

HEC MONTRÉAL

**Predicting a consumer's mood after his revenge against a firm: Influence of the revenge behavior on the prediction's accuracy**

**By**

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*Mémoire présenté en vue de l'obtention  
du grade de maîtrise ès sciences  
(M. Sc.)*

Août 2015

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## RÉSUMÉ

Ce mémoire réplique l'étude de Carlsmith, Wilson et Gilbert (2008) en traitant de l'erreur de prédiction de l'impact de la vengeance en contexte de vengeance du consommateur. Alors qu'on s'attend à ce que le comportement de vengeance fasse varier la qualité des prédictions des répondants, il n'en est rien. Une expérimentation par scénario montre que les consommateurs sous-estiment leur désir de pardonner à la firme et surestiment leur désir de se venger à nouveau et leurs sentiments négatifs. Ils ruminent moins que prévu. La surestimation de leurs émotions positives s'explique par la surestimation de leur désir de se venger à nouveau pour rendre leur relation avec la firme plus juste. Ces résultats nuancent ceux de Carlsmith, Wilson et Gilbert et orientent les recherches futures vers le rôle modérateur du type de relation entretenue avec la firme.

**Mots-clefs:** erreur de prédiction, désir de vengeance, rumination, comportement de vengeance, comportement du consommateur, vengeance du consommateur, recherche quantitative, expérimentation, enquête

## **ABSTRACT**

This master's thesis replicates Carlsmith, Wilson and Gilbert's study (2008) about the error of prediction of the impact of revenge on mood, in a consumer behavior context. While revenge behavior is supposed to moderate the predictions' accuracy, the results of this scenario-based experiment say otherwise. Consumers overestimate their desire to pursue revenge in the future, and they also overestimate their negative feelings and ruminate less than they thought. They also underestimate their desire to forgive the firm. The overestimation of their desire to pursue revenge in the future leads to an overestimation of their positive feelings, because revenge makes their relationship with the firm fair. These results nuance Carlsmith, Wilson and Gilbert's. Future research should study the moderation of both consumers' prediction accuracy and impact of revenge, by the type of relationship existing between the consumer and the guilty firm.

**Key words:** error of prediction, prediction accuracy, desire for revenge, rumination, revenge behavior, consumer behavior, consumer revenge, quantitative research, experimentation, survey

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## REMERCIEMENTS

Je remercie tout d'abord mes co-directeurs, Yany Grégoire et Sandra Laporte, pour le soutien qu'ils m'ont accordé tout au long du processus et pour avoir su me recadrer quand j'en avais besoin. Tous les deux forts disponibles et très encourageants, leur aide m'a été indispensable et nos rencontres ont généré de très intéressantes discussions.

Je remercie aussi la Chaire en Marketing des services et expérience-client pour le généreux soutien financier qui m'a été offert. La chaire m'a aussi permis de faire la connaissance de Fateme Ghadami et Mina Rohani qui m'ont gentiment accueillie, et m'ont également apporté soutien, conseils et encouragement. Leur regard plus expérimenté et leurs conseils avisés m'ont été très bénéfiques. Merci aussi à Nasser Shahrabi et Fatima El Yousfi pour leur gentillesse et leurs encouragements.

Un grand merci à mes amies Sabrina Bédard, Dominique Dussault et Katherine Vachon qui ont exploré avec moi les difficultés, frustrations et joies du mémoire. Ensemble nous avons pu travailler, discuter, procrastiner, et surtout nous encourager et nous entraider...

Je tiens également à remercier Jonathan Deschênes pour l'aide apportée lors de l'Atelier de recherche en marketing.

Finalement, je serai éternellement reconnaissante envers mes parents pour leur patience et leur soutien, et pour m'avoir patiemment laissée parler de chaque étape de mon cheminement.

## 1. INTRODUCTION

Customer satisfaction is the key to companies' success, particularly in service companies. Their satisfaction leads to higher loyalty, stronger relationships with firms, and higher intentions to purchase and recommend (Cronin, Joseph, Brady and Hult, 2000; Lemke, Clarke and Wilson, 2011; Zeithaml, Berry and Parasuraman, 1996). However, in a situation of double deviation (service failure and poor recovery), consumers may feel angry or betrayed by the company, and decide to get revenge (Grégoire and Fisher, 2008). The consequences of their decision are potentially disastrous for companies. Indeed, due to the explosion of social media, acts of revenge can easily go viral, as demonstrated by Dave Carroll's *United Breaks Guitars* (Sons of Maxwell, 2009).

Unlike the impact of revenge on companies, the impact of revenge on consumers' moods is not clearly identified. Previous research in psychology and revenge literature proposes two theories. The first says that revenge is beneficial because the resulting satisfaction helps restore the avenger's mood (Bushman, Baumeister and Phillips, 2001) and because of the prosocial aspect of revenge (De Quervain, Fischbacher, Treyer, Schellhammer, Schnyder, Buck and Fehr, 2004; Knutson, 2004; Gollwitzer and Denzler, 2009; Gollwitzer, Meder and Schmitt, 2011; Strobel, Zimmermann, Schmitz, Reuter, Lis, Windmann and Kirsch, 2011; Funk, McGeer and Gollwitzer, 2014). The second theory disagrees, positing that revenge has the effect of salt water on thirst. It is assumed that a consumer acting on his anger fuels it because of the violation of social norms (Yoshimura, 2007), and because he

ruminates (Rusting, and Nolen-Hoeksema, 1998; Bushman, 2002; McCullough, Bono, and Root, 2007, Carlsmith, Wilson and Gilbert, 2008).

Carlsmith, Wilson and Gilbert (2008) notably demonstrated in a general context that people wrongly believe they will feel better after getting revenge, while in fact getting revenge makes them ruminate and their mood gets worse. According to the researchers, people's ignorance of the impact of rumination explains their mistaken belief. Research in psychology shows that several psychological mechanisms could also play a part (Totterdell, Parkinson, Briner and Reynolds, 1997; Loewenstein, Prelec and Shatto, 1998; Loewenstein and Schkade, 1999; Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000; Gilbert, Driver-Linn, & Wilson, 2002; Wilson and Gilbert, 2003; Hsee and Hastie, 2006; Buehler, McFarland, Spyropoulos and Lam, 2007; Hoerger, Quirk, Lucas and Carr, 2010; Kushlev and Dunn, 2012).

This research is set in a consumer behavior context rather than a general one because several variables specific to this context could be game changers, like the firm's reputation and attitude toward the consumer, both before and during the service failure (De Wulf, Odekerke-Schröder and Iacobucci, 2001; Aaker, Fournier and Brasel, 2004; Grégoire and Fisher, 2008; Grégoire, Tripp and Legoux, 2009; Grégoire, Laufer and Tripp, 2010; Tripp and Grégoire, 2011), as well as the consumer's perception of the service failure and double deviation (Folkes, 1984; Weiner, 2000). These game changers make this replication valuable. Do consumers really overestimate the positive impact of revenge when their target is a firm? We aim to understand if and how consumers can make incorrect predictions about the

beneficial effect of revenge on their affective state, leading them to believe that revenge will be sweet while it actually turns out bitter.

The moderating effect of revenge behavior on desire to pursue revenge in the future, discovered by Ghadami (2015), may help evaluate more clearly the accuracy of the prediction regarding the impact of revenge on mood in this context. Her research showed that getting revenge directly decreases the desire to pursue revenge again, whereas doing it behind the firm's back sustains it over time because the consumer ruminates. While Carlsmith, Wilson and Gilbert (2008) did not use this variable, we propose that a direct act of revenge brings more closure to a consumer than an indirect one. Therefore, a consumer getting revenge directly against a firm (by making the firm aware of his revenge) is more likely to accurately predict his mood after the revenge than a consumer acting indirectly (behind the firm's back) because, in the former case, he ruminates less and is less tempted to seek revenge again.

A 2 by 2 between-subject scenario-based experiment, with the addition of a control condition aiming to determine consumers' revenge preference, is used to confirm this hypothesis based on previous literature. The two factors used here are the *revenge behavior* (*direct*: the firm is aware of the revenge vs *indirect*: the firm doesn't know about it) and the *task* (*prediction*: before the revenge, guessing how it will make the consumer feel vs *reality*: evaluating the consumers' feelings after the revenge). In the control condition, the respondent chooses a revenge behavior and predicts his future mood. These five conditions are used to assess the accuracy of the

predictions depending on the revenge behavior and their efficiency, while letting us know more about consumers' opinions regarding the impact of revenge.

This study offers theoretical contributions mainly related to revenge literature. Future research possibilities will be discussed.

## **2. LITERATURE REVIEW**

The first section of this literature review is dedicated to Carlsmith, Wilson and Gilbert's study (2008) related to mood prediction mistakes in a general interpersonal revenge context. This section aims to present the original study, which this master's thesis attempts to replicate in a consumer revenge context. The next two sections present two types of explanations for why avengers fail to correctly predict their mood. The first is linked to lay beliefs about revenge, and the second one is mostly subconscious and psychological. The aim of this study is to check if this kind of mistake happens in a consumer behavior context and why.

### **2.1. Overly optimistic mood and rumination predictions in a general interpersonal context: Carlsmith, Wilson and Gilbert (2008)**

This master's thesis is a replication of Carlsmith, Wilson and Gilbert's study (2008). Their study was concerned with the inaccurate predictions of the impact of revenge on mood and rumination in a general interpersonal context. This literature review begins with a detailed summary of their article.

Carlsmith, Wilson and Gilbert pursued several goals. First, they wanted to know more about the emotional impact of revenge. They were wondering if people could

accurately predict these results, and in cases where the predictions were inaccurate, they wanted to know why.

Carlsmith, Wilson and Gilbert based their study on psychological literature about the impact of revenge, and about the psychological mechanisms involved in affective forecasting. Specifically, they discussed the possibility of a cathartic power of revenge and the use of revenge to deliberately repair one's mood. They were unsure about the true effect of revenge on mood: is the effect of revenge truly salutary? They also identified impact bias and focalism as main causes of affective errors of prediction: forecasters overestimate the impact of the future event on their emotions (intensity and duration). People tend to overestimate how much a future event will stay on their mind. However, because anger traps people in a vicious circle, the three authors assumed that betrayed people would overestimate the positive impact of revenge on their emotions. Hence, they would underestimate their anger's duration and intensity after their revenge. Indeed, their lay belief is that revenge will make them feel better; this belief may be too optimistic. Carlsmith, Wilson and Gilbert decided to validate this idea with three experimental studies.

The first one was a lab experiment. It was based on the free rider paradigm. The participants were separated into groups of four players (the fourth one was a computer but the respondents did not know it). They played a game of "Prisoner's Dilemma". They received some money and could choose to invest it in a common fund or keep it. At the end of each round, the money deposited in the common fund was divided into four shares with an added 40% interest regardless of the participants' individual contributions. The fourth player (computerized) encouraged

the participants to invest in the common fund, while keeping its own money. Therefore, he was a free rider. The participants were divided into three conditions: punishment, forecast, no punishment. While those who were in the no-punishment condition were instructed to assess their feelings and how much they ruminated, the punishers were told they could choose to sacrifice some of their winnings to punish the free rider (he would lose three times the amount they chose to sacrifice to punish him), while the forecasters were told to imagine they could do so. Both punishers then assessed their feelings and rumination level while the forecasters predicted them, imagining what they would feel if they had been allowed to punish. After a ten minute filler task, everyone rated their reactions once again.

Carlsmith, Wilson and Gilbert's second study aimed to find out what happened if people witnessed the punishment of someone who hurt them, instead of giving it themselves. Each participant received a detailed scenario of the first study and were divided into three conditions: no punishment, punisher and witness.

In the last study, there were five conditions: no punishment, punishment, witness, forecaster in a situation of punishment, and forecaster as a witness. In this study, the avengers (actual and forecasters) were asked to compare how they would have felt if they were witnesses instead of giving the punishment themselves, while the witness (actual and forecasters) and those who did not punish answered the opposite question.

The three studies allowed Carlsmith, Wilson and Gilbert to find out that people overestimated their happiness after an act of revenge and underestimated how much they ruminated. They even thought they would feel better and ruminate less if they were able to punish rather than do nothing, which was wrong since they kept thinking

about the free rider and felt bad. On the other hand, they always felt better as a witness than as a punisher, probably because they did not punish the free rider themselves, and so they did not feel as though they were bad people. This was not predicted either. Carlsmith, Wilson and Gilbert also discovered that when the respondent punishes the offender himself, rumination partially mediates the effect of punishment on affect, while affect partially mediates the impact of punishment on rumination. However, the respondents are unable to predict this effect.

## **2.2. Impact of revenge on mood: two contrasting theories**

The impact of revenge on a consumer's mood is not clearly identified. Indeed, previous research in psychology highlights two different points of view. While some authors believe that "revenge is sweet", others disagree and state that the impact of revenge on mood is negative.

First, revenge is "sweet" for two main reasons. Western culture spreads the idea that acting on one's anger feels good (Bushman, Baumeister and Phillips, 2001) and that revenge has a cathartic power. In addition, the prosocial aspect of revenge also makes it "sweet". Indeed, punishing social norm violations increases anticipated satisfaction (de Quervain, Fischbacher, Treyer, Schellhammer, Schnyder, Buck and Fehr, 2004; Knutson, 2004; Strobel, Zimmermann, Schmitz, Reuter, Lis, Windmann and Kirsch, 2011). Moreover, several authors proved that revenge's sweetness does not come from its process but from its outcome. While the idea of getting even with someone who wronged you is tempting, getting revenge is not enough. What matters is that the offender understands and acknowledges that what he did was bad (Gollwitzer and Denzler, 2009; Gollwitzer, Meder and Schmitt, 2011) and adopts a

remorseful behavior (Funk, McGeer and Gollwitzer, 2014). If he does, then the effect on mood is the most positive. If the avenger does not act in his interest alone, but also for others, and if his action successfully changes the culprit's behavior for the better, then revenge can be sweet.

On the contrary, some authors agree that revenge has the same effect as “salted water on thirst” for two main reasons. Yoshimura (2007) says that getting revenge generates more negative emotions than positive ones. Getting revenge is not socially desirable and increases feelings of guilt. In cases where the revenge fails, it can cause anger. Finally, an avenger may also fear retribution. These negative emotions overpower the positive ones. Other authors think these negative emotions are not caused by the act of revenge, but by its process. When someone plans and enacts revenge, he ruminates (Crombag, Rassin and Horselenberg, 2003; Carlsmith, Wilson and Gilbert, 2008). This means that his thoughts keep coming back to the initial act which provoked the revenge and the failed recovery, which increases his level of aggression (Rusting and Nolen-Hoeksema, 1998; Bushman, 2002; McCullough, Bono, and Root, 2007). Therefore, his mood cannot improve.

These two opposing beliefs about revenge, and more specifically consumers' general lack of knowledge about rumination compared to the more accepted idea that revenge feels good, partly explain affective forecasting mistakes (Kushlev and Dunn, 2012; Hsee and Hastie, 2006). Several psychological mechanisms also do.

