The value disruption of uncivil other-customers during online service recovery
**Web Appendix**

The goal of this follow-up Study 1B was to assess H1-H3 with a different type of VCSC where fellow customers can interact with each other during a service recovery episode, a brand's online support community. Importantly, C2C online dysfunctional behavior on such online channels has not been examined. Thus, this follow-up study extends the findings of Study 1A and increases the external validity of the negative effect of C2C online dysfunctional behavior.

Method

Similar to the majority of service failure and recovery works (e.g., McCollough, Berry, and Yadav 2000), an online survey was developed with a hypothetical scenario to avoid the ethical and financial threats that accompany a real-life failure situation. To avoid potential brand biases, the scenario provided subjects with a description of a failure at a fictional retail grocery store. After a textual description of the failure, the survey instrument asked subjects to imagine they decided to complain on the retailer's online support community. Subjects were exposed to a screenshot image (see figure below) which depicted a hypothetical complaint made by the subject based on the failure's description. To aid ecological validity, the screenshot incorporated the design of a common template used by firms' online support communities.

The screenshot featured two additional replies to the complaint: one by a fellow consumer who voiced dysfunctional comments directed at the complainant and another by the firm in response to the complainant's failure. Because the scope of this research focused on a complainant's experience with other customers and not on a service provider's response to an online complaint, we sought the single most ecologically and externally valid representation of a firm's action. Most firms reply to VCSC complaints (e.g., 87% response rate, Bacile et al. 2018),

with a generic template style response, meaning the lack of a response in the scenario would be unusual and not ecologically valid. Hence, a reply from the firm was included in the scenario. The text used in the complaint, the other-customer's dysfunctional response, and the firm's response was similar to actual posts the authors found in a pre-study of real-life incidents of online complaints and uncivil responses. Pre-testing confirmed the perceived realism of the scenario. Following exposure to the screenshot, subjects answered manipulation checks, manifest items of interest, and demographic questions.
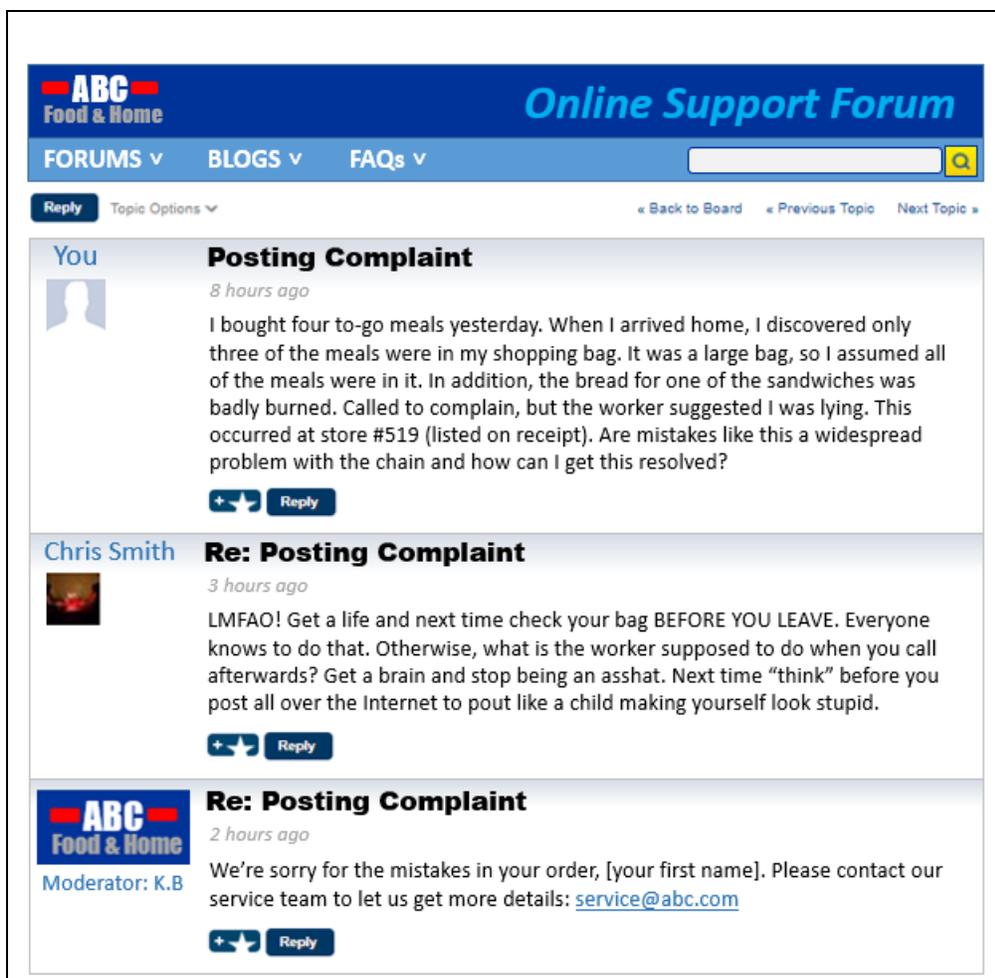
An Amazon mechanical turk panel of 195 U.S. subjects completed the online survey. Sixteen subjects failed a quality check item, bringing the final sample size to 179 subjects (*M*

