Service Recovery via Social Media: The Social Influence Effects of Virtual Presence

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Abstract
Social media channels are increasingly used by consumers to post complaints to companies. In contrast to traditional channels, the complaint and a firm’s recovery efforts are visible to passive observers who are virtually present. Additionally, these unaffected users may become involved by supporting a complainant with negative comments or by supporting the firm with positive comments, leading to interactive virtual presence (VP). We reveal that such VP affects how a complainant reacts to successful and unsuccessful service recovery. Based on social influence theory (SIT), we investigate the influence of a mere VP as well as interactive VP of positive and negative valence on the complainant’s satisfaction and purchase intentions and analyze the role of expertise of those who are virtually present. The results indicate that SIT is applicable to virtual environments but that restrictions apply. Specifically, mere VP enhances the effects of recovery success, but—in contrast to SIT—not the negative results of unsuccessful recovery, and interactive VP leads to attitude polarization. Moreover, high-expertise individuals who engage in positive (negative) interactions after unsuccessful (successful) recovery are deleterious. When experts disconfirm successful recovery, they have higher credibility and reduce confidence in the firm. However, in contrast to SIT, experts trying to mitigate unsuccessful recovery are perceived as less credible, which also reduces confidence. Overall, if service recovery via social media is successful, firms will benefit from VP. However, caution is advised when using expert users who may interfere with service recovery processes.

Keywords
virtual presence, social presence, social influence theory, social media, service recovery

I am not happy with my experience I had with your airline on December 27 and on my return flight on January 20. Last December, it took me 3 days to get my baggage and now this is the 4th day after my return and my baggage is still not in. Why why why???? I called your customer service, I wrote several e-mails, but no one of your airline does help me. As on this Facebook page, over 1 million of your fans can read my problem, I hope you are a bit more concerned with my situation. PLEASE, tell me where I can find my baggage!!! I think we deserve better service than this. Regards, Paul Smith

This comment appeared on the Facebook page of a U.S. airline and is just one example of how today’s customers use social media to post service inquiries and voice complaints. The social media channels of phone providers such as AT&T or T-Mobile are used for complaints about technical problems, hotel guests report negative service experiences on the Facebook page of Marriott Hotels, and customers of Dell complain about problems with customer support in the Dell Community. All of these firms are faced with complaints that are visible to hundreds, thousands, or even millions of other consumers. And customers such as Paul Smith try to leverage this computer-mediated exposure to other consumers, labeled virtual presence (VP; Naylor, Lamberton, and West 2012), to achieve service recovery. Effective recovery via social media thus requires not only handling complaints but also an understanding of the effects of VP. However, despite consumers’ increased use of social media as a complaint channel, there appears to be a “reluctance of publicly handling complaints” (Einwiller and Steilen 2015, p. 7). This may partly be due to a lack of knowledge on how VP affects the recovery process.

Social influence theory (SIT) offers an explanation of how individuals are influenced by the presence and the behavior of others (Latané 1981). Specifically, based on social facilitation (Zajonc 1965), individuals are assumed to show stronger reactions when others are present. Existing research found ample evidence for such effects in the actual presence of others. For instance, Dahl, Manchanda, and Argo (2001) show that an embarrassing purchase creates more embarrassment when others are around. Kinard, Capella, and Kinard (2009) reveal enhanced emotional reactions to self-service use when encountering social presence. Specifically focusing on service recovery, He, Chen, and Alden (2012) found that in the actual

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presence of others, satisfaction after successful recovery is higher. In contrast, the effects of others being virtually present have only recently been considered. Naylor, Lamberton, and West (2012) found that in brand communities, brand evaluations and purchase intentions are enhanced when other members’ pictures are revealed. Although their study lays important groundwork, it is difficult to generalize the results to a service—and specifically service recovery—context, as they did not consider customer-company interactions that are at the core of service recovery processes. A key question is thus whether the assumptions of SIT apply to service recovery in social media environments.

SIT proposes three “social forces”—size, proximity, and source strength—as determinants of social presence effects (Latané 1981). As each of these forces increases, the impact of a social presence should be enhanced. Existing studies found, for instance, that group size effects only hold when others are spatially close (Argo, Dahl, and Manchanda 2005) and that psychological proximity enhances social facilitation (He, Chen, and Alden 2012). For VP, Naylor, Lamberton, and West (2012) found that a higher number (i.e., size) of similar users (i.e., proximity) leads to higher purchase intentions. Source strength, the third determinant of social presence, has not been sufficiently considered, as Argo, Dahl, and Manchanda (2005) point out. This is surprising, as on most social media platforms, the number of users who are present during an interaction as well as their proximity to a complaining customer is outside of a firm’s control, while their importance may be easily influenced, such as by awarding an expert status to certain users (Labrecque et al. 2013).

In addition to the three social forces, social presence is commonly distinguished based on the degree of interactivity between the focal individual and the audience. On the one hand, in the opening comment, Paul Smith refers to more than 1 million potential readers of his complaint, who represent a mere or noninteractive social presence (Argo, Dahl, and Manchanda 2005). On the other hand, social presence can be interactive, when others comment during the service provision (Harris and Baron 2004), which will necessarily be of either positive or negative valence (Godes et al. 2005). Paul Smith’s complaint, for example, was commented by five consumers, four of which highlighted the airline’s bad performance (i.e., negatively framed) and one that defended the brand and described a positive experience (i.e., positively framed). Positive and negative interactive VP may thus confirm a complainant’s recovery experience (i.e., positive for successful, negative for unsuccessful) or disconfirm it (i.e., positive for unsuccessful, negative for successful). Although service recovery via social media may encounter both mere and interactive VP, existing studies considered only one of the two types, without comparing mere and interactive (positively or negatively framed) social presence (e.g., Argo, Dahl, and Manchanda 2005; Brocato, Voorhees, and Baker 2012; Chen, He, and Alden 2014; He, Chen, and Alden 2012; Naylor, Lamberton, and West 2012).

In light of consumers increasingly using social media to voice complaints, our work contributes by revealing the influence of VP during service recovery. Specifically, challenging the assumption of SIT, we show that compared to no VP, mere VP enhances the positive effects of recovery success but does not affect the negative consequences of unsuccessful recovery (Study 1). Additionally, we demonstrate an attitude polarization effect of interactive VP that is in line with SIT, as positively framed VP only increases the positive reactions to successful recovery, while negatively framed VP only enhances the deleterious reactions to recovery failure (Study 2). Finally, we show that source strength competes with attitude polarization, as an interactive VP of high-expertise individuals who disconfirm recovery success deteriorates attitudes and intentions for both successful (Study 3) and—in contrast to the assumptions of SIT—unsuccessful recovery (Study 4). This effect is explained by source credibility, which is higher for experts disconfirming successful recovery but lower for experts trying to mitigate unsuccessful service recovery, and a resulting decrease in consumers’ confidence in the service provider. Overall, these results imply that SIT is generally applicable to virtual contexts but that restrictions apply, especially regarding the link between source strength and credibility. Furthermore, our results underscore that companies should consider social media as a service channel, as they will benefit from both mere and interactive VP when they are successful in resolving complaints. At the same time, however, caution is advised regarding the practice of relying on expert users to interact with other consumers, which may backfire during service recovery.