### **2.3. The fault in our brains: psychological mechanisms and affective forecasting mistakes**

Some psychological mechanisms are also believed to be involved in affective errors of prediction. These mechanisms can be classified in three categories. They can be linked to the event affecting the future mood, to the context of the prediction, or to the consumer's wish to repair his current mood.

The first is related to the event influencing the future mood. Consumers can be too focused on the impact of revenge on their mood to take into account other possible influencers (*focalism*: Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000; Wilson and Gilbert, 2003; Hsee and Hastie, 2006). Moreover, they can also overestimate its impact on their emotional reactions while making their prediction (*impact bias*: Gilbert, Driver-Linn, & Wilson, 2002; Wilson and Gilbert, 2003; Hsee and Hastie, 2006; Buehler, McFarland, Spyropoulos and Lam, 2007; Hoerger, Quirk, Lucas and Carr, 2010; Kushlev and Dunn, 2012). The third bias related to the future event is called "*misconstrual*" because consumers are likely to imagine their perfect revenge and anticipate their future mood accordingly. They are later disappointed when it does not happen that way, which is bad for their mood (Gilbert, Driver-Linn and Wilson, 2002; Wilson and Gilbert, 2003).

Consumers also tend to forget the influence of their current context on their prediction. Indeed, a consumer can be so blinded by his anger that he forgets that the double deviation and his revenge are two separate events in two separate times. He does not realize that his mood just before his revenge may not be the same as his current angry one (just after the service failure). Therefore, he predicts a complete reversal of his bad mood thanks to his revenge, which could be a mistake. Loewenstein and Schkade (1999), Gilbert and Wilson (2003) and Hsee and Hastie

(2006) call this *projection bias*. The *hot to cold empathy gap* also takes place before the revenge. Angry consumers could overestimate how unhappy they will be and how much they will want revenge afterwards because, when they are predicting it, after the double deviation, they are very angry and they forget that revenge may affect their mood (Wilson and Gilbert, 2003; Hsee and Hastie, 2006; Kushlev and Dunn, 2012). Once again, their prediction is contaminated by the context. Even though in the heat of the moment they feel like they will never stop being angry, there is no guarantee their anger will be as intense later (Loewenstein, Prelec and Shatto, 1998). Unlike the projection bias and the hot to cold empathy gap, the *expectation effect* happens after the prediction. Gilbert and Wilson (2003) proved that when a future mood is coherent with its prediction, it is reinforced. On the contrary, if the mood differs, it becomes more opposed to the prediction. A consumer could be so disappointed by his revenge's poor impact on his mood that it would get even worse.

The last psychological mechanism worth mentioning is the *motivated prediction*. This type of mood prediction aims to repair the consumer's current mood (Buehler, McFarland, Spyropoulos and Lam, 2007). However, if the forecaster does not take into account possible mood influencers, which often happens, it can have the opposite effect (Totterdell, Parkinson, Briner and Reynolds, 1997). Indeed, being too optimistic aggravates a future mood whereas a negative mood prediction "softens the blow". That is why a consumer whose revenge is not as satisfying as he had hoped will be angrier than if he had predicted a lower mood. The following table (Table 1) summarizes the different psychological mechanisms described in this section.

<b>Mechanism</b>	<b>Main idea</b>
<p>Focalism</p> <p><i>Wilson, Wheatley, Meyers, Gilbert, &amp; Axsom (2000)</i>  <i>Gilbert and Wilson (2003)</i>  <i>Hsee and Hastie (2006)</i></p>	<p>Focusing completely on one event before predicting a future mood and forgetting about other possible mood influencers.</p>
<p>Impact bias</p> <p><i>Buehler, McFarland, Spyropoulos and Lam (2007)</i>  <i>Wilson and Gilbert (2003)</i>  <i>Hoerger, Quirk, Lucas and Carr (2010)</i>  <i>Gilbert, Driver-Linn, &amp; Wilson (2002)</i>  <i>Hsee and Hastie (2006)</i>  <i>Kushlev and Dunn (2012)</i></p>	<p>Overestimating the impact of a future event on emotional reactions before predicting them.</p>
<p>Misconstrual concept</p> <p><i>Gilbert and Wilson (2003)</i>  <i>Gilbert, Driver-Linn and Wilson (2002)</i></p>	<p>Imagining a future event in the way one wishes and predicting future mood using the key parts of the previously described event as bases, regardless of the possibility of the event happening differently.</p>
<p>Projection bias</p> <p><i>Loewenstein (1999)</i>  <i>Gilbert and Wilson (2003)</i>  <i>Hsee and Hastie (2006)</i></p>	<p>Predicting a future mood without realizing that a present event is contaminating current emotions and the prediction.</p>
<p>Expectation effect</p> <p><i>Gilbert and Wilson (2003)</i></p>	<p>When a future mood is coherent with its prediction, the mood is reinforced. On the contrary, if the mood differs from its prediction, their opposition is strengthened.</p>
<p>Hot to cold empathy gap</p> <p><i>Gilbert and Wilson (2003)</i>  <i>Loewenstein, Prelec and Shatto (1998)</i>  <i>Hsee and Hastie (2006)</i>  <i>Kushlev and Dunn (2012)</i></p>	<p>Tendency to overestimate (or underestimate) a future mood linked to an event because of the level of desire for the future event to happen.</p>
<p>Motivated prediction: risk and difficulty</p> <p><i>Buehler, McFarland, Spyropoulos and Lam (2007)</i>  <i>Totterdell, Parkinson, Briner and Reynolds (1997)</i></p>	<p>A mood prediction whose goal is to repair a current mood can have the opposite effect if the forecaster doesn't take into account possible mood influencers. Being too optimistic aggravates a future mood, whereas a negative mood prediction "softens the blow".</p>

TABLE 1: Effect of Psychological Mechanisms on Mood Prediction Accuracy in Literature

### 3. CONCEPTUAL FRAMEWORK

If consumers do fail to accurately predict their mood after an act of revenge, does the magnitude of the error vary depending on the type of revenge behavior? The following conceptual framework depicts this question.

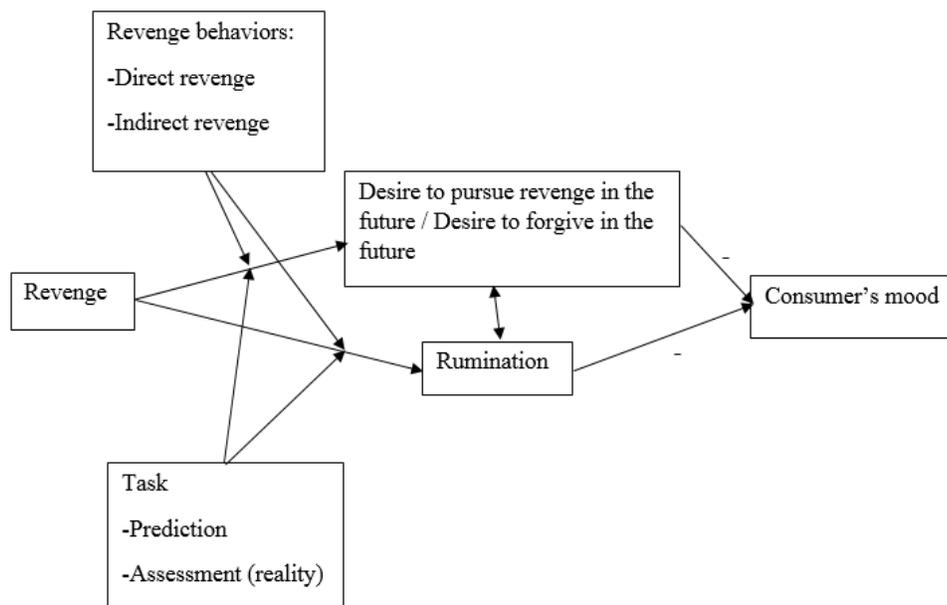


Figure 1: Conceptual Framework

This section first presents the different revenge behaviors, their determinants and their impact as a mediator of the impact of revenge on mood. The next section introduces this study's expected mediators (desire to pursue revenge in the future / forgiveness and rumination), as well as their impact on each other, and on the consumer's mood.

#### 3.1. How to get revenge: In the firm's face or behind its back?

The explanations for a possible gap between prediction and reality (the two levels of “task”) have already been presented. The second independent variable is the revenge behavior. A consumer can get revenge directly or indirectly. Several motives determine his choice. This variable’s impact as a moderator of the impact of revenge on mood is also explained.

### *3.1.1. Definition*

An act of revenge is direct if the guilty firm is aware of it (Grégoire, Laufer and Tripp, 2010). Two kinds of direct revenge exist: market place aggression and vindictive complaining (Grégoire, Laufer and Tripp, 2010; Grégoire and Fisher, 2008). These behaviors consist in expressing one’s anger and one’s feeling of betrayal directly to the firm (often to a frontline employee). Because direct revenge aims to disturb and put pressure on the employee receiving it (Grégoire, Laufer and Tripp, 2010), it can be qualified as violent: the abuse is either physical or verbal.

On the contrary, indirect revenge takes place behind the firm’s back with the use of negative word of mouth (NWOM) and third party complaining (Grégoire, Laufer and Tripp, 2010). NWOM consists in spreading the double deviation story by talking to friends and relatives, or using the Internet (online public negative complaining: Ward and Ostrom, 2006) to reach a larger public. This way, other consumers are aware of the revenge before the firm is. This type of revenge aims to ruin the firm’s reputation (Grégoire, Laufer and Tripp, 2010; Grégoire and Fisher, 2006). Finally, third party complaining consists in contacting an organization in order to seek legal advice (Ghadami, 2015; Grégoire and Fisher, 2006) on the most efficient way to pressure the guilty firm.

### *3.1.2. Determinants*

A consumer will most likely choose to get revenge against a firm directly if he thinks he has enough power individually to avoid retaliation (Tripp and Bies, 1997; Grégoire, Laufer and Tripp, 2010; Bies and Tripp, 2013; Ghadami, 2015), otherwise an indirect revenge behavior is more convenient (Tripp and Bies, 1997; Ward and Ostrom, 2006; Grégoire, Laufer and Tripp, 2010; Bies and Tripp, 2013; Ghadami, 2015). On the other hand, he will act behind the firm's back if he fears the judgement of others, since direct revenge behaviors, which are sometimes perceived as more aggressive, are not socially desirable (Eisenberger, Lynch and Rohdieck, 2002, in Aquino and Reed, 2002). Indirect revenge will also be chosen if the consumer wants to protect others, or to gain support as a group of consumers (Grégoire and Fisher, 2008) in order to teach the firm a lesson. Finally, Grégoire, Laufer and Tripp (2010) proved that the more severe the incident and the more problems it caused for the consumer, the more he spread the word on the Internet, to his friends or to a third-party.

### *3.1.3. Revenge behavior as a moderator of the impact of revenge on mood*

Ghadami (2015) proved that direct revenge behavior lowers the consumer's desire to pursue revenge in the future, whereas indirect revenge behavior leads to a sustained desire to pursue revenge in the future. This means that revenge is "sweet" only if the revenge behavior is direct. Indeed, direct revenge leads to closure: by acting in front of the firm and putting pressure on its employees, a consumer feels like the firm is getting what it deserves (Gollwitzer and Bushman, 2002), and that he

is protecting other consumers (Gollwitzer and Denzler, 2009). On the contrary, indirect revenge does not allow for this confrontation. Since the consumer acts behind the firm's back, he cannot be sure it is aware of his action. Therefore there is no sense of closure and the potential for rumination increases (Ghadami, 2015), which prevents the thirst for revenge from being satiated.

### **3.2. Expected mediators**

Several variables are judged as suitable mediators of the impact of revenge behavior on prediction accuracy. First, both desire to pursue revenge in the future and desire to forgive in the future, as well as their impact on consumers' moods are presented. Then, rumination is defined, as well as its impact on both desire for more revenge / for forgiveness in the future, and mood.

#### *3.2.1. Desire to pursue revenge in the future*

After being the victim of a double deviation, a consumer gets angry because he knows a person is responsible (it is not situational), and that the firm could have prevented it (it was predictable) (Lerner and Keltner, 2000). He may want to get revenge. Weiner (2000) and Folkes (1984) agree that the stability of the incident (accidental or usual), and knowing that the company is responsible, increase or decrease this desire. Once someone (firm, employee) is blamed, the motivation to retaliate is greater (Bies and Tripp, 2013).

Violating social norms also creates desire to pursue revenge in the future. Indeed, the company violated the reciprocity principle and betrayed the consumer's trust by failing to meet his expectations (De Wulf, Odekerken-Schröder and Iacobucci, 2001). Both of these unfair violations create a desire to "get even". Because the consumer

has been wronged, his anger is righteous, which makes getting revenge morally acceptable.

### *3.2.2. Desire for forgiveness in the future*

According to Tripp, Bies and Aquino (2007), to forgive means to let go of one's resentment and anger towards an offender. Two conditions are necessary to be successful (Bies and Tripp, 2013). First, the consumer must know who exactly is responsible for the service failure. Second, his revenge must be proportionate to the damage he suffered so that forgiving is easier. Giving the firm what it deserves makes letting go of the resentment easier. Achieving forgiveness depends on the consumer's perception of fairness in his relationship with the firm (Grégoire and Fisher, 2008; Joireman, Grégoire, Devezer and Tripp, 2013). If the consumer does not consider their relationship balanced after his revenge, forgiving will be harder.

McCullough, Worthington and Rachal (1997) add that an attempt at forgiveness is characterized by the willingness to build a new constructive relationship with the firm. Nonetheless a consumer may forgive the company only to avoid having to work on a new relationship. Indeed, he can lack the level of motivation necessary to act on his desire to pursue revenge in the future, or think it is not worth destroying any possibility of reconciliation (Bies and Tripp, 1997; Tripp, Bies and Aquino, 2007), and decide to forgive the firm even though it does not deserve it.

If, after enacting his revenge, a consumer still wants to pursue revenge, then he may not have got enough closure from his first attempt. Therefore, his thirst for revenge is not appeased. Hence we assume that his mood will be poor, or not as good

as he predicted. In fact, desire to pursue revenge in the future is likely to negatively impact mood.

On the contrary, if a consumer is willing to forgive, it may mean that the success of his revenge helped to distract his mind from the situation. He should then be in a better mood (Bushman, 2002; Crombag, Rassin and Horselenberg, 2003). Therefore desire to forgive in the future may improve his mood.

### 3.2.3. *Rumination*

Because the consumer is righteously angry, he ruminates (Bies and Tripp, 2013). This process keeps his thoughts on the double deviation (Rusting and Nolen-Hoeksema, 1998; McCullough, Bono and Root, 2007; Bies and Tripp, 2013). Therefore he cannot think of anything but retaliating, which negatively impacts his mood. The more the consumer ruminates, the more he gets angry; it is a vicious circle and venting about it to friends makes it worse (Bies and Tripp, 2013). This is why the idea of revenge having a cathartic effect is criticized (Bushman, 2002).

