



What Do Online Complainers Want? An Examination of the Justice Motivations and the Moral Implications of Vigilante and Reparation Schemas

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Abstract

This research aims to understand how two basic schemas—vigilante and reparation—influence online public complaining. Drawing on two experiments, a longitudinal field study and content analysis of online complaints, the current research makes three core contributions. *First*, we show that for similar service failures, each schema is associated with different justice motivations (i.e., in terms of recovery, revenge, and protection of others), which have different moral implications for consumers. *Second*, vigilante and reparation complainers write complaints in a different manner and are drawn to different online platforms; this information is helpful to identify complainers using each schema. *Third*, the schemas moderate the process leading to different post-complaint benefits (i.e., resolution and positive affect). Specifically, perseverance has a greater effect on obtaining a resolution for reparation complainers compared to vigilantes. Additionally, whereas a recovery leads to an increase in positive affect for reparation complainers, vigilantes experience a high level of positive affect simply by posting their complaint (regardless of the resolution). The theoretical, ethical, and managerial implications of these findings are discussed.

Keywords Online complaining · Justice theory · Service failure · Customer revenge · Cognitive schemas · Conflict frames · Ethics consumer behavior · Textual analysis

Introduction

As firms have expanded their use of social media to promote their offerings, dissatisfied customers have followed suit by complaining online. According to a recent survey (Grant 2013), 21% of 18–34-year-old customers complain through social media when firms do not satisfy their needs. A variety of online platforms (e.g., Twitter, Facebook, consumeraffairs.com) now provide customers with accessible and popular channels for complaining and reaching a large audience.

While online public complaining has been addressed in marketing (e.g., Joireman et al. 2013; Ward and Ostrom 2006), this response has been overlooked in the ethics literature; yet the phenomenon of online public complaining relates to many moral issues. Customers typically engage in this extreme form of negative word of mouth when they perceive that the firm acted in a highly reprehensible manner (Antonetti and Maklan 2016b). Justice theory is also the dominant paradigm used to understand online complaining (Tax et al. 1998; Ward and Ostrom 2006), and this paradigm relates to many concepts with moral implications: such as revenge and protection of others (e.g., Grégoire and Fisher 2008). For instance, customers who complain online to seek revenge can be viewed as behaving morally or immorally. On the one hand, public revenge is a means of restoring justice, deterring exploitive behavior and protecting other customers (Grégoire and Fisher 2008; McCullough et al. 2013). On the other hand, revenge can also be viewed as taboo (Jacoby 1983) and as a response that “our higher nature should rise above” (Uniacke 2000, p. 61).

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In the current research, we validate the existence of two complaining schemas (i.e., *reparation* and *vigilante*). Given their differences, these two schemas are associated with different justice motivations and moral issues. These distinctions derive from qualitative work arguing that customers use different, predefined mental schemas to make sense of and respond to service failures (Beverland et al. 2010; Ringberg et al. 2007). By developing the notion of schema, we aim to advance the literature on ethical consumer behavior in two ways. First, we provide new insights that explain how online complainers respond to firms' reprehensible actions (Antonetti and Maklan 2016a). Here, online complaining typically occurs in the context of high severity and strong blame toward a firm (Tripp and Grégoire 2011). Second, we discuss how online complainers perceive the moral implications of being motivated by recovery, protection of others, and mainly revenge. Although the notion of *workplace* revenge is regularly discussed in ethics (Barclay et al. 2014; Seabright and Schminke 2002), we do not find the equivalent discussion for *consumers*.

Building on the relevant literature (Beverland et al. 2010), we posit that *reparation complainers* frame the problem as a *task* (i.e., a mistake to be fixed) and focus on resolving the dispute with a firm. Their motivation is primarily related to reparative justice for oneself and others (e.g., apology and compensation). *Vigilante complainers* frame the problem as a *personal and public affront* to be avenged, and from which, they should *protect other consumers* (Ward and Ostrom 2006). Here, their motivation is primarily about punitive justice and justice for others (Cropanzano et al. 2003). These complainers want to punish firms as well as to alert fellow consumers of firms' abuses (Grégoire and Fisher 2008).

Drawing on a multi-method approach, the current research offers three core contributions. First, we *validate* with an experiment and a field study the existence of the schemas by comparing their profiles on three key justice motivations (i.e., recovery, revenge, and protection of others); each profile involves a different set of moral implications for consumers. In comparison with the reparation schema, we expect that the vigilante schema will be associated with stronger desires to get revenge and protect other customers for similar service failures. However, the reparation schema should be related to greater desire for recovery, compared to the vigilante schema. Here, we highlight that these two schemas are not diametrically opposed and that their differences are a matter of degree. Specifically, we expect small, but meaningful differences for desires for recovery and protection of others; these two motivations naturally arise for most customers after service failures in an online context. However, we should see a larger difference in desires for revenge between schemas.

Second, we examine two concrete ways that managers can use to *identify* both schemas, which are psychological

and difficult to observe in real life. As a first way to identify them, we argue that each schema gravitates to different online platforms. The reparation complainers should be more inclined to contact online consumer agencies (which facilitate a discussion with the firms), whereas the vigilante complainers are more likely to post on complaint websites (designed to be confrontational). As a second identification procedure, we posit that the schemas are associated with different writing styles that reflect different worldviews (Pennebaker et al. 2003). For instance, compared to reparation complainers, vigilante complainers write in a more casual and abstract (versus formal and concrete) style and are more likely to use pronouns that imply blame (e.g., “you” and “they”).

Third, we track over time two post-complaint benefits—i.e., obtaining a resolution and positive affect—that customers derive from each schema. While reparation complainers are able to get a resolution when they persevere over time, vigilante complainers are unable to obtain such an outcome (despite perseverance). However, whereas reparation complainers' positive affect depends on obtaining a resolution, vigilante complainers feel high positive affect by simply posting online (regardless of their resolution). In the following sections, we present a literature review on both schemas. Then, we develop our hypotheses and present our studies.

Research Background About the Schemas

Service failures often lead customers to complain in private and in public. Private complaining occurs when customers voice their concerns only to the firms responsible, whereas public complaining occurs when customers let a third party or the general public know about the failure (Singh 1988). Notably, the growth of social media has made online public complaining more frequent than ever before (Ward and Ostrom 2006). Grégoire et al. (2015) argue that customers may complain online after a simple service failure—by using firms' official social media—or after a “double deviation” situation, which is a service failure followed by a failed recovery. In the case of a double deviation, complainers are more likely to use online platforms such as YouTube and to contact online third-party applications (such as *consumeraffairs.com* or any application that is not associated with the firm at fault).

Given the pervasiveness of online complaining, researchers have been keenly interested in understanding the phenomenon of online complaining. One promising approach has been to consider the role of schemas that customers adopt when they engage in online complaining. It should be noted that the current research focuses on online complaining resulting from a service failure with a firm; we do not directly address the phenomenon of customer online

Table 1 Comparison of two customer complaining schemas based on our three contributions

Hypothesis	Reparation schema	Vigilante schema	Key results
<i>Basic definitions</i>			
Prior typology	Utilitarian (Ringberg et al. 2007) Task based (Beverland et al. 2010)	Oppositional (Ringberg et al. 2007) Personal based (Beverland et al. 2010)	
Approach	Problem solving for oneself and others	Confrontational and protection of others	
<i>Contribution 1: validating their justice motivations</i>			
H1: justice motivations	Highest desire for recovery (H1a) Low desire for revenge (H1b) High desire for protection of others (but less than vigilante schema) (H1c)	High desire for recovery (but less than reparation schema) (H1a) High desire for revenge (H1b) Highest desire for protection of others (H1c)	Study 1b confirms H1ab. Study 2 confirms H1abc
<i>Contribution 2: identification of the schema</i>			
H2: online platform	Online consumer agency	Complaint website	Study 1b confirms H2
H3: writing style	More formal (H3a) Use of “I” (H3b) More past tense, less present tense, more references to place and time (H3c)	Less formal (H3a) Use of “you” and “they” (H3b) Less past tense, more present tense, fewer references to place and time (H3c)	Study 2 confirms H3abc
<i>Contribution 3: post-complaint benefits</i>			
H4: getting a resolution	Greater ability to get a resolution when customers persevere over time (H4a)	No effect of getting a resolution, despite perseverance (H4b)	Study 2 confirms H4
H5: positive affect	Positive affect is conditioned by getting a resolution (H5a)	High positive affect regardless of the resolution (H5b)	Study 2 confirms H5

deviance and opportunism, especially if these latter behaviors are not associated with a failure or a crisis.

A Schema-Based Approach to Understanding Online Public Complaining

Recent qualitative research has revealed that customers' responses to service failures are strongly conditioned by mental schemas (Ringberg et al. 2007) or frames (Beverland et al. 2010). Ringberg et al. (2007), for example, uncover two schemas customers use when approaching service failures and refer to them as the utilitarian vs oppositional models.¹ More recently, Beverland et al. (2010) identified two closely related schemas consumers use to make sense of their conflicts, labeled task-based vs. personal-based frames. Building on these typologies, the current research proposes a set of conceptually similar schemas which we refer to as the *reparation* and *vigilante* schemas, a relabeling intended to more directly reflect the justice paradigm (Tax et al. 1998).

Customers adopting a *reparation schema* tend to be rational and pragmatic (Ringberg et al. 2007). Although they are dissatisfied with the situation, they do not frame it in a personal or oppositional manner, but rather as a problem to be solved (Beverland et al. 2010). These customers tend to “focus on the events that led to the failure and adopt a conflict style focused on ensuring practical outcomes and resolution” (Beverland et al. 2010, p. 620). They are also concerned about obtaining reparation for other customers, especially in an online complaint setting, as a way to restore social order (Ward and Ostrom 2006).

Customers adopting a *vigilante schema* tend to frame service failures in a more confrontational manner. They believe firms have betrayed them and thus feel the need to reassert themselves by showing their opposition (Ringberg et al. 2007). They want to punish firms for their misbehaviors; and by the same token, they are concerned to alert other customers against similar injustices (Ward and Ostrom 2006). In sum, these customers are likely to engage in more confrontational conflict styles, which focus on punishing the offender and alerting other consumers (Beverland et al. 2010; Ward and Ostrom 2006).

