what might have been" than satisficers.

Schwartz (2015) and Schwartz et al. (2011) suggested that in some circumstances maximizing is not the normatively correct thing to do, propagating robust satisficing. In line with this, Zeelenberg (2015) suggested that one mechanism to minimize regret is to lower expectations about the chosen alternative. However, as stated by Schwartz et al. (2002, p. 1194) "it is plausible that maximizers have higher expectations than satisficers". Thus, even based on substantial evidence about several differences between satisficers and maximizers, it is still unclear who would regulate regret more successfully. In general, as proposed in  $H_1$ , individuals that use the DGL strategy will be more likely to reduce their regret following a negative outcome. Furthermore, given that maximizers usually experience more regret, we also suggest that the DGL effect would be moderated by individuals maximizing tendency in such a way that satisficers would reduce more regret than maximizers ( $H_2$ ).

## 2. Study 1

Study 1 was performed in order to test the main effect of the Decrease Goal Level strategy on experienced regret and to examine the extent to which the maximizing tendency moderates this effect. This study was preregistered (<https://aspredicted.org/3896a.pdf>).

## 2.1. Method

### 2.1.1. Participants and design

An a-priori power analysis with G\*Power indicated that for a 95% power,  $\alpha = 0.05$ , and a small to medium effect size  $f = 0.20$ , we needed 390 participants. We oversampled to account for potential data exclusions, and recruited 405 adults (53.8% females,  $M_{age} = 39$  years,  $SD = 12.36$ ) via Turk Prime, in return for a \$0.50 compensation. Participants were randomly assigned to the DGL condition or the Control condition.

### 2.1.2. Procedure

Participants were asked to read the text below (adapted from Landman, 1987):

Suppose you have vacationed in Florida, at the beaches, for years now. You always went during the last 10 days of September. This year you have not made up your mind between going to Sarasota or Key West. In the end, you decide to vacation in Key West. You expect to enjoy the warm weather and to have as much fun as you had during your past vacations.

Two weeks before your trip you check the weather forecast and realize that, unfortunately, it will be raining all 10 days in Key West. Sarasota, however, will be mostly sunny. Since you have already paid all your expenses in advance, you are not willing to change your destination (and loose the money you already paid).

After reading the scenario, participants in the Decrease Goal Level condition were asked to perform the following task<sup>1</sup>:

When you planned your vacation you first aimed at enjoying the warm weather in Key West. Please write below all the other goals you would set in order to still enjoy the trip to Key West despite the rainy weather. Feel free to write as many sentences as you wish.

The questionnaire contained 10 boxes for participants to write in their answers. Each box contained the sentence "Even in the rainy weather I could...". We propose that asking individuals to think about all the other things they could still do rather than enjoying the good weather would help them update their goals. In other words, thinking about alternative goals would decrease the main goal level. This task, as proposed in RRT, should put the individual's bad decision in a better light, even though the bad outcome (rainy weather) could not be reversed. Participants in the Control condition did not receive any additional task.

Next, we assessed experienced regret with two questions ( $r = 0.67$ ). Specifically, we asked participants to answer the following two questions: "How much would you regret your decision to decide going to Key West rather than going to Sarasota?" (1 = none, 7 = very much), and "In retrospect, how bad do you judge your decision to opt for going to Key West rather than going to Sarasota?" (1 = not bad at all, 7 = very bad). Next, participants filled in Schwartz et al.'s (2002) 13-item Maximization Scale ( $\alpha = 0.83$ ;  $M = 3.77$ ,  $SD = 0.98$ ) using Likert-type scales (1 = strongly disagree; 7 = strongly agree). Finally, participants reported demographic information and were thanked for their participation.

## 2.2. Results

We started out with testing the hypothesis that in the face of decisions with negative outcomes, individuals who use the DGL strategy experience less regret ( $H_1$ ). As predicted, a  $t$ -test showed that participants in the DGL condition indicated less regret ( $M = 3.86$ ,  $SD = 1.51$ )

<sup>1</sup> The control group did not receive an additional task. However, there were no differences between the conditions in how much time participants spent on reading the scenario ( $M_{DGL} = 34.80$  s,  $SD = 39.40$ ;  $M_{control} = 35.94$ ,  $SD = 44.35$ );  $t(403) = 0.27$ ,  $p = .79$ .



than participants in the control condition ( $M = 4.60$ ,  $SD = 1.42$ );  $t(403) = 5.09$ ,  $p < .001$ . Participants wrote an average of 5.84 alternative goals ( $SD = 2.97$ ; Minimum = 0, Maximum = 10). The most frequently goals mentioned were go to a restaurant (30% of the participants), local museums (28% of the participants), the mall (24% of the participants), the beach, and relax, enjoy the hotel, and watch movies/TV (less than 10% each).