Because of this vicious circle, the consumer cannot consider any future event that is not linked to the situation (Bies, Tripp, 2013). This clearly recalls two psychological mechanisms previously explained: *focalism* and *hot to cold empathy gap*. Indeed, the hot to cold empathy gap is characterized by the consumer's inability to think of a "deadline" at which the event would stop affecting his mood (Wilson and Gilbert, 2003; Loewenstein, Prelec and Shatto, 1998; Hsee and Hastie, 2006; Kushlev and Dunn, 2012). Ruminating is likely to encourage such a bias. Moreover, the consumer's obsession with the event that is supposed to affect his mood and his obliviousness to the other events that might influence it could lead to an affective

forecasting mistake (focalism) (Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000; Wilson and Gilbert, 2003; Hsee and Hastie, 2006; Buehler, McFarland, Spyropoulos and Lam, 2007).

The more a consumer ruminates, the more he wants to pursue revenge, and the less he is inclined to forgive the firm. Rumination should also indirectly lower the mood through the desire to pursue revenge in the future.

#### **4. HYPOTHESIS DEVELOPMENT**

The variables selected for this study have now been explained. This section first re-states the reasons for replicating this study in a consumer behavior context. Two hypotheses presenting this study's expected results and their justification follow.

Several variables make an act of revenge in a consumer behavior context different from one in an interpersonal general context (firm's attitude before and during the incident, firm's reputation, magnitude of the problems caused, consumer's perception of the incident, and so on), which could influence the impact of revenge on mood. An act of revenge against a firm takes place in a much more competitive context: each party wants something from the other. Personal interest comes first whereas in Carlsmith, Wilson and Gilbert's study (2008), cooperation was more likely to characterize the relationship. During their studies, four "players" were funding a common account through a prisoner's dilemma. The number of players may have increased the importance of behaving in a socially desirable way and to promote common good. Moreover, the context was informal and no contract was drawn. The differences between both contexts make this study relevant. Getting revenge for the

violation of the reciprocity principle may not induce guilt when it is against a firm. Consumers may accurately predict their feelings, desire to pursue revenge in the future / forgiveness and level of rumination. Drawing on Ghadami's results (2015), the type of revenge behavior seems likely to moderate the impact of revenge and the prediction's accuracy.

First, according to the conceptual framework, a direct confrontation allows the consumer to accurately predict his future mood: because he gets even and gets closure, his desire to pursue revenge in the future decreases, he ruminates less and his mood is as high as he predicted. He is also more inclined to forgive and let go of his resentment. There is no overestimation.

*Hypothesis 1: When the revenge is direct, there is no affective forecasting mistakes in a consumer's revenge context. Each actual variable is equal to its predicted counterpart.*

- a) The consumer's actual mood after he gets revenge and his predicted mood are equal.*
- b) His actual desire to pursue revenge in the future is equal to his predicted desire to pursue revenge in the future.*
- c) His actual desire to let go of his resentment is equal to his predicted desire to let go of his resentment.*
- d) His actual desire to repair his relationship with the firm is equal to his predicted desire to repair his relationship with the firm.*
- e) After his revenge, the consumer ruminates as much as he predicted.*

On the contrary, as we previously discussed, because a consumer getting revenge indirectly does not confront the firm, he is unable to get closure. For this reason, contrary to his belief, his desire to pursue revenge in the future is either sustained or increased, he does not want to forgive the company nor give his relationship with the firm a new start. He also ruminates more. As a result, his mood is worse than he predicted.

*Hypothesis 2: When the revenge is indirect, there are affective forecasting mistakes in a consumer's revenge context. The actual variables and their predicted counterpart are not equal.*

- a) The consumer's actual mood after he gets revenge is worse than his predicted mood. Indeed, his actual negative feelings are higher than his predicted negative feelings. Moreover, his actual positive feelings are lower than his predicted positive feelings.*
- b) His actual desire to pursue revenge in the future is higher than his predicted desire to pursue revenge in the future.*
- c) His actual desire to let go of his resentment is lower than his predicted desire to let go of his resentment.*
- d) His actual desire to repair his relationship with the firm is lower than his predicted desire to repair his relationship with the firm.*
- e) The consumer ruminates more after his revenge than he predicted.*

## **5. METHODOLOGY**

This section presents the methodology used in this study (an experiment with a survey). It begins by a brief overview, then focuses on its design: presenting each condition and justifying the use of scenarios. A brief summary of this experiment's steps completes the second sub-section. The next one explains how the stimuli manipulate the two independent variables. Once the selected material's relevance is demonstrated, the scales used to measure the mediators and the dependent variables are detailed. Finally, the results of the pre-test validating the design are presented.

### **5.1. Overview**

To test these hypotheses, a scenario-based between-subject experiment was designed to validate the assumption of causality and eliminate the impact of undesirable events (Singleton and Straits, 2010, p.197). Two independent variables were tested: the task (reality or prediction) and the revenge behavior (direct or indirect). The dependent variables are: desire to pursue revenge in the future; desire to forgive in the future (let go of the resentment / repair the relationship); rumination; and affect (positive / negative). The respondents were North American, older than eighteen and recruited through Qualtrics. They were randomly assigned to a condition to generalize the results (Singleton and Straits, 2010) and avoid the concentration of a certain population reacting particularly to a specific context in a single condition (Kushlev and Dunn, 2012). Their participation was compensated (4 dollars).

### **5.2. Experimental design**

#### *5.2.1. Selecting five conditions*

Each independent variable had two levels. Respondents either predicted the dependent variables or experienced them; their revenge was either direct or indirect.

A control condition was used to find which revenge the respondents thought would make them feel best and less likely to pursue revenge again. They were asked to choose a behavior according to these criteria and make a prediction. The idea was to compare the gaps between the reality conditions and the predictions, and see if they would be smaller when the respondents had a choice. Therefore there were five conditions<sup>1</sup> (Table 1).

### 5.2.2. *Choosing a between-subject design*

A between-subject design was used to prevent any self-fulfilling prophecy or consistency bias since no respondent both predicted and evaluated actual feelings (Kushlev and Dunn, 2012).

Revenge behavior Task	Reality	Prediction
Direct revenge	Condition 1	Condition 2
Indirect revenge	Condition 3	Condition 4
Revenge behavior chosen by the respondent	<del>Condition 5</del>	Condition 5

TABLE 2: Experimental Design

It is important to give respondents a chance to forecast their emotions accurately by providing the most realistic situation possible (Kushlev and Dunn, 2012). Because replicating Carlsmith, Wilson and Gilbert's study (2008) in a field experiment would have raised ethical issues with the involvement of real firms, decreasing the control over the experiment, detailed scenarios were used. Several studies about consumer revenge (Bechwati and Morrin, 2003; Carlsmith, Wilson and Gilbert, 2008; Ghadami,

<sup>1</sup> We did not include a sixth condition, where the respondents would choose a type of revenge and measure their own feelings (reality). This is because a respondent who makes a wrong call is more likely to lie about his feelings after an act of revenge, as opposed to a respondent who has chosen for a stranger (prediction).

2015; Denzler, Förster and Liberman, 2009) and mechanisms generating affective forecasting mistakes (Wilson, Wheatley, Meyers, Gilbert and Axsom, 2000) used a similar procedure.

### *5.2.3. The respondent's journey*

After being screened according to their age and location, each respondent read a scenario describing a double deviation (Amazon forgot to deliver Christmas presents on Christmas Eve, lied about it and was unable to repair its mistake before the 26<sup>th</sup>). They were asked to describe their feelings related to the situation in order to counteract the weakness of scenario-based emotions compared to those created by field experiments. Then the dependent variables (desire to pursue revenge in the future / forgiveness, rumination, mood) were measured. The second part of the scenario described their revenge behavior. After that, depending on their condition, the respondents either made a prediction about the dependent variables (desire to pursue revenge in the future / forgiveness, rumination, mood) or assessed how they felt about them. Some questions were asked about the main control variables related to consumers' revenge. Some manipulation checks measured the respondents' understanding and level of attention paid to the scenario. Finally the respondents were asked to guess the study's topic, though none was able to.

### **5.3. Stimuli development**

The scenarios were elaborated with care in order to generalize the results of the study. A believable service failure was selected since the scenario describes the loss of a package during a delivery. Choosing Christmas as the time of the service failure aimed to make most of the respondents imagine they would be upset (increase

external validity: Singleton and Straits, 2010). The following sub-sections explain the reason why the stimuli used in the study were built this way. To begin, the stimuli used (two scenarios) in the first step are presented and their relevant manipulation of the factor Task (prediction-reality manipulation) is justified. Then, the revenge behaviors stimuli are also presented and supported.

### 5.3.1. Task: Prediction-Reality Manipulation

Two scenarios are used to manipulate task (prediction vs reality). The following table presents the four standard conditions (as we already explained, the control condition is a prediction condition, and its revenge stimuli are both of the prediction conditions' revenge stimuli).

Stimuli/Task	Reality	Prediction
Scenario	<p>Two years ago, you accepted a job abroad, which is why you've been flying home in order to spend the Christmas holiday with your family. You ordered the presents for your family on Amazon three weeks ago to receive them in time at your parents.</p> <p>As planned, you arrived home on time yesterday. You expect to receive the presents shortly since they are out for delivery according to Amazon's tracking system. However, after a couple of hours, you haven't received the parcel. You check on Amazon's website once more and you are surprised to see that your current order status is "Delivered and signed for by the resident".</p> <p>You immediately call Amazon's logistics department, and explain your</p>	<p>Today is Christmas Eve and you're spending it with your family at your parents' house. Soon you'll start preparing the meal with your family, but right now you're distracted by your father's friend. You've just met him and he's telling you about something that happened to him a few years ago, also on Christmas Eve.</p> <p>He remembers he had ordered Christmas presents for his family on Amazon three weeks in advance to receive them in time. That day, he had expected to receive the presents a couple hours before since they were out for delivery according to Amazon's tracking system. However, he hadn't received the parcel. Of course, he was surprised to see, on Amazon's website, that his</p>

	<p>situation. The customer service employee tries to reach the driver. After talking to him, she tells you that he never had your package in his truck and that your parcel is in fact still at the delivery center. She then tells you that: “Unfortunately, since it is Christmas Eve, based on our policy, the drivers have the afternoon off. I’m afraid we won’t be able to deliver your package today. We will try again on the 26th.” It is now 2pm, and you know that you won’t be able to drive to the delivery center before it closes for the day.</p>	<p>current order status had been “Delivered and signed for by the resident”. He had immediately called Amazon's logistics department and explained his situation. The customer service employee had explained that she understood the problem. After talking to the driver, she had said that he never had his package in his truck and that the parcel was in fact still at the delivery center. She had then told him that: “Unfortunately, since it is Christmas Eve, based on our policy, the drivers have the afternoon off. I’m afraid we won’t be able to deliver your package today. We will try again on the 26th.” He hadn’t been able to drive to the delivery center before it had closed for the day.</p>
Direct revenge behavior	<p>You think about what just happened. Your package was forgotten and Amazon lied to you, putting you in a bad situation. You decide that they shouldn’t get away with it: it’s unfair. You decide that other consumers should know about the incident and you want Amazon to know how unhappy you are with its behavior. The company has to be made aware and you intend to make sure Amazon gets the message straight. Before hanging up you tell the consumer service employee: “I hope you’ll like my own Christmas present to you! I just posted it and it’s waiting for you on Twitter”. Then, you go on your Twitter account and post the following message, making</p>	<p>He had thought about what just happened. His package had been forgotten and Amazon had lied to him, putting him in a bad situation. He decided that they shouldn’t get away with it: it was unfair. He decided that other consumers should know about the incident and he wanted Amazon to know how unhappy he was with its behavior. The company had to be made aware and he intended to make sure Amazon got the message straight. Before hanging up he had told the consumer service employee: “I hope you’ll like my own Christmas present to you! I just posted it and it’s waiting for you on Twitter”. Then, he had gone on his</p>

	<p>sure to tag Amazon so that it'd receive it:  <a href="#">@Amazon</a> You forgot about my package and #<a href="#">lied</a> about its delivery! Can't give Christmas presents! Buy at Best Buy next time!  <a href="#">#AmazonLogistics</a></p>	<p>Twitter account and posted the following message, making sure to tag Amazon so that it'd receive it:  <a href="#">@Amazon</a> You forgot about my package and #<a href="#">lied</a> about its delivery! Can't give Christmas presents! Buy at Best Buy next time!  <a href="#">#AmazonLogistics</a></p>
<p>Indirect revenge behavior</p>	<p>You think about what just happened. Your package was forgotten and Amazon lied to you, putting you in a bad situation. You decide that they shouldn't get away with it: it's unfair.  You decide that other consumers should know about the incident, but you aren't sure Amazon should be made aware of your action yet.  You hang up and go on the Consumer Horror Stories Website where customers share their bad experiences with companies. Since no company monitors this website's content, it's assumed that Amazon will not get the message and will not be aware of how unhappy you are with its behavior.  You write:  "Amazon forgot to deliver my package and notified it as delivered, saying I signed a receipt. They lied! I have no Christmas presents to offer tonight because of Amazon Logistics! Next year, I'll definitely order at Best Buy, and you should do the same!"</p>	<p>He had thought about what just happened. His package had been forgotten and Amazon had lied to him, putting him in a bad situation. He decided that they shouldn't get away with it: it was unfair.  He decided that other consumers should know about the incident, but he hadn't been sure Amazon should be made aware of his action yet.  He had hung up and went on the Consumer Horror Stories Website where customers shared their bad experiences with companies. Since no company monitored this website's content, it was assumed that Amazon would not get the message and would not be aware of how unhappy he was with its behavior. He wrote:  "Amazon forgot to deliver my package and notified it as delivered, saying I signed a receipt. They lied! I have no Christmas presents to offer tonight because of Amazon Logistics! Next year, I'll definitely order at Best Buy, and you should do the same!"</p>

TABLE 3: Experimental Stimuli

In the “reality” scenario, the respondent is the main character: he is the victim of the double deviation and he gets revenge. He is asked to imagine himself in the situation. On the other hand, in the “prediction” scenario, the respondent listens as a stranger he just met is telling him about the double deviation that happened to him a few years ago. Later, he makes the prediction for this person.

The purpose of the prediction scenario is to have the respondent forecast his own feelings and levels of rumination and of desire to pursue revenge / forgiveness in the future. Indeed, because a person is more similar to a respondent than to a group, the respondent will use his own forecast as an anchor to be more accurate in regard to the stranger’s assessment (Pollmann and Finkenauer, 2009). The latter forecast will be more accurate if the respondent does not know the person used as subject (Hoch, 1987; Pollmann and Finkenauer, 2009; Van Boven and Loewenstein, 2003). Finally, when someone finds himself in a “state of drive” (Van Boven and Loewenstein, 2003), like the “visceral state” described by Bies and Tripp (2013), his tendency to use his current disposition to estimate another’s is reinforced. Therefore, it is assumed that the accuracy of the respondent’s self-forecast will be passed on to the accuracy of his assessment of the stranger’s reaction.

### *5.3.2. Revenge behavior Manipulation*

The other independent variable is the revenge behavior adopted against the firm. Two stimuli were developed: a direct revenge stimulus and an indirect one.

The literature review about revenge behaviors showed that several aspects are considered to distinguish them. Specifically, direct revenge acts are characterized by contact with a frontline employee and the firms are aware of them (Grégoire, Laufer

and Tripp, 2010), while indirect revenge acts are deceptive and directed at the whole firm even though it is not aware of it (Grégoire, Laufer and Tripp, 2010).