Table 1 offers an overview of these two schemas and our hypotheses, which are organized according to our three contributions. While these schemas can be viewed as distinct prototypes for the purposes of exposition, the choice

¹ These authors identify a third schema, the relational model. Complainers using a relational model aim to restore their relationship as it was before the service failure. This schema is unlikely to be used by online complainers who are unlikely to return to the firm if they have sufficient time to find an alternative (Tripp and Grégoire 2011).

between the reparation and vigilante schemas is not absolute nor an “either-or” decision. We argue that the schemas are different approaches that may be activated at different moments, depending on the context. On the one hand, customers could initially adopt a reparation schema but turn to the vigilante schema if the reparation efforts are unsuccessful. On the other hand, the tensions created by a vigilante schema could be eventually replaced by a reparation schema due to friendly discussions and compromises. Although we believe that a transition from one schema to another is possible, the current research focuses on one schema at a time, which is the typical approach used in this literature (Beverland et al. 2010; Ringberg et al. 2007). Before studying a possible transition, we first confirm the existence of these schemas in real life and empirically validate their characteristics.

It is also important to clarify that our use of the term “vigilante” does not imply villainous motives; the vigilante schema is fundamentally driven by a desire to achieve justice for oneself and others. This response can be even viewed as noble when it relates to the protection of others.

Moral Implications of Each Schema

Online public complaining raises different sets of moral issues depending on the schema used by complainers. When complainers adopt a vigilante schema, they typically see revenge and punishments as last recourses to achieve some form of justice (for instance, after a severe service failure and/or a series of failed recoveries); and thus, they feel morally justified to perform their actions (Grégoire and Fisher 2008). In turn, a reparation schema can be viewed as the “right” approach from a moral standpoint (because it relies on conversation, for instance). However, this schema may be ineffective and inappropriate when customers face abusive firms. We further elaborate on the moral implications of each schema.

The vigilante schema is motivated in part by revenge, a response about which people may have conflicting judgments. On the one hand, most major religions have tenets against revenge (e.g., to “turn the other cheek” in the New Testament). Jacoby (1983) also argues that revenge is taboo in modern society because government has usurped the possibility of enacting justice through punishment. In addition, revenge may also conflict with some procedural justice perceptions related to voice, bias suppression, and accuracy of information (Leventhal 1980). Vengeance is often covert, and it can preclude a constructive conversation between individuals.

On the other hand, revenge is a well-studied response in marketing, especially since the advent of the Internet [see Joireman et al. 2016 for a literature review]. In a consumer context, the relation between customers and firms strongly

relies on exchanges, and it remains somewhat competitive (Aggarwal 2004). Given this relational context, acts of retaliation regularly occur between customers and firms. Developing the views of Joireman et al. (2016), it can be observed that customers tend to see revenge as morally acceptable under any of the following conditions: (1) when customers with strong relationships feel betrayed by firms, (2) after a severe failure, (3) after a double deviation, and (4) when the customer infers that the firms were motivated by greed.

At first sight, a reparation schema may appear more “righteous,” compared to a vigilante schema. First, reparation involves direct conversation among the parties, and as a result, it enables voice. Second, reparation allows an exchange of information that can correct misperceptions, thereby increasing the accuracy of information. That being said, this response may not correspond well to the conflictual nature of a service failure that led a customer to make an online complaint (Grégoire et al. 2009). Customers regularly engage in online public complaining because repeated requests for recovery have failed or after severe service failures. In this kind of context, a reparation schema may appear ineffective to deal with a badly intentioned firm.

Hypotheses Development

In this section, we develop the five hypotheses (see Table 1) that correspond to our three key contributions: (1) validating the schemas on the basis of their justice dimensions (H1), (2) examining ways to identify the schemas (H2–H3), and understanding the post-complaint benefits associated with each schema (H4–H5).

Validating the Schemas on the Basis of Justice Theory (H1)

Customer responses to service failures are driven by a variety of motivations that relate to justice theory (Grégoire and Fisher 2008; Ringberg et al. 2007). Specifically, we characterize the schemas on the basis of three justice-inspired desires: *recovery*, *revenge*, and *protection of others*. These desires or motivations relate to different mechanisms to restore justice, and they all involve different moral issues. It should be noted that we do not make any claim about the causality between the schemas and the motivations; we simply predict their association.

Recovery is a positive mechanism for restoring justice, and it refers to anything (e.g., apologies, compensation, refunds, etc.) a firm provides to its customers to repair a failure (Grégoire and Fisher 2008; Walster et al. 1973). The notion of recovery is central in the service failure literature (Smith et al. 1999), and we define *desire for recovery* as a customer’s felt need to receive from the firm proper

compensation and apology for the service failure. This mechanism is often the one preferred by customers because it relies on positive interactions, and it does not contravene any moral norm. Although a reparation schema should be associated with a greater desire for recovery compared to a vigilante schema, even vigilante complainers have some expectations about receiving an apology and compensation. Given the exchange-based relation between customers and firms, vigilante complainers remain motivated by this possibility. Hence, the difference on this desire is likely to be small.

Revenge is a negative mechanism for restoring justice (e.g., Bechwati and Morrin 2003). In contrast to reparation, whereby customers seek to improve their own situation by receiving something from the firm, revenge is motivated by a desire to “bring down” a firm in order to restore justice (Walster et al. 1973). We define *desire for revenge* as a customer’s felt need to punish a firm for the inconvenience it has caused (Bechwati and Morrin 2003). Although customer revenge is thought to be on the rise because of the easy access to online applications, this response is not always considered by customers. As previously observed, revenge is associated with a moral stigma, and customers feel morally justified to use it only under some conditions (see the four conditions listed in the prior section). Given their focus on confrontation, we anticipate that vigilante complainers have a much greater desire for revenge, compared to reparation complainers.

Finally, disgruntled customers may be motivated by a desire to protect other customers, especially in an online context. Specifically, we define a *desire to protect others* as a felt need to let other customers know about a firm that is perceived to be abusive. This motivation is aligned with the notion of deontic justice (Cropanzano et al. 2003), in which individuals are motivated to restore justice even in situations in which they are not directly involved. Actually, the norm of justice is so pervasive that individuals are often compelled to restore it for others, even when they do not personally face a failure. This mechanism is associated with high moral standards because individuals act in a selfless manner in order to restore social order for all.

Although the motivation to protect others has not surfaced in earlier schematic discussions, it aligns with the broader prototype of a vigilante, who is motivated to protect a broader community from counter-normative behavior. Importantly, this motivation also makes vigilantes’ desire for revenge more acceptable from a moral standpoint. Vigilante complainers believe they get revenge not only for themselves, but also for a community (Ward and Ostrom 2006). In line with this perspective, we expect that vigilante customers will report a stronger desire to protect others, compared to customers adopting a reparation schema. However, this difference should be small because of the public nature of online complaining. Most online complainers, regardless

of their schema, should be motivated by some desire to protect others. Formally:

H1 The two schemas interact with the three justice motivations, such that the reparation schema is associated with a slightly higher desire for recovery (H1a), a substantially lower desire for revenge (H1b), and a slightly lower desire to protect other customers (H1c), compared to the vigilante schema.

Two Approaches to Identify the Schemas (H2–H3)

The schemas are mainly psychological; and because of this, the customers adhering to them could be difficult to identify. In this section, we develop two hypotheses that can help managers in this identification process. Specifically, we argue that the complainers adopting each schema are drawn to different online platforms (H2) and use different writing styles (H3).

Online Platforms. There are a variety of online venues that customers can use to complain (Grégoire et al. 2015)—such as review sites (yelp), complaint websites (riporffreport.com), online consumer agencies (bbb.com), and a variety of social media (Facebook, YouTube, etc.). The two schemas should naturally drive complainers to use different online venues.

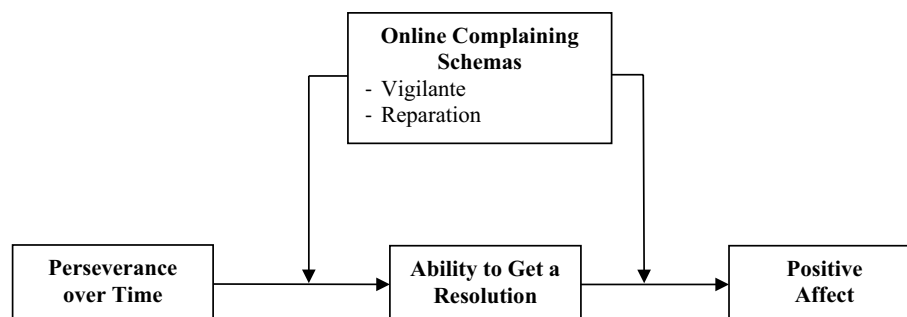
The reparation complainers are more likely to seek help from a third-party organization. For instance, they could complain to online consumer agencies that offer a platform through which customers and firms can meet and find a settlement. Such online agencies (e.g., consumeraffairs.com) also provide customers with useful information to help them in their negotiations with firms. In addition, new service websites (PeopleClaim, Scambook) have emerged to help customers handle their complaints for a modest fee (Grégoire et al. 2015).

The vigilante complainers, by contrast, ought to prefer complaint websites (riporffreport.com), review websites (Yelp), and social media (Facebook) that allow them to attack the firms directly and publicly. By nature, these online venues are designed to be blunt and unfiltered, and in the case of rippedoffreport.com, also aggressive and confrontational. As such, they make it easy to implement vengeance. Moreover, even though managers can write rebuttals about the event, these venues are rarely an appropriate place for collaborative negotiation.

H2 Compared to vigilante complainers, reparation complainers are more likely to complain to online consumer agencies and less likely to contact complaint websites.

Writing Style. Given their schemas, we argue that vigilante and reparation conflict resolution styles can be detected

Fig. 1 Effects of the complaining schemas on receiving post-complaint benefits



in the subtle ways they communicate when they complain. In this research, we pay special attention to function words, that is, short words (such as pronouns, articles, prepositions, auxiliary verbs, etc.) that represent most of the text and that only make sense in a given context (Pennebaker 2011). Through a series of articles, Pennebaker and colleagues (Pennebaker et al. 2003) show that function words have the ability to capture the deep motivations, feelings, and thoughts of an individual.

Because reparation complainers focus on problem solving and negotiation with firms, they should use a more formal and professional kind of language, in contrast to vigilantes. Formal writing tends to involve greater percentages of function words (such as articles), longer words (more than six letters), passive voice, and auxiliary verbs (Pennebaker 2011). The greater use of articles refers to a more classical writing style, whereas longer words show a concern for precision. Finally, the passive voice is more typical when people try to write formally about a topic. For these reasons, we hypothesize:

H3a The complaints of reparation complainers are more formally written and include more function words, longer words, and more auxiliary verbs, compared to those of vigilante complainers.

