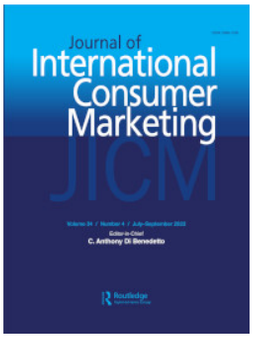

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Microblogging for Engagement: Effects of Prior Company Involvement, Communication Strategy, and Emojis on Western and Chinese Users

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ABSTRACT

Companies' social networking platforms can contribute to engaged stakeholder relationships, but many companies struggle to actually make that happen. An online experiment with IT companies' microblogs investigated effects of communication strategy, emoji use, and prior company involvement on the appreciation and online engagement of Western and Chinese users. The exogenous variables had strong effects. Chinese users showed more appreciation and online engagement than Western users. Prior company involvement contributed to appreciation and online engagement. The message characteristics did not have the expected effects. Action- or community-focused microblogs resulted in lower appreciation. Emojis did not affect appreciation and online engagement.

KEYWORDS

Cross-cultural communication; company microblogs; online engagement; social media; Twitter

Introduction

Social network platforms are full of opportunities and challenges for companies. Their popularity enables companies to reach and engage with stakeholders worldwide and, by doing so, generate trust and commitment and foster sustainable organization-stakeholder relationships (Men and Tsai 2014). However, the popularity of social media also led to a deluge of frequently updated information, which forces companies to compete for attention more than ever before. Attracting users' attention and achieving engagement have become major challenges for companies in their SNS strategies.

Stakeholder engagement involves a heightened awareness of and interest in a company, as well as an inclination to interact and transact with it. Engagement is a mental state assumed to comprise subprocesses such as cognitive processing, affection, and activation (Hollebeek, Glynn, and Brodie 2014) or identification, enthusiasm, attention, absorption, and interaction (Gómez, Lopez, and Molina 2019). In social network sites (SNSs), online engagement is used as a proxy for stakeholder engagement. It is codified into three specific behaviors: liking, sharing, and replying (Malhotra, Malhotra, and See 2013; Menon et al. 2019). Taking the efforts required and their potential impact into account, Cho, Schweickart, and Haase (2014) classified these online behaviors into three levels of engagement, from liking (lowest) to replying (highest). These online behaviors are believed to have a reciprocal relationship with engagement in the offline world: Research suggests that people are more likely to respond to messages of companies that matter to them; at the same time, people's online engagement is assumed to enrich and reinforce their attitude toward and relationship with the company (Gómez, Lopez, and Molina 2019; Harrigan et al. 2018; Hollebeek, Glynn, and Brodie 2014).

A prominent line of research regarding companies' use of SNSs is how message characteristics can promote users' online engagement. An important additional question in our globalized world is whether cultural differences between national contexts matter in this respect. In this article we describe the design and results of an experiment into the effects of two message characteristics (communication strategy and emoji

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use) and two exogenous factors (prior company involvement and national culture) on users' appreciation and online engagement. Regarding national culture, we compared Western-European and Chinese users. Our research involved microblogs of international IT companies. For Western Europe, we focused on Twitter; for China we used its Chinese counterpart Weibo. We had the following three research questions:

RQ1: What are the effects of prior company involvement, communication strategy (information, community, action) and emoji use on users' appreciation of and online engagement with companies' microblogs?

RQ2: How does national culture (Western Europe versus China) affect users' appreciation of and online engagement with companies' microblogs?

RQ3: To what extent does national culture (Western Europe versus China) moderate the effects of prior company involvement, communication strategy, and emoji use on users' appreciation of and online engagement with companies' microblogs?