**Mere VP During Service Recovery**

Generally, SIT proposes that social presence—actual, implied, or imagined—enriches an individual’s affective and behavioral reactions in a situation (Latané 1981). The assumed underlying process is that even the mere presence of others will lead to greater drive and arousal, which then facilitates emotional and/or behavioral responses (Schmitt et al. 1986; Zajonc 1965). This effect was empirically supported, as a mere social presence increased, for instance, embarrassment (Dahl, Manchanda, and Argo 2001; Grace 2007) and self-presentation behavior (Argo, Dahl, and Manchanda 2005).

In service recovery, VP should, according to SIT, enhance a complainant’s responses. Two commonly measured responses are changes in satisfaction with the complaint handling and purchase intentions (e.g., Bitner, Booms, and Tetreault 1990; Gelbrich and Roschk 2011; Van Vaerenbergh, Larivière, and Vermeir 2012). Specifically, successful service recovery was found to result in greater satisfaction and higher likelihood of purchasing in the future, while unsuccessful recovery leads to deterioration in these variables. Applying social facilitation to this context suggests that these reactions to recovery success should be increased when others are virtually present. We thus expect that when service recovery is successful, the mere presence of a virtual audience enhances satisfaction with the complaint handling and purchase intentions. Similarly, when recovery is unsuccessful, a mere VP should amplify the negative reactions on these variables.
Hypothesis 1: Compared to no VP, mere VP increases (decreases) (a) satisfaction with complaint handling and (b) purchase intentions when service recovery is successful (unsuccessful).

Study I

Study Design and Method
The first study was a 2 (VP: no and mere) x 2 (service recovery: unsuccessful and successful) between-subjects experiment. The context involved a mass-market car brand. To control for existing attitudes, respondents were first asked to indicate their attitude toward the brand, to be included as a covariate, as well as toward three brands from different industries for filler purposes.

We used a self-administered online questionnaire and obtained analyzable responses from 96 students at a German university (female = 46.9%, Mage = 25.5 years, SD = 5.69) who were randomly assigned to the experimental groups (cell sizes 21–28). Before seeing the stimuli, all participants indicated their social media usage frequency and whether they had ever used it to voice complaints.

Manipulations
The scenario asked subjects to imagine being a customer of the brand who is about to complain because of a delayed new car delivery (see Appendix B). In the successful service recovery settings, an employee apologized and provided a solution. In the unsuccessful recovery settings, an employee apologized without offering a solution. VP was manipulated by the channel of interaction. In the non-VP conditions, the complaint happened via phone (i.e., unobservable by others). In the VP conditions, it occurred on the brand’s Facebook page of which respondents saw an image and were informed that it had over 115,000 fans who could see their complaint. All other information in the scenarios was constant across conditions.

For manipulation checks, we measured the agreement to the statements “Other people could see my service inquiry” (VP) and “My service inquiry was solved” (service recovery). To ensure independence of both manipulations, we employed a full-factorial design, regressing each manipulation check variable on both independent variables (Perdue and Summers 1986). For VP perception, an influence of the VP manipulation (β = 3.05, t(92) = 18.58, p < .001), no effect for the recovery manipulation (β = −.11, t(92) = −.67, p = .51), and no interaction were found (β = .38, t(92) = 1.15, p = .26). Subjects in the mere VP conditions exhibited similar agreement on the 5-point scale (MmereVP&ServiceRecovery = 4.68, MmereVP&SR = 4.76), while those in the non-VP conditions disagreed (MnonVP&SR = 1.82, MnonVP&SR = 1.52). Service recovery perception was influenced by the recovery manipulation (β = 2.84, t(92) = 17.55, p < .001), but not by VP (β = .15, t(92) = .93, p = .36) or the interaction (β = .53, t(92) = 1.65, p = .11). Independent of VP, subjects in the successful recovery conditions perceived that the inquiry was solved (MSR−noVP = 4.14, MSR−mereVP = 4.56), while those in the unsuccessful recovery conditions did not (MSR−noVP = 1.57, MSR−mereVP = 1.46).

Measures
All variables were measured with established scales (see Appendix A). Initial attitude toward the brand (α = .84, construct reliability [CR] = .88, average variance extracted [AVE] = .72) was based on Kim, Lim, and Bhargava (1998). Satisfaction with complaint handling (α = .95, CR = .92, AVE = .74) was measured based on Tax, Brown, and Chandrashekaran (1998). The scale by Coyle andThorson (2001) was adapted to measure purchase intentions (α = .94, CR = .95, AVE = .82). Confirmatory factor analysis (CFA) revealed satisfactory levels of convergent validity. Moreover, discriminant validity requirements were met (Fornell and Larcker 1981), as each scale’s AVE exceeded multiple squared correlations (range .08–.54).

Results
To examine the influence of VP on satisfaction and purchase intentions, we estimated two regression equations. The independent variables were the covariates (i.e., gender, age, initial attitude toward the brand, social media usage frequency, and complaint experience), VP (−.5 = no and .5 = mere), service recovery (−.5 = unsuccessful and .5 = successful), and the VP x recovery interaction.

Satisfaction was influenced by VP (β = .46, t(87) = 2.98, p < .01), service recovery (β = 1.78, t(87) = 11.16, p < .001), and the interaction term (β = 1.00, t(87) = 3.25, p < .01). Age was the only covariate that exerted an influence (β = −.03, t(87) = −2.22, p < .05). Using the regression coefficient estimates, Figure 1A displays satisfaction by service recovery at no and mere VP. A spotlight analysis (Irwin and McClelland 2001) showed that when recovery was unsuccessful, VP did not deteriorate satisfaction with complaint handling, although the effect exhibited the assumed negative directionality (MnoVP = 1.83 versus MmereVP = 1.79; β = −.05, t(87) = −.21, p = .83). When recovery was successful, on the other hand, VP increased satisfaction (MnoVP = 3.11 versus MmereVP = 4.07; β = .96, t(87) = 4.30, p < .001).

For purchase intentions, significant effects of VP (β = .44, t(87) = 3.16, p < .01), service recovery (β = .83, t(87) = 5.71, p < .001), and the interaction (β = 1.08, t(87) = 3.86, p < .001), were found. Initial attitude toward the brand was the only significant covariate (β = .34, t(87) = 3.35, p < .01). Similar to satisfaction, the effect of VP differed between unsuccessful and successful recovery (see Figure 1B). When recovery was unsuccessful, VP did not decrease purchase intentions, although the directionality indicated an effect as hypothesized (MnoVP = 2.05 versus MmereVP = 1.95; β = −.10, t(87) = −.52,
In contrast, when recovery was successful, the assumed increase was evident ($M_{\text{noVP}} = 2.33$ versus $M_{\text{mereVP}} = 3.31$; $\beta = .98$, $t(87) = 4.85$, $p < .001$).