A regression analysis for participants in the DGL condition showed a significant and negative effect of number of goals mentioned on regret ( $b = -0.12$ ,  $SE = 0.04$ ,  $t(191) = -3.15$ ,  $p < .01$ ). Thus, the more alternative activities were mentioned by these participants, the less regret they indicated. This fits very well with the idea that people can decrease their current goal level and focus on other goals, as a strategy to regulate their regrets.

We next performed a regression analysis to test the hypothesis that the DGL effect would be moderated by individuals' maximizing tendency ( $H_2$ ). We did this using PROCESS's Model 1 (Hayes, 2013), 5000 bootstrapped re-samples and a 95% confidence interval, with maximization tendency (mean centered -  $M = 3.77$ ,  $SD = 0.98$ ), a condition dummy-coded variable (DGL = 1, Control = 0), and their interaction as predictors and experienced regret as the dependent variable. The results showed a significant main effect for maximizing on regret ( $b = 0.38$ ,  $SE = 0.10$ ,  $t(401) = 3.77$ ,  $p < .01$ ,  $CI_{95} = [0.18, 0.59]$ ) but not for the dummy-coded condition ( $b = 0.77$ ,  $SE = 0.57$ ,  $t(401) = 1.35$ ,  $p = .18$ ,  $CI_{95} = [-0.35, 1.89]$ ). The expected interaction between condition and maximizing was significant ( $b = -0.40$ ,  $SE = 0.15$ ,  $t(401) = -2.70$ ,  $p < .01$ ,  $CI_{95} = [-0.68, -0.10]$ ).

As shown in Fig. 1, contrary to our predictions, the Johnson-Neyman technique (Spiller et al., 2013) revealed that when maximization tendency was above 2.90 (82% of the sample), there was a significant negative effect ( $b = -0.38$ ,  $SE = 0.019$ ,  $p = .05$ ) on regret. No difference was found for low levels of maximizing tendency (put differently, the effect is there for maximizers, but not for satisficers).

Another regression analysis shows that the maximizing tendency had no effect on the number of goals mentioned ( $b = -0.16$ ,  $SE = 0.20$ ,  $t(191) = -0.85$ ,  $p = .40$ ), which indicates that individuals reported the same number of alternative goals regardless of their maximizing tendency. This result suggests that the regret regulation strategy worked independently of the individual's maximizing tendency.

### 2.3. Discussion

In this study, participants were exposed to a decision-making scenario with an outcome that fell short of their initial expectations, and they learned that an alternative choice would have led to a better outcome. In the scenario, participants chose to vacation in Key West, but

Sarasota would have been a better destination choice. Participants were asked about their regret over choosing Key West, and half of them were first asked to list other goals that they could set for their vacation, thereby effectively decreasing the goal level for that trip.

As expected, the  $t$ -test showed that individuals in DGL condition indicated less regret than those in the control condition. Additionally, the number of alternative activities was negatively correlated to individuals' regret intensity and this number was not dependent upon individuals' maximizing tendency. This finding is consistent with the RRT assumption that when regret is inevitable, it is still possible to cope with it (Zeelenberg & Pieters, 2007). We indeed found an effect of the DGL strategy on the mitigation of regret. To the best of our knowledge, this is the first study to empirically test the efficacy of this strategy.

Also, Study 1 extends the explanation of the psychological processes underlying the DGL effect. We found that the reduction in regret when using the DGL strategy was higher for maximizers than for satisficers. Indeed, when one does not get the best outcome, clinging to the counterfactual past should compromise well-being in the case of unattainable goals, thus it is important to reengage in alternatives (Krott & Oettingen, 2018) or, extrapolating to RRT, to use the DGL strategy. However, although research on maximizing has consistently reported the maximizers' higher levels of regret experience, our results surprisingly suggest an effective strategy that might alleviate their negative feelings. When engaging in the DGL strategy maximizers feelings of regret are similar to these of satisficers.