Literature review

Prior company involvement

Given the enormous numbers of accounts and postings available on SNSs, social media users must be selective in the companies they follow and the postings they respond to. Previous research suggests that users' familiarity with and attitude toward companies affect their willingness to engage with them online. This is often conceptualized as company or brand involvement. Zaichkowsky (1985) defined involvement as "a person's perceived relevance of the object based on inherent needs, values, and interests" (324). Hollebeek, Glynn, and Brodie (2014) and Harrigan et al. (2018) found involvement to be positively related to the cognitive processing, affective response, and behavioral intentions of social media users. Chun and Lee (2016) showed that people's lasting involvement with companies affects their situational involvement with companies (exposing themselves to or interacting with companies' online content), their intention to follow and learn more about companies' social network presence, and their willingness to recommend them to their Facebook friends. Gómez, Lopez, and Molina (2019) found that social media brand involvement (people's general interest in a brand's social media presence) had a stronger relationship with online engagement than the quality of the content on the accounts. Read et al. (2019) zoomed in on the inferences users make on the basis of corporate tweets and confirmed that positive impressions of service quality and brand intimacy led to higher degrees of online engagement. These studies underline the importance of company involvement for social media users, not only for their intentions to follow or visit accounts, but also for their online engagement while visiting. This leads to the following hypothesis:

H1: Users' prior company involvement is positively related to their appreciation of and engagement with companies' microblogs.

Communication strategy

Many studies have investigated the communication strategies companies use on SNSs, analyzing to what extent they try to benefit from the interactive possibilities of social media (including two-way communication and community building) or measuring the effects of such attempts. Although the literature suggests that it would be a waste to limit corporate use of SNSs to broadcasting information (Culnan, McHugh, and Zubillaga 2010; T. Li, Berens, and De Maertelaere 2013; Morsing and Schultz 2006), research suggests that one-way communication is still dominant in companies' SNSs. Lovejoy and Saxton (2012), for instance, analyzed nonprofit organizations' tweets distinguishing three communication strategies: *information* (sharing and spreading information), *community* (building a sense of community), *action* (mobilizing people and evoking action). Their results showed that companies used SNSs more for information sharing than for community and action strategies. Other studies confirmed that organizations use SNSs predominantly for one-way communication (Gomez and Vargas-Preciado 2016; Guo and Saxton 2014; Lovejoy and Saxton 2012; Shin, Pang, and Kim 2015; Waters and Jamal 2011; S. Zhang, Gosselt, and De Jong 2020). Y. Wang and Yang (2020) confirmed this for nonprofit organizations, but

found that for-profit organizations use more dialogue; however, this mainly involved responding to tweets, not initiating dialogue.

Most studies comparing the effects of different communication strategies (partially or entirely) confirmed the benefits of interactive and engaging strategies (Araujo and Kollat 2018; Kim and Yang 2017; S. Kim, Kim, and Sung 2014; Saffer, Sommerfeldt, and Taylor 2013; Saxton and Waters 2014; Y. Wang and Yang 2020). It is debatable, however, whether the research designs of these studies justify causal inferences. Six of the studies mentioned used content analyses of company postings, exploring correlations of message characteristics with numbers of likes, shares, and replies; only one study (Saffer, Sommerfeldt, and Taylor 2013) experimentally exposed participants to Twitter accounts of different companies, which differed in degree of interactivity but also in many other respects. Watkins (2017), on the other hand, conducted experimental research into the effects of communication strategies, albeit in the different setting of Twitter accounts of professional athletes, and found that usefulness of information was more important than the use of dialogic principles. S. Zhang, De Jong, and Gosselt (Forthcoming) had similar results: The information strategy appeared to be superior in terms of online engagement compared to more interactive approaches. Read et al. (2019) did not find a significant relationship between interactivity on Twitter and online engagement.

Although the empirical evidence supporting the superiority of interactive and engaging strategies is still limited, we followed the dominant view in the literature when formulating our second hypothesis:

> H2: Companies' microblogs using interactive or engaging communication strategies (*community* or *action*) evoke higher appreciation and more online engagement than companies' microblogs that broadcast (*information*).

Emoji use

Emojis are small icons depicting objects or emotions that are often used in personal instant messaging and social media contexts. Studies of corporate and marketing microblogs suggest that emojis are not yet commonly used in professional and organizational contexts (Casado-Molina et al. 2019; Kwon and Sung 2011; M. Li et al. 2019; Waters and Jamal 2011; S. Zhang, Gosselt, and De Jong 2020). Kwon and Sung (2011) found that emojis are more often used in replies than in original tweets or retweets and that certain business categories—particularly beverages & restaurants, fashion, and computers & electronics—are more likely to use emojis than others. M. Li et al. (2019) established national differences in the popularity and use of emojis. And Casado-Molina et al. (2019) showed that companies may have different strategies in their use of emojis and may use them as a branding instrument.