**Discussion**

Study 1 investigated how VP affects customers during service recovery. In support of Hypothesis 1, when recovery is successful, VP improves satisfaction with complaint handling and purchase intentions. At the same time, however, VP does not lead to a further deterioration in both variables when recovery is unsuccessful, which is in contrast to the assumptions of SIT. One explanation could be a floor effect due to the unsuccessful recovery, where satisfaction and intentions are already very low even without VP. Additionally, the null finding might be explained by the negativity effect, that is, the greater weighting of negative information due to its greater diagnosticity (Herr, Kardes, and Kim 1991). The unsuccessful recovery experience would thus decrease the salience of a mere VP.

Overall, the results show that if companies succeed with service recovery, the mere VP of others enhances positive consequences. At the same time, no increased negative results of unsuccessful recovery should be feared. However, these findings only apply to a mere VP and require further investigation for interactive VP.

**Interactive VP During Service Recovery**

Social media are characterized by a high degree of interactivity among users (Hennig-Thurau et al. 2010). As interactions are frequently commented by others, it is likely that also during service recovery a complaining customer will experience more than just a mere VP. While a mere VP is noninteractive (Naylor, Lamberton, and West 2012), we define interactive VP as an active engagement of the virtual audience with the target consumer. It thus resembles a type of consumer-to-consumer interaction (Libai et al. 2010) and may occur in the form of comments or via social bookmarking (e.g., Facebook’s “Like” button; see Gerlitz and Helmond 2013).

Differences between mere and interactive VP can directly be derived from SIT, which posits that individuals are especially influenced by social interactions, such that the influence of interactive social presence should exceed that of mere presence. The assumed reason is that interactions will create greater arousal and thereby lead to a stronger facilitation of emotional/behavioral responses (Latané 1981).

Interactive social presence needs to be discerned based on its valence (Godes et al. 2005). For our context of service recovery, we will thus refer to interactions between a target consumer and the audience that comprise negative information about the focal firm as negative VP, and interactions that comprise positive information as positive VP. Examples for the former are a comment that describes a bad experience with a service provider or approval with negative posts, while the latter could be a comment defending a company or the “Liking” of the brand.

Generally, SIT postulates that the presence of somebody exhibiting a behavior of a positive or negative valence increases the probability that observers show attitudes and/or behavior of the same valence (Pratkanis 2007). However, attitude polarization (Abelson 1995) suggests a more differentiated reaction by stating that attitudes become more extreme after exposure to attitude-confirming information. Such an effect can be observed, for instance, when group discussions, both in person and computer-mediated, among individuals...
favorably (unfavorably) disposed toward an alternative lead the group to become even more (less) so (Sia, Tan, and Kwok-Kee 2002). In a recent study, Bohlmann at al. (2006) revealed that satisfaction is susceptible to the polarizing influence of social interactions. At the same time, interactions that would disconfirm existing attitudes are more likely to be ignored, especially if attitudes had been strongly formed (Lord, Ross, and Lepper 1979). In service recovery, such disconfirming interactive VP occurs when others defend a company that was unsuccessful in resolving a complaint or comment negatively about a company that was successful.

Based on the combination of SIT and attitude polarization, we assume that compared to a mere VP, when interactive VP confirms service recovery experience (i.e., positive for successful or negative for unsuccessful recovery), customers’ reactions should be enhanced. In contrast, when interactive VP disconfirms recovery experience (i.e., negative for successful or positive for unsuccessful recovery), such polarization effect should not be evident.

**Hypothesis 2:** Compared to a mere VP, positive VP increases (a) satisfaction with complaint handling and (b) purchase intentions when service recovery is successful but not when it is unsuccessful.

**Hypothesis 3:** Compared to a mere VP, negative VP decreases (a) satisfaction with complaint handling and (b) purchase intentions when service recovery is unsuccessful but not when it is successful.

**Study 2**

**Study Design and Method**

Study 2 was a 3 (VP: mere, positive, and negative) × 2 (service recovery: unsuccessful and successful) between-subjects online experiment. The context was the same as in Study 1.

In contrast to the student sample in Study 1, we paid a market research firm to recruit a sample of 202 German respondents (female = 43.1%, M_age = 41.5 years, SD = 12.22) to increase the generalizability of our findings. Respondents were randomly assigned to one of the six experimental groups, and cell sizes ranged from 28 to 38 subjects. The same control variables as in Study 1 were included.

**Manipulations**

Stimuli similar to those of Study 1 were employed to manipulate recovery success and mere VP (see Appendix B). Interactive VP was manipulated with comments of other users. In the positive VP scenarios, two users praised the brand’s service and tried to mitigate the complaint, and other users “liked” the brand’s answer as well as the positive comments. For negative VP, two users complained about the brand’s service and discouraged the complainant. Additionally, other users liked the initial complaint and the negative comments.

A manipulation check for recovery success identical to Study 1 revealed an influence of this manipulation (β = 2.73, t(198) = 24.08, p < .001, but no influence of VP (β = .11, t(198) = .45, p = .66), or the interaction (β = .35, t(198) = 1.54, p = .13). Independent of VP, subjects in the successful recovery conditions regarded the inquiry as solved (M_mereVP&SR = 4.14, M_positiveVP&SR = 4.36), while those in the unsuccessful conditions did not (M_mereVP&SR = 1.58, M_positiveVP&SR = 1.46). The mere versus interactive VP manipulation was checked with the statement “Other users commented on my service inquiry” (5-point Likert-type scale). Contrasting the mere VP conditions with the positive and negative VP conditions showed an effect of interactive VP (β = 2.24, t(198) = 18.30, p < .001), but no influence of recovery success (β = .10, t(198) = .79, p = .43) or the interaction (β = .22, t(198) = .90, p = .37). The mere VP conditions revealed equal levels of disagreement (M_mereVP&SR = 2.58, M_positiveVP&SR = 2.57), while the interactive VP conditions exhibited equal levels of agreement (M_mereVP&SR = 4.71, M_positiveVP&SR = 4.92). Finally, in the interactive VP conditions, perceived valence was measured with three word pairs (negative/positive, bad/good, and dispraising/praising; 5-point Likert-type scale; α = .96). Contrasting negative and positive VP confirmed the valence manipulation (β = 2.89, t(124) = 19.72, p < .001), without any influence of recovery success (β = .29, t(124) = 1.99, p = .05) or the interaction (β = .41, t(124) = 1.39, p = .17). The negative VP manipulation led to equally low valence ratings (M_positiveVP&SR = 1.50, M_mereVP&SR = 1.59), while the positive VP manipulation led to equally high ratings (M_positiveVP&SR = 4.18, M_mereVP&SR = 4.68).

**Measures**

We used the same scales as in Study 1 for initial attitude toward the brand (α = .93, CR = .94, AVE = .83), satisfaction with complaint handling (α = .98, CR = .95, AVE = .82), and purchase intentions (α = .95, CR = .94, AVE = .79). Again, all scales exhibited convergent validity (see Appendix A). Squared multiple correlations (.02–.32) did not exceed AVE, indicating adequate discriminant validity.

**Results**

We employed two planned contrasts: mere VP versus positive VP and mere VP versus negative VP, and thus halved the significance level threshold to .025 per Bonferroni adjustment.