Maximizing orientation is particularly important in consumer research because once activated in one domain (even if not related to consumption situations), it can amplify regret and dissatisfaction in a different domain (Kokkoris, 2019) and also increase the likelihood of returning and switching products (Ma & Roese, 2014, p. 71). Study 2 continues the examination of the workings of the DGL strategy, but this time by directly manipulating individuals' maximizing tendency, instead of measuring it.

## 3. Study 2

Study 2 further tested the proposed effect of the Decrease Goal Level strategy on individuals' regret ( $H_1$ ). We also again examined the interaction with maximizing orientation. Based on Study 1's results, we tested the prediction that DGL strategy works better for maximizers compared to satisficers. For this purpose, we manipulated instead of measuring the maximizing tendency. This study was preregistered (<https://aspredicted.org/7hp57.pdf>).

### 3.1. Method

#### 3.1.1. Participants and design

Based on an a-priory power analysis with G\*Power (80% power,  $\alpha = 0.05$ ,  $f = 0.14$ ) we recruited 494 participants (50.6% females,  $M_{age} = 39$  years,  $SD = 13.53$ ) via Turk Prime, who received \$0.50 compensation. The experiment employed a 2(Maximizing Orientation: satisficing vs. maximizing)  $\times$  2(Task: DGL vs. Control) between-subjects design.

#### 3.1.2. Procedure

We manipulated participants' maximizing orientation using a projective technique (Kassarjian, 1974). Based on Mao (2016, Study 4), participants were asked to read a brief description of a consumer called Julio, who was described as being a satisficer or being a maximizer. Next, they were asked to remember two personal situations in which they behaved like Julio (cf. Morales et al., 2017). After this maximizing/satisficing manipulation, participants read a scenario in which Julio chose the wrong vacation destination and were asked to predict how much Julio would regret his decision. Specifically, participants in the Satisficing conditions read:

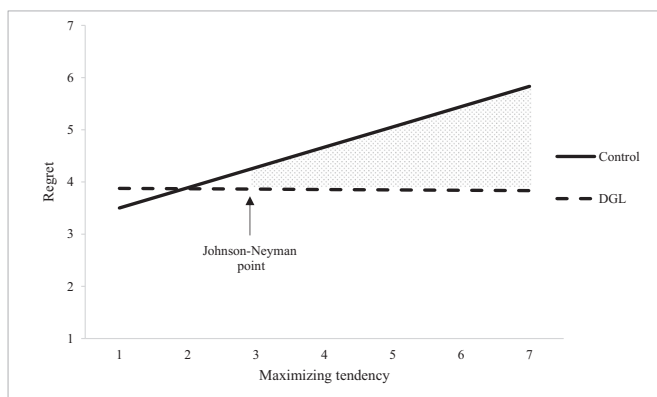


Fig. 1. Maximizing tendency as the moderator of regret regulation (DGL vs Control) effect on regret in Study 1 ( $N = 390$ ). For values above 2.90, there is a significant and negative effect of DGL on regret, but no significant difference was found for low levels of maximizing tendency.

Julio's personal philosophy, simply put, is 'be content' and 'be good enough'. According to him, 'be perfect' and 'be the best' are neither necessary nor realistic. Such a character is clearly reflected in his every decision making such as going shopping. When confronted with several products, for example, he would carefully evaluate each option and its features in a reasonable amount of time, with the goal of selecting a product good enough among available choices.

Participants in the Maximizing conditions read:

Julio's personal philosophy, simply put, is 'be perfect' and 'be the best'. According to him, 'be content' and 'be good enough' are neither acceptable nor tolerable. Such a character is clearly reflected in his every decision making such as going shopping. When confronted with several products, for example, he would carefully evaluate each option and its features no matter how long it takes, with the goal of selecting the best product among available choices.

In order to make the manipulation more realistic (cf. Morales et al., 2017), all participants were asked to complete the following task:

Think about at least two situations in your life when you adopted Julio's philosophy of life and accepted options that were good enough without worrying about choosing the best one [vs. only accepted the best option possible, not just what was good enough]. Describe these situations below, giving some details about the situation, what you chose, and why.