In this study, the distinction between direct and indirect revenge behaviors is only based on the firm's awareness. It does not have to happen strictly offline since social media is often used to broadcast the revenge and reach a bigger audience, regardless of the avenger's decision to inform the firm. Direct revenge is revenge that the firm is made aware of. It does not have to be directed at one employee in particular. Indirect revenge is revenge that the firm is not aware of.

To get revenge, the consumer writes a message about the incident and exhorts other consumers to buy from a competitor. When the revenge is direct, the message is posted on Twitter with proper hashtags and the company is informed by the consumer on the phone. The company is also tagged so that it will receive the tweet. The message will be read by the consumer's followers. It's a direct online public complaint.

When the revenge is indirect, the message is posted on the website Consumer Horror Stories. This fictional website is dedicated to consumers' stories of double deviations with companies. Firms do not monitor it, so they will not be alerted to a post on this website, nor will they be made aware of the revenge by a phone call. The post still reaches a large audience. It's an indirect online public complaint.

#### **5.4. Measurement**

This sub-section details the scale used in the survey. Unless otherwise specified, each scale is a 7-point Likert scale where 1 = “strongly disagree” and 7 = “strongly agree”. Appendix 2 details their items.

The mood scale (five-point Likert scale: 1 = “not at all” and 5 = “extremely”) is adapted from the PANAS scale (Watson, Clark and Tellegen, 1988) and from the six-item version of this scale used by Carlsmith, Wilson and Gilbert in 2008. Their item “vengeful” was eliminated because its meaning was too close to the desire to pursue revenge in the future, which was measured here. The actual scale used here is composed of four items representing negative affect and four for positive affect.

Twelve items measure desire to pursue revenge in the future (five items) /forgiveness (seven items: three for the intention to repair the relationship with the firm / four describing the intention to let go of the bad feelings associated with the incident). This scale has been used several times in consumer revenge research (Grégoire, Laufer and Tripp, 2010; Grégoire, Tripp and Legoux, 2009; Grégoire and Fisher, 2006; Ghadami, 2015).

The last dependent variable studied in this study is rumination. It is measured here with McCullough, Bono and Root (2007)’s four-item scale.

Justice restoration is an important control variable in a consumer revenge study. It is adapted from Ghadami’s scale (2015) and is composed of five items.

To measure the perception of the revenge behavior as direct or indirect, a 7-point bipolar scale was created. It contains four items. While the two types of revenge behaviors are called “direct” and “indirect” in the research, these words were not used

in the questionnaire. Indeed, respondents may think that these words do not apply to a revenge behavior. Therefore, the items used in the questionnaire were related to the firm's degree of awareness of the revenge. A 7-point bipolar scale made of two items was used to measure the adequacy of the revenge behaviors. Four sentences were also used to measure the level of understanding of the task and the level of attention paid by the respondents during the survey.

### 5.5. Pretest

The purpose of this pre-test was to check that each manipulation worked as expected.

After removing the incomplete questionnaires and those that didn't pass the attention filter used to make sure that the respondents actually paid attention to the survey instead of simply clicking through (18 deleted questionnaires), 110 respondents remained (54 men and 56 women).

The pre-test proved that the manipulations were successful. The revenge behaviors were correctly perceived as direct or indirect ( $F[1,106]=107.64$ ,  $p=0.00$ ;  $M_{\text{direct}}=2.59$ ,  $SD_{\text{direct}}=1.45$ ,  $M_{\text{indirect}}=5.51$ ,  $SD_{\text{indirect}}=1.49$ ; on a scale where 1 = "direct" and 7 = "indirect") no matter the level of "task", and seemed equally adequate with a non-significant main effect of the revenge behavior on this perception ( $F[1,106]=1.967$ ,  $p=0.164$ ;  $M_{\text{direct}}=3.41$ ,  $SD=1.92$ ;  $M_{\text{indirect}}=3.89$ ,  $SD=1.71$ ; where 1 = "justified" and 7 = "not justified"). Both revenge behaviors and scenarios were perceived as realistic ( $F[1,106]=0.01$ ,  $p=0.92$ ;  $M_{\text{direct}}=6.63$ ,  $SD=0.75$ ;  $M_{\text{indirect}}=6.61$ ,  $SD=0.74$  on the one item 7-point bipolar scale where 1 = "couldn't happen in real life" and 7 = "could happen in real life") without any main effect or interaction

between the two factors. The respondents correctly perceived their task ( $F[1,106]=158.704$ ,  $p=0.000$ ;  $M_{\text{reality}}=2.505 < M_{\text{prediction}}=6.343$ ,  $SD_{\text{reality}}=1.72152$ ,  $SD_{\text{prediction}}=1.43679$ ) regardless of their revenge behavior. When the respondent read the reality scenario he correctly identified his status as the victim of the service failure whereas when he read the prediction scenario, he understood that someone he just met was the victim (1 = happening to you and 7 = that happened to a man you just met). Finally, after reading the scenarios, respondents were in a bad mood (positive affect:  $F[1,106]=0.632$ ,  $p=0.428$ ;  $M_{\text{reality}}=1.666$ ,  $SD=1.04640$ ;  $M_{\text{prediction}}=1.858$ ,  $SD=1.44588$ ; negative affect:  $F[1,106]=0.032$ ,  $p=0.858$ ;  $M_{\text{reality}}=5.189$ ,  $SD=1.13682$ ;  $M_{\text{prediction}}=5.142$ ,  $SD=1.54947$ ) no matter their scenario or revenge behavior. A table with the results of the analysis is available in Appendix 4.

The pre-test also helped to improve the material. Any reason for the consumer to be found responsible for the service failure was removed (the package containing the Christmas gifts was ordered three weeks before instead of ten days) and some scales were adjusted within reason to improve their reliability (positive and negative affect, revenge behavior manipulation check). Overall, the pre-test was a success. Appendix 1 contains the final questionnaire.

## 6. RESULTS

This sixth section is dedicated to the analysis of the study's results. First, its scales' reliability is demonstrated. The next sub-section paints a picture of the respondents who participated in the experiment and filled out the questionnaire. Then, the relevance of its manipulation checks is observed. A fourth sub-section tests

the study's hypotheses, while the last one explains why such counter-intuitive results were obtained by testing relevant mediation effects.

### **6.1. Reliability analysis**

Before analysing the results of the experiment, it is important to check the reliability of the main scales used. Several criteria are used to do this. Each scale must be composed of items with loadings higher than 0.3. It must also explain a sufficient part of the variable's variance. Finally, a reliable scale has a Cronbach Alpha higher than 0.7. The scales used here comply with these criteria. Appendix 2 describes their reliability.

### **6.2. Sample**

Fifty respondents were recruited by condition and seven incomplete questionnaires were eliminated. Therefore this study counts 243 respondents. This sample counts 128 men (52.7%) and 115 women (47.3%). The respondents between the age of 55 years old and 64 years old are the most represented (26.7%), but the 45-54s are a close second (25.9%). These respondents were successfully randomized through the five conditions: a Chi-square test for independent samples made sure that both ages and genders were equally distributed (age:  $\chi^2=24,861$ ;  $df=16$ ;  $pvalue=0.072$ , NS; gender:  $\chi^2=4.761$ ;  $df=4$ ;  $pvalue=0.313$ ).

### **6.3. Manipulation checks**

In this section, the effectiveness of the manipulations used for this experiment is evaluated. Appendix 3 contains a table detailing their results.

#### *6.3.1. Revenge Behavior Manipulation Check*

A full factorial ANOVA testing the effectiveness of the revenge behavior manipulation checks shows that the respondents' perception of their revenge behavior was correct. They perceived the direct and indirect revenge behaviors differently. This main effect is significant ( $F[1,237]=92.922, p=0.000, M_{\text{direct revenge}}=2.739, SD_{\text{direct revenge}}=1.315, M_{\text{indirect revenge}}=4.735, SD_{\text{indirect revenge}}=1.696$ ). There is no significant interaction for this manipulation, but a significant main effect of the task manipulation exists when it should not ( $F[2,237]=3.726, p=0.026$ ). This main effect shows that on a scale from 1 (direct) to 7 (indirect), the respondents predicting the impact of an act of revenge of their choice perceived their revenge to be significantly more direct than the respondents who explained how they really felt ( $M_{\text{prediction choice}}=3.349 < M_{\text{reality}}=4.084, p=0.008, SD_{\text{prediction choice}}=1.597, SD_{\text{reality}}=1.763$ ). Without a significant interaction between the task manipulation and the revenge behavior, the meaning of this main effect cannot be clearly interpreted. Finally, without any doubt, on a scale from 1 (adequate) to 7 (inadequate), the respondents seemed to think that Amazon clearly deserved the revenge, regardless of their experimental treatment: there is no significant interaction between the task manipulation and the revenge behavior ( $F[2,237]=0.978, p=0.378$ ), no significant main effect of the task ( $F[2,237]=0.583, p=0.559$ ), and no significant main effect of the revenge behavior ( $F[1,237]=0.146, p=0.703$ ).

### 6.3.2. Reality-Prediction Manipulation Check

A full factorial ANOVA testing the effectiveness of the reality-prediction manipulation checks shows that the respondents paid attention during the survey. They correctly identified both their role (as the victim when they explained how they

really felt versus as a “listener” when they made a prediction – whether the revenge behavior was imposed or not) and their task during the survey ( $F[2,237]=258.930$ ,  $p=0.000$ ,  $M_{\text{reality}}=5.489$ ,  $SD_{\text{reality}}=1.011$ ,  $M_{\text{imposed prediction}}=2.413$ ,  $SD_{\text{imposed prediction}}=1.015$ ,  $M_{\text{prediction choice}}=2.817$ ,  $SD_{\text{prediction choice}}=0.873$ ). There is no other significant main effect or interaction for this manipulation.

### 6.3.3. Scenario

A full factorial ANOVA testing the effectiveness of the scenario shows that the respondents rightfully blamed Amazon for both the service failure and the poor service recovery regardless of both their task and revenge behavior. There is no significant interaction, nor any significant main effect for this manipulation (revenge behavior:  $F[1,237]=0.670$ ,  $p=0.414$ ,  $M_{\text{direct revenge}}=5.626$ ,  $SD_{\text{direct revenge}}=1.3747$ ,  $M_{\text{indirect revenge}}=5.781$ ,  $SD_{\text{indirect revenge}}=1.295$ ; task manipulation:  $F[2,237]=0.534$ ,  $p=0.587$ ,  $M_{\text{reality}}=5.576$ ,  $SD_{\text{reality}}=1.284$ ,  $M_{\text{prediction imposed}}=5.730$ ,  $SD_{\text{prediction imposed}}=1.364$ ,  $M_{\text{prediction choice}}=5.805$ ,  $SD_{\text{prediction choice}}=1.399$ ; interaction:  $F[2,237]=0.658$ ,  $p=0.519$ ).

## 6.4. Hypotheses testing

Testing the proposed hypotheses means testing the existence of an interaction between the two independent variables (task x revenge behavior) for each of the dependent variables. A two-factor ANOVA is used.

Unlike what was expected, none of the dependent variables were significantly affected by the interaction of the two factors (desire to pursue revenge in the future:  $F[2,237]=1.735$ ,  $p=0.179$ , NS; desire to repair the relationship:  $F[2,237]=1.510$ ,  $p=0.223$ ; desire to let go of the incident:  $F[2,237]=0.203$ ,  $p=0.817$ ; rumination:

$F[2,237]=0.435, p=0.648$ ; positive affect:  $F[2,237]=0.032, p=0.969$ ; negative affect:  $F[2,237]=0.075, p=0.928$ ). There was no main effect of the revenge behavior either (desire to pursue revenge in the future:  $F[1,237]=0.576, p=0.449, M_{\text{direct}}=4.427, SD_{\text{direct}}=1.779, M_{\text{indirect}}=4.265, SD_{\text{indirect}}=1.609$ ; desire to repair the relationship:  $F[1,237]=0.077, p=0.782, M_{\text{direct}}=2.812, SD_{\text{direct}}=1.385, M_{\text{indirect}}=2.864, SD_{\text{indirect}}=1.365$ ; desire to let go of the incident:  $F[1,237]=0.197, p=0.658, M_{\text{direct}}=3.644, SD_{\text{direct}}=1.694, M_{\text{indirect}}=3.548, SD_{\text{indirect}}=1.656$ ; rumination:  $F[1,237]=0.979, p=0.323, M_{\text{direct}}=4.467, SD_{\text{direct}}=1.645, M_{\text{indirect}}=4.671, SD_{\text{indirect}}=1.559$ ; positive affect:  $F[1,237]=0.380, p=0.538, M_{\text{direct}}=2.116, SD_{\text{direct}}=0.953, M_{\text{indirect}}=2.036, SD_{\text{indirect}}=0.911$ ; negative affect:  $F[1,237]=1.227, p=0.269, M_{\text{direct}}=2.901, SD_{\text{direct}}=1.189, M_{\text{indirect}}=2.714, SD_{\text{indirect}}=1.247$ ).

The hypotheses, as initially formulated, were not supported. Instead of the expected moderation of the predictions' accuracy by the revenge behavior, a main effect of the task was discovered. Table 3 details the impact of this main effect in each condition. It shows that consumers make affective errors of prediction. Most of these mistakes benefit the consumer. Indeed, both his desire to pursue revenge in the future and his level of rumination are lower than predicted (desire to pursue revenge in the future:  $F[2,237]=31.711, p=0.000, M_{\text{reality}}=3.480 < M_{\text{prediction}}=5.214, SD_{\text{reality}}=1.528, SD_{\text{prediction}}=1.376$ ; rumination:  $F[2,237]=25.256, p=0.000, M_{\text{reality}}=3.716 < M_{\text{prediction}}=5.186, SD_{\text{reality}}=1.544, SD_{\text{prediction}}=1.353$ ). Moreover, the consumer is more prepared to let go of his hurt feelings and to repair his relationship with the firm than he anticipated (desire to let go of his hurt feelings:  $F[2,237]=27.146, p=0.000, M_{\text{reality}}=4.167 > M_{\text{prediction}}=2.633, SD_{\text{reality}}=1.368, SD_{\text{prediction}}=1.486$ ; desire to repair the

relationship with the firm:  $F[2,237]=11.548$ ,  $p=0.000$ ,  $M_{\text{reality}}=3.164 > M_{\text{prediction}}=2.296$ ,  $SD_{\text{reality}}=1.144$ ,  $SD_{\text{prediction}}=1.418$ ). Finally, the consumer's negative feelings are less potent than expected ( $F[2,237]=5.923$ ,  $p=0.003$ ,  $M_{\text{reality}}=2.600 < M_{\text{prediction}}=3.161$ ,  $SD_{\text{reality}}=1.218$ ,  $SD_{\text{prediction}}=1.217$ ). On the contrary, the consumer did overestimate the strength of his positive feelings ( $F[2,237]=5.774$ ,  $p=0.004$ ,  $M_{\text{reality}}=1.796 < M_{\text{prediction}}=2.079$ ,  $SD_{\text{reality}}=0.841$ ,  $SD_{\text{prediction}}=0.958$ ). These results differ from Carlsmith, Wilson and Gilbert's (2008).