**Mere Versus Positive VP**

For the first contrast, the independent variables were the covariates (i.e., gender, age, initial attitude toward the brand, social media usage frequency, and complaint experience), VP (−.5 = mere and .5 = positive), service recovery (−.5 = unsuccessful and .5 = successful), and the VP × recovery success interaction.

Satisfaction was influenced by VP (β = .65, t(127) = 4.23, p < .001), recovery success (β = 2.17, t(127) = 14.24,
p < .001), and the interaction term (β = .72, t(127) = 2.31, p < .025), but not by any covariate. The spotlight analysis revealed that the effect of VP differed by recovery success (see Figure 2 I.A). As hypothesized, positive VP increased satisfaction when recovery was successful ($M_{mereVP} = 3.57$ versus $M_{VP+} = 4.57$; $β = 1.01$, $t(127) = 4.56, p < .001$) but not when it was unsuccessful ($M_{mereVP} = 1.75$ versus $M_{VP+} = 2.04$; $β = .29$, $t(127) = 1.34, p = .18$).

For purchase intentions, effects of VP ($β = .37$, $t(127) = 2.54$, $p < .025$), service recovery ($β = .93$, $t(127) = 6.30$, $p < .001$), and the interaction ($β = .73$, $t(127) = 2.45$, p < .025), were evident. The only significant covariate was initial attitude toward the brand ($β = .47$, $t(127) = 5.72$, p < .001). When recovery was successful, positive VP increased purchase intentions ($M_{mereVP} = 2.65$ versus $M_{VP+} = 3.39$; $β = .74$, $t(127) = 3.48, p < .001$), while no difference was evident for unsuccessful recovery ($M_{mereVP} = 2.09$ versus $M_{VP+} = 2.10$; $β = .01$, $t(127) = .04, p = .97$, see Figure 2 I.B).

**Mere Versus Negative VP**

The second contrast included the covariates, VP (−.5 = mere and .5 = negative interactive), recovery (−.5 = unsuccessful and .5 = successful), and the interaction.

Satisfaction with complaint handling was not influenced by VP ($β = -.17$, $t(125) = −1.09, p = .28$) or any covariate, but by recovery success ($β = 2.16$, $t(125) = 14.28, p < .001$), and the interaction term ($β = .68$, $t(125) = 2.28, p < .025$). An
analysis of the two recovery conditions, as illustrated in Figure 2 II.A, revealed that negative VP did not affect satisfaction when recovery was successful ($M_{\text{mereVP}} = 3.56$ versus $M_{\text{VP-}} = 3.73$; $\beta = .17$, $t(125) = .81$, $p = .42$), but that it led to a deterioration when recovery was unsuccessful ($M_{\text{mereVP}} = 1.73$ versus $M_{\text{VP-}} = 1.22$; $\beta = -.51$, $t(125) = -2.30$, $p < .025$).

For purchase intentions, a negative effect of VP that was marginally significant ($\beta = -.31$, $t(125) = -2.04$, $p = .04$) and a positive influence of recovery success were found ($\beta = .79$, $t(125) = 5.26$, $p < .001$), but no interaction ($\beta = .45$, $t(125) = 1.52$, $p = .13$). Initial attitude toward the brand was the only significant covariate ($\beta = .32$, $t(125) = 3.49$, $p < .001$). Thus, in contrast to our assumption, the effect of VP appeared to not differ by recovery success. However, as evident in Figure 2 II.B, a spotlight analysis did provide support for the hypothesized influence. Negative VP did not influence purchase intentions when recovery was successful ($M_{\text{mereVP}} = 2.64$ versus $M_{\text{VP-}} = 3.55$; $\beta = -.09$, $t(125) = -.43$, $p = .67$), while a decrease occurred for unsuccessful recovery ($M_{\text{mereVP}} = 2.08$ versus $M_{\text{VP-}} = 1.55$; $\beta = -.54$, $t(125) = -2.55$, $p < .025$).

Discussion

Study 2 tested how interactive VP influences the effects of recovery success. As hypothesized in Hypothesis 2, positive VP enhances the beneficial consequences of successful service recovery but does not attenuate the negative outcomes of unsuccessful recovery. Moreover, negative VP increases the deleterious consequences of unsuccessful recovery but does not affect the outcomes of successful recovery, as hypothesized in Hypothesis 3. Overall, we thus find evidence for attitude polarization effects. Interactive VP can be beneficial, but only if it is of a positive valence and if the company is successful in resolving the complaint. If recovery is unsuccessful, the danger of a polarization of deleterious consequences due to negative VP exists. At the same time, VP that disconfirms recovery success (i.e., negative VP for successful recovery, positive VP for unsuccessful recovery) did not have any effects. While these results indicate that the general assumptions of SIT also apply to the social media context, the question arises whether there are conditions under which such disconfirming VP exerts an influence.

Source Strength of Disconfirming VP During Service Recovery

In line with attitude polarization, Study 2 found disconfirming VP to not have any influence. However, SIT suggests that the source of interaction—as one of the three social forces—should influence the effect of VP (Latané 1981). Source strength refers to “salience, power, importance, or intensity of a given source to the target” (Latané 1981, p. 344). Companies frequently address this determinant by rewarding users who have expertise in a certain topic (Fanfarelli, Vie, and McDaniel 2015). For instance, the Dell (2015) Community Rockstar program “recognizes independent experts and enthusiasts for their community contributions in solving technical issues, ideation and helping customers.” To further understand the effects of VP in service recovery, we therefore focus on source strength (i.e., expertise) when VP disconfirms recovery success.

Both negative and positive VP from an expert source should exert a greater influence than VP from a source of average expertise. Extant research demonstrated the influence of expert consumers (e.g., Flynn, Goldsmith, and Eastman 1996). Tseng and Hsu (2010) found that online, the level of expertise plays an important role for the influence on others’ attitudes and purchase intentions. Source strength should thus enhance the effects of VP. While disconfirming VP from an average source was found to not exert an influence (Study 2), disconfirming VP from an expert source should be influential. When recovery is successful, negative (i.e., disconfirming) VP should deteriorate consumers’ attitudes if it comes from a strong source. Similarly, when recovery is unsuccessful, positive VP from a strong source should mitigate the negative effects and thus lead to more favorable attitudes.

Hypothesis 4: When service recovery is successful, negative VP of others who have high expertise (vs. average expertise) reduces (a) satisfaction with complaint handling and, subsequently, (b) purchase intentions.

Hypothesis 5: When service recovery is unsuccessful, positive VP of high-expertise (vs. average-expertise) individuals increases (a) satisfaction with complaint handling and, subsequently, (b) purchase intentions.

To test whether an influence of expertise is really due to higher source strength (and thus adheres to SIT), we investigate the underlying process via two mediating variables, namely, source credibility and confidence in the service provider. Previous research found that source expertise positively influences credibility (e.g., Buda and Zhang 2000), with the latter defined as the believability of an entity (Erdem and Swait 2004). An influence of source strength, as postulated by SIT, should thus be explained by enhanced source credibility. Moreover, consumers use information from others to increase their confidence in making the right choice (Flynn, Goldsmith, and Eastman 1996). Confidence, defined as the degree of certainty about an evaluative judgment (Laroche and Sadokierski 1994), was found to depend on source credibility (e.g., Priester and Petty 2003) and to influence consumers’ attitudes and intentions (Laroche and Sadokierski 1994).