Despite the limited use of emojis, various studies underlined the potential benefits of adding emojis in microblogs, both in private communication and in corporate microblogs. In a literature review, Bai et al. (2019) concluded that emojis help to overcome the lack of non-verbal cues in computer-mediated communication and more effectively express emotions. Riordan (2017b) summarized this as disambiguation and affect, while emphasizing that these functions also apply to non-face emojis. Research suggests that emojis contribute to the effectiveness of corporate microblogs, in terms of image (attractiveness, credibility, competence) (Beattie, Edwards, and Edwards 2020; Daniel and Camp 2020), online engagement (McShane et al. 2021), brand attachment (Arya, Sethi, and Verma 2018), and overall affect and purchase intention (Das, Wiener, and Kareklas 2019). Different explanations have been proposed for such effects, including playfulness and joy (McShane et al. 2021; Riordan 2017ab), processing fluency (Daniel and Camp 2020), similarity to face-to-face communication (Beattie, Edwards, and Edwards 2020), and emphasis (Casado-Molina et al. 2019). Casado-Molina et al. (2019), however, argued that the effects of emojis depend on the specific ways they are used: They seem to be particularly useful in three circumstances: when posts involve customer service and care, when they are placed in positive contexts, and when they are used to emphasize something.

Although research on the effects of emojis is still in its infancy, the results so far univocally support the added value of emojis in microblogs. We therefore formulated the following hypothesis:

> H3: Companies' microblogs with emojis evoke higher appreciation and more online engagement than companies' microblogs without emojis.

National culture

Literature suggests that national culture influences how companies use SNSs and how users respond to them. Several studies used content analysis to compare Chinese and Western companies' use of SNSs and found differences in the arrangement of accounts and message characteristics such as content, message elements, and communication strategies (C. Li and Wu 2018; M. Li et al. 2019; Shi and Xu 2020; R. Wang, Huang, and Pérez-Ríos 2020; S. Zhang, De Jong, and Gosselt 2021; X. Zhang, Tao, and Kim 2014).

User research into cultural differences and online engagement, however, is still relatively scarce. Most studies used questionnaires to compare general tendencies of engagement. Chu and Choi (2011), for instance, compared Chinese and U.S. users' inclination to engage in electronic word-of-mouth, showing that Chinese users are more actively involved in activities such as giving, seeking, and forwarding opinions than U.S. users. Tsai and Men (2017) came to similar conclusions for users' engagement with companies on SNSs: Chinese users exposed themselves more to companies' information and were more active in replying, sharing, and uploading content. Based on these findings, we formulated the following hypothesis:

> H4: Chinese users have a higher appreciation of and more online engagement with companies' microblogs than Western users.

Apart from this overall tendency, we expected an interaction effect between national culture and prior company involvement. Several studies showed that relationships and social values are more important to Chinese consumers than to Western consumers (Jiao et al. 2018; Yum 1988), which appears to be in line with the distinction between collectivism and individualism (Hofstede 2003). Prior company involvement can be seen as a precondition for building or having a relationship with a company. For Western users, some of the content of microblogs might be interesting irrespective of the company behind them; for Chinese users, the microblogs form part of a more-comprising relationship. We thus expected the role of prior company involvement to be stronger among Chinese users than among Western users. This led to the following hypothesis:

> H5: Prior company involvement has a stronger positive effect on appreciation and online engagement among Chinese users than among Western users.

Finally, we expected interaction effects between national culture and the two types of microblog characteristics (communication strategy and emoji use).