Pronouns are also important function words that capture the focus of an individual (Pennebaker et al. 2003; Kacewicz et al. 2013). For instance, the use of the pronoun “I” shows a greater concern for oneself; this pronoun indicates an effort at introspection to understand one’s situation. A communicator perceiving a lack of power is also more likely to use “I” (“I wonder if you could do this”). In turn, people who perceive themselves as powerful communicators tend to use the pronoun “you” (“you could do this”) or the imperative form (“do this”) when communicating. The pronouns “you” and “they” also put the focus and blame on others (such as the firm) rather than on oneself. Because reparation individuals are less likely to display their power and to blatantly blame the firm in their communications—because such an aggressive style could negatively affect their negotiations—their complaints should use a greater percentage of “I” and

a smaller percentage of “you” and “they.” Accordingly, we hypothesize:

H3b The complaints of reparation complainers are more likely to include the word “I” and less likely to include the words “you” and “they,” compared to those of vigilante complainers.

Finally, reparation complainers should be especially concerned with explaining the past events and should be precise about the place and the time of the event (compared to the vigilantes). To negotiate more effectively, the reparation complainers need to establish the facts and explain what actually happened in the *past*. The vigilantes are more concerned about blaming and exposing the firm at the *current time* for what it did in the past. Additionally, the vigilantes’ discourses are framed in a more abstract manner so that their message is more effective at mobilizing others (Ward and Ostrom 2006). On the basis of this reasoning, we hypothesize:

H3c The complaints of reparation complainers include more past tense, less present tense, and more specific references to place and time, compared to those of vigilante complainers.

Different Post-complaint Benefits Derived from Each Schema (H4–H5)

Given their different justice motivations, the two schemas should lead to different outcomes. Accordingly, we next consider two benefits customers gain by using either schema, namely problem resolution and positive affect. Although the service failures leading to online complaining are typically severe situations needing a resolution (Tripp and Grégoire 2011), the outcomes of problem resolution and positive affect have rarely been examined in a longitudinal context. As a starting point, we assume that complaining perseverance increases the likelihood of problem resolution over time, and problem resolution is associated with greater

positive affect over time. Importantly, we posit that these links are moderated by the schemas (see Fig. 1).²

From Perseverance to Problem Resolution Because online complaints often involve severe failures that have worsened over time (Tripp and Grégoire 2011), these situations cannot be easily resolved. In fact, customers need to keep complaining to increase their chance of obtaining a resolution. Such being the case, our model of post-complaint benefits starts with perseverance (i.e., the extent to which customers persist over time in their complaining efforts), which should lead to a greater chance to obtain a resolution (i.e., the extent to which customers perceive the initial service failure to be resolved to their satisfaction). However, the presence of different schemas raises an interesting question: Which schema is more likely to convert perseverance into problem resolution over time?

Anecdotally, some high-profile vigilante cases suggest that exposing firms publicly could lead to an excellent recovery. For example, when Dave Carroll—a musician who saw his guitar being broken by United Airlines—created the viral YouTube video song “United Breaks Guitars,” he got the firm’s attention, and United offered to pay for Carroll’s guitar and other expenses. Despite this apparent success, such high-profile cases are not necessarily representative of typical vigilante schemas. In Carroll’s example, the resolution offered by United is better explained by the viral nature of the video, which became a public relations fiasco, rather than by a desire to provide a resolution to a vigilante customer. So, any resolution could be viewed as a by-product rather than the central outcome of this schema.

Given its nature, a reparation schema appears more likely (than a vigilante schema) to lead to a resolution, given that the reparation schema encourages discussions, whereas the vigilante schema may lead to confrontation. Also, by using the support of an online third-party organization, these reparation schema complainers could become better positioned to obtain the desired resolution. However, the reparation complaining schema is not necessarily a guarantee of success. For instance, problems leading to an online complaint are often complex and difficult to resolve (Grégoire et al. 2009). To be successful, reparation complainers may require additional time and effort to find new information and meet

with new individuals (e.g., managers, lawyers, etc.), all of which takes time, energy, and persistence. In sum, reparation complainers should only get a resolution if they are willing to show a high level of perseverance.

H4 The type of online complaining schema interacts with perseverance to predict a resolution over time, such that:

- (a) For the reparation schema, complainers are more likely to get a resolution when they persevere over time.
- (b) For the vigilante schema, complainers are unlikely to get a resolution even if they persevere over time.

From Problem Resolution to Positive Affect In this context: Why would customers adopt a vigilante schema if it is less likely to lead to a material gain? They do so because these complainers believe that their vigilante form of complaining is intrinsically rewarding, even if their complaint does not lead to a resolution. We believe these complainers may feel more positive about their complaints for three key reasons. First, as long as vigilantes believe the firm has been punished and learned its lesson (Gollwitzer et al. 2011), vigilantes should feel positive, regardless of the resolution outcomes. Second, these customers may see it as their moral duty to alert others as a way to restore a form of social justice. Building on the notion of deontic justice (Cropanzano et al. 2003), vigilante complainers may be compelled to restore justice by protecting other customers (Porath et al. 2011). Third, vigilante complainers may feel a greater positive affect from this venting behavior, since it is directed to a large audience (Gollwitzer et al. 2011). For these reasons, we expect that their complaints should make them “feel good,” regardless of the resolution.

By comparison, we argue that problem resolution is closely associated with positive affect among customers adopting a reparation schema. For this schema, much of the focus is on obtaining a resolution. If reparation complainers do not achieve this goal, they should experience less positive affect than if they do achieve a resolution. Formally:

H5 The type of online complaining schema interacts with getting a resolution over time to predict the positive affect of complaining, such that:

- (a) For the reparation schema, complainers experience a high level of positive affect only when a resolution is achieved.
- (b) For the vigilante schema, complainers always experience a high level of positive affect, regardless of the outcome.

² “Based on recent evidence that shows that online complaining can occur after both a service failure and a double deviation (Grégoire et al. 2015), our intention is to develop a theory and hypotheses at a broader level, which encompasses both possible contexts. However, because our model for H4 and H5 relies on the assumption that an individual will show perseverance and keep complaining over time, we also believe that a double deviation—in which a firm would have failed in its initial recovery attempts—is a more appropriate context to test this part of our theory. It should be noted that H4–H5 are only tested with Study 2, which is conducted in a double deviation context.”

Overview of the Studies

Given the applied nature of our research, our ultimate objective is to test our hypotheses in a naturalistic and longitudinal context. However, the accomplishment of this goal is challenging because the schemas refer to psychological constructs and are difficult to observe. To address this challenge, we follow a multi-method approach—including two experiments, a content analysis and a longitudinal field study—that relies on using two websites as proxies for the schemas. As we explain next, these two websites possess unique features that capture the essence of a reparation schema (for consumeraffairs.com) and a vigilante schema (for ripoffreport.com). Accordingly, before reporting our main study (Study 2), we ensured that these two websites were reasonable proxies for the schemas.

Specifically, in Study 1a, we establish that the two websites possess different orientations that fit the two schemas; consumeraffairs.com (CA) should be more problem-solving oriented, whereas ripoffreport.com (RR) should be more confrontation oriented. Then, Study 1b manipulates the two schemas after a simple service failure and shows that the reparation and vigilante schemas are associated with different justice motivations (H1) and the selection of different websites (H2). Finally, Study 2 tests all the hypotheses (except H2) using the two websites as proxies for the schemas in the context of a double deviation. By varying the context of Study 1 (a service failure) and Study 2 (a double deviation), we wish to show that the application of the schemas is generalizable.

Study 1a: Consumeraffairs.com and Ripoffreport.com as Proxies for the Schemas

Study 1a validates the (problem solving vs. confrontation driven) orientation of the two websites (CA and RR) that will be used in Studies 1b and 2. When individuals write their complaints on CA, they are asked to explicitly indicate the type of reparation they seek and to write in a constructive manner. The complaints are then read by specialized staff and forwarded to appropriate legal resources (when it is relevant to do so). CA may also contact the firms so that a resolution can be negotiated. Given these characteristics, participants should see this website as being problem-solving oriented.

In contrast, RR presents an online platform that suits well a vigilante schema and a confrontational style. On this site, all the complaints are made public with minimal changes, and they constitute the first comment of a blog that becomes available on key search engines. The

underlying goal of this site is to expose abusive firms to a vast audience. The firm receives a copy of the complaint, and managers are invited to write a rebuttal. In sum, this website is a public forum where consumers and firms confront each other.

Design, Procedure, and Measures

To test the general orientation of these websites, we ran an experiment in which participants were randomly exposed to either of them. Overall, 195 participants were recruited via Amazon's Mechanical Turk. A total of 35 individuals failed our attention check, leaving a total of 160 usable questionnaires ($M_{age}=35.9$, 52% female). Participants were randomly assigned to three pages of each site: the landing page, the page about consumer resources, and the page to write a complaint.

We then asked the respondents to answer questions about the orientation of the website. We developed a four-item scale to capture whether a website was problem solving (1) versus confrontation oriented (7). This scale is based on four semantic differential items, such as the website I reviewed “was peaceful versus aggressive,” “meant peace versus war,” “made my relationship with the firm better versus worse,” and “was problem-solving oriented versus conflict oriented” ($M=3.90$; $SD=1.41$; $\alpha=.85$).

Results

An ANOVA revealed, as expected, that CA was viewed as more problem-solving oriented compared to RR, which was seen as more confrontation oriented ($M_{CA}=3.08 < M_{RR}=4.87$; $F[1, 158]=103.53$; $p<.001$). The means of both websites were different from the mid-scale point (4) that indicated neutrality between the two extremes (both p 's $<.001$). This finding indicates that CA is perceived as being more likely to resolve problems (less than 4; $p<.001$), whereas RR is viewed as being more prone to confrontations (higher than 4; $p<.001$).

Discussion of Study 1a

The present results suggest that CA and RR websites, which are used in Studies 1b and 2 as proxies for the reparation and vigilante schemas, are perceived as intended. Building on these findings, Study 1b validates the two schemas (after a service failure) by showing their different justice motives (H1) and their preference for complaining on different websites (H2). To test these hypotheses, in Study 1b, we experimentally manipulated the two schemas using scenarios and then measured their differences in terms of justice motivations (revenge, recovery, and protection of others) and likelihood of complaining on CA vs. RR.

Study 1b: Motivational Profiles and Preferred Online Platforms of Each Schema

Design and Procedure

Overall, 234 participants were recruited via Amazon's Mechanical Turk. A total of 48 individuals failed our attention check, leaving a total of 186 usable questionnaires ($M_{\text{age}}=36.6$, 41% female). Participants thought of a recent service failure and were then randomly assigned to read one of two schema manipulations. In the *vigilante condition*, participants were told that they were "motivated to get revenge and get even following their service failure," while in the *reparation condition*, they were told they were "motivated to solve the problem and obtain compensation." Participants were then presented with the two websites (RR vs. CA). Each presentation showed the website's logo and slogan and contained information that was listed on their "about us" page. It should be noted that the actual RR and CA websites also vary on other specific aspects related to their "feel and look." To control for such differences, we presented information about the website using a simplified table in which most of the variables relating to the "feel and look" were kept constant. Exposure to the two websites was counterbalanced. There was no effect of counterbalancing the websites on the justice motivations (p 's $> .22$).