If service recovery is successful but customers encounter disconfirming information (i.e., negative VP) from an expert source, its credibility should be higher, which should reduce confidence in the service provider compared to a source of average expertise. For unsuccessful recovery, on the other hand, an attenuating effect of disconfirming information (i.e., positive VP) from an expert source should be explained by higher credibility and higher confidence.
**Hypothesis 4_med:** The deteriorating effects of negative VP of high-expertise individuals during successful service recovery are explained by higher source credibility and a resulting lower confidence in the service provider.

**Hypothesis 5_med:** The enhancing effects of positive VP of high-expertise individuals during unsuccessful service recovery are explained by higher source credibility and a resulting higher confidence in the service provider.

**Study 3**

**Study Design and Method**

We investigated the hypothesized effects of expertise of negative VP disconfirming successful service recovery as well as the underlying process (Hypotheses 4 and 4_med) by manipulating expertise (average vs. high) between subjects. A control group with only a mere VP was included for validation purposes. The scenario again involved a recovery situation on Facebook. However, we changed the context from cars to telecommunication services and thus from durables to a contractual service setting.

An online market research firm recruited 147 German respondents (female = 53.7%, M_age = 37.7 years, SD = 10.82) who had not participated in the previous studies. Participants were randomly assigned to the control group or one of the two experimental conditions (cell sizes 44–55). Subjects indicated their attitude toward the telecommunication brand, social media usage frequency, and complaint experience.

**Manipulations**

As this study focused on disconfirming negative VP, all three groups involved a successful service recovery scenario (see Appendix C). Participants were asked to imagine being a customer of the telecommunication brand, who is about to complain because of repeated service outage. They then read the complaint and were asked to indicate their service recovery expectations, to be included as a covariate. The next page displayed the brand’s response, in which an employee apologized and provided a solution to the problem. In the control group, no further information was provided. The average-expertise condition was similar to the negative VP condition in Study 2. In the high-expertise condition, subjects were informed that some users have an expert status based on their knowledge about the brand and their experience in helping others and were then exposed to a negative comment by such an expert user. Thus, both conditions displayed the same negative comment but differed in the expertise of the commenting user.

We assessed the VP manipulation with the same question as in Study 2 (“Other users commented on my service inquiry,” 5-point Likert-type scale). Analysis of variance revealed significant differences (F(2, 144) = 52.57, p < .001). Bonferroni-adjusted post hoc comparisons showed that subjects in the control condition (M_mereVP = 2.27) agreed less than subjects in the two experimental conditions (M_avgExp = 4.25, p < .001; M_highExp = 4.00, p < .001), while the latter two did not significantly differ. To ensure that no differences exist regarding the perception of recovery success, we again used the statement “My service inquiry was solved.” As intended, subjects did not differ in their level of agreement (F(2, 144) = 1.76, p = .18). The expertise manipulation was assessed by asking participants in the two experimental conditions whether the commenting person was “a regular user” or “an expert user.”

In the average-expertise condition, all respondents selected the first answer; while in the high-expertise condition, all respondents selected the second answer. Finally, we included a realism check at the end of the survey (“The situation described in the study was realistic,” 5-point Likert-type scale), for which responses ranged from 4.02 to 4.19 and did not differ between groups (F(2, 144) = .41, p = .66).

**Measures**

The same scales as in the first two studies were used for initial attitude toward the brand (α = .94, CR = .94, AVE = .85), satisfaction with complaint handling (α = .94, CR = .92, AVE = .75), and purchase intentions (α = .97, CR = .97, AVE = .87). The covariate service recovery expectations (α = .87, CR = .80, AVE = .51) was based on Hess, Ganesan, and Klein (2003). Confidence in the service provider (α = .93, CR = .90, AVE = .70) was assessed based on Argo, Dahl, and Manchanda (2005), and source credibility (α = .95, CR = .95, AVE = .80) was captured based on Erdem and Swait (2004). CFA results (see Appendix A) indicated convergent validity, and AVE exceeded squared multiple correlations (.001–.32), indicating discriminant validity.

**Results**

We analyzed the mediating effects of credibility and confidence with PROCESS (Hayes 2013), which employs bootstrapping procedures for estimating direct and indirect effects. Two planned contrasts were used, with the significance level again halved to .025 per Bonferroni. First, to ensure a replication of the results of Study 2, we compared the control group (mere VP) to the average-expertise condition. Second, we contrasted average and high expertise to test Hypotheses 4 and 4_med. Figure 3 depicts the groups’ mean values.

**Mere VP Versus Low-Expertise Interactive VP**

In the first contrast, the independent variables were the covariates (i.e., gender, age, initial attitude toward the brand, social media usage frequency, complaint experience, and service recovery expectations) and VP (0 = mere and 1 = average expertise). Confirming Study 2, the results showed that compared to mere VP, negative VP of a regular user influenced
neither satisfaction ($\beta = -.09, t(84) = -.38, p = .70$) nor purchase intentions ($\beta = -.22, t(84) = -1.19, p = .24$).

**Low Versus High Expertise**

The second contrast included the covariates and expertise (0 = average and 1 = high) as predictors. Satisfaction was influenced by expertise ($\beta = -.59, t(95) = -3.01, p < .005$) and age ($\beta = -.03, t(95) = -2.59, p < .025$). Purchase intentions were influenced by expertise ($\beta = -.38, t(95) = -2.18, p < .05$) and initial attitude toward the brand ($\beta = .42, t(95) = 4.81, p < .001$). Confidence was influenced by expertise ($\beta = -.63, t(95) = -3.28, p < .001$), age ($\beta = -.02, t(95) = -2.26, p < .05$), and recovery expectations ($\beta = .22, t(95) = 2.40, p < .025$). Source credibility was influenced by expertise ($\beta = .45, t(95) = 3.14, p < .005$). The results thus show that compared to a regular user, disconfirmation of successful recovery from an expert user deteriorates satisfaction, purchase intentions, and confidence. At the same time, high-expertise VP is perceived to be more credible than average-expertise VP.

The mediation analysis results, which included a link between satisfaction and intentions, supported the hypothesized process (see Figure 4A). As the 99% bootstrap confidence intervals (CI) around the estimate exclude zero, the indirect influence via credibility, confidence, and satisfaction was significant ($B = -.03, SE = .02, 99% bootstrap CI [-.12, -.002]$). Moreover, significant indirect effects were revealed for expertise via confidence and satisfaction ($B = -.08, SE = .04, 95% bootstrap CI [-.21, -.02]$ as well as for expertise via credibility ($B = -.14, SE = .07, 99% bootstrap CI [-.38, -.01]$). Overall, the negative influence of high-expertise VP disconfirming successful recovery is thus partly explained by its higher credibility and the subsequent decrease in consumers’ confidence.