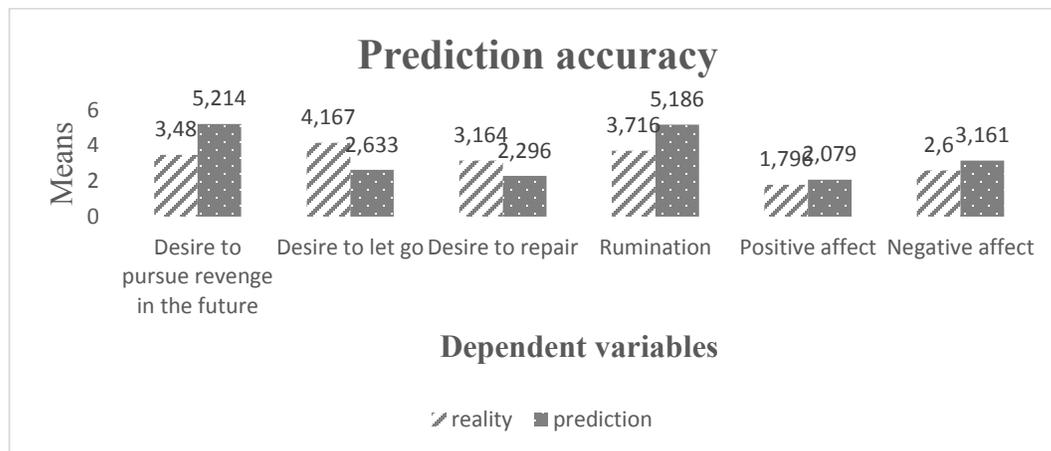


Figure 2: Main effect of Task on the dependent variables: prediction accuracy

The control condition, in which respondents were able to choose their revenge behavior, also shows interesting results. First, the majority of these respondents chose to get revenge directly as was expected based on the hypotheses. While their prediction is significantly closer to what really happens for some dependent variables, they still make mistakes. Specifically, they still overestimate their desire to pursue revenge in the future and their level of rumination. Indeed, even when they choose their revenge, they still think they will want to get revenge again more than they

actually do after their revenge ( $M_{\text{prediction}}=5.214 > M_{\text{prediction choice}}=4.345 > M_{\text{reality}}=3.480$ ,  $SD_{\text{prediction}}=1.376$ ,  $SD_{\text{prediction choice}}=1.751$ ,  $SD_{\text{reality}}=1.528$ ). They also think they will ruminate more than they actually end up doing ( $M_{\text{prediction}}=5.186 > M_{\text{prediction choice}}=4.805 > M_{\text{reality}}=3.716$ ,  $SD_{\text{prediction}}=1.353$ ,  $SD_{\text{prediction choice}}=1.518$ ,  $SD_{\text{reality}}=1.544$ ). Finally, their predicted level of positive feelings is even more overestimated than the level predicted by the respondents who did not choose their revenge ( $M_{\text{prediction choice}}=2.352 > M_{\text{prediction}}=2.079 > M_{\text{reality}}=1.796$ ,  $SD_{\text{prediction choice}}=0.955$ ,  $SD_{\text{prediction}}=0.958$ ,  $SD_{\text{reality}}=0.841$ ).

Variable	$M_{\text{reality}}$ / direct revenge	$M_{\text{reality}}$ / indirect revenge	$M_{\text{prediction}}$ / direct revenge	$M_{\text{prediction}}$ / indirect revenge	$M_{\text{prediction}}$ choice / direct revenge	$M_{\text{prediction}}$ choice / indirect revenge	F-test	Significance
Desire to pursue revenge in the future	3.308	3.6522	5.2980	5.1306	4.6765	4.0133	31.711	0.002 (prediction vs prediction choice; reality vs prediction choice) 0.000 (reality vs prediction)
Desire to repair	3.2267	3.1014	2.4354	2.1565	2.7745	3.3333	11.548	0.002 (prediction choice vs prediction) 0.000 (reality vs prediction) 0.653 (prediction choice vs reality)
Desire to let go	4.280	4.0543	2.7245	2.5408	3.9265	4.0500	27.146	0.000 (prediction choice vs prediction; reality vs prediction) 0.528

								(prediction choice vs reality)
Rumination	3.530	3.9022	5.1939	5.1786	4.6765	4.9333	25.256	0.000 (reality vs prediction choice; reality vs prediction) 0.162 (prediction vs prediction choice)
Negative Affect	2.705	2.4946	3.2908	3.0306	2.7059	2.6167	5.923	0.001 (reality vs prediction) 0.025 (prediction choice vs prediction) 0.782 (reality vs prediction choice)
Positive Affect	1.815	1.7772	2.1276	2.0306	2.4044	2.3000	5.774	0.001 (prediction choice vs reality) 0.033 (reality vs prediction) 0.109 (prediction vs prediction choice)

TABLE 4: Main effect of Task- Main data collection

### 6.5. Tests of mediation effects

Several mediations were tested using Baron and Kenny's method (1986) to explain the results presented above. The aim was to understand both the overestimation of the positive affect by the respondents, and the joint overestimation of desire to pursue revenge in the future, negative affect and rumination.

#### 6.5.1. Explaining the overestimation of positive affect

Justice restoration and desire to pursue revenge in the future were tested as mediators to understand why the respondents overestimated the positive impact of revenge on their mood.

*6.5.1.1. Marginal mediation of the effect of task on positive affect by justice restoration*

Justice restoration seemed suitable since consumers could think that getting revenge would bring justice to their relationship with the firm. By overestimating this possible impact of revenge, consumers could also overestimate the impact of task on positive affect.

First, after getting revenge against a firm, a consumer feels significantly less like justice has been restored between the firm and himself than the prediction said ( $a = -0.327$ ,  $s_a = 0.160$ ,  $p = 0.042$ ). Moreover, the effect of task on positive affect, while significant when tested alone (coefficient  $= -0.282$ ,  $p = 0.031$ ), completely disappears when justice restoration is added to the model ( $p = 0.123$ ), while justice restoration positively impacts positive affect ( $b = 0.280$ ,  $s_b = 0.055$ ,  $p = 0.000$ ). Since the effect of task is completely cancelled by justice restoration, justice restoration seems to completely explain the effect of task on positive affect. Unfortunately, a Sobel test invalidates this complete mediation (test statistic  $= -1.8966$ ,  $p = 0.058$ ). Since the Sobel test is nearly significant ( $p > 0.05$ ), then the mediation is only marginally significant. We can therefore affirm that after getting revenge against the firm, the consumer is marginally less happy than the forecast said because while making the prediction, the idea that getting revenge would make everything fair was overestimated.

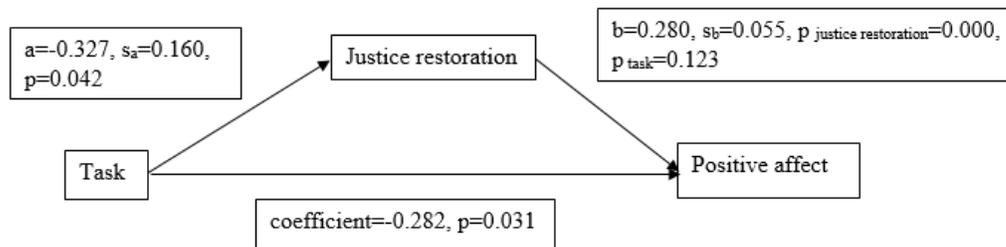


Figure 3: Mediation of the impact of Task on Positive Affect by Justice Restoration

*6.5.1.2. Complete mediation of the effect of task on positive affect by desire to pursue revenge in the future*

Desire to pursue revenge in the future is also tested as a mediator to understand the overestimation of positive affect. Baron and Kenny's method of analysis (1986) gave the following result.

After getting revenge, a consumer is less inclined to seek revenge ( $a=-1.741$ ,  $s_a=0.209$ ,  $p=0.000$ ) than he predicted, and his positive feelings are also less intense (coefficient= $-0.282$ ,  $p=0.031$ ). When both task and desire to pursue revenge in the future are used together to regress positive affect, the impact of task is not significant ( $p=0.631$ ), while desire to pursue revenge in the future significantly impacts positive affect ( $b=0.121$ ,  $s_b=0.044$ ,  $p=0.007$ ). A Sobel test confirms this complete mediation of the impact of task on positive affect by desire to pursue revenge in the future (test statistic= $-2.611$ ,  $p=0.009$ ). This means that after getting revenge, the consumer's positive feelings are less intense than the prediction assumed because his desire to seek revenge again is less than he expected (Figure 4). Hence, the willingness to get revenge again generates positive feelings for the consumer. This result is surprising because desire to pursue revenge in the future was expected to have a negative impact

on positive affect, based on the assumption that desiring revenge prevented the consumer from getting closure and letting the incident go.

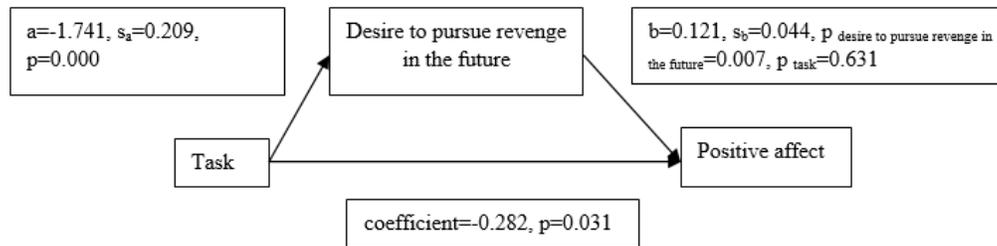


Figure 4: Mediation of the impact of Task on Positive Affect by Desire to pursue revenge in the future

To explain this result, several mediations were tested separately for each task. Using justice restoration as a mediator gives an interesting result. Indeed, while justice restoration does not explain the link between the prediction of both desire to pursue revenge in the future and positive affect after the consumer's revenge, the result is different in the reality conditions. The more the consumer wants to get revenge again, the more he tends to think that his first revenge balanced his relationship with the firm ( $a=0.158$ ,  $s_a=0.071$ ,  $p=0.028$ ), and the more intense his positive feelings are (coefficient= $0.166$ ,  $p=0.003$ ). Finally, when both desire to pursue revenge in the future and justice restoration are used together to regress positive affect after the revenge, the effect of desire to pursue revenge in the future shrinks ( $p=0.027$ ), while justice restoration positively impacts positive affect ( $b=0.331$ ,  $s_b=0.071$ ,  $p=0.000$ ). Because the effect of desire to pursue revenge in the future on positive affect is still significant, a partial mediation is tested, and confirmed by a Sobel test (test statistic= $2.008$ ,  $p=0.045$ ). This means that the more

consumers want to get revenge again after their initial act of revenge, the happier they are because they think getting revenge re-establishes a fair relationship with the firm (Figure 5). With this in mind, the overestimation of the consumer's positive feelings post revenge is understandable. Because a consumer thinks that getting revenge will re-establish justice in his relationship with the firm, which makes him happy, when his desire to pursue revenge in the future is overestimated, his positive feelings also are. This result is consistent with the overestimated certainty that revenge will make their relationship fair again.

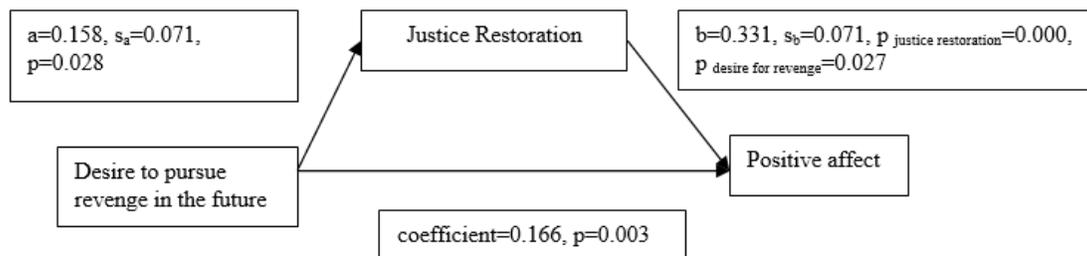


Figure 5: Mediation of the impact of Desire to pursue revenge in the future on Positive Affect by Justice Restoration.

### 6.5.2. Explaining the overestimation of desire to pursue revenge in the future, rumination and negative affect

The two-factor ANOVA revealed that the respondents overestimated their desire to pursue revenge in the future, their negative feelings and their level of rumination. These results were not expected. This subsection aims to understand these overestimations and to find out if the overestimations of these three variables are interrelated.

It is assumed that ruminating increases the desire to pursue revenge in the future and vice versa. Indeed, Bies and Tripp (2013) describe their interaction as a “vicious circle”. Because both of these variables are overestimated when a prediction is made, and because the same is true for negative affect, the links between these three variables are explored to understand their overestimation. Each variable is tested as a mediator of the effect of task on the others.

Task significantly and negatively affects these three variables. This means that after getting revenge, the respondent ruminates less than was predicted ( $a=-1.478$ ,  $s_a=0.208$ ,  $p=0.000$ ). He is also less willing to pursue revenge again ( $a=-1.741$ ,  $s_a=0.209$ ,  $p=0.000$ ) and his negative feelings are significantly less intense than the prediction assumed ( $a=-0.557$ ,  $s_a=0.175$ ,  $p=0.002$ ).

*6.5.2.1. Complete mediation of the impact of task on rumination and negative affect by desire to pursue revenge in the future*

Desire to pursue revenge in the future seems to completely mediate the impact of task on both rumination ( $b=0.645$ ,  $s_b=0.055$ ,  $p=0.000$ ,  $p_{\text{task}}=0.058$ ) and negative affect ( $b=0.181$ ,  $s_b=0.059$ ,  $p=0.003$ ,  $p_{\text{task}}=0.229$ ). Indeed, when both task and desire to pursue revenge in the future are used to regress each variable, the impact of task disappears while there is an increase in levels of both rumination and desire to get revenge in the future. Two Sobel tests confirm these results. Therefore, after getting revenge, the consumer ruminates less than he anticipated he would because he does not want to seek revenge again as much as was predicted (statistic test= $-6.791$ ,  $p=0.000$ ). In the same way, his negative feelings are less intense than predicted

because he does not want to get revenge again as much as the forecast assumed (test statistic=-2.8788,  $p=0.004$ ).