This method should be effective because, as the literature suggests, the two schemas can be activated directly after a service failure. First, a reparation schema is consistent with this whole research stream, which suggests that customers will naturally seek reparation after service failure (Smith et al. 1999; Tax et al. 1998). Second, Joireman et al. (2016) identify two service failure conditions that could directly lead customers to develop a vengeful mindset (which is consistent with the vigilante schema): (1) when a service failure is perceived as severe and (2) when customers infer that firm can be fully blamed for a situation given its negative motive (such as greed). As we show below, the service failures reported by our participants seem to possess these two characteristics (i.e., severity and blame).

Measures

Participants answered two questions about their likelihood to post on each of the two websites (on a seven-point scale: very unlikely = 1 to very likely = 7). We then measured desire for revenge, desire for recovery, and desire to protect others (see "Appendix 1" for complete scales). The desire for revenge scale (five items) is well established in psychology (i.e., Aquino et al. 2001; McCullough et al. 2013) and marketing (i.e., Bechwati and Morrin 2003) and

includes items such as "I wanted to get even with the firm" ($M=4.80$; $SD=1.62$; $\alpha=.95$). The desire for recovery scale (three items) was adapted from prior research (Grégoire and Fisher 2008; Porath et al. 2011) and includes items such as "I wanted to receive a form of reparation for the failure" ($M=5.92$; $SD=.99$; $\alpha=.71$). Finally, the desire to protect others scale (three items) was adapted from Grégoire and Fisher (2008) and includes items such as "I wanted to warn others so they wouldn't experience similar failures" ($M=6.07$; $SD=1.05$; $\alpha=.94$). The psychometric properties of these three scales were examined through a confirmatory factor analysis (see "Appendix 2").

In terms of control variables, we also measured failure severity with two established items, including "the failure was a 'minor problem' (1) versus a 'major problem' (7) ($M=5.18$; $SD=1.40$; $\alpha=.94$); blame attribution with the item "overall, the service failure was in no way, the firm's fault (1) versus completely the firm's fault (7)" (one item; $M=6.03$; $SD=1.02$); and dissatisfaction, with two items measuring the extent to which participants were dissatisfied and discontented ($M=4.40$; $SD=.56$; $\alpha=.75$).

Results

H1: Motivational Profiles We tested H1 using a two-way mixed ANOVA wherein the schema manipulation (vigilante vs. reparation) was a between-subjects factor and the three motivations (revenge, recovery, and protection) were a within-subjects factor. Results indicated that the schema manipulation ($F[1, 184]=10.27$; $p<.001$), the motivation factor ($F[2, 184]=77.53$; $p<.001$), and most importantly, the "schema by motivations" interaction ($F[2, 184]=21.19$; $p<.001$) were all significant. In short, this interaction suggests that the two schemas were associated with different motivational profiles, a result that generally supports H1. Figure 2 displays the different scores for each motivation (after controlling for the other motivations).

We conducted a series of simple tests with each motivation. After controlling for a desire for revenge ($F[1, 182]=6.40$; $p<.05$) and a desire to protect others ($F[1, 182]=43.48$; $p<.001$), the reparation schema is associated with a slightly higher desire for recovery compared to the vigilante schema ($M_{\text{reparation}}=6.09 > M_{\text{vigilante}}=5.74$; $F[1, 182]=6.24$; $p<.05$), which is consistent with H1a. Supporting H1b, the reparation complainers had a substantially lower desire for revenge than the vigilante complainers ($M_{\text{reparation}}=4.20 > M_{\text{vigilante}}=5.46$; $F[1, 182]=32.86$; $p<.001$).³ Finally, the two schemas had a similar desire

³ We controlled for the effects of desire for recovery ($F[1, 182]=6.40$; $p<.05$) and desire for protection of others ($F[1, 182]=0$; $p=.99$) in these tests. It should be noted that the results remain significant even if we do not control for the other motivations ($F[1, 184]=29.82$; $p<.001$).

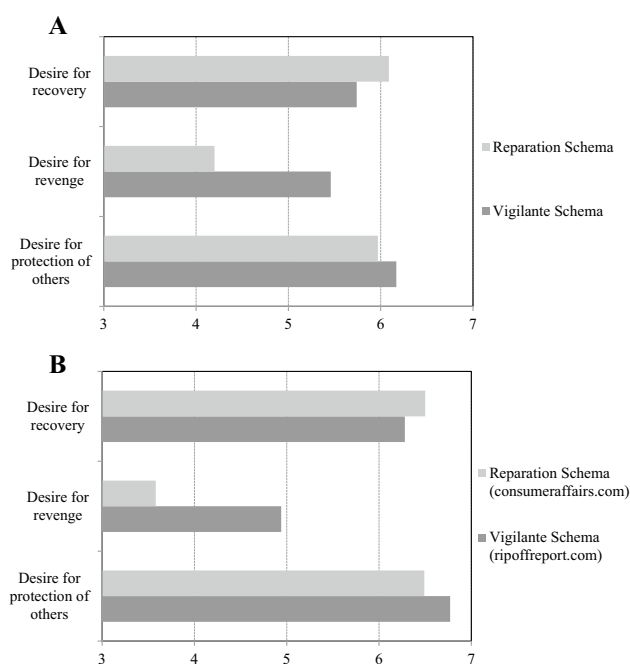


Fig. 2 Profiles of the two schemas based on their justice motivations. Panel A: study 1b (an experiment). Panel B: study 2 (field study). Note: In both studies, we test for the effect of the schemas on a given motivation by controlling for the two other motivations

to protect others ($M_{\text{reparation}} = 5.97 \approx M_{\text{vigilante}} = 6.17$; $F[1, 182] = 1.78$; $p = .18$);⁴ although the means were in the expected direction, H1c is not supported. Taken together, the two schemas are associated with different justice motivation profiles, mainly centering on a large difference in desire for revenge.

Importantly, we did not find any significant differences between the two schemas on failure severity, blame, or dissatisfaction (all p 's $> .15$). We also found that these three constructs were different from the midpoint scale (i.e., 4) indicating neutrality (all p 's $< .001$). Overall, the participants (in both conditions) reported a severe service failure ($M = 5.18$) for which they clearly blamed the firm ($M = 6.13$) and about which they felt moderately dissatisfied ($M = 4.40$).

H2: Likelihood of Posting on RR and CA. For H2, we tested the effects of the manipulated schemas on the likelihood to post on RR or CA. First, we checked how the schema manipulation influenced participants' binary choice between the two online venues. Consistent with H2, a Chi-square analysis ($\chi^2 [1] = 7.04$, $p = .01$) revealed that among the participants who selected RR ($n = 77$), 61% of them had

been exposed to the vigilante condition, whereas for the participants, who selected CA ($n = 109$), 58.7% had been exposed to the reparation stimuli. Further supporting H2, analysis of the continuous measures revealed that participants in the vigilante condition were more likely than those in the reparation condition to post on RR (H2a: $M_{\text{vigilante}} = 4.75 > M_{\text{reparation}} = 4.17$; $p < .05$) and less likely than those in the reparation condition to post on CA (H2b: $M_{\text{vigilante}} = 5.09 < M_{\text{reparation}} = 5.54$; $p < .05$). Overall, these results support H2: vigilante complainers are more likely than reparation complainers to contact a complaint website emphasizing confrontation, while reparation complainers are more likely than vigilantes to select a consumer agency focusing on problem resolution.

Discussion of Study 1b

Study 1 validates the vigilante and reparation schemas in an online complaining context by testing H1–H2. The reparation schema was associated with a slightly higher desire for recovery (H1a) but a much lower desire for revenge (H1b), compared to the vigilante schema (H1a). However, the two schemas were associated with the same desire to protect others; H1c was not supported in this study. Another way to describe the justice profile for each type of complainer is by comparing the relative levels of motivations within each schema. The reparation complainers experience high desires for recovery and protection of others; they have little interest for revenge. The vigilante complainers, in turn, seem interested in all three possible mechanisms: revenge, recovery, and protection of others.

Consistent with H2, the different schemas have different preferences for their choice of online venues. As expected, compared to individuals adopting a reparation schema, participants in the vigilante schema condition are more likely to contact a complaint website (i.e., RR) and less likely to contact an online consumer agency (i.e., CA), supporting H2a and H2b.

On the basis of Studies 1a and 1b, we argue that the two websites (RR and CA) make reasonable proxies for comparing the schemas in a naturalistic setting (in Study 2). RR is viewed as a confrontation-oriented website, and the functions of this website fit a vigilante schema. In turn, CA is oriented toward negotiation and problem resolution, and this website is preferred by complainers with a reparation schema.

Study 1 possesses limitations that we address in Study 2. First, the schemas were manipulated through scenarios, which we are not certain occur naturally in a real-life context. Second, Study 1b involves a simple service failure situation, rather than a double deviation context. Although recent evidence shows that online complaining (Grégoire et al. 2015) and the vigilante schema (Joireman et al. 2016)

⁴ We controlled for the effects of desire for recovery ($F[1, 182] = 43.48$; $p < .001$) and desire for revenge ($F[1, 182] = 0$; $p = .99$) in this test. The results remain insignificant even if we do not control for the other motivations ($F[1, 184] = .64$; $p = .43$).

can occur after a single service failure, these responses were first studied in the context of a double deviation (Grégoire et al. 2009). Finally, the participants had to recall a service failure in Study 1b, and retroactive method could be associated with a significant memory bias (Smith et al. 1999).

Study 2: A Field Study with Real Complainers

Study 2 achieves three goals related to our three contributions. First, we provide an additional test of the motivational profiles (H1) drawing on a sample of real, online consumers holding vigilante vs. reparation schemas (using RR and CA as proxies for the schemas). Second, we evaluate how consumers adopting the vigilante and reparation schemas differ in the language they use when describing their complaints (H3). Third, using a longitudinal design, we examine how the two schemas influence the gaining of post-complaint benefits (H4-5).⁵

Importantly, Study 2 is designed to address the key limitations of Study 1. First, Study 2 replicates H1 in a natural setting involving real online complainers. In Study 2, we had access to the complaints that were naturally elicited in real life on real websites. Second, the context of Study 2 involves a double deviation rather than a single service failure. A double deviation is a more extreme context that is especially appropriate to test theories related to online complaining. Third, we employed many measures to address potential memory bias. We surveyed only participants who had complained in the last 10 days prior to the first survey; to the best of our knowledge, this delay is the smallest reported in the literature. In addition, for waves 2–4, the respondents were asked to answer questions about their current state in terms of resolution and affect; there is no retrospection for these variables. Finally, we analyzed the content of the initial online complaints (H3); there was again no retrospection in the collection of these archival data.