**Discussion**

Study 3 investigated the effect of source strength when VP disconfirms successful service recovery. As expected (Hypothesis 4), high expertise deteriorates satisfaction and purchase intentions, while no effect is evident for VP of average expertise. In

![Figure 3. Study 3: Satisfaction with complaint handling, purchase intentions, confidence in the service provider, and source credibility by experimental group. Covariates included are gender, age, initial attitude toward the brand, social media usage intensity, complaint experience, and service recovery expectations.](image-url)
line with SIT, as source strength increases, so does the effect of social presence. Furthermore, in support of Hypothesis 4_med, higher credibility of expertise VP and a resulting decrease in the confidence in the service provider emerged as the mediating process. These results reveal that when service recovery is successful, negative VP from expert users is a relevant risk that companies face.

**Study 4**

**Study Design and Method**

Study 4 examined whether high expertise of positive VP can buffer the negative effects of unsuccessful service recovery (Hypotheses 5 and 5_med). In addition to the between-subjects manipulation of expertise (average vs. high), the study included a control group with mere VP. The context was identical to Study 3.

A sample of 153 consumers were recruited by an online market research firm (female = 50.3%, M_age = 37.2 years, SD = 9.98), and randomly assigned to one of the three groups (cell sizes 38–54). The study procedure was identical to Study 3.

**Manipulations**

In contrast to Study 3, all three scenarios involved an unsuccessful service recovery and the comment from another individual—again a regular user (i.e., average expertise) or an expert user (i.e., high expertise)—was positively framed, identical to the positive VP used in Study 2 (see Appendix C). The manipulation of mere versus interactive VP was successful (“Other users commented on my service inquiry,” 5-point Likert-type scale; F(2, 150) = 37.94, p < .001); Bonferroni-adjusted post hoc tests revealed lower scores for the control group (M_mereVP = 2.37) than for the experimental conditions (M_avgExp = 4.33, p < .001; M_highExp = 3.94, p < .001), while the latter two did not differ. Perceived recovery success (My service inquiry was solved) did not differ across groups (F(2, 150) = 2.16, p = .12), indicating that the scenario was understood as intended. The expertise manipulation check was

![Figure 4. Studies 3 and 4: Indirect effects of expertise of disconfirming virtual presence (VP). Covariates included are gender, age, initial attitude toward the brand, social media usage intensity, complaint experience, and service recovery expectations; dashed line indicates nonsignificant path; **p < .005, *p < .025, y p < .05.](attachment:figure4.png)
answered correctly by all participants in the experimental groups. Realism assessments (“The situation described in the study was realistic,” 5-point Likert-type scale) ranged between 3.89 and 4.13 ($F(2, 150) = .70, p = .50$).

**Measures**

The same scales as in Study 3 were used for initial attitude toward the brand ($\alpha = .94$, CR = .93, AVE = .81), satisfaction with complaint handling ($\alpha = .93$, CR = .91, AVE = .71), purchase intentions ($\alpha = .95$, CR = .97, AVE = .88), service recovery expectations ($\alpha = .87$, CR = .79, AVE = .49), confidence in the service provider ($\alpha = .88$, CR = .88, AVE = .64), and source credibility ($\alpha = .94$, CR = .95, AVE = .78). All scales exhibited satisfactory convergent (Appendix A) and discriminant validity (squared multiple correlations .02–.43).

**Results**

Two planned contrast were used to examine the effects of VP expertise: a comparison of the control group (mere VP) with the low-expertise condition, and a comparison of the low- and the high-expertise conditions to test the assumptions of Hypotheses 5 and 5_med. The significance level was again halved to .025 per Bonferroni. Figure 5 depicts the mean values for all variables across the three groups.

**Mere VP Versus Low-Expertise Interactive VP**

The predictors in the first contrast were the covariates (i.e., gender, age, initial attitude toward the brand, social media usage frequency, complaint experience, and recovery expectations) and VP (0 = mere and 1 = average expertise). In line with Study 2, when recovery was unsuccessful, interactive VP influenced neither satisfaction ($\beta = .14$, t(91) = .62, $p = .54$) nor purchase intentions ($\beta = .13$, t(91) = .72, $p = .47$).

**Low Versus High Expertise**

In the second contrast, the independent variables were the covariates and expertise (0 = average and 1 = high). In contrast to our assumptions (Hypothesis 5), expertise exerted a negative influence on satisfaction with complaint handling ($\beta = -.50$, t(107) = -3.00, $p < .005$). Similarly, purchase intentions were negatively influenced by expertise at a level approaching significance ($\beta = -.25$, t(107) = -1.70, $p =$...
The only significant covariate was initial attitude toward the brand ($\beta = .50$, $t(107) = 7.56$, $p < .001$). For confidence, an equally deteriorating effect of high expertise was evident ($\beta = -.50$, $t(107) = -2.43$, $p < .025$), with initial attitude toward the brand as the only significant covariate ($\beta = .24$, $t(107) = 2.56$, $p < .025$). The findings for source credibility further supported these findings that are in contrast to our assumptions: Instead of an enhancing effect, higher expertise actually led to lower levels of credibility ($\beta = -.44$, $t(107) = -2.26$, $p = .026$).

The mediation analysis revealed that the deleterious effect of high expertise operated through a decrease in credibility—higher expertise led to lower credibility of the virtually present and interactive user—and confidence in the service provider, which reduced satisfaction and ultimately purchase intentions ($B = -.02$, $SE = .01$, 95% bootstrap CI $[-.07, -.003]$; see Figure 4B).

To compare the results of Studies 3 and 4, we furthermore conducted combined post hoc analyses with expertise (average and high), valence of disconfirming VP (negative [Study 3], positive [Study 4]), and the covariates. The results revealed that in both cases (i.e., positive VP disconfirming unsuccessful recovery and negative VP disconfirming successful recovery), high expertise led to similar deteriorations in satisfaction, purchase intentions, and confidence in the service provider. Differences were only evident regarding source credibility, which further supports the results of the individual studies. While disconfirming VP of average expertise was judged to be equally credible in both studies, an expert source disconfirming successful recovery (Study 3) was judged to be significantly more credible, and high-expertise VP disconfirming unsuccessful recovery (Study 4) was perceived as significantly less credible.

**Discussion**

Study 4 tested the effects of source strength of positive VP that disconfirms unsuccessful recovery. In contrast to Study 3, however, the findings led us to reject both hypotheses. Instead of an enhancing influence of high expertise (Hypothesis 5), we found that satisfaction and purchase intentions are deteriorated. This is explained by the lower credibility of high-expertise users compared to users of average expertise. This finding is intriguing and deserves further investigation. One explanation is that when service recovery is unsuccessful, consumers perceive a disconfirming reaction of expert users to be dishonest and assume that these users intentionally try to counter the negative recovery outcome. Regular users, in contrast, might be perceived as independent and thus more credible. Overall, this finding suggests another pitfall of using expert users. Not only is there a risk of such experts spreading negative comments, but positive comments on negative incidents appear to also be harmful.