age=35; *M* income=$52,000; 57% male). The sample was qualified to participate, as 93% had

read complaints on this type of online platform. Participants confirmed via a realism check

question on a seven-point Likert scale (1-extremely unrealistic/7-extremely realistic) that the

depicted interactions between consumers in the scenario's screenshot was highly realistic to

online conversations (*M*=6.2; *SD*=0.9). In addition, subjects were asked to evaluate the

complaint text used in the scenario manipulation, which also averaged above the mid-point of a

realism check (*M*=5.5; *SD*=1.4). All measures are listed in the full version of the manuscript's

Table 2, second to last column to the right.

Data analysis and results

SmartPLS version 3.2.7, featuring partial least squares structural equation modeling

(PLS-SEM), assessed the hypotheses. PLS-SEM was used due to its capacity to assess non-

normal data. Subjects viewed the scenario's stimulus as expected: the uncivil exchange produced

perceptions of particularly strong dysfunctional behavior and perceptions of an extremely low

degree of C2C interactional justice. This resulted in skewness and kurtosis of the distributions

for these two constructs of interest. It is noteworthy to point out that the non-normal data

stemming from these types of perceptions should not be surprising. Most individuals in a

developed society adhere to socially normative treatment of others, with extreme violations –

such as uncalled for incivility – quickly diagnosed as extremely inappropriate and unfair

behavior (Smith, Phillips, and King 2010). The non-normality of these constructs would be

problematic for covariance-based structural equation models, yet, "PLS-SEM's statistical

properties provide very robust model estimations with data that have normal as well as extremely

non-normal," distributions (Hair et al. 2016, p. 27).

Common method bias

Prior to the assessment of the measurement model and hypotheses, the threat of common method bias of the cross-sectional survey was investigated. The marker variable approach recommended by Lindell and Whitney (2001) was followed by including a theoretically unrelated single-item measure ("*I like to daydream*") on a seven-point likert scale. The marker's two lowest correlations with constructs of interest ($r=.000$ and $r=.007$) were below the suggested threshold level ($r=.20$) where common method bias is concerning (Malhotra, Kim, and Patil 2006). In addition, none of the marker's correlations with any of the constructs of interest approached significance ($p>.20$). The marker's exceptionally low correlations suggest no threat of the common method negatively influencing the data.

Measurement model validity and reliability

The measurement model's psychometric properties were assessed using guidelines set forth by Hair et al. (2019). All standardized factor loadings surpassed .70 (Hair, Ringle, and Sarstedt 2011). Internal reliability was evident due to composite reliability ranging from .89 to .98, and Cronbach's alpha ranging from .83 to .97 (Hair et al. 2016). The average variance extracted (AVE) exhibited convergent and discriminant validity for all constructs, ranging from .67 to .91. Each construct's square root of its AVE exceeded the inter-correlations with other constructs, which demonstrated discriminant validity (Fornell and Larcker 1981). In addition, item correlations met the HTMT criteria by not exceeding .85 (Voorhees et al. 2016). Mean values, psychometric properties, and construct correlations are shown in the table below.