Design and Procedures

This study involved a series of four questionnaires that were administered every 2 weeks (see McCullough et al. 2013). We surveyed customers who had sent a complaint to one of the two websites (CA or RR) in the 10 days preceding the first questionnaire. Each website recommends that the complainers first contact privately the firm before making an online complaint. Both websites tend to offer their services once complainers have initially complained to the firm and failed to reach a settlement (i.e., a double deviation). Thus,

⁵ H2 cannot be tested in Study 2 because we use the websites as proxies for the schema. This hypothesis was tested in Study 1b.

Study 2 was normatively conducted in the context of a double deviation.

The sampling frames were composed of 1434 and 952 complainers for CA and RR, respectively, for an overall sampling frame of 2386 individuals. In our first e-mail, the potential respondents were invited to go to qualtrics.com to complete the first questionnaire. This initial e-mail was followed by two reminders. A similar multi-contact approach was used for waves 2–4. After the first wave, 441 participants had completed the first survey, with 250 and 191 participants for RR and CA, respectively. For wave 1, the overall response rate was 18.4%. The number of respondents decreased by 154 between waves 1 and 2, by 77 between waves 2 and 3, and by 44 between waves 3 and 4. Overall, 166 respondents completed the fourth phase of the survey, with 106 and 60 respondents for CA and RR, respectively.

When we consider all the waves, 1104 observations were available for our analyses. Sixty-one percent of the final sample was female, and the average age of the respondents was 44.12 years ($SD = 11.97$). Our respondents formulated complaints in 53 industries, including automotive (11%), retail (10.5%), credit, debt and mortgage services (10.3%), and cell-phone providers (9.5%). We also analyzed the content of the complaints and found that 96.2% of them were classified as double deviations.⁶

Prior to conducting our analyses, we confirmed through a series of *t* tests that the respondents who did not complete all four waves did not differ from the respondents in the final sample on any of the key constructs (all *p*'s > .07). The equivalence of these two groups suggests that data were missing at random and that our longitudinal data were unbiased by attrition (McCullough et al. 2013).

Measures

The following sections describe our perceptual measures (see “Appendix 1” for all multi-item scales).

Desires for Recovery, Revenge, and Protection of Others

We used the same scales for these constructs, which were described in Study 1.

⁶ Two independent coders analyzed the content of the 431 complaints for which we had information. Overall, the level of agreement between coders was high (79.1%), and differences were resolved through discussion. Overall, 17.5% of the complaints were classified as “unspecified recovery stage.” After excluding these instances, 96.2% of the complaints were classified as double deviations. The coders identified only 13 (3.5%) service failures with no recovery request and only one service failure recovery followed by a positive recovery. See Grégoire et al. (2009) for details.

Perseverance and Ability to get a Resolution The ability to get a resolution was measured at waves 2, 3, and 4 with the item “Since you posted online, was the service failure resolved to your satisfaction?” Perseverance was measured with a single-item measure for the same three waves: “Since you posted a report online, did you give up on having the service failure resolved to your satisfaction?” These two questions were categorical (i.e., yes or no).

Positive and Negative Affect We collected, via open-ended questions, participants’ feelings about their complaints. In all the waves, an open-ended question was asked: “How do you feel about complaining?” The free format allowed respondents to fully describe their feelings after performing the posting. Two independent coders conducted a “pre-coding” round to determine the affect categories. The resulting classifications were: (1) “positive,” which involved situations that contained positive feeling adjectives (i.e., good or better); (2) “negative,” where negative feeling adjectives (i.e., bad or worse) were present; and “mixed,” where both positive and negative adjectives were present. The judges coded all responses, placing each response into one of the three categories. Percentage agreement was 80.2% (910 out of 1123), which is beyond the .7 set by Nunnally (1978). Disagreements were discussed until an agreement was reached.

Control Variables We controlled for a variety of situational variables, such as relationship quality (Grégoire et al. 2009), blame (Bechwati and Morrin 2003), perceived severity (McCullough et al. 2013), as well as distributive and procedural fairness (Smith et al. 1999). The measures of the control variables were taken during the first wave of data collection. All these constructs were measured with validated multi-item scales (see “Appendix 1”). We also controlled for gender and age. The psychometric properties of the perceptual scales were assessed with a CFA (see “Appendix 2”). The descriptive statistics and the correlation table are presented in Table 2.

Results

H1: Motivational Profiles For H1, we examined whether the consumers using the two websites—reflecting the schemas—differed on the basis of their justice motivations. We conducted a mixed-model ANOVA, where the two websites were the between-subjects factor and the three justice motivations were the within-subjects factor. We found significant main effects of the website/schema ($F[1, 439] = 38.26$; $p < .001$) and the justice motivations ($F[2, 439] = 387.51$; $p < .001$) and a significant “website by motivations” interaction ($F[2, 439] = 29.48$; $p < .001$). Again, this interaction supports H1 (see Fig. 2, Panel B).

Following the same approach as in Study 1b, we conducted a series of simple tests.⁷ In support of H1abc, respectively, customers complaining on the CA website (reparation schema) reported a slightly higher desire for recovery ($M_{\text{CA-reparation}} = 6.50 > M_{\text{RR-vigilante}} = 6.28$; $F[1, 437] = 3.90$; $p < .05$), a substantially lower desire for revenge ($M_{\text{CA-reparation}} = 3.58 < M_{\text{RR-vigilante}} = 4.94$; $F[1, 437] = 46.48$; $p < .001$), and a slightly lower desire to protect others ($M_{\text{CA-reparation}} = 6.49 < M_{\text{RR-vigilante}} = 6.77$; $F[1, 437] = 8.03$; $p < .01$).

We conducted additional analyses to ensure that the service failure situations were similar. We did not find any significant differences for blame ($M_{\text{CA-reparation}} = 6.45 \approx M_{\text{RR-vigilante}} = 6.49$; $p = .71$), failure severity ($M_{\text{CA-reparation}} = 6.08 \approx M_{\text{RR-vigilante}} = 6.10$; $p = .85$), distributive justice ($M_{\text{CA-reparation}} = 1.51 \approx M_{\text{RR-vigilante}} = 1.47$; $p = .69$), procedural justice ($M_{\text{CA-reparation}} = 1.53 \approx M_{\text{RR-vigilante}} = 1.39$; $p = .17$), dissatisfaction ($M_{\text{CA-reparation}} = 6.66 \approx M_{\text{RR-vigilante}} = 6.55$; $p = .23$), and prior relationship quality ($M_{\text{CA-reparation}} = 4.59 \approx M_{\text{RR-vigilante}} = 4.42$; $p = .19$). We found that these constructs were different from the midpoint scale (i.e., 4) indicating neutrality (all p ’s $< .001$). Overall, the participants in both conditions reported a severe service failure ($M = 6.09$), for which they clearly blamed the firm ($M = 6.47$), about which they felt very dissatisfied ($M = 6.61$) and concerning which they perceived a low level of distributive justice ($M = 1.49$) and procedural justice ($M = 1.47$). These extreme scores seem typical of a double deviation.

We also did not find any significant difference in regard to age ($M_{\text{CA-reparation}} = 44.0$ years $\approx M_{\text{RR-vigilante}} = 44.2$ years; $p = .32$) or gender (female: $M_{\text{CA-reparation}} = 59.5\% \approx M_{\text{RR-vigilante}} = 62.2\%$; $p = .90$). These results suggest that both schemas differ mainly on the basis of their justice motivations.

H3: Content Analysis of the Reparation and Vigilante Complaints For H3, we next analyzed the content of the original complaints using the software Linguistic Inquiry and Word Count (Pennebaker et al. 2007). Table 3 shows the categories of interest, their brief definitions, and the statistics for each website. The complaints of both websites have the same length (in terms of words) and count the same number of words per sentence (p ’s $> .37$).

Consistent with H3a, the complaints on CA (reparation) have more six-letter words (18.7% of the total words

⁷ When we examined the effect of the website/schema on a desire for recovery, we controlled for a desire for revenge ($F[1, 437] = 44.82$; $p < .001$) and a desire for protection of others ($F[1, 437] = 13.19$; $p < .001$). For the same test for a desire for revenge, we controlled for a desire for recovery ($F[1, 437] = 44.82$; $p < .001$) and a desire to protect others ($F[1, 437] = .95$; $p = .33$). Finally, for the test on a desire to protect others, we controlled for a desire for revenge ($F[1, 437] = .95$; $p = .33$) and a desire for recovery ($F[1, 437] = 13.19$; $p < .001$).

Table 2 Correlation matrix and descriptive statistics (study 2)