**General Discussion**

Customers increasingly use social media to complain to brands and to ask for customer service, well aware that a virtual public will witness successful or unsuccessful service recovery. We found that compared to traditional service recovery, such mere VP enhances the positive effects of recovery success, while the negative consequences of unsuccessful recovery remain unaffected. Study 2 revealed attitude polarization effects of interactive VP: negative VP is only harmful if recovery failed, while positive VP boosts the positive effects of recovery success but is unable to alleviate the negative outcomes of unsuccessful recovery. Challenging these attitude polarization effects, Studies 3 and 4 found that for disconfirming VP, high expertise harms the complainant’s satisfaction and purchase intentions. This effect is consistently explained by the credibility of high expertise and its effects on confidence in the service provider.

**Theoretical Contributions**

Our research provides evidence for the applicability of SIT in social media contexts, where others are only virtually present, but at the same time also reveals certain restrictions. Specifically, social facilitation was found to only apply to VP for positive outcomes (i.e., successful recovery), but not when responses were negative due to unsuccessful service recovery. Moreover, SIT did not predict the deleterious effects of negative VP from an expert source disconfirming successful recovery. We thus propose that the source strength–credibility link posited by SIT may be influenced by consumers’ assumptions about the intentions of others who are also present. Possibly, in virtual environments, consumers more easily revert to assumptions of dishonesty due to a higher degree of anonymity than in off-line settings.

Additionally, we offer three derived subcontributions. First, our work contributes to SIT by testing the role of source strength for social presence effects. The finding that source strength competes with attitude polarization is an important addition to the existing investigations of the two other social forces (i.e., size and proximity).

Second, the combination of mere and interactive VP contributes, as existing research focused on either mere (e.g., Argo, Dahl, and Manchanda 2005; Naylor, Lamberton, and West 2012) or interactive presence (e.g., Harris and Baron 2004). By considering both types of social presence, we show that mere VP effects are limited to positive service encounters, while the effects of interactive VP depend on valence and source strength.

Third, we expand knowledge about social presence effects in service environments. Although social influence in servicescapes was generally conceptualized (Tombs and McColl-Kennedy 2003), existing studies predominantly focused on actual presence (e.g., Brocato, Voorhees, and Baker 2012; He, Chen, and Alden 2012), while virtual settings have not received sufficient attention. Our results suggest that for VP during service provision, principles known from brick-and-mortar settings, such as social facilitation (Zajonc 1965), also apply.

**Managerial Implications**

Although companies face the demand for customer service via social media, many cannot meet this request: More than half
of the respondents (55%) in a recent survey called their experience of communicating with brands via social media “disappointing” or “mediocre” (Langsdorf 2012). Our findings thus have important implications for marketing and customer service managers and allow for three strategic recommendations.

First, companies should not ignore service inquiries and complaints via social media but use social media as a real service channel, in which inquiries are directly solved. Not only will unsuccessful recovery impair the complainant’s satisfaction and purchase intentions; far worse, such bad service experiences of single customers are publicly visible. Others can observe recovery performance and may join a discussion, which will enhance the deleterious reaction of a complainant. Social media should thus not be reduced to advertising but rather be regarded as an equal communication channel, for which the same complaint management and recovery processes need to be implemented as in off-line channels.

Second, at first sight, the effects of a mere VP suggest that there is more to gain from providing service recovery via social media than there is to lose, as the positive outcomes of recovery success are enhanced while the negative outcomes of unsuccessful recovery remain unaffected. However, interactive VP is likely and often intended by companies (Hoffman and Novak 2012). In this case, negative interactions may exert deteriorating influences when service recovery is unsuccessful. In social media, it is thus even more important for companies to resolve customer inquiries, because the positive effects of recovery success will be significantly higher due to VP. At the same time, companies should be aware that if customer service is offered via social media, fostering positive engagement becomes even more important.

Third, our results suggest that firms should be cautious when distinguishing expert users. Although this strategy appears to be widely used in social media (Labrecque et al. 2013), it may be risky in service recovery. On the one hand, companies should especially care for and nurture the relationships to these experts. As our results show, their critical comments are more credible than those from “regular” users, which may attenuate the positive outcomes of successful recovery. On the other hand, firms should refrain from using expert users for overly positive comments, as trying to alleviate the negative outcomes of unsuccessful recovery will backfire.

Limitations and Further Research

When interpreting the results of our studies, four limitations should be considered. First, although we controlled for subjects’ initial attitude toward the focal brand, we did not account for individual differences. Different customers are likely to react differently when they experience service recovery under VP. For instance, He, Chen, and Alden (2012) identify independent self-construal as a moderator of actual social presence effects. Future research should examine whether this also applies to virtual contexts.

Second, our studies employed written scenario techniques and pictures to simulate recovery experiences and VP. Additionally, we used self-reported scales to measure the dependent variables. Although our approach increases internal validity, the studies should be replicated in field experiments on actual social media platforms where respondents experience service recovery, and where their behavior can be observed, in order to increase the external validity of the findings.

Third, we did not consider temporal aspects for interactive VP. It is possible that actual and VP differ due to the time frame in which interactions may occur, as VP (e.g., Facebook users) also comprises asynchronous communications and is thus likely to be perceived as more long lasting. Future research should consider the effects of temporal distance on the influences of VP.

Fourth, our studies focused on the effects of VP on the complainant. As interactions in social media take place publicly, other consumers are likely to also be influenced by interactions between a complainant and a brand (van Noort and Willemsen 2012). Such spillover effects of interactive VP on the observing audience should be considered in further studies.

Appendix A

Table A1. Items and Reliability Measures (Study 1/Study 2/Study 3/Study 4).

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s α</th>
<th>Reliability</th>
<th>AVE</th>
<th>Factor Loadings</th>
<th>Indicator Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>x1 bad/good</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>x2 worse than competing brands/better than competing brands</td>
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<td></td>
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<tr>
<td>x3 unattractive/attractive</td>
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<tr>
<td>x4 I was happy with how [brand] handled my complaint</td>
<td></td>
<td></td>
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<tr>
<td>x5 [Brand] did all that I expected to solve my problem</td>
<td>.93/.97/.88/.94</td>
<td>.78/.89/.72/.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>x6 [Brand] did all that I expected to solve my problem</td>
<td>.87/.95/.89/.74</td>
<td>.63/.79/.76/.56</td>
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</tbody>
</table>