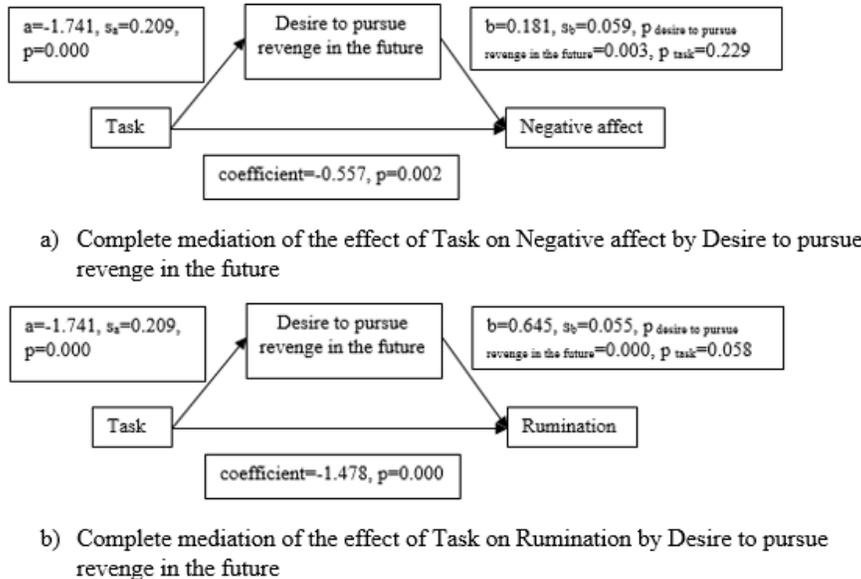


Figure 6: Mediations of the effect of Task on Negative Affect and Rumination by Desire to pursue revenge in the future.

#### 6.5.2.2. Mediation of the impact of task on desire to pursue revenge in the future and negative affect by rumination

Regarding rumination, while the variable completely mediates the impact of task on negative affect ( $b=0.308$ ,  $s_b=0.057$ ,  $p=0.000$ ,  $p_{\text{task}}=0.580$ ), its mediation effect on task's impact on desire to pursue revenge in the future is only partial ( $b=0.647$ ,  $s_b=0.055$ ,  $p=0.000$ ,  $p_{\text{task}}=0.000$ ). Indeed, when both task and rumination are used to regress negative affect, the impact of task is cancelled while rumination significantly increases the consumer's negative feelings. On the other hand, when the two variables are used to regress desire to pursue revenge in the future, task still has a significant impact on desire to pursue revenge in the future even though rumination significantly increases the consumer's desire to pursue revenge in the future. Two

Sobel tests confirm these results. Therefore, after getting revenge against a firm, the consumer's negative feelings are less intense than predicted because he does not think about the incident as much as was predicted (test statistic=-4.312,  $p=0.000$ ). In a similar manner, after getting revenge, the consumer is less inclined to seek revenge again than he previously thought because he ruminates less than he expected (test statistic=-6.082,  $p=0.000$ ).

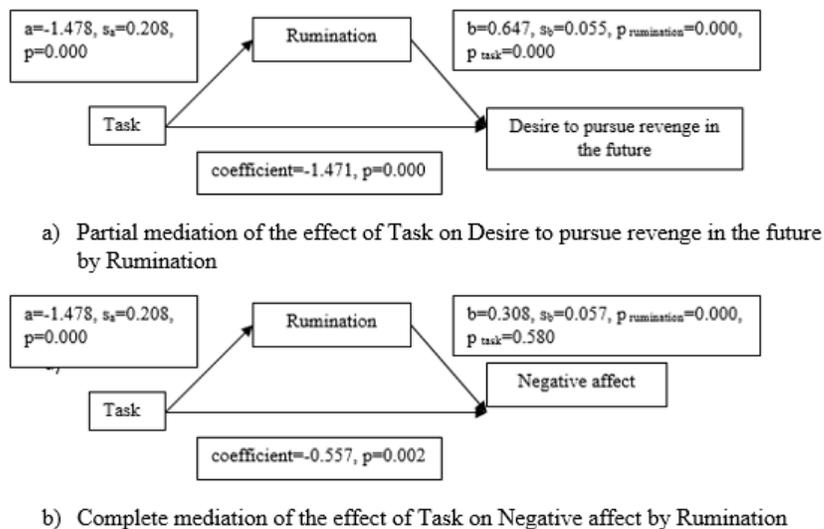
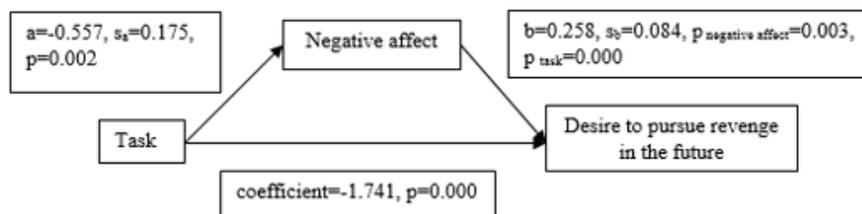


Figure 7: Mediations of the impact of Task on Desire to pursue revenge in the future and Negative Affect by Rumination

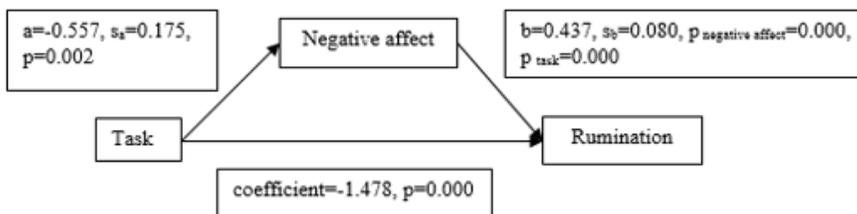
### 6.5.2.3. Partial mediation of the effect of task on rumination and desire to pursue revenge in the future by negative affect

Finally, negative affect partially mediates task's impact on both rumination ( $b=0.437$ ,  $s_b=0.080$ ,  $p=0.000$ ,  $p_{\text{task}}=0.000$ ) and desire to pursue revenge in the future ( $b=0.258$ ,  $s_b=0.084$ ,  $p=0.003$ ;  $p_{\text{task}}=0.000$ ). Indeed, when both task and negative affect are used together to regress each variable, even though negative affect

significantly increases the levels of rumination and desire to pursue revenge in the future, task's impact on these two variables is still significant. Two Sobel tests confirm these partial mediations. Therefore, after getting revenge against a firm, the consumer does not think as much about the incident as the prediction assumed because he does not feel as bad as he thought he would (test statistic=-2.750,  $p=0.006$ ). In the same way, the consumer is less inclined to get revenge again than the prediction said because his negative feelings are less intense than they were assumed to be (test statistic=-2.210,  $p=0.027$ ).



a) Partial mediation of the effect of Task on Desire to pursue revenge in the future by Negative affect



b) Partial mediation of the effect of Task on Rumination by Negative affect

Figure 8: Mediations of the effect of Task on Rumination and Desire to pursue revenge in the future by Negative Affect.

The following figure sums up this study's results.

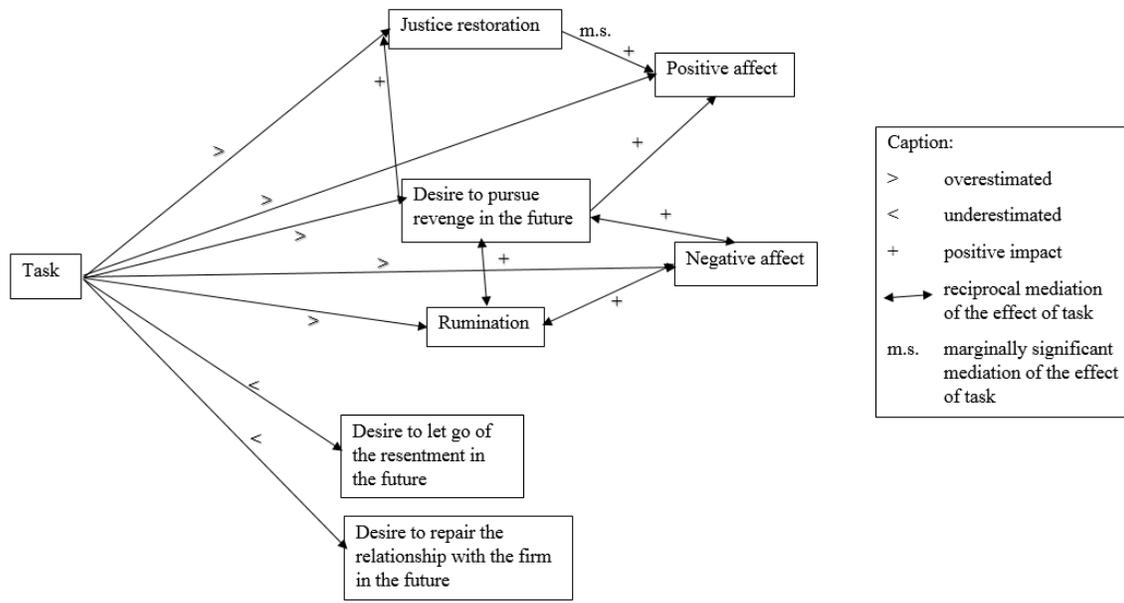


Figure 9: Final model.

## 7. DISCUSSION

This section begins with a summary of the present study's results. This study's theoretical contributions follow. The last sub-section presents ways to improve this study and proposes new directions for service marketing and consumer behavior research.

### 7.1. Results summary

This master's thesis failed to validate its hypotheses. While a moderation of the prediction's accuracy by the revenge behavior was expected, the results proved otherwise. Instead, regardless of their revenge behavior, consumers overestimate their desire to pursue revenge in the future, their rumination level, their negative feelings, and their positive feelings after their revenge, while they underestimate both their desire to let go of the incident and their desire to repair their relationship with the firm. Therefore, errors of prediction do exist in a consumer behavior context.

However, these errors are mostly positive for consumers because they are less inclined to seek revenge again, they ruminate less and feel less unhappy than what was predicted. Because the consumer overestimated how badly he would want to get revenge again after his first attempt, he also overestimated how much he would ruminate and feel bad, and vice versa (desire to pursue revenge in the future and rumination are the strongest mediators). Consumers are also more prepared to let go of their hurt feelings and repair their relationship with the firm than they thought they would. These errors of prediction are not necessarily a bad thing.

The last prediction mistake, on the contrary, is not desirable: consumers overestimate the intensity of their positive feelings when they forecast the impact of revenge. While the belief that revenge made their relationship with the firm fair is indeed overestimated by consumers, and in spite of the fact that justice restoration has a positive influence on positive affect, overestimating justice restoration explains only marginally the overestimation of predicted positive feelings. Instead, desire to pursue revenge in the future explains this relationship completely. After getting revenge, the consumer's positive feelings are less intense than the forecast announced because he is less inclined to get revenge again than he predicted. Therefore it seems that, in a consumer behavior context where the relationship between the different actors is more competitive than in a general interpersonal context, the willingness to get revenge alone generates positive feelings. This can be explained by the fact that after actually getting their revenge, consumers feel like justice has been restored in their relationship with the firm, which makes them happier.

## **7.2. Theoretical implications**

This section first explains how the present results are opposed to Carlsmith, Wilson and Gilbert (2008). Then, desire to pursue revenge in the future and justice restoration's roles in the overestimation of positive affect are used to explain consumers' motivation to get revenge. Finally, the study's results shed some light on the impact of revenge on mood.

*7.2.1. The role of rumination: opposition with Carlsmith, Wilson and Gilbert's study:*

These results disagree with Carlsmith, Wilson and Gilbert's (2008) on one point. Indeed, the authors of the original article state that ruminating and having no knowledge of this phenomenon is the reason why people mistakenly believe that getting revenge will make them feel better. This study showed different, which suggests that it was worthwhile to replicate Carlsmith, Wilson and Gilbert's study in a context of consumer revenge.

The first thing to remember about their theory is that people overestimate the positive impact of revenge on their mood because they underestimate how much they ruminate and are not aware of the negative impact of this process on their mood. Obviously, this does not completely happen here. If it did, the respondents would have underestimated their desire to pursue revenge in the future, their rumination level and their negative feelings, and they would have overestimated their desire to let go of the incident and repair their relationship with the firm. In the present study, consumers seem to expect the worst, except for their positive feelings that they actually overestimate. Their positive feelings excluded, they do not seem to think that getting revenge is the best way to get over the double deviation. It is not possible to

affirm that consumers are aware of the impact of rumination on their mood, but the results show that they exaggerate how much they actually do ruminate after getting revenge on the firm which is in complete opposition to Carlsmith, Wilson and Gilbert's result.

Carlsmith, Wilson and Gilbert (2008) also insist that the respondents' lack of knowledge about the negative impact of rumination on mood is the reason consumers overestimate their future mood. Indeed, the overestimation of their rumination level completely explains the overestimation of the intensity of their negative feelings, but it does not explain the overestimation of the intensity of their positive feelings (this mediation was tested but its result was not significant). Therefore, the predicted level of rumination has nothing to do with the overestimation of the positive feelings.

These results are compelling pieces of evidence that indicate it was worthwhile to replicate Carlsmith, Wilson and Gilbert's study (2008) in a consumer behavior context. When an act of revenge takes place in a competitive context such as a transactional exchange, it seems like it does not weigh heavily on the avenger's mind, unlike what happened in the original study. In Carlsmith, Wilson and Gilbert's prisoner dilemma, choosing to be a free rider made a participant richer, but the interest of the group was to cooperate. For this reason, everyone had to do their part. Cooperation was not technically compulsory, but moral and social expectations clearly recommended it. Their set-up was not institutionalized. There was no exchange of service and no contract was drawn. The original study's set-up is much more communal than ours, because the focus on the common good of the group

increased the importance of behaving in a socially desirable way, unlike the purely commercial relationship between the two actors in this thesis.

*7.2.2. Selfish avengers: desire to pursue revenge in the future, justice restoration and the reciprocity principle*

In this section of the discussion, the role played by the desire to pursue revenge in the future and by justice restoration in the overestimation of positive affect allows us to know more about consumers' thoughts about the reciprocity principle and about their motivation to get revenge.

The overestimation of the level of desire to pursue revenge in the future explains the overestimation of consumers' positive feelings because getting revenge re-establishes justice in their relationship with the firm which makes them feel good. This result puts into question the idea that revenge is completely bad for one's mood (Rusting, and Nolen-Hoeksema, 1998; Bushman, 2002; McCullough, Bono, and Root, 2007; Yoshimura, 2007; Carlsmith, Wilson and Gilbert, 2008). Indeed, desiring revenge again seems to also make consumers happier. This implies that consumers believe in the reciprocity principle and want to punish social norm violations: the double deviations really broke the trust they had in the company if they feel the need to get even to "make everything fair" (De Wulf, Odekerken-Schröder and Iacobucci, 2001).

However, the happiness generated by the desire to pursue revenge in the future has nothing to do with a pro-social behavior. Indeed, the positive feelings were not overestimated because forecasters and actual avengers thought revenge would teach the company to stop mistreating its customers (Gollwitzer and Bushman, 2002), nor

was it done to protect fellow consumers (Grégoire and Fisher, 2008; Gollwitzer and Denzler, 2009). If revenge was used to punish a misbehavior, the protection of others was not the intent. Consumers seemed to believe in revenge as a way to get even with the firm, but they also seemed to fight only for themselves.

### *7.2.3. Impact of revenge on consumers: the consequences for companies*

While Ghadami's results (2015) indicated that revenge behavior moderated the level of desire to pursue revenge in the future, it does not moderate prediction accuracy. Affirming that a direct act of revenge is "sweeter" than an indirect one was impossible in the present study. Instead, it concludes that getting revenge is not necessarily "sweet" in a business context, but that it is more satisfying than expected. Indeed, the respondents expected to feel generally worse, apart from their positive feelings.