	1	2	3	4	5	6	7	8	9	10	11
1. Source/schema ^a	1.00										
2. Revenge-t1	-.31	1.00									
3. Reparation-t1	-.03	.32	1.00								
4. Prot. of others-t1	-.16	.15	.20	1.00							
5. Resolution-t2 ^b	-.11	.02	.04	.02	1.00						
6. Resolution-t3	-.15	.04	-.04	.08	.61	1.00					
7. Resolution-t4	-.04	.10	-.02	.03	.50	.72	1.00				
8. Perseverance-t2 ^c	.05	.04	.14	-.04	-.22	-.07	-.25	1.00			
9. Perseverance-t3	-.03	.11	.13	.03	-.18	-.18	-.30	.68	1.00		
10. Perseverance-t4	.03	.06	.07	-.03	-.28	-.28	-.39	.55	.68	1.00	
11. Pos. affect-t1 ^d	-.18	.00	.06	.10	-.09	.01	-.10	.04	-.06	-.05	1.00
12. Pos. affect-t2	-.29	.05	-.02	.06	-.16	-.16	-.22	-.02	.04	.08	.38
13. Pos. affect-t3	-.18	.01	-.09	.09	-.08	-.18	-.20	.01	.00	.07	.35
14. Pos. affect-t4	-.14	.03	-.01	-.13	-.13	-.21	-.18	.03	-.08	.00	.26
15. Rel. Qua.-t1	.06	-.09	.05	.04	-.02	.05	.00	.00	-.04	.05	.05
16. Dissatisfaction-t1	.06	.19	.42	.24	-.01	-.11	-.06	.04	.06	.08	.04
17. Severity-t1	-.01	.12	.34	.19	.12	.03	.06	.07	.10	.06	-.02
18. Blame-t1	-.02	.19	.27	.15	.01	-.02	-.10	.00	.17	.05	-.05
19. Dist. Just.-t1	.02	-.14	-.23	-.04	-.42	-.33	-.27	.10	.02	.13	.06
20. Proc. Just.-t1	.07	-.16	-.23	-.06	-.19	-.04	-.08	-.03	-.04	-.04	.03
21. Age	-.01	.01	-.01	.00	-.04	-.04	.01	.00	-.03	.07	-.02
22. Gender ^e	.03	.00	-.17	-.12	-.01	.08	.11	-.05	-.09	-.14	-.15
Mean	–	4.17	6.41	6.21	–	–	–	–	–	–	–
Standard deviation	–	2.26	1.18	1.45	–	–	–	–	–	–	–
Proportion	56.2%				15.4%	19.8%	19.1%	56.5%	50.2%	47.7%	71.4%
	12	13	14	15	16	17	18	19	20	21	22
11. Pos. affect-t1 ^d											
12. Pos. affect-t2	1.00										
13. Pos. affect-t3	.69	1.00									
14. Pos. affect-t4	.56	.63	1.00								
15. Rel. Qua.-t1	-.05	-.09	-.01	1.00							
16. Dissatisfaction-t1	-.04	.03	.22	.08	1.00						
17. Severity-t1	.02	-.08	-.20	.05	.29	1.00					
18. Blame-t1	-.10	-.06	.02	-.01	.28	.12	1.00				
19. Dist. Just.-t1	.11	.11	.19	.10	-.11	-.24	-.10	1.00			
20. Proc. Just.-t1	.03	.03	.02	.10	-.14	-.24	-.17	.60	1.00		
21. Age	-.07	-.07	-.09	-.01	-.07	-.01	.03	-.05	.01	1.00	
22. Gender ^e	-.09	-.02	-.06	.08	-.09	-.14	-.06	.08	.06	.17	1.00
Mean	–	–	–	4.52	6.61	6.09	6.47	1.49	1.47	44.12	–
Standard deviation	–	–	–	1.33	.97	1.3	1.09	1.21	1.08	12.28	–
Proportion	63.5%	64.9%	62.9%								61%

The sample size varies depending on the waves (time 1 = 441; time 2 = 287; time 3 = 210; and time 4 = 166)

For times 1, 2, 3, and 4, respective correlations greater than .09, .12, .15, and .17 are significant ($p < .05$, two-tailed distribution)

^aReparation schema (compared to vigilante schema)

^bCustomer getting a satisfactory resolution (yes–no question)

^cCustomers who did not give up seeking a resolution (yes–no question)

^dPositive affect (compared to negative and mixed affect)

^eWomen (compared to men)

Table 3 Comparison of the content of the complaints from each website (study 2)

Category	Examples for the category	Consumer affairs (reparation)	Ripoff report (vigilante)	ANOVA (sig.)
<i>Descriptive</i>				
Total world count	—	299.93	331.88	.37
# of words/sentence	—	25.56	24.90	.67
<i>Formality (H2a)</i>				
6-letter word (% ^a)	—	18.37%	16.52%	.001
Function (%)	pronouns, articles, prepositions, etc	55.58%	52.59%	.004
Article (%)	a, an, the	7.17%	6.16%	.001
Auxiliary verb (%)	am, must, have, can, etc	8.57%	7.91%	.025
<i>Pronoun (H2b)</i>				
I	I, me, mine, etc	6.44%	5.79%	.045
You	you, your, thou, etc.	.45%	.78%	.002
They	they, their, they'd, etc	1.92%	2.40%	.015
<i>Description (H2c)</i>				
Past tense	went, ran, played, etc	6.67%	5.90%	.016
Present tense	is, hear, do, etc.	5.07%	5.60%	.054
Future tense	will go, will run, will...	1.10%	1.05%	.529
Place	here, down, in, on, etc	5.42%	4.97%	.145
Time	when, end, until, etc	6.12%	5.45%	.013

^aThe percentage of words belonging to a category in a complaint

vs. 16.52% for RR; $p < .001$) and more function words (55.8% > 52.59%; $p < .001$), compared to RR (vigilante). In terms of specific function words, we found in CA's complaints more articles (7.17% > 6.16%; $p < .001$) and auxiliary verbs (8.57% > 7.91%; $p < .05$), compared to RR. These statistics suggest that reparation complainers tend to write in a more formal style than vigilante complainers.

Consistent with H3b, the complaints made to CA include a greater percentage of the “I” pronoun (6.49% > 5.79%; $p < .05$) as well as a lower percentage of the “you” pronoun (.45% < .78%; $p < .01$) and the “they” pronoun (1.92% < 2.40%; $p < .05$), compared to RR. Overall, these results suggest that reparation complainers are more focused on their situation and less on blaming the firm, compared to the vigilante complainers.

Finally, customers complaining to CA used the past tense more often (6.67% > 5.90%; $p < .05$) and the present tense less frequently (5.07% < 5.60%; $p = .055$), compared to RR. There was no difference in the use of the future tense on either website ($p > .53$). Complainers at CA also made a greater use of “time” function words (6.12%) versus those on RR (5.45%; $p < .05$); we did not find a significant difference in regard to “place” words between websites ($p > .15$). Overall, these results are generally consistent with H3c, which posits that reparation complainers tend to focus more on the past and less on the present; they also use more precise function words related to the time of the service failure.

H4: Interaction Between Schema and Perseverance to Predict Resolution We used a discrete time survival

model to test H4. This type of model is appropriate given the categorical nature of the dependent variable. Specifically, the dependent variable can be viewed as the likelihood of obtaining a satisfactory resolution during a given time interval. In the current dataset, there are three time intervals—between times 1 and 2, between times 2 and 3, and between times 3 and 4. When these three time intervals are considered, we obtain a total of 663 usable observations (i.e., 287 individuals for the first interval, 210 for the second interval, and 166 for the third interval). Finally, with four waves that are evenly spaced in time, a discrete specification is necessary (Allison 1995). The control variables that were used in this model were dissatisfaction, severity, blame, procedural fairness, distributive fairness, and relationship quality. Among all the control variables (see Table 4), only distributive justice is associated with the ability to get a resolution ($p < .001$).

In Table 4, the dichotomous variable “reparation schema” is used to qualify the type of online schemas, where “1” corresponds to the reparation schema and “0” to the vigilante schema (based on the websites). First, the main effects of both the perseverance and reparation schemas do not achieve significance (p 's > .12). More importantly, the “perseverance x reparation schema” interaction is significant and positive ($\beta = 1.87$, $SE = 0.83$, $p < .02$). This interaction means that the effect of perseverance on obtaining a resolution is stronger for the reparation schema in contrast to the vigilante schema. Further examination reveals that perseverance is a predictor of resolution for a reparation schema ($\beta = 2.53$, $SE = .57$,

Table 4 Ability to get a resolution^a as a function of perseverance and online public complaining schemas (study 2)

Parameter	Parameter estimate	standard error	χ^2	Pr > χ^2
Perseverance ^b	.66	.60	1.25	.27
Reparation schema ^c	− 1.10	.71	2.38	.12
Perseverance × reparation schema	1.87	.84	5.04	.02
Control variables				
Age	.002	.016	.02	.90
Gender ^d	− .03	.13	.05	.82
Blame	− .01	.17	.01	.99
Relationship quality	− .05	.14	.12	.95
Severity	− .17	.14	1.60	.21
Distributive fairness	.85	.17	26.52	< .001
Procedural fairness	− .21	.19	1.23	.27
Dissatisfaction	.03	.21	.02	.90

^aA categorical variable where “1” means obtaining a satisfactory resolution and “0” means not obtaining a resolution

^bA categorical variable where “1” means that the complainers persevered (i.e., *did not give up*) and “0” means that the complainers gave up on having the service failure resolved to their satisfaction

^cThe reference group is the vigilante schema

^dThe reference group is male

$p < .001$), a result that is consistent with H4a. In turn, the effect of perseverance is nonsignificant ($\beta = .66$, $SE = .60$, $p > .10$) for a vigilante schema, which is consistent with H4b.

The parameters (β) were transformed into risk ratios ($e\beta$) to interpret the interaction. The “risk ratio” estimates the likelihood to get a resolution for the different combinations of online schema and perseverance, compared to a reference group. As shown in Fig. 3 (panel A), the reference group is the vigilante schema without perseverance (associated with the “1” value). At any given period, a customer with a reparation schema and showing perseverance increases his chance of obtaining a resolution by more than four times (risk ratio = 4.18), compared to the reference group. Our results also show that, for a vigilante schema, perseverance only slightly increases the likelihood of getting a resolution (risk ratio = 1.93). A reparation schema without perseverance is ineffective in getting a resolution (risk ratio = .32).

H5: Interaction Between the Schemas and Resolution to Predict Positive Affect For H5, a generalized estimating equation (GEE) was used to model the affective response to complaining (Zeger et al. 1988). This model allows for a categorical dependent variable and the specification of a covariance structure needed for repeated measures. The dependent measure was treated as binomial, with 1 corresponding to “positive affect” and 0 corresponding to “mixed affect” and “negative affect.” A second set of analyses in which the dependent measure included three categories (positive, mixed, and negative affects) led to analogous results. The binomial response was favored because it allowed the specification of an unstructured working correlation matrix for the covariance structure.

The independent variables included time, getting a resolution, reparation schema, the interaction “resolution by reparation schema,” as well as the control variables. As in the prior analysis, “getting a resolution” and “reparation schema” were dichotomous variables. Time was treated as a continuous variable, and it reflects measurements in different waves. This variable was not found to be a significant predictor of positive affect ($p > .50$). In this analysis, none of the control variables achieved significance (p ’s $\geq .10$).

As shown in Table 5, the “resolution × online schema” interaction is significant ($\beta = 1.33$, $SE = .47$, $p < .01$). From further analysis of this interaction (see Fig. 3, Panel B), the probability of positive affect was found to be higher when the service failure is resolved ($P = 70\%$) vs. unresolved ($P = 43\%$) for the reparation schema. A supplementary analysis revealed that the difference between “obtaining a resolution” vs. “no resolution” is significant for this schema ($\beta = 1.14$, $SE = .35$, $p < .001$). This set of results is consistent with H5a. In turn, the vigilante schema leads to similarly high levels of positive affect, regardless of the resolution obtained. There is no significant difference in this case ($\beta = -.20$, $SE = .33$, $p > .50$), as per H5b.