(continued)
Table A1. (continued)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s α</th>
<th>Loadings</th>
<th>AVE</th>
<th>Factor Reliability</th>
<th>Indicator Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_6 The complaint was handled as well as it should have been</td>
<td>.94/.94/.89/.84</td>
<td>.80/.77/.74/.66</td>
<td></td>
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<tr>
<td>x_7 I was pleased with the manner in which the complaint was dealt with</td>
<td>.91/.96/.91/.86</td>
<td>.74/.83/.78/.74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase intentions (Coyle and Thorson 2001)</td>
<td>.94/.95/.97/.95</td>
<td>.94/.95/.97/.97</td>
<td>.82/.79/.87/.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>x_8 It is very likely that I will buy [brand]</td>
<td>.94/.96/.95/.93</td>
<td>.88/.90/.90/.85</td>
<td></td>
<td></td>
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<tr>
<td>x_9 I will purchase [brand] next time I need a car/phone plan</td>
<td>.94/.96/.95/.95</td>
<td>.90/.89/.91/.90</td>
<td></td>
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<tr>
<td>x_10 I will definitely try [brand]</td>
<td>.90/.84/.96/.94</td>
<td>.79/.63/.91/.88</td>
<td></td>
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<tr>
<td>x_11 I expect [brand] to try to make up for the inconvenience caused by the problem</td>
<td>.84/.89/.87/.94</td>
<td>.71/.75/.76/.89</td>
<td></td>
<td></td>
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<tr>
<td>x_12 I expect [brand] to do everything in its power to solve the problem</td>
<td>—/—/.92/.95</td>
<td>—/—/.77/.82</td>
<td>—/—/.95/.95</td>
<td>—/—/.80/.80</td>
<td></td>
</tr>
<tr>
<td>x_13 I do not expect [brand] to exert much effort to solve the problem (R)</td>
<td>—/—/.55/.62</td>
<td>—/—/.20/.24</td>
<td>—/—/.93/.93</td>
<td>—/—/.83/.83</td>
<td></td>
</tr>
<tr>
<td>x_14 I expect [brand] to try to make up for the inconvenience caused by the problem</td>
<td>—/—/.69/.76</td>
<td>—/—/.40/.44</td>
<td>—/—/.94/.85</td>
<td>—/—/.84/.58</td>
<td></td>
</tr>
<tr>
<td>x_15 I expect that the complaint will make [brand] solve the problem</td>
<td>—/—/.94/.85</td>
<td>—/—/.84/.58</td>
<td>—/—/.93/.87</td>
<td>—/—/.83/.83</td>
<td></td>
</tr>
<tr>
<td>Confidence in the service provider (Argo, Dahl, and Manchanda 2005)</td>
<td>—/—/.93/.88</td>
<td>—/—/.90/.88</td>
<td>—/—/.70/.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>x_16 unsure/sure</td>
<td>—/—/.86/.90</td>
<td>—/—/.71/.75</td>
<td>—/—/.95/.95</td>
<td>—/—/.80/.80</td>
<td></td>
</tr>
<tr>
<td>x_17 uncertain/certain</td>
<td>—/—/.91/.89</td>
<td>—/—/.79/.67</td>
<td>—/—/.83/.83</td>
<td>—/—/.80/.80</td>
<td></td>
</tr>
<tr>
<td>x_18 not confident/confident</td>
<td>—/—/.74/.74</td>
<td>—/—/.50/.51</td>
<td>—/—/.89/.90</td>
<td>—/—/.83/.83</td>
<td></td>
</tr>
<tr>
<td>x_19 unclear/clear</td>
<td>—/—/.93/.87</td>
<td>—/—/.83/.62</td>
<td>—/—/.89/.90</td>
<td>—/—/.83/.83</td>
<td></td>
</tr>
<tr>
<td>Source credibility (Erdem and Swait 2004)</td>
<td>—/—/.95/.95</td>
<td>—/—/.95/.95</td>
<td>—/—/.80/.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>x_20 The other user is trustworthy</td>
<td>—/—/.88/.94</td>
<td>—/—/.83/.85</td>
<td>—/—/.90/.91</td>
<td>—/—/.86/.86</td>
<td></td>
</tr>
<tr>
<td>x_21 The other user is dependable</td>
<td>—/—/.82/.90</td>
<td>—/—/.71/.77</td>
<td>—/—/.89/.90</td>
<td>—/—/.83/.76</td>
<td></td>
</tr>
<tr>
<td>x_22 The comments made by the other user are believable</td>
<td>—/—/.82/.90</td>
<td>—/—/.71/.77</td>
<td>—/—/.89/.90</td>
<td>—/—/.83/.76</td>
<td></td>
</tr>
<tr>
<td>x_23 The other user is telling the truth</td>
<td>—/—/.89/.90</td>
<td>—/—/.71/.77</td>
<td>—/—/.89/.90</td>
<td>—/—/.83/.76</td>
<td></td>
</tr>
<tr>
<td>x_24 The other user is honest</td>
<td>—/—/.93/.93</td>
<td>—/—/.83/.62</td>
<td>—/—/.93/.93</td>
<td>—/—/.83/.62</td>
<td></td>
</tr>
</tbody>
</table>

Note. All items measured on 5-point scales. CFA model fit Study 1: χ²(41) = 48.50, χ²/df = 1.18, RMSEA = .044, SRMR = .034, CFI = .99, NNFI = .99. CFA model fit Study 2: χ²(41) = 82.59, χ²/df = 2.01, RMSEA = .071, SRMR = .038, CFI = .99, NNFI = .98. CFA model fit Study 3: χ²(237) = 421.23, χ²/df = 1.78, RMSEA = .087, SRMR = .070, CFI = .92, NNFI = .91. CFA model fit Study 4: χ²(237) = 352.35, χ²/df = 1.49, RMSEA = .065, SRMR = .060, CFI = .96, NNFI = .95. CFA = confirmatory factor analysis; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; CFI = comparative fit index; NNFI = non-normed fit index; df = degrees of freedom; AVE = average variance extracted.

Appendix B

Table B1. Stimulus Material Translations—Studies 1 and 2.

Introduction  Please imagine the following situation: You are John Doe, a customer of [brand]. Recently, you have purchased a new car and the [brand] dealer announced a delivery time of 3–4 months. Since you have now been waiting for 6 months and since [brand] has not yet informed you about any delay, you are angry and want to complain

<table>
<thead>
<tr>
<th>Study 1: no VP vs. mere VP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful service recovery</td>
</tr>
<tr>
<td>Unsuccessful service recovery</td>
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</tbody>
</table>

Complaint  To complain, you (call [brand’s] customer service hotline/visit the Facebook page of [brand] with more than 160,000 persons who can exchange information with [brand] or with each other). You describe your complaint (to the customer service agent/by posting the following comment): "More than half a year ago I purchased a new car from you. My [brand] dealer told me that the delivery time would be 3–4 months. Now I've already been waiting for more than 6 months and no one can tell me when I will get my new car. I paid a lot of money for this car and expect a clear answer when my new car is finally going to be delivered." (As here on Facebook 160,000 fans can see my post, I hope to receive an immediate answer from you.)

(continued)
Appendix C

Acknowledgements
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References


**Author Biographies**

**Tobias Schaefers** is an assistant professor of marketing at TU Dortmund University, Germany. His research focuses on technology-enabled interactions between companies and (private as well as organizational) customers, access-based services, sponsoring, and sales. His work has appeared in *Journal of Service Research*, *Journal of Interactive Marketing*, *Marketing Letters*, and *Psychology & Marketing*, among others.

**Julia Schamari** is a cofounder and the chief operating officer of make relations GmbH, a relationship marketing agency based in Frankfurt, Germany. She obtained her doctoral degree at EBS Business School, Germany. Her dissertation focused on consumer engagement in social media. Her work has been published in *Journal of Interactive Marketing*. 

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