The questionnaire contained two boxes for participants to write in their answers. Next, participants answered the following manipulation check question: "To what extent do you think Julio tends to accept what is good enough or tend to accept only what is best? Answers on the right side indicate that he tends to accept what is good enough, on the left, indicates that he tends to accept only the best" (1 = He only accepts what is the best; 7 = He always accepts what is good enough).

The remainder of the procedure was similar to Study 1. Participants were asked to read a third-person version of the scenario from Study 1. Participants in the Decrease Goal Level condition were asked to write alternative activities in 10 boxes maximum, with each box containing the sentence "Even in the rainy weather Julio could...". Experienced regret over the decision to go to Sarasota was assessed with the two questions from Study 1. Finally, participants were asked for demographic information and thanked for their participation.

### 3.2. Results

The manipulation check confirmed that the Satisficer Julio was viewed as more prone to always accept what is good enough ( $M = 5.99$ ,  $SD = 1.15$ ) than the Maximizer Julio ( $M = 1.62$ ,  $SD = 1.42$ ;  $t(492) = 37.55$ ,  $p < .001$ ). A 2(Maximizing Orientation)  $\times$  2(Task) ANOVA on the regret ratings yielded significant main effects of Maximizing Orientation ( $M_{\text{satisficer}} = 3.80$ ,  $SD = 0.89$  vs.  $M_{\text{maximizer}} = 5.06$ ,  $SD = 0.90$ ,  $F(1, 490) = 99.28$ ,  $p < .0001$ , partial  $\eta_p^2 = 0.168$ ) and Task ( $M_{\text{control}} = 4.68$ ,  $SD = 0.89$  vs.  $M_{\text{DGL}} = 4.18$ ,  $SD = 0.90$ ,  $F(1, 490) = 16.29$ ,  $p < .0001$ , partial  $\eta_p^2 = 0.032$ ). The Maximizing  $\times$  Task interaction was marginally significant,  $F(1, 490) = 2.84$ ,  $p = .09$ , partial  $\eta_p^2 = 0.006$ , observed power = 0.391. Confirming our predictions, follow up tests showed that regret regulation task had a greater effect in reducing Maximizers' regret ( $M_{\text{control}} = 5.42$ ,  $SD = 1.34$ ;  $M_{\text{DGL}} = 4.70$ ,  $SD = 1.42$ ;  $t(243) = 4.122$ ,  $p < .0001$ ), than in reducing Satisficers' regret ( $M_{\text{control}} = 3.94$ ,  $SD = 1.55$ ,  $M_{\text{DGL}} = 3.65$ ,  $SD = 1.32$ ;  $t(247) = 1.633$ ,  $p = .10$ ), see Fig. 2.

Again, regression analysis shows a significant negative effect of the number of goals on regret,  $b = -0.83$ ,  $SE = 0.04$ ,  $t(243) = -2.28$ ,  $p < .05$ . In other words, the more alternative activities were mentioned by participants, the less regret they indicated. Most importantly, the maximizing tendency manipulation had no effect on the number of goals mentioned ( $M_{\text{satisficers}} = 5.47$ ,  $SD = 2.72$ ;  $M_{\text{maximizers}} = 5.22$ ,  $SD = 2.34$ ,  $t(243) = 0.79$ ,  $p = .43$ ). Regardless of the manipulation condition,

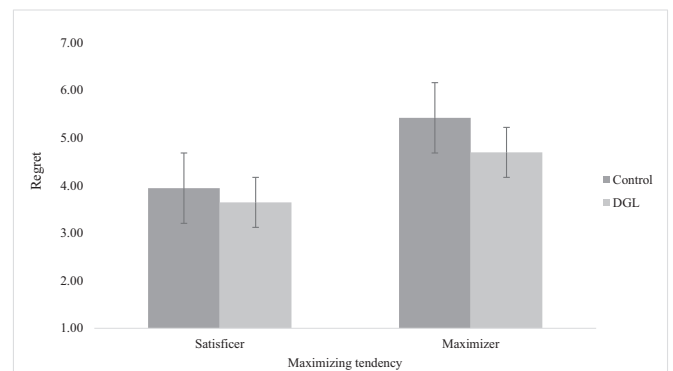


Fig. 2. Mean regret as a function of maximizing tendency (satisficers vs. maximizers) and regret regulation task (DGL vs. Control) in Study 2 ( $N = 494$ ).

individuals reported the same number of alternative activities.