Regardless of their expectations, and while it was not discussed in the results because the study focused on the moderation of prediction accuracy by revenge behavior, actually getting revenge proved to have a positive impact on consumers' moods. Paired comparisons showed that consumers who actually got revenge (reality conditions) had significantly more positive feelings after their revenge than before (just after the service failure), along with significantly less negative feelings. Getting revenge made them feel better, though this impact was weak despite its significance. Indeed, their moods were less than stellar even after getting revenge: their negative feelings were low, but so were their positive feelings.

Regarding the other dependent variables, getting revenge did not have a significant impact on consumers' desire to pursue revenge in the future, nor on their

level of rumination. However, while revenge did not impact their desire to repair their relationship with the firm, their desire to let go of their resentment was marginally lower after their revenge than before. It is clear that, though the respondents' desire to pursue revenge in the future was quite low both before and after their revenge, and even if they did not ruminate much, they were not completely willing to let go of their hurt feelings, and they were not inclined to repair their relationship with the firm. They did not forgive, which is coherent with the idea that revenge damages their relationship with the firm. Therefore, even though the study tends to say that revenge's impact on consumers' mood is not necessarily bad, this last result agrees that double deviations and consumers' revenge behaviors are still to be avoided (Grégoire and Fisher, 2008). Appendix 5's table details the impact of revenge in reality conditions.

### **7.3. Limitations**

Some of this study's limitations can be explained by its methodology. First, the context of the service failure used in this study explains the respondents' low desire for revenge. In addition, the present results might have varied with a different design (adding cognitive dissonance, focusing on offline revenge behaviors, and targeting respondents more open to online communication).

#### *7.3.1. Explaining the weak desire to pursue revenge in the future*

The present results show that the respondents were not keen on getting revenge after the double deviation. While the pre-test helped to make sure that the consumer did not take the blame for the service failure, these efforts were not enough to make the respondents want to get revenge for three possible reasons.

First, respondents may downplay their desire to pursue revenge in the future because wishing for revenge is not approved of in modern society. It is also possible that they thought getting revenge was not worth it (Bies and Tripp, 1997; Tripp, Bies and Aquino, 2007). Indeed, the context of the study was chosen to increase the problems caused by the double deviation (being unable to offer Christmas presents disappoints, frustrates, and can create a bad atmosphere during a family vacation), and this was successful, but when respondents described their feelings after reading about the double deviation, some of them said focusing on enjoying the party with their family was more important than worrying about missing presents. Choosing Christmas was a double-edged sword, because it enhanced both the hurt feelings and the reluctance to act on them.

The good reputation of Amazon may also explain why the respondents did not want to get revenge; in that case, this study could be replicated with a fictitious company.

Respondents' reluctance to get revenge can finally be explained by the behavior of the employee who answered their complaint. Indeed, the customer service employee is not responsible for the service failure. She is, however, the one to explain why the company is not able to help them in time. She talks about the company's Christmas policy: the drivers have the afternoon off to spend time with their family because of the holiday, and are then unable to deliver the presents. The reason may be understandable for the consumers. Even though the driver made a mistake, the consumer may have decided not to get revenge to avoid causing trouble for others on a family holiday. They may also think the complaint process is fair and

well explained (procedural fairness: Tax, Brown, and Chandrashekar, 1998), which decreases their motivation to get revenge. This reluctance to get revenge makes it harder to conclude on the impact of revenge on mood. Hence the context of the scenario is a limit.

### *7.3.2. Changing the design: cognitive dissonance, targeted respondents and revenge behaviors*

The present results are at odds with Carlsmith and colleagues' research. This can be explained by two differences between the two designs. Carlsmith, Gilbert and Wilson used a cognitive dissonance mechanism in their study, but this study did not. Moreover, in the original study, the respondents were able to confront the free rider directly, which was not possible here. This suggests that respondents may be more open to offline acts of revenge compared to online ones. Finally, another reason would be the present study's respondents. They belong to an older category of the population. Younger respondents may be more open to the use of social media to get revenge.

Indeed, to punish the free rider, the respondents from Carlsmith, Wilson and Gilbert's study (2008) had to sacrifice some of their own gains (the free rider lost three times as much as them). While the forecasters may not have thought much about that beyond their need to punish the free rider, those who actually punished him may have regretted losing money over him. If they kept thinking about their lost money, this might explain why their feelings were so overestimated and why they thought about the free rider so much (rumination). No such cognitive dissonance happened here, and rumination was measured differently (the items focused on how

much they thought about the incident rather than the firm) which could explain this different result. However, if the respondents had to sacrifice something to get their revenge against the firm in this study, they may have felt worse and ruminated more. Of course, in a consumer behavior context, losing something in order to punish may not have the same impact than in Carlsmith, Wilson and Gilbert's where common good is promoted. Indeed, Bechwati and Morrin (2003) showed that some consumers were inclined to make a sacrifice so that they could get revenge and still be satisfied. Even though customers agree to have the second best outcome if it means getting even more efficiently, it would be interesting to see if their forecast would be similar to present ones. Would they be more accurate or even farther from the truth? In the same way, it could be interesting to see what consumers focus on the most when they ruminate. Would it be the incident globally, or the firm only?

In this study, directly confronting the driver who lied was impossible. Instead, the respondents got revenge for the lack of supervision in the company's logistics department. An act of revenge involving the driver himself might have generated the expected results with an interaction of task with revenge behavior. This study might also have other results with "offline" acts of revenge, especially because there is no guarantee that Amazon's customer service can actually be contacted by phone. Being face to face instead of on the phone, showing the message in person instead of informing the company of its post by phone, may bring different results because seeing the impact of the revenge on the employee's body language (facial expression, behavior, and so on) during a direct revenge act may be more satisfying. If such an

experiment was successful, giving advice to respondents on ways to proceed with their revenge may be possible, unlike here.

The respondents may also be a limitation. More than half are 45 years old or older, while less than 20% are younger than 35. Because a younger population is more comfortable with social media, this study might get other results with younger respondents. Indeed, they may feel more satisfied after an act of online revenge than older ones.

#### **7.4. New research directions**

This study suggests two main new research directions. A field experiment could investigate the involvement of psychological mechanisms in affective errors of prediction in a consumer revenge context. Moreover, drawing from the present results, studying the impact of relationship rule violations in different revenge contexts (brand personalities and relationships between the parties involved in the service failure) could be relevant.

##### *7.4.1. Investigating the involvement of psychological mechanisms in consumers' affective prediction inaccuracies*

Identifying active psychological mechanisms leading to affective forecasting mistakes could be interesting. These mechanisms were neglected here because the focus was on the dependent variables as ways to explain the error of prediction.

The control condition is an “orchestrated” misconstrual problem (Gilbert, Driver-Linn and Wilson, 2002; Wilson and Gilbert, 2003). The respondents were asked to choose which type of revenge would have the best impact, which resulted in a bigger

overestimation of their positive feelings. This overestimation could be due to a projection bias (Loewenstein and Schkade, 1999; Gilbert and Wilson, 2003; Hsee and Hastie, 2006), a motivated prediction (Buehler, McFarland, Spyropoulos and Lam, 2007), or an impact bias (Gilbert, Driver-Linn, & Wilson, 2002; Wilson and Gilbert, 2003; Hsee and Hastie, 2006; Buehler, McFarland, Spyropoulos and Lam, 2007; Hoerger, Quirk, Lucas and Carr, 2010; Kushlev and Dunn, 2012). A hot to cold empathy gap may explain the overestimated negative feelings (Wilson and Gilbert, 2003; Hsee and Hastie, 2006; Kushlev and Dunn, 2012; Loewenstein, Prelec and Shatto, 1998).

A field experiment is recommended to investigate the existence of these psychological mechanisms, providing a more realistic situation (no scenario) to replicate these results. A question aiming to distinguish each mechanism could be added to increase their validity.

*7.4.2. A theoretical application: studying the impact of relationship rule violations in different revenge contexts*

In a commercial context, the error of prediction is mostly reversed compared to what happened in Carlsmith, Wilson and Gilbert's study (2008), where the respondents were primed to promote the good of the group. Similarities can be drawn with Aggarwal (2004) regarding the impact of the violations of relationship norms on the evaluation of a brand.

Aggarwal proved that the perceived violation of relationship norms mediates the impact of the brand's action on consumers' evaluation of the brand. If one complies

with the rules of an exchange relationship while in a communal setting, one does not end up well and vice versa.

It seems that similarly, the revenge act hurts the consumer more than he imagined when he shares a “communal” relationship with the offender (Carlsmith, Wilson and Gilbert’s study, 2008). On the other hand, in an exchange relationship, the consumer is pleased to see that globally, the tit for tat approach does not hurt as much as he thought.

Confirming this moderation by the type of relationship sounds interesting; either to compare both the impact of revenge and consumer’s prediction accuracy on different types of brands (personalities), or in two completely different contexts (family or friends versus commercial relationship).

## APPENDICES

### Appendix 1: Questionnaire

What is your approximate age in years?

- Below 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65 or more

Where do you live?

- North America
- South America
- Europe
- Asia
- Africa
- Australia / New Zealand

What is your gender?

- Male
- Female

The following pages contain an anonymous questionnaire, which we invite you to complete. This questionnaire was developed as part of a master's thesis at HEC Montréal.

Because your first impressions best reflect your true opinions, we would ask that you please answer the questions included in this questionnaire without any hesitation. There is no time limit for completing the questionnaire, although we have estimated that it should take about 15 minutes.

The information collected will be anonymous and will remain strictly confidential. It will be used solely for the advancement of knowledge and the dissemination of the overall results in academic or professional forums.

The online data collection provider agrees to refrain from disclosing any personal information (or any other information concerning participants in this study) to any other users or to any third party, unless the respondent expressly agrees to such disclosure or unless such disclosure is required by law.

You are free to refuse to participate in this project. By accepting to participate in this study, you are required to answer all the questions. However, you may decide to stop answering the questions at any time. By completing this questionnaire, you will be considered as having given your consent to participate in our research project and to the potential use of data collected from this questionnaire in future research.

If you have any questions about this research, please contact the principal investigator, Sarah Herbault, at the telephone number or email address indicated below.

HEC Montréal's Research Ethics Board has determined that the data collection related to this study meets the ethics standards for research involving humans. If you have any questions related to ethics, please contact the REB secretariat at (514) 340-7182 or by email at [cer@hec.ca](mailto:cer@hec.ca).

Thank you for your valuable cooperation!

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514-340-1493	514-340-1493	514-340-7312
<a href="mailto:sarah.herbault@hec.ca">sarah.herbault@hec.ca</a>	<a href="mailto:yany.gregoire@hec.ca">yany.gregoire@hec.ca</a>	<a href="mailto:sandra.laporte@hec.ca">sandra.laporte@hec.ca</a>

Try to picture yourself in the situation you are about to read. Please feel free to read it as many times as you need before answering the questions.

**Reality Conditions:**

Scenario:

Two years ago, you accepted a job abroad, which is why you've been flying home in order to spend the Christmas holiday with your family. You ordered the presents for your family on Amazon three weeks ago to receive them in time at your parents.

As planned, you arrived home on time yesterday. You expect to receive the presents shortly since they are out for delivery according to Amazon's tracking system. However, after a couple of hours, you haven't received the parcel. You check on Amazon's website once more and you are surprised to see that your current order status is "Delivered and signed for by the resident".

You immediately call Amazon's logistics department, and explain your situation. The customer service employee tries to reach the driver. After talking to him, she tells you that he never had your package in his truck and that your parcel is in fact still at the delivery center. She then tells you that: "Unfortunately, since it is Christmas Eve, based on our policy, the drivers have the afternoon off. I'm afraid we won't be able to deliver your package today. We will try again on the 26th." It is now 2pm, and you know that you won't be able to drive to the delivery center before it closes for the day.

Now that you have read the scenario, please answer the following questions. Remember that there are no right and wrong answers, so please take your time and answer each question honestly.

After this incident and Amazon's failure to improve the situation, how do you feel? Please describe your feelings in details so that someone reading you can picture himself in your situation.

Insist on what you felt:

-when you saw the faulty update of your order status

-when the employee said the company couldn't help you before the 26th.

To what extent do you want to:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
... take actions to get Amazon in trouble	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... cause inconvenience to Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... punish Amazon in some way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... make Amazon get what it deserves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... get even with Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... make an effort to be more friendly and concerned about Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... try to make amends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...give Amazon back a new start, a renewed relationship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...let go of the negative feelings you had against Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...let go of your hate and desire for revenge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...let go of your hurt and pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...let go of the resentment you felt toward Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do you feel when thinking about Amazon's behavior?

	Strongly disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I can't stop thinking about what Amazon has done to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thoughts and feelings about how Amazon has hurt me keep running through my head.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strong feelings about what Amazon has done to me keep building up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Images of the service failure keep coming back to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

After the incident and Amazon's failure to improve the situation, do you feel?

	Not at all	A little	Moderately	Quite a bit	Extremely
Pleased	<input type="radio"/>				
Positive	<input type="radio"/>				
Satisfied	<input type="radio"/>				
Happy	<input type="radio"/>				
Negative	<input type="radio"/>				
Distressed	<input type="radio"/>				
Irritated	<input type="radio"/>				
Upset	<input type="radio"/>				

### **Direct Revenge Stimuli**

You think about what just happened. Your package was forgotten and Amazon lied to you, putting you in a bad situation. You decide that they shouldn't get away with it: it's unfair.

You decide that other consumers should know about the incident and you want Amazon to know how unhappy you are with its behavior. The company has to be made aware and you intend to make sure Amazon gets the message straight.

Before hanging up you tell the consumer service employee: "I hope you'll like my own Christmas present to you! I just posted it and it's waiting for you on Twitter". Then, you go on your Twitter account and post the following message, making sure to tag Amazon so that it'd receive it:

@Amazon You forgot about my package and #lied about its delivery! Can't give Christmas presents! Buy at Best Buy next time! #AmazonLogistics

### **Indirect revenge stimulus**

You think about what just happened. Your package was forgotten and Amazon lied to you, putting you in a bad situation. You decide that they shouldn't get away with it: it's unfair.

You decide that other consumers should know about the incident, but you aren't sure Amazon should be made aware of your action yet.

You hang up and go on the Consumer Horror Stories Website where customers share their bad experiences with companies. Since no company monitors this website's content, it's assumed that Amazon will not get the message and will not be aware of how unhappy you are with its behavior. You write:

"Amazon forgot to deliver my package and notified it as delivered, saying I signed a receipt. They lied! I have no Christmas presents to offer tonight because of Amazon Logistics! Next year, I'll definitely order at Best Buy, and you should do the same!"

After getting your revenge against Amazon, to what extent do you want to:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
... take actions to get Amazon in trouble	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... cause inconvenience to Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... punish Amazon in some way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... make Amazon get what it deserves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... get even with Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... make an effort to be more friendly and concerned about Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... try to make amends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...give Amazon back a new start, a renewed relationship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...let go of the negative feelings you had against Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...let go of your hate and desire for revenge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...let go of your hurt and pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...let go of the resentment you felt toward Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

After getting your revenge, how do you feel when thinking about Amazon's behavior?