Regarding communication strategy, research showed that the prominence of communication strategies differs between Western countries and China (Florenthal and Chao 2016a, 2016b; Waters and Lo 2012; Wu and Li 2018; S. Zhang, De Jong, and Gosselt 2021). Chinese companies are more likely to use interactive and engaging strategies, whereas Western companies tend to stick to one-way information sharing. This, again, might reflect differences between individualistic and collectivistic cultures (cf. Hofstede 2003). In the more individualistic Western cultures, SNSs might be primarily seen as platforms for personal expression and information distribution; in the more collectivistic Chinese culture, SNSs might be seen as platforms to strengthen togetherness, harmony, and interpersonal relationships (Florenthal and Chao 2016b; Wu and Li 2018). Although there is no user research available confirming that these differences correspond to user preferences, we expect that the differences in communication strategies used on SNSs between Western countries and China lead to more susceptibility of Chinese users to interactive and engaging strategies. This leads to the following hypothesis:

> H6: The use of interactive and engaging strategies in companies' microblogs has a stronger positive effect on appreciation and online engagement among Chinese users than among Western users.

Regarding emoji use, studies comparing Chinese and Western companies on microblog platforms found considerable differences: In Chinese contexts, emojis are used much more frequently than in Western contexts (C. Li and Wu 2018; X. Zhang, Tao, and Kim 2014). A possible explanation is that Chinese people have a stronger visual orientation than Western people (Q. Li, De Jong, and Karreman 2020, 2021), which may be attributed to their pictographic script (Y. Wang and Wang 2009) or to the fact that China has a high-context culture. Hall's (1976) distinction between low-context and high-context involves the extent to which messages must be explicit and unambiguous in order to be successful. People in low-context cultures, like Western-European countries, need explicit and direct messages; people in high-context cultures, such as China, see communication processes situated in a broader context, in which messages may be indirect and can even be incomplete or ambiguous. Research showed that people from high-context cultures use more visuals to convey messages and communicate more effectively with visual cues than people from low-context cultures (Würtz 2005; Xie et al. 2009; X. Zhang, Tao, and Kim 2014). In addition, emojis appear to be used differently in the two cultures. Waters and Jamal (2011) analyzed tweets of top 200 nonprofit organizations in the United States and found that they rarely used emojis for expressing emotions; in an analysis of Chinese NGOs' use of Weibo, Zhou and Pan (2016) found that emojis often served to engage netizens. Based on these findings, we formulated the following hypothesis:

> H7: The use of emojis in companies' microblogs has a stronger positive effect on appreciation and online engagement among Chinese users than among Western users.

Method

Research design

To test the seven hypotheses, an online experiment was conducted using a 2 (prior company involvement: high vs. low) × 3 (communication strategy: information vs. action vs. community) × 2 (emojis: present vs. absent) × 2 (national culture: Chinese vs. Western) between-subjects design. Chinese and Western participants were randomly assigned to a condition in which they were exposed to a series of six microblogs of international IT companies, all representing the same combination of communication strategy and emoji use conditions. Western participants saw the microblogs in a Twitter environment, Chinese participants in a Weibo environment. Participants' prior company involvement was assessed before they were exposed to the microblogs. A median-split was used to distinguish participants with high and low involvement. The dependent variables were participants' overall appreciation of the microblogs and their willingness to like, share, and reply. The research was approved by our university's ethical committee (BCE200250).

Stimulus materials

The stimulus materials consisted of Twitter/Weibo microblogs of four large IT companies: Intel, IBM, HP, and Microsoft. We used different companies to avoid the influence of extremely positive or negative attitudes regarding one specific company. The six microblogs involved three communication subdomains: two focused on public relations, two on marketing communication, and two on technical communication. All microblogs contained text and visuals with combinations of hashtags (#), mentions (@), and hyperlinks.

In all conditions we made sure that the microblog versions only differed regarding the two independent variables. The manipulated versions of the six microblogs were always identical in (1) company name, account ID, logo, official account verification, and date, (2) message conveyed and tone of voice, and (3) message elements included (visuals, hashtags, hyperlinks, mentions). To avoid effects of numbers of likes, replies, and reposts, we kept all engagement indicators at zero, but displayed the original icons below each post for an authentic look of the microblogs.