### 3.3. Discussion

Study 2 replicates the findings from Study 1. The DGL strategy was effective in reducing the regret that individuals indicated, and this effect was more pronounced for maximizers than for satisficers. This conclusion was strengthened by the finding that, as in Study 1, the number of alternative activities written down was negatively related to the intensity of the regret over the vacation choice. This indicates that people can regulate their regret the more the alternatives they generate.

Although at first we expected satisficers to reduce more regret than maximizers, Study 1 and 2 results show that post choice regret is not a pre-determined outcome for maximizers but is possible to be mitigated by the DGL strategy. According to Decision Justification Theory, individuals tend to experience more intense regret when they do not see their decision as justifiable (Connolly & Zeelenberg, 2002). In fact, many studies have shown a negative relationship between the level of justification and regret intensity (Inman & Zeelenberg, 2002; Pieters & Zeelenberg, 2005; Reb & Connolly, 2010; Towers et al., 2016). Hence, compared to satisficers, maximizers' decisions might reflect a more cautious, reflective, or justifiable process, which theoretically should lead to less regrettable decisions. However, empirical research has shown that, contrary to this assumption, maximizers experience more regret than satisficers (Besharat et al., 2014; Chowdhury et al., 2009; Hassan et al., 2019; Ma & Roese, 2014; Parker et al., 2007; Polman, 2010; Schwartz et al., 2002; Zeelenberg & Pieters, 2007). Besides, more negative feelings were observed in maximizers even when they obtained objectively better results (Iyengar et al., 2006). Going back to the present results, although maximizers and satisficers did not differ on the number of alternative activities reported, they did differ in the intensity of regret experience. Our current findings suggest that the DGL strategy might help individuals, especially maximizers, to realize that their more cautious and reflective decision-making process actually was not wasted, instead, in the experimental condition it provided outcomes better than only the expected primary goal. Of course, our data do not allow us to test for such an effect based on the justifiability of the decision. This would be something for future research.

## 4. General discussion

Our results reinforce the need to focus on regret elicited in failed consumption experiences. In the case of unattainable goals, reengaging in alternative ones by DGL would help individuals, especially maximizers, not to experience so many threats to their well-being. Being attached to what one could have experienced entails dysfunctional emotional consequences that are not positive to individuals (Krott & Oettingen, 2018) so in some cases, giving up on a goal or setting new

ones is the best thing to do. Previous studies have investigated the goal disengagement effect on individuals' well-being and regret (Bauer et al., 2008; Bauer & Wrosch, 2011; Farquhar et al., 2013; Wrosch et al., 2003, 2005). Such studies have found some benefit to abandoning goal-directed activities and reengaging in valued alternative goals when individuals are confronted with unattainable ones. However, unlike prior work, which has mostly considered individuals' life goals and the age moderator effect, our results investigated the goal updating effect in consumption contexts.

In a case study design, Park et al. (2016) observed the DGL strategy when stakeholders involved in making decisions about investments in technology were faced with some negative outcomes. When these stakeholders faced difficulties that would prevent a perceived criticality initial goal to be reached, it was later assessed as a "nice to have" feature. As the example reported by Pieters and Zeelenberg (2007), a decision to invest in option A that gained 6% in financial value would elicit regret when an individual receives feedback about a foregone alternative B that gained 10% in financial value. Thus, to be satisfied with 6% would help individuals to mitigate their regret. With an experimental design that permits causal conclusion to be drawn, we now extend Park et al. (2016) results and confirm Pieters and Zeelenberg's (2007) assumption by showing the engagement in a goal updating effect in reducing individuals' regret. Our results tested and confirmed the hypothesis that goal updating through DGL helps individuals to deal with retrospective regret.

One of RRT strategies (Alternative-focused) highlights individuals' tendency to reappraise their decisions by devaluing the forgone alternative, as a consumer who is not enjoying his rainy vacation in Key West may picture a rainy vacation in Sarasota anyway, in order to regret less his choice to go to Key West (e.g., Chen & Pham, 2019). It is important to point out that, in the present research, we demonstrate the DGL strategy that addresses the idea of being satisfied with one's choice, rather than engaging in a comparison of alternatives. This is particularly important because the devaluation that occurs in the alternative-focused strategy is unlikely to take place and to help individuals to mitigate their regret if the forgone alternative is clearly superior to the chosen one (Van Dijk & Zeelenberg, 2005).