Discussion of Study 2

Study 2 confirms the existence of the two schemas—reparation and vigilante—in a real-life setting. Overall, the motivation profiles are similar across Studies 1b and 2 (see Fig. 2) despite the change of context from a simple service failure (in Study 1) to a double deviation (in Study 2). Importantly,

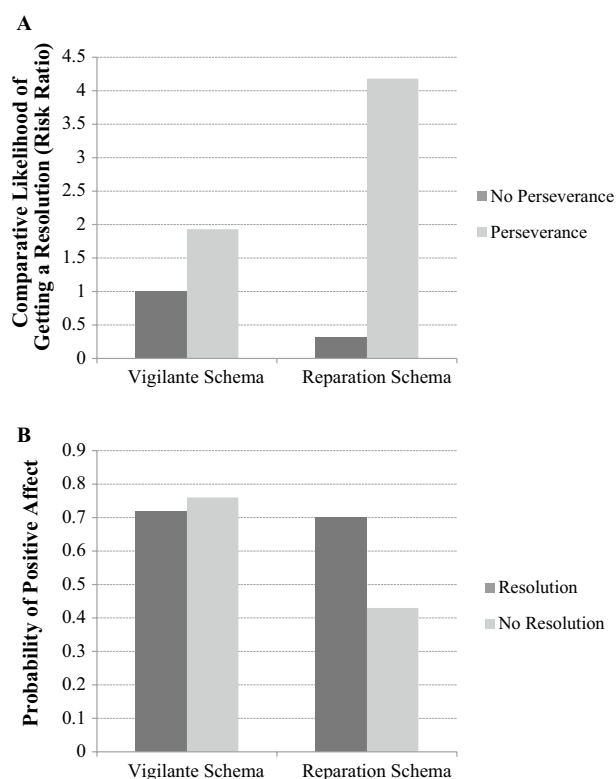


Fig. 3 Perseverance, problem resolution, and positive affect as a function of online complaining schemas (study 2). Panel A: likelihood of getting a resolution as a function of online complaining schemas and perseverance*. *Note:* The reference category to infer risk ratios is the vigilante schema without perseverance (associated with “1”). The reparation schema with perseverance is 4.18 times more likely to get a resolution compared to the reference category. Panel B: probability of positive affect as a function of online complaining schemas and getting a resolution

Study 2 supports all the hypothesized differences between recovery (H1b), revenge (H1b), and protection of others (H1c). Here, it should be recalled that Study 1b did not provide support for H1c. We provide a detailed discussion of the justice motivations of each schema in the general discussion.

To the best of our knowledge, Study 2 is the first effort to highlight the different writing styles across schemas. The current research focuses on the differences in the usages of function words. Consistent with H3, we find differences that are consistent with the nature of each schema and their respective motivations. Compared to vigilante complainers, customers with a reparation-based schema tend to write in a more formal manner (using longer words and more function words); they use more introspective pronouns (e.g., “I”) and fewer pronouns involving blame (e.g., “you” and “they”); and they refer more intensively to past events by using a greater percentage of words involving the notion of time.

Importantly, Study 2 demonstrates that these two schemas lead to different post-complaint benefits. As per H4, when a reparation schema is coupled with perseverance (over a

Table 5 Positive affect^a as a function of obtaining a resolution and online public complaining schemas (study 2)

Parameter	Parameter estimate	Standard error	Z	Pr > t
Intercept	1.20	1.21	.99	.32
Time	-.02	.09	-.22	.82
Obtaining a resolution ^b	-.19	.33	-.59	.56
Reparation schema ^c	-1.49	.25	-6.01	<.001
Obtaining a resolution × reparation schema	1.33	.47	2.82	.004
Control variables				
Age	-.01	.01	-1.27	.21
Gender ^d	-.39	.24	-1.63	.10
Blame	-.09	.09	-.98	.33
Relationship quality	.10	.08	1.14	.26
Severity	-.09	.11	-.80	.43
Distributive fairness	.16	.16	1.17	.24
Procedural fairness	.03	.14	.22	.83
Dissatisfaction	.06	.14	.42	.67

^aA categorical variable where “1” means positive affect and “0” positive or mixed affect

^bA categorical variable where “1” means obtaining a satisfactory resolution and “0” means not obtaining a resolution

^cThe reference group is the vigilante schema

^dThe reference group is male

two-month period), complainers are four times more likely to obtain a resolution, compared to the other conditions (see Fig. 3). Consistent with H5, customers adopting a vigilante schema experience a high level of positive affect by simply posting their misadventures online. In contrast, the reparation customers’ affect strongly depends on obtaining a satisfactory resolution; they experience high positive affect when they do obtain a resolution and low positive affect when they do not.

General Discussion

We confirm—across a field study and two experiments—the hypotheses related to our three contributions (see Table 1 for a summary). These three contributions are linked by an overarching goal: to demonstrate that online complainers are better understood if managers consider their mental schemas and their justice motivations. We discuss each contribution below.

Different Justice Motivations (and Moral Issues) for Both Schemas (H1)

Insightful qualitative research (Beverland et al. 2010; Ringberg et al. 2007) has described mental schemas as the

key drivers explaining complainers' responses to conflict-laden situations. The current research extends this work by *quantitatively* validating two schemas in an online context. Building on justice theory—i.e., the dominant paradigm in service (Smith et al. 1999; Tax et al. 1998)—the current research focuses on understanding the different profiles of justice motivations for each schema. This first step is crucial because it allows understanding what complainers “truly want” when they go online. To draw these profiles, we use motivations (or desires) that are derived from three established mechanisms to restore justice.

As our core contribution, we find meaningful and consistent differences for these three motivations across schemas, in two studies using different methods (See Fig. 2). We found these distinctions for service failure situations that were almost identical in terms of failure severity (Studies 1b and 2), blame (Studies 1b and 2), dissatisfaction (Studies 1b and 2), justice perceptions (Study 2), and prior relationship (Study 2). We also replicated our basic findings for H1 across the two contexts—a service failure (in Study 1b) and a double deviation (in Study 2)—in which online complaining can occur (Grégoire et al. 2015). Consistent with the notion of schemas, the highlighted differences are mainly based on the way that customers see and respond to a situation—in terms of justice motivations—and not the situation itself. In addition, our results lead us to conclude that both types of complainers, regardless of the schema, believe that their way of restoring justice is highly justified from a moral standpoint.

Reparation Schema Reparation individuals are first characterized by having the highest desire for recovery in both studies, compared to individuals who use the vigilante schema (H1a). The reparation schema is also associated with a high desire to protect others (H1c), although this last desire is slightly lower than for the vigilante schema (this difference is significant in Study 2 but not in Study 1b). Finally, a desire for revenge is substantially lower for these complainers (compared to the vigilantes), with at least a one-point scale difference in both studies. When we compare the three motivations within the reparation schema, we observe that these complainers are highly motivated to seek a recovery and to help others, but they have little interest in revenge.

These results provide a clear picture of the way that reparation complainers perceive their schema as being morally justified. First, they strive to obtain compensation, apology, or any form of recovery for their service failure. This aspiration appears morally reasonable given the marketing and exchange context in which the service failure takes place. Second, reparation complainers would feel that their schema is especially “moral” since they are not only concerned about themselves, but also about others and the online community. On the basis of our results, we argue that reparation

complainers believe that their online actions will benefit not only themselves, but also other customers. Third, reparation complainers arguably believe that they take the highest moral ground because they do not consider revenge. They probably see revenge as morally reprehensible, and they prefer the two other positive mechanisms.

Vigilante Schema The vigilante schema possesses both similarities and differences with the reparation schema. As for similarities, both schemas tend to be driven by recovery and protection of others. The means for these two last motivations are high for both schemas, although we observe significant differences. Compared to the reparation schema, the vigilante schema is associated with slightly less desire for recovery (H1a) and slightly more desire to protect others (H1c). A noteworthy difference is that the vigilante complainers are much more motivated by revenge than are the reparation complainers (H1b). Vigilante complainers display one of the highest desires for revenge ever reported in the literature, with an average score of 5.20 (in both of our studies). In most other studies, this motivation has generally been associated with lower values, varying between 1 and 3 (e.g., Joireman et al. 2013). When we compare the three motivations within the vigilante schema, we note that these complainers are highly motivated by all three mechanisms to restore justice. They have the two highest scores on revenge and protection of others; in addition, their desire for recovery remains strong.

Again, these findings provide key insights into the perceived morality of the vigilante schema. From our findings, we can speculate that vigilante complainers perceive their schema as being morally justified and even necessary. Perhaps, they see themselves as “righteous warriors” who have the responsibility to punish “evil” firms for the sake of the public good (Ward and Ostrom 2006). We believe that their strong desire for revenge is perceived as morally acceptable in accordance with their very high motivation to protect the online community. With their communal sense, vigilante complainers probably believe that all means—including revenge—are justified to restore justice for others. Interestingly, we note that these complainers still feel a high desire for recovery. This last result again strengthens our conclusion that these complainers take into account all possible mechanisms to restore justice. They have the view that “the end” morally justifies “any means,” which makes them especially dangerous for firms.

How to Identify Each Schema (H2–H3)

The answer to hypothesis 1 provides a deep understanding of the psychological motivations and morality of each schema. Although these last findings are crucial to understanding the phenomenon of online complaining, they are of little help for managers (and researchers) who wish to identify

these schemas in real life. In order to address this issue, we develop two hypotheses (H2–H3) that are specifically designed to help this identification process.

For the reparation complainers, their motivational profile, which is based on problem resolution, explains their propensity to complain to a third-party organization (such as *consumeraffairs.com*) that could help them reach a settlement with the firm (H2a). In addition, in order to negotiate a resolution in a more effective manner, reparation complainers have a preference for a more conciliatory writing style, which is characterized by a greater formality (H3a), enhanced introspection (H3b), less blame toward the firm (H3b), and a detailed description of the past events (H3c).

Consistent with their motivation profile, vigilante complainers are more likely to contact complaint websites (such as *RipoffReport.com*) that would directly expose the “offending firm” to a large audience. Vigilante complainers have a preference for more confrontational online venues, so they can fulfill their role of vigilante. We also expand these findings by arguing that the vigilante complainers are the most likely to use social media and different review websites to post their negative experience in a public setting (Grégoire et al. 2015). Consistent with such online venues, vigilantes’ writing style compared to that of reparation complainers is less formal (H3a), uses more common language (H3a), relies more on blaming the firm by using pronouns such as “you” and “they” (H3b), and formulates general statements more often in the present tense (H3c).

Post-complaint Benefits Associated with Each Schema (H4–H5)

The results also show that online complaining schemas play a moderating role in the process leading to two post-complaint benefits: resolution and positive affect over time (see Fig. 1). We find that perseverance helps reparation complainers obtain a resolution, but does not help vigilantes to obtain the same outcome (H4). Indeed, over a two-month period, complainers with a reparation schema are four times more likely to get a resolution than are vigilante complainers with or without perseverance and other reparation complainers without perseverance. From the perspective of this benefit (resolution), the reparation schema is superior to the vigilante schema. The reparation complainers can expect to get a resolution if they persevere, which is not the case for vigilantes.