Communication strategy (information vs. community vs. action) was manipulated by creating three variants of all six microblogs. The information strategy served as the baseline; the community and action strategy were created by adding community or action elements to it. The

microblogs with the information strategy informed users about the company or its products or services—e.g., "What will life be like in 5 years? #ICYMI: Here are 5 innovations we believe will help change our lives. https://ibm.co/2Hr8lqT #IBM5in5." In the microblogs with the community strategy, the information was complemented with an attempt to interact with followers—e.g., "What will life be like in 5 years? #ICYMI: Here are 5 innovations we believe will help change our lives. https://ibm.co/2Hr8lqT #IBM5in5 What do you think will be the biggest innovation?" In the microblogs with the action strategy, the information was complemented with explicit encouragements to take action for or on behalf of the company—e.g., "What will life be like in 5 years? #ICYMI: Here are 5 innovations we believe will help change our lives. https://ibm.co/2Hr8lqT #IBM5in5 Find out at our webinar TODAY @ 11 am. Register now." Figure 1 gives an example of the three versions of communication strategy (all in the condition including emojis).

Emoji use was manipulated by including or excluding emojis in the text. In the conditions with emojis, each post contained two emojis, one expressing the sentiment of the microblog (e.g., a smiling face 😊 or a smiling face with hearts 😍) and the other depicting an object mentioned (e.g., a laptop 💻 or the earth 🌍). The emojis were included in the text that was identical for all three communication strategies. Figure 1 shows how emojis were embedded in the text.

For all microblogs, two language versions were created. Western participants saw the tweets in English, Chinese participants read the weibos in Chinese. All texts were created in English. The first author, a native speaker of Chinese, translated them into Chinese. A bilingual professional translator made back-translations of all Chinese texts into English. The original and back-translated English versions were compared and both versions were found to be equivalent.

Measures

Participants evaluated each microblog by answering four questions: the extent to which they would like it, share, it, reply to it, and how much they appreciated it. All were measured using sliders allowing participants to choose a rating with two decimals between 0 and 7. Factor analyses of the four scores per microblog consistently showed that the four questions formed two constructs: overall appreciation (appreciation and likes) and active online engagement (shares and replies), both of which had satisfactory Cronbach's alphas for all six microblogs (ranging from .74 to .90). Our dependent variables in the analyses, then, were participants' overall appreciation of the six microblogs (Cronbach's alpha = .85) and their active online engagement with the six microblogs (Cronbach's alpha = .93).

We also asked two questions (on seven-point Likert scales) for each microblog as a manipulation check for communication strategy. For the operationalization of the community strategy, participants reacted to the statement "This tweet/weibo interacts and converses with the user" (Cronbach's alpha across the six microblogs = .80). For the operationalization of the action strategy, participants reacted to the statement "This tweet/weibo encourages and mobilizes users to take action" (Cronbach's alpha across the six microblogs = .73).

Participants' prior company involvement toward the four IT companies was measured with a set of seven questions per company, focusing on their familiarity with and impressions of the companies and their products. The questions had the form of seven-point semantic differentials (e.g., unfamiliar-familiar, dislike-like, unimportant-important). Factor analyses showed that the seven questions were unidimensional for all companies. Cronbach's alphas per company were satisfactory (ranging from .90 to .94). We combined the participants' prior company involvement score for the four companies (Cronbach's alpha = .76) and used a median-split to distinguish participants with positive and negative attitudes toward the four companies in our analyses.

Like the manipulations, the questionnaire was administered in two languages. Western participants answered the questions in English, Chinese participants in Chinese. The same procedure with back-translations was used, which confirmed that the two questionnaire versions were similar.

Figure 1. Example of one of the microblogs used in three communication strategy versions.

Procedure

Data were gathered using the online survey tool Qualtrics. Data collection for this experiment was combined with questions about participants' general behavior and motives regarding company SNSs, which will be reported in another article. Participants first answered some demographic questions (age, gender, and education). After that, three sections of the questionnaire focused on their general behavior and motives. This was followed by the questions about their prior company involvement with each of the four IT companies. In the final part of the session, they were presented with the six tweets/weibos, always in the same order. For every tweet/weibo, they first answered the four questions measuring the dependent variables and then the two questions for the manipulation check.