Furthermore, maximizers have an enhanced tendency to engage in upward comparisons (Ma & Roese, 2014) which in turn would make it easier to find any best-unchosen alternative afterward. The greater transparency afforded by digital media makes people quite exposed to standards of excellence or benchmarks for success, bringing up the question that not everyone can be or get the best, which may arise psychological negative consequences on the individual. Although maximizers are those who always strive to get the best, maximizing the outcomes it is not always possible. Several reasons as the complexity of the world, the limitations of human unaided information processing, or time pressure might push individuals to seek for what is good enough (Misuraca & Fasolo, 2018). Identifying the best option can be a never-ending task, as well as "the best" can always change in the face of new information (Sparks et al., 2012). Maximizers seem less committed to their choices, which makes them more prone to keep their options open and to recognize the appeal of foregone options, leaving them less satisfied than satisficers.

Nevertheless, by showing DGL's significant effect on maximizers' regret we suggest ways to alleviate their negative feelings when their initial goal was not achieved. Suppose a couple that for weeks were engaged in research looking for the perfect hotel to spend their honeymoon. They choose an expensive one expecting to have the best Eiffel tower view through their bedroom window. Unfortunately, when arriving in Paris, they find a completely cloudy climate and there is no more beautiful view to appreciate through the window. How much would they regret choosing this one instead of a cheaper hotel? The DGL effect observed on the studies presented in the present research suggest that, as a strategy usually adopted by Booking.com, suggesting closest landmarks, natural beauty, restaurants, and markets surrounding in

some hotel options descriptions could be useful to help individuals to regulate their post-decision negative experiences and by identifying other goals better enjoy their decision outcome.

Researchers have consistently reported that there is a relationship between decisions to switch suppliers and problems during individuals' experience (Bougie et al., 2003; Coulter & Ligas, 2000; Zeelenberg & Pieters, 2004). Accordingly, many service recovery strategies have been investigated in order to increase customer retention rates (DeWitt & Brady, 2003; Johnston & Fern, 1999; Santos et al., 2019). However, many of the recovery strategies are based on the assumption that the customer will complain to the company before deciding to switch (Sánchez-García & Currás-Pérez, 2011). This is not always the case though, especially in situations like the one in the scenario used in our studies. Consumers do not always attribute responsibility for the failed experience to the provider, sometimes they attribute the bad experience to themselves because they realize that at some point in time they could have prevented the bad situation, by choosing a different option (Gilovich & Medvec, 1994; Zeelenberg & Pieters, 2007). DGL effect results suggest that it is possible to placate consumers even after unexpected negative outcomes that are beyond the company competence, and without waiting for consumers to complain.

It is important to point out that recent results have suggested that maximizers maximize differently across decision domains. Specifically, maximizers maximize in services and experiences significantly less than in consumer goods, or life decisions (Carter & Gilovich, 2010; Kokkoris, 2019). Our studies tested the DGL efficacy to regulate individuals' regret in the experiential domain. Future studies could investigate if individuals' ability to regulate their regret also differs according to the context.

Still, in regards to Maximizing orientation, there is an extensive discussion about the Schwartz et al. (2002) Maximization Scale refinement, since past research employing the scale suggested it contains several items that tend not to perform well psychometrically (Nenkov et al., 2008). In fact, Cheek and Schwartz (2016) recently called for future research on the measurement of the maximizing orientation, focusing not only on high standards component but especially on alternative search strategies which, according to Misuraca and Fasolo (2018), should start first by a consistent discussion about what indeed is 'seeking for the best'. Therefore, the next studies could investigate the different components model of maximization relationship with the DGL effect.

#### CRediT authorship contribution statement

**Annaysa Salvador Muniz Kamiya:** Conceptualization, Methodology, Investigation, Formal analysis, Writing – original draft. **Marcel Zeelenberg:** Validation, Resources, Formal analysis, Writing – review & editing. **José Mauro da Costa Hernandez:** Methodology, Supervision, Validation, Writing – review & editing.

#### Declaration of competing interest

All authors declare that they have no conflict of interest.

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