Construct	Mean	SD	AVE	CR	α	R^2	1	2	3	4	5	6
1. Dys. behavior	6.1	1.0	.75	.90	.83	--	**.87**					
2. C2C justice	1.9	1.5	.91	.98	.97	.56	-.69	**.95**				
3. Att. complaining	3.8	1.4	.67	.89	.83	--	-.09	.27	**.82**			
4. Hedonic value	5.3	1.4	.72	.93	.95	.32	-.43	.56	.12	**.85**		
5. Pragmatic value	4.2	1.6	.84	.95	.96	.03	-.12	.17	.10	.59	**.92**	
6. Sociability value	5.3	1.4	.71	.90	.93	.29	-.47	.54	.13	.81	.64	**.84**

Structural model assessment and hypotheses testing

Per the recommendations set forth by Hair et al. (2019), multicollinearity was not a risk to the measures, as all variance inflation factor values were below five (Hair et al. 2016). The explanatory power of the model was supported, as the range of R^2 values (listed in the table above) and f^2 effect sizes (reported for each construct in the next section) suggested a mix of weak-to-moderate-to-strong level of explanatory power. The predictive power of the model was examined with the PLSpredict procedure in SmartPLS. This procedure required a single endogenous construct's manifest items be evaluated using $Q^2_{predict}$ and root mean squared error (RMSE) values produced by the PLSpredict analysis. All four of C2C interactional justice's items produced $Q^2_{predict}$ values greater than 0, which established the predictive accuracy of the model. The RMSE values for these four items were then compared across the predicted model and the linear model. The RMSE values for two of the four items were higher in the linear model. Per Hair et al. (2019), when half of a construct's items produce higher RMSE values in the linear model compared to the predicted model, it points to medium predictive power.

Next, the hypotheses were assessed. In support of H1, the PLS-SEM estimation resulted in a significant negative effect (β = -.65; $p<.001$; $f^2=.95$) for the dysfunctional behavior → C2C interactional justice hypothesis. The results also supported H2's interaction hypothesis of attitude toward complaining significantly moderating (β = -.27; $p<.001$; $f^2=.08$) the dysfunctional behavior → C2C justice relationship. Regarding the next three value hypotheses, H3a's C2C justice → hedonic value was supported (β =.56; $p<.001$; $f^2=.46$), which suggests as C2C justice decreases (increases) based on the exchange with another customer, the hedonic value one experiences from the online dialogue will correspondingly decrease (increase). Similarly, H3b's

C2C justice → pragmatic value was supported (β =.17; $p<.05$; f^2=.03), which provides evidence to how the perceived unfairness (fairness) of customer-to-customer exchanges can hinder (assist) a complainant trying to arrive at a solution to their issue. It is worth mentioning, here, that this path was not significant in Study 1A. This suggests that the type of online platform used by customers and/or the type of industry within which a failure occurs may also introduce different perceptions of how helpful certain platforms are to assisting in one's pursuit of correcting a prior failure, and how impactful an uncivil customer may be in these different platforms. Lastly, H3c's C2C justice → sociability value was supported (β =.54; $p<.001$; f^2=.41). Indeed, the degree of perceived fairness from one customer's interactions with another during the provision of online customer service does affect a complainant's experiential social value.

To elaborate on H2's significant interaction results, a simple slopes analysis is depicted below. On the right side of this figure, when the other customer's interaction is perceived to be particularly dysfunctional and uncivil, all victims perceived the interaction as unjust no matter their attitude towards complaining. However, as the perceived dysfunction lessens, an observer's attitude towards complaining diminishes the effect of the dysfunction on perceived justice. Moving toward the left side of the figure, in which dysfunction falls below its mean, subjects who are positively disposed towards complaining saw such behavior as just. From the opposite standpoint, subjects with a negative attitude towards complaining saw even mildly dysfunctional behavior as unjust. This heightened sense of injustice would correspond to a greater degree of diminished experiential value for subjects with unfavorable attitudes toward complaining.

Interaction of attitude toward complaining on dysfunctional behavior → C2C justice