	Strongly disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I can't stop thinking about what Amazon has done to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thoughts and feelings about how Amazon has hurt me keep running through my head.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strong feelings about what Amazon has done to me keep building up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Images of the service failure keep coming back to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

After getting your revenge against Amazon, do you feel?

	Not at all	A little	Moderately	Quite a bit	Extremely
Pleased	<input type="radio"/>				
Positive	<input type="radio"/>				
Satisfied	<input type="radio"/>				
Happy	<input type="radio"/>				
Negative	<input type="radio"/>				
Distressed	<input type="radio"/>				
Irritated	<input type="radio"/>				
Upset	<input type="radio"/>				







To what extent do you agree with the following statements?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I believe my reaction indicated some form of rudeness.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My reaction showed Amazon how powerful I am.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My reaction showed that I am brave enough to stand for my own rights.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
While I decided what I was going to do against Amazon, it was important to me to know if someone would witness my reaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I chose to get revenge this way because otherwise people would have judged me negatively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I think back about my revenge, I feel guilty.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Your reaction to Amazon's failure was...



Thinking about the incident and your reaction, how much do you agree with these statements?

	Strongly disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I was victim of Amazon's mistake.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My father's friend told me about the time he was victim of Amazon's mistake.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During this survey, I said how getting revenge against Amazon made me feel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During this survey, I predicted how my father's friend must have felt when he got revenge against Amazon.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Usually, when you're mad...

	Almost never	Sometimes	Often	Almost always
You express your anger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If someone annoys you, you are apt to tell him or her how you feel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Finally, after reading the situation and completing the questionnaire, what do you think this study is about?

**Prediction conditions:**Scenario

Today is Christmas Eve and you're spending it with your family at your parents' house. Soon you'll start preparing the meal with your family, but right now you're distracted by your father's friend. You've just met him and he's telling you about something that happened to him a few years ago, also on Christmas Eve.

He remembers he had ordered Christmas presents for his family on Amazon three weeks in advance to receive them in time. That day, he had expected to receive the presents a couple hours before since they were out for delivery according to Amazon's tracking system. However, he hadn't received the parcel. Of course, he was surprised to see, on Amazon's website, that his current order status had been "Delivered and signed for by the resident".

He had immediately called Amazon's logistics department and explained his situation. The customer service employee had explained that she understood the problem. After talking to the driver, she had said that he never had his package in his truck and that the parcel was in fact still at the delivery center. She had then told him that: "Unfortunately, since it is Christmas Eve, based on our policy, the drivers have the afternoon off. I'm afraid we won't be able to deliver your package today. We will try again on the 26th." He hadn't been able to drive to the delivery center before it had closed for the day.

Now that you have read the scenario, please answer the following questions. Remember that there are no right and wrong answers, so please take your time and answer each question honestly.

After this incident and Amazon's failure to improve the situation, how do you think your father's friend felt? Please describe what his feelings should have been according to you in details so that someone reading you can picture himself in his situation.

Insist on what he must have felt:

-when he saw the faulty update of his order status

-when the employee said the company couldn't help him before the 26th.



How do you think your father's friend must have felt when thinking about Amazon's behavior?

	Strongly disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
He couldn't stop thinking about what Amazon had done to him.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thoughts and feelings about how Amazon had hurt him kept running through his head.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strong feelings about what Amazon had done to him kept building up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Images of the service failure kept coming back to him.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

After the incident and Amazon's failure to improve the situation, do you think your father's friend must have felt?

	Not at all	A little	Moderately	Quite a bit	Extremely
Pleased	<input type="radio"/>				
Positive	<input type="radio"/>				
Satisfied	<input type="radio"/>				
Happy	<input type="radio"/>				
Negative	<input type="radio"/>				
Distressed	<input type="radio"/>				
Irritated	<input type="radio"/>				
Upset	<input type="radio"/>				

**Direct Revenge Stimulus:**

He had thought about what just happened. His package had been forgotten and Amazon had lied to him, putting him in a bad situation. He decided that they shouldn't get away with it: it was unfair.

He decided that other consumers should know about the incident and he wanted Amazon to know how unhappy he was with its behavior. The company had to be made aware and he intended to make sure Amazon got the message straight.

Before hanging up he had told the consumer service employee: "I hope you'll like my own Christmas present to you! I just posted it and it's waiting for you on Twitter". Then, he had gone on his Twitter account and posted the following message, making sure to tag Amazon so that it'd receive it:

@Amazon You forgot about my package and #lied about its delivery! Can't give Christmas presents! Buy at Best Buy next time! #AmazonLogistics

**Indirect Revenge Stimulus**

He had thought about what just happened. His package had been forgotten and Amazon had lied to him, putting him in a bad situation. He decided that they shouldn't get away with it: it was unfair.

He decided that other consumers should know about the incident, but he hadn't been sure Amazon should be made aware of his action yet.

He had hung up and went on the Consumer Horror Stories Website where customers shared their bad experiences with companies. Since no company monitored this website's content, it was assumed that Amazon would not get the message and would not be aware of how unhappy he was with its behavior. He wrote:

"Amazon forgot to deliver my package and notified it as delivered, saying I signed a receipt. They lied! I have no Christmas presents to offer tonight because of Amazon Logistics! Next year, I'll definitely order at Best Buy, and you should do the same!"

**Control condition stimulus:**

He had thought about what just happened. His package had been forgotten and Amazon had lied to him, putting him in a bad situation. He decided that they shouldn't get away with it: it was unfair.

He had two ways of getting revenge against Amazon:

-Let other consumers know about the incident with a message on Twitter, and make sure Amazon would know how unhappy he was with its behavior.

Before hanging up on the customer service employee, he would tell her:

“I hope you’ll like my own Christmas present to you! I just posted it and it’s waiting for you on Twitter!”

Then he would write the following tweet, tagging Amazon to make sure Amazon receive the message:

@Amazon You forgot about my package and #lied about its delivery! Can’t give Christmas presents! Buy at Best Buy next time! #AmazonLogistics

This way, Amazon would clearly be made aware of his dissatisfaction and get the message straight.

Or:

-Let other consumers know about the incident with a message on the Consumer Horror Stories Website where other customers share their bad experiences with companies, without telling Amazon how unhappy he was with its behavior.

Since no company monitored this website’s content, it was assumed that Amazon would not get the message and would not be made aware of his dissatisfaction.

After hanging up on the customer service employee, he would write:

“Amazon forgot to deliver my package and notified it as delivered, saying I signed a receipt. They lied! I have no Christmas presents to offer tonight because of Amazon Logistics! Next year, I’ll definitely order at Best Buy and you should do the same!”

This way, he'd make sure Amazon would not be aware of his action yet.

Please choose the revenge behavior that you think would make him feel best in this situation. Think about the revenge option that would:

-make him feel less inclined to get revenge with Amazon afterwards

-give him more closure -make him stop thinking about the incident:

- Tweet (Amazon knows about it) (1)
- Consumer Horror Stories website (Amazon doesn't know about it) (2)







When you consider your father's friend's revenge against Amazon, you believe that...

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Amazon understood it has done something wrong to him	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amazon has learnt how to treat its customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amazon now realizes its wrongdoing won't be left unanswered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amazon has learnt to be responsible for its failures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When you consider your father's friend's revenge against Amazon, you believe that it...

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
prevented Amazon from making the same mistake to other customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
stopped Amazon from taking advantage of other customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
saved other customers from potential future harm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
was because of other customers' sake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
had no benefit for your father's friend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Regarding the incident and the failed recovery, you think that...



To what extent do you agree with the following statements?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I believe my father's friend's reaction indicated some form of rudeness.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My father's friend's reaction showed Amazon how powerful he is.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My father's friend's reaction showed that he is brave enough to stand for his own rights.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
While my father's friend decided what he was going to do against Amazon, it was important to him to know if someone would witness his reaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My father's friend chose to get revenge this way because otherwise people would have judged him negatively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When my father's friend thinks back about his revenge, he feels guilty.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Your father's friend's reaction to Amazon's failure was...

	1	2	3	4	5	6	7
In Amazon's face: Behind Amazon's back	<input type="radio"/>						
Clearly apparent to Amazon: Not necessarily apparent to Amazon	<input type="radio"/>						
Obvious to Amazon: Unobvious to Amazon	<input type="radio"/>						
Made so Amazon would see it: Made so Amazon wouldn't see it	<input type="radio"/>						
Aggressive: Soft	<input type="radio"/>						
Appropriate: Inappropriate	<input type="radio"/>						
Directed at the employee only: Directed at the whole firm	<input type="radio"/>						
Affecting the local office only: Affecting the whole firm	<input type="radio"/>						
Affecting only a few other customers: Affecting a large number of customers	<input type="radio"/>						
Trivial: Serious	<input type="radio"/>						
Deserved: Undeserved	<input type="radio"/>						
Effective: Ineffective	<input type="radio"/>						

Thinking about the incident and your father's friend's reaction, how much do you agree with these statements?

	Strongly disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I was victim of Amazon's mistake.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My father's friend told me about the time he was victim of Amazon's mistake.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During this survey, I said how getting my revenge against Amazon made me feel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During this survey, I predicted how my father's friend would feel if he got revenge against Amazon.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Usually, when you're mad...

	Almost never	Sometimes	Often	Almost always
You express your anger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If someone annoys you, you are apt to tell him or her how you feel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Finally, after reading the situation and completing the questionnaire, what do you think this study is about?

## Appendix 2: Reliability of the main scales used

Variable	Items	Loadings	Percent of explained variance	Cronbach Alpha
Desire to pursue revenge in the future	(I want to...) -take actions to get Amazon in trouble -cause inconvenience to Amazon -punish Amazon in some way -make Amazon get what it deserves -get even with Amazon	>0.8	90.871	0.975
Desire to repair the relationship with the firm	(I want to...) -make an effort to be more friendly and concerned about Amazon -try to make amends -give Amazon back a new start, a renewed relationship	>0.8	80.890	0.881
Desire to let go of the hurt feelings	(I want to...) -let go of the negative feelings I had against Amazon -let go of my hate and desire for revenge -let go of my hurt and pain -let go of the resentment I felt toward Amazon	>0.9	91.648	0.970
Rumination	-I can't stop thinking about what Amazon has done to me. -Thoughts and feelings about how Amazon has hurt me keep running through my head. -Strong feelings about what Amazon has done to me keep building up. -Images of the service failure keep coming back to me.	>0.9	92.169	0.971
Positive Affect	-Pleased -Positive -Satisfied -Happy	>0.8	77.726	0.903
Negative Affect	-Negative -Distressed -Irritated -Upset	>0.8	85.350	0.942
Justice Restoration	(My reaction to Amazon's failure...) -balanced our relationship -ensured that my loss is not Amazon's gain -gave Amazon what it deserved -makes everything fair -re-established justice	>0.6	61.884	0.841
Blame	-Amazon is to blame for the service failure -Amazon is to blame for the poor service recovery	>0.9	91.695	0.906
Reality-	-I was victim of Amazon's mistake.	>0.6	71.452	0.862

Prediction Manipulation Check	-My father's friend told me about the time he was victim of Amazon's mistake. -During this survey, I said how getting revenge against Amazon made me feel. -During this survey, I predicted how my father's friend must have felt when he got revenge against Amazon.			
Revenge Behavior Manipulation Check	-Obvious/Unobvious -In Amazon's face/Behind Amazon's back -Apparent/Not necessarily apparent -Made so Amazon would see/Made so Amazon wouldn't see	>0.8	79.100	0.912
Revenge adequacy	-Appropriate/Inappropriate -Deserved/Undeserved	>0.9	83.234	0.797

TABLE 1: Scales and reliability

### Appendix 3: Manipulations' validity

<b>Variable</b>	<b>M</b> reality / direct revenge	<b>M</b> reality / indirect revenge	<b>M</b> prediction imposed / direct revenge	<b>M</b> prediction imposed / indirect revenge	<b>M</b> prediction choice / direct revenge	<b>M</b> prediction choice / indirect revenge	<b>F-test</b>	<b>Significance</b>
Revenge behavior Manipulation Check*	3.320	4.848	2.500	5.056	2.397	4.300	92.922	0.000
Reality- Prediction Manipulation Check	5.375	5.603	2.531	2.296	2.618	3.017	258.930	0.000
Revenge adequacy **	3.490	3.185	3.194	3.265	2.779	3.267	0.978	0.378
Blame	5.630	5.522	5.571	5.888	5.677	5.933	0.534	0.587

This table shows the results of a full factorial ANOVA.

\*bipolar scale: 1=direct; 7=indirect

\*\*bipolar scale: 1=adequate; 7=inadequate

TABLE 1: Manipulation check – Main data collection

#### Appendix 4: Pre-test's results

Variable	Direct revenge		Indirect revenge		F-Test (contrast)	Significance
	Reality	Prediction	Reality	Prediction		
Revenge Behavior Manipulation Check*	2.73	2.44	5.31	5.71	107.64	0.000
Realism	6.62	6.63	6.56	6.67	0.010	0.922
Revenge adequacy**	3.52	3.30	4.37	3.41	1.967	0.164

This table shows the result of a full factorial ANOVA

\*bipolar scale: 1=direct; 7=indirect

\*\*bipolar scale: 1=adequate; 7=inadequate

TABLE 1: Manipulation checks: Revenge behaviors - Pre-test

Variable	Reality	Prediction	F-Test (contrast)	Significance
Reality-Prediction Manipulation Check*	2.5000	6.3426	160.929	0.000
Realism	6.030	6.093	0.091	0.763
Blame	4.795	5.389	2.680	0.105
Negative Affect	5.190	5.142	0.035	0.851
Positive Affect	1.6667	1.8580	0.636	0.427

The column F-Test shows the main effect of Task on the tested variables.

\*Likert scale: 1=Strongly disagree; 7=Strongly agree

TABLE 2: Manipulation checks: Task - Pre-test

### Appendix 5: Actual revenge's impact on consumer's mood

Variable	M before*	SD before*	M after**	SD after**	Mean difference	SD difference	T-test	pvalue
Positive affect***	1.297	0.706	1.797	0.841	0.500	1.037	4.722	0.000
Negative affect***	3.487	1.069	2.604	1.218	-0.883	1.439	-6.011	0.000
Desire to pursue revenge in the future	3.413	1.671	3.473	1.528	0.060	1.271	0.466	0.642
Desire to let go of the resentment	4.435	1.387	4.172	1.368	-0.263	1.343	-1.919	0.058
Desire to repair the relationship with the firm	3.198	1.061	3.167	1.144	-0.031	1.009	-0.304	0.762
Rumination	3.734	1.472	3.708	1.544	-0.026	1.296	-0.197	0.844

This table compares the different variables before and after the consumers actually get revenge. If it is not signaled, each variable is measured by a 7-point Likert scale where 1="Strongly disagree" and 7="Strongly agree".

\* measured after the service failure and before the revenge (reality conditions)

\*\* measured after the revenge (reality conditions)

\*\*\* Positive affect and Negative affect are measured by a 5-point scale where 1="Not at all" and 5="Extremely".

TABLE 1: Actual impact of revenge: Paired comparisons – Main data collection

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