Participants

To create comparable and more or less homogeneous groups, we recruited university students from the two national cultures. Western participants were recruited at the University of Twente (the Netherlands), which teaches almost all programs in English. Most Western participants were Dutch (115) or German (70), followed by Belgian (3), British (1), Norwegian (1), and Swiss (1). Chinese participants were recruited at Zuni Normal University. Chinese participants were all native speakers of Mandarin. We recruited participants via social media (e.g., Facebook and WeChat), via snowball sampling, and via the university's participant pool (rewarding students with credits for participating in research).

In total, 388 undergraduate students participated. Table 1 shows their background characteristics. The participants' gender was almost balanced

Table 1. Participants' background characteristics.

Variable		Western	Chinese	Total
N		191	197	388
Age (M, SD)		21.4 (2.4)	21.7 (1.8)	21.6 (2.1)
Gender (N, %)	Male	98 (51)	95 (49)	193 (43)
	Female	92 (48)	100 (50)	252 (56)
	Other	1 (1)	2 (1)	3 (1)
Academic discipline (N, %)	Science and engineering	92 (48)	74 (38)	166 (43)
	Social science	99 (52)	123 (62)	222 (57)

Table 2. Results of the manipulation checks for communication strategy.

	Information	Community	Action	Significance
Community recognized	4.22[a] (1.05)	4.55[b] (.92)	4.35[ab] (.99)	F (2,385) = 3.78, p < .05, partial eta^2 = .02
Action recognized	4.28[a] (.95)	4.39[a] (.90)	4.65[b] (.86)	F (2,385) = 5.77, p < .005, partial eta^2 = .03

Note: Measured on seven-point scales (1 = strongly disagree, 7 = strongly agree). Different letters in superscript indicate significant differences between groups, based on an LSD post hoc test.

in both cultures. There were also no significant differences in gender between the experimental groups. The participants' age ranged from 17 to 33. There were no significant differences between Western and Chinese participants and between the experimental groups. The participants' educational level was homogeneous, all studying at the undergraduate level. But there was a significant difference in academic discipline: In the Western sample, science and engineering students and social science students were more or less balanced; in the Chinese sample, there were more social science students than science and engineering students (chi-square = 4.455, df = 1, p < .05). A correlation analysis showed that academic discipline did not correlate significantly with the dependent variables, so we decided against using it as an additional factor in our analyses

Results

Manipulation check

Table 2 presents the results of the manipulation check for communication strategy. We used analyses of variance with the three types of message strategies as independent variables and the two manipulation-check questions as dependent variables. As can be seen, participants in the *community* conditions significantly judged the six microblogs to be more community-oriented than participants in the *information* conditions; their difference with participants in the *action* conditions was only a tendency (p = .10) in the expected direction. Participants in the *action* conditions judged the six microblogs to be more action-oriented than participants in both other conditions. In all, we conclude that the manipulations in our experiment were successful.

Multivariate test: Effects of independent variables on the dependent variables

We conducted a multivariate analysis of variance to test the effects of communication strategy, emoji use, prior company involvement, and national culture on participants' overall appreciation of and active engagement with the companies' microblogs.

The first step in the analysis are the multivariate test results, focusing on the main and interaction effects of all independent variables on the conglomerate of the two dependent variables (Table 3). We found significant main effects of prior company involvement, communication strategy, and culture and a significant interaction effect of culture and prior company involvement. These main and interaction effects will be further explored below. Three of the hypotheses must already be rejected after this first analysis. There was no main effect of emoji use (H3): Including emojis in the microblogs did not affect participants' overall appreciation and active online engagement. There were also no interaction effects of culture and communication strategy (H6) and of culture and emoji use (H7): Chinese and Western participants reacted similarly to both types of message characteristics.

Table 3. Multivariate test results.