So why would complainers adopt a vigilante schema if it does not improve their chances of getting a resolution? They do so because this schema intrinsically feels good, regardless of whether they receive a resolution or not (H5). Stated in another way, vigilante complainers feel positive regardless of firms’ responses to their complaints. Vigilantes experience high positive affect by simply posting their

misadventures online, which satisfies their desire to punish the firms. Doing so may also satisfy their desire to help other customers; as a result, they experience a greater positive affect from their public venting. From the perspective of this benefit (i.e., positive affect), the vigilante schema seems superior to the reparation schema. That is, the vigilantes are instantly rewarded simply by going online, whereas the customers seeking reparation have to wait, even persevere, until the firm agrees to some form of resolution. Reparation complainers need a resolution to feel good; without a resolution, we observe a low level of positive affect for this schema (H5).

Managerial Implications

Customers are not passive anymore; the online platforms have provided them with powerful tools to address their grievances. Therefore, managers also need to take an active approach to address online complaints. On the basis of our research, we offer specific guidance for the two schemas documented in this research.

Reparation Schema Reparation complainers mainly want to obtain a recovery and to protect others in the process. They are not that interested in making public outbursts and broadcasting the firms’ service failures over the whole Internet. Reparation complainers will contact an online agency to receive additional support and possibly to alert the company to fix a problem that may affect other customers. The reparation complainers are open to discussion, and we believe that managers should embrace the opportunity to negotiate with them. We suggest that managers—once they become aware of the existence of these complainers—return to the “negotiation table” in a private and discrete manner. Here, managers should keep discussing privately with these complainers and offer them a just resolution for the problem encountered. Managers should also assure that the company will make the necessary corrections for other customers.

Vigilante Schema Finding an appropriate recovery for vigilante complainers is more challenging because these individuals want “everything.” First, they want to make a public example of the firms, so they can get their revenge and protect others. Second, our results suggest that these individuals are also interested in receiving a compensation for themselves, given their strong desire for recovery. So, what can managers do to appease these demanding complainers? We recommend that managers simultaneously address these complainers on two fronts—publicly and privately—by following four steps.

As a first step, it is important to address vigilantes’ posts in a timely manner. According to the best “social media” practices (Grégoire et al. 2015), managers need to carefully monitor social media and publicly respond within 1 h of a post. Minimally, managers need to inform the public that

they are aware of the complaint and that they will privately contact the complainers to further investigate the situation.

As a second step, managers need to contact the complainer to better understand his/her perspective and to understand his/her expectations about a compensation for him/herself and others.

As a third step, if the firm is at fault, it needs to publicly acknowledge its mistakes and apologize for the occurrence of the service failure. It should also publicly explain how it will fix the problem for other customers. By doing so, vigilantes' desires for revenge and for protection of others should be fulfilled. Managers also need to provide the sought compensation to the complainers to satisfy their desire for recovery.

As a fourth step, if the firm is not at fault, managers need to write a rebuttal and explain the firm's perspective. It should be noted that a firm can be "right" and that other consumers on social media could support a firm's position and condemn the inappropriate actions of a vigilante complainer. The business press has reported many examples of such occurrences.

Limitations and Research Avenues

Although the current findings help extend work on ethical consumer behavior, it is important to keep the limitations of this research in mind. The first limitation is that the two websites used in Study 2 may be imperfect proxies for the schemas. To address this limitation, we conducted two experiments (Studies 1a and 1b) that aimed to validate the appropriateness of the two websites for the schemas. However, future research should explore other ways to identify the schemas in a real-life setting, possibly through an analysis of writing style.

A second limitation is that we did not fully explore the various motivations associated with each schema—we focus principally on justice theory. Because schemas are complex amalgams of cognitions, emotions, motivations, and behaviors, it is possible that the two schemas also differ on the basis of other motivations, such as teaching a firm a lesson, gaining popularity for oneself, and/or gaining influence. It should be noted that the current research only examines the association between the schemas and the motivations; we do not make any claim about the causality between the schemas and the motivations.

Third, in this research, we have discussed schemas as if complainers adopt one or the other schema. This approach is consistent with the literature recently developed on service failure (Beverland et al. 2010). However, it is possible that in real life, complainers use both schemas at different points in time. For instance, a customer might begin with a reparation schema but after experiencing a terrible recovery attempt, switch to a vigilante schema.

A longitudinal study looking at switching could provide evidence for this notion.

Fourth, while we used an innovative analysis that focuses on identifying diverse function words, we acknowledge that the current research only scratches the surface of such a method. More research is needed to create algorithms and norms that would help to automatically distinguish one schema from another on the basis of the usage of function words. It should be noted that our content analysis fully relies on the work and software developed by Pennebaker (2011), Pennebaker et al. (2007). Future research should also consider other theories and other software (such as Leximancer) for the content analysis of complaints. It would also be interesting to compare the language used after a simple service failure with that used after a double deviation.

Finally, we still need more research about the phenomenon of online complaining. One fruitful research avenue is to better understand the differences and similarities between complaining behaviors and customers' deviant behaviors. We also suggest that future research should examine the function words used by the frontline employees and analyze how employees' responses influence complainers' behaviors. In other words, we encourage the examination of the interactions between frontline employees and complainers through the use of dyadic designs. In addition, it is important to test H3–H5 in both possible contexts (i.e., service failure and double deviation); in the current research, we only test them in a double deviation context.

Funding This study was funded by a large public North American university.

Compliance with Ethical Standards

Conflict of interest There is no conflict of interest between this university and the two websites of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the Institutional Committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the studies.

Appendix 1

Justice Motivations (Studies 1B and 2)

Desire for Revenge (Study 1b: average variance extracted (AVE) = .79; composite reliability (CR) = .96; α = .95) (Study 2: AVE = .84; CR = .96; α = .97)

Indicate to which extent you wanted to:

- ... take actions to get the firm in trouble.
- ... punish the firm in some way.
- ... cause inconvenience to the firm.
- ... get even with the service firm.
- ... make the service firm get what it deserved.

Desire for recovery (Study 1b: AVE = .48; CR = .73; $\alpha = .71$) (Study 2: AVE = .53; CR = .77; $\alpha = .72$)

- ... have the firm assume responsibility for its actions.
- ... receive a form of reparation for the failure.
- ... have the firm to fix its mistake.

Desire to Protect Others (Study 1b: AVE = .91; CR = .96; $\alpha = .94$) (Study 2: AVE = .83; CR = .93; $\alpha = .92$)

- ... to ensure that others would not go through what I went through.
- ... protect others from this type of situation.
- ... warn others so that they wouldn't experience a similar failure.

Control Variables in Study 2

Relationship Quality (Second-order construct: Study 2: AVE = .50; CR = .75; $\alpha = .73$)

Trust (AVE = .80; CR = .94; $\alpha = .94$)

- I felt that the firm was...
- ... Very undependable (1)–very dependable (7)
 - ... Very incompetent (1)–very competent (7)
 - ... Of low integrity (1)–of high integrity (7)
 - ... Very unresponsive to consumers (1)–very responsive consumers (7)

Commitment (AVE = .79; CR = .92; $\alpha = .92$)

- I was very committed to my relationship with the service firm.
- The relationship was something I intended to maintain for a long time.
- I put efforts into maintaining this relationship.

Social Benefits (AVE = .80; CR = .94; $\alpha = .94$)

- My relationship with the service firm was based on its ability to...
- ... recognize who I am as a customer.
 - ... know my personal needs as a customer.

- ... build a “one-on-one” connection.
- ... make me feel important and appreciated.

Dissatisfaction (AVE = .80; CR = .92; $\alpha = .90$)

At the moment of the service failure, I felt (1) dissatisfied, (2) discontented, and (3) displeased.

Blame (AVE = .57; CR = .79; $\alpha = .71$)

Overall, the firm was “not at all” (1) vs. “totally” (7) responsible for the poor recovery.

The service failure episode was in “no way” (1) vs. “completely” (7) the firm's fault.

To what extent do you blame the firm for what happened? Not at all (1)–completely (7).

Failure Severity (AVE = .70; CR = .87; $\alpha = .86$)

- The service failures caused me...
- ... minor problems (1)–major problems (7).
 - ... small inconvenience (1)–big inconvenience (7).
 - ... minor aggravation (1)–major aggravation (7).

Procedural Fairness (AVE = .72; CR = .91; $\alpha = .91$)

Despite the hassle caused by the problem, the firm responded fairly and quickly.

I feel they responded in a timely fashion.

I believe the firm has fair policies and practices to handle problems.

With respect to its policies and procedures, the firm handled the problem in a fair manner.

Distributive Fairness (AVE = .79; CR = .92; $\alpha = .92$)

Overall, the outcomes I received from the service firm were fair.

Given the time, money, and hassle, I got fair outcomes.

I got what I deserved.

Appendix 2

Confirmatory Factor Analyses (Study 1b)

The psychometric properties of the three justice motivations were assessed with a CFA. This model includes a desire for revenge (five items), a desire for recovery (three items), and a desire to protect others (three items). This 11-item model produced a satisfactory fit with a comparative fit index (CFI) of .96, a Tucker-Lewis index (TLI) of .95, a

root-mean-square error of approximation (RMSEA) of .089, and a χ^2 of 101.51 ($df=41$, $p<.001$). In this model, the loadings (λ 's) of the first-order constructs were large and significant (p 's $<.001$), the average variance extracted exceeded or approached .50 for all constructs, and composite reliability scores and Cronbach's alphas were greater than the .7 guideline (see "Appendix 1").

Confirmatory Factor Analyses (Study 2)

The psychometric properties of the reflective scales (at time 1) were assessed with one CFA. This model includes a desire for revenge (five items), a desire for recovery (three items), a desire to protect others (three items), dissatisfaction (three items), blame (three items), failure severity (three items), procedural fairness (four items), and distributive fairness (three items). See "Appendix 1" for the detailed items. This 27-item model produced a satisfactory fit with a comparative fit index (CFI) of .96, a Tucker-Lewis index (TLI) of .96, a root-mean-square error of approximation (RMSEA) of .051, and a χ^2 of 608.70 ($df=296$, $p<.001$). In this model, the loadings (λ 's) of the first-order constructs and the second-order construct (i.e., relationship quality) were large and significant (p 's $<.001$), the average variance extracted exceeded .50 for all constructs, and composite reliability scores and Cronbach's alphas were greater than the .7 guideline (see "Appendix 1").

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