	Wilks' lambda	F	df	Significance	Partial eta^2
Communication strategy	.968	2.990	4,726	$p < .05$	.02
Emoji use	.995	.909	2,363	$p = .40$	
Culture	.766	55.375	2,363	$p < .001$	.23
Prior company involvement	.894	21.449	2,363	$p < .001$	.11
Communication strategy * emoji use	.984	1.473	2,363	$p = .21$	
Communication strategy * culture	.981	1.714	4,726	$p = .15$	
Communication strategy * prior company involvement	.994	.519	4,726	$p = .72$	
Emoji use * culture	.996	.777	2,363	$p = .46$	
Emoji use * prior company involvement	.991	1.708	2,363	$p = .18$	
Culture * prior company involvement	.964	6.808	2,363	$p < .005$	.04
Communication strategy * emoji use * culture	.983	1.559	4,726	$p = .18$	
Communication strategy * emoji use * prior company involvement	.985	1.343	4.726	$p = .25$	
Communication strategy * culture * prior company involvement	.983	1.552	4,726	$p = .19$	
Emoji use * culture * prior company involvement	.988	2.146	2,363	$p = .12$	
Communication strategy * emoji use * culture * prior company involvement	.998	.159	4,726	$p = .96$	

Effects of prior company involvement

The results of the univariate test of the effects of prior company involvement can be found in Table 4. Prior company involvement had significant effects on participants' overall appreciation and active online engagement. Higher prior involvement corresponded with higher appreciation and more online engagement. The partial eta^2 scores indicate a large effect size for overall appreciation and a small to medium effect size for online engagement. These results confirm H1: Prior company involvement leads to higher appreciation of and engagement with companies' microblogs.

Effects of communication strategy

Table 5 presents the univariate test results of the effects of communication strategy. Communication strategy only had a significant effect on participants' overall appreciation of the microblogs, not on their active engagement. What is more, its effect on overall appreciation was in the opposite direction than hypothesized: Participants appreciated the information versions of the microblogs significantly more than the community and action versions. The partial eta^2 score indicates a small to medium effect size. Based on these findings, H2 must be rejected: We cannot conclude that engaging communication strategies lead to more online engagement and may even expect negative effects of such communication strategies on appreciation.

Effects of national culture

Table 6 presents the univariate test results of the effects of national culture. Culture had a

Table 4. Univariate test results: Effects of prior company involvement on appreciation and active online engagement.

	Low involvement	High involvement	Univariate test result
Appreciation	3.00 (1.43)	3.81 (1.37)	F (1,364) = 42.335, p < .001, partial eta^2 = .10
Online engagement	1.91 (1.61)	1.95 (1.62)	F (1,364) = 15.848, p < .001, partial eta^2 = .04

Note: Measured with slider questions on sliders between 0 (strongly disagree) and 7 (strongly agree). As the dependent variables were considered separately, we made adjustments to the alpha level (.05/2=.025) using Bonferroni adjustment.

Table 5. Univariate test results: Effects of communication strategy on appreciation and engagement.

	Information	Community	Action	Univariate test result
Appreciation	3.72 (1.36)^a	3.38 (1.52)^b	3.11 (1.41)^b	F (2,364) = 5.275, p < .01, partial eta^2 = .03
Online engagement	2.04 (1.68)	1.88 (1.64)	1.86 (1.52)	F (2,364) = 1.223, p = .30

Note: Measured with slider questions on sliders between 0 (strongly disagree) and 7 (strongly agree). Different letters in subscript indicate significant differences between groups (LSD *post hoc* test, p < .05). As the dependent variables were considered separately, we made adjustments to the alpha level (.05/2=.025) using Bonferroni adjustment.

Table 6. Univariate test results: Effects of national culture on appreciation and engagement.

	Western users	Chinese users	Univariate test result
Appreciation	3.30 (1.22)	3.51 (1.64)	F (1,364) = 14.454, p < .001, partial eta^2 = .04
Active engagement	1.25 (1.07)	2.58 (1.78)	F (1,364) = 93.467, p < .001, partial eta^2 = .20

Note: Measured with slider questions on sliders between 0 (strongly disagree) and 7 (strongly agree).

significant effect in the expected direction on both dependent variables. Chinese users appreciated the microblogs more and were much more inclined to engage with them. The partial eta^2 scores indicate a small to medium effect on appreciation and a large effect on active engagement. These findings confirm H4: Chinese are more positive about microblogs and are considerably more willing to show engagement with them.

Interaction effects between national culture and prior company involvement

The interaction effects of national culture and prior company involvement are visualized in Figure 2 (overall appreciation) and Figure 3 (active engagement). A significant interaction effect (F (1,364) = 11.0481, p < .005, eta^2 = .03) shows that the influence of prior company involvement on microblog appreciation was larger for Chinese participants than for Western participants. A similar interaction effect was found for active engagement (F (1,364) = 12.131, p < .005, eta^2 = .03). In both cases, the eta^2 scores indicate a small to medium effect size. These findings confirm H5: Prior company involvement has a stronger influence on the appreciation and engagement of Chinese users than it has on Western users.

Discussion

Main findings

This study empirically investigated the effects of two message characteristics (communication strategy and emoji use) and two exogenous factors (prior company involvement and national culture) on users' appreciation of and engagement with companies' microblogs. An overview of the seven hypotheses tested is given in Table 7.

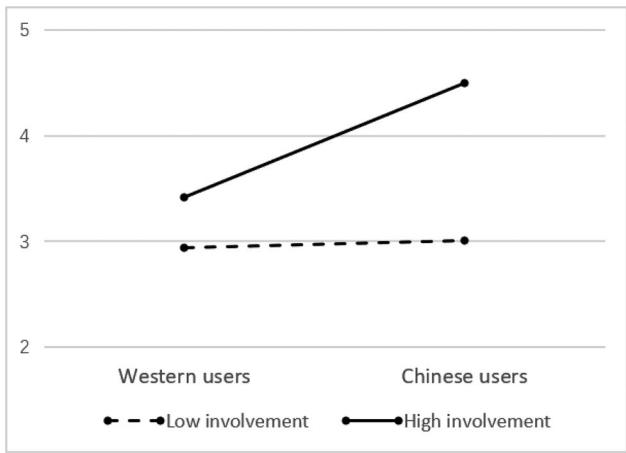

Figure 2. Interaction effect of culture and prior company involvement on overall appreciation.

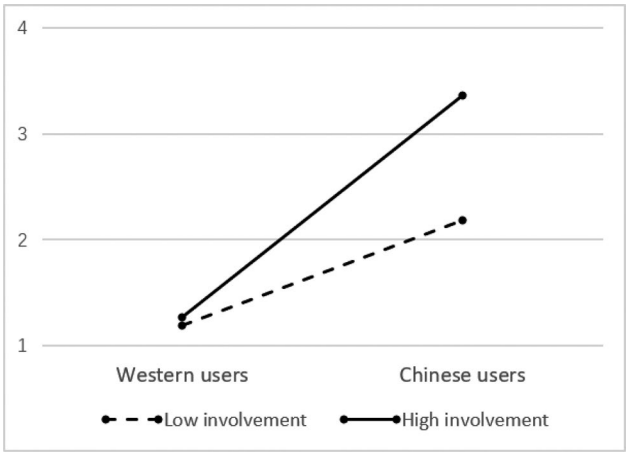

Figure 3. Interaction effect of culture and prior company involvement on active online engagement.

Overall, our results indicate that the exogenous factors had large effects on users' reactions to companies' microblogs. Prior company involvement had the largest effect on users' appreciation of companies' microblogs: Knowing and liking the company behind the microblog plays an important role in users' appreciation. A smaller difference, in the same direction, was found for active online engagement. These findings are in line with the results of earlier studies (Harrigan et al. 2018; Hollebeek, Glynn, and Brodie 2014; Read et al. 2019). Rather than assuming a linear relationship between inviting online engagement and building company involvement and engagement, it seems more realistic to see this as a cyclical process. Company involvement is an important factor in creating online engagement, which in turn might contribute to company involvement and engagement.

National culture had the largest effect on active engagement: Chinese users were considerably more inclined to actively engage with companies' microblogs than Western users were. A smaller difference, in the same direction, was found for microblog appreciation. These findings experimentally confirm those of other studies, mostly based on correlations between microblog characteristics and real-life user responses (C. Li and Wu 2018; Li et al. 2019; Shi and Xu 2020; R. Wang, Huang, and Pérez-Ríos 2020; X. Zhang, Tao, and Kim 2014) or surveys (Chu and Choi 2011; Tsai and Men 2017). It seems safe to assume that online engagement manifests itself on an entirely different scale in China than in Western countries and that this difference is not caused by different population sizes but by different online dispositions.

Furthermore, we found an interaction effect between the two exogenous variables: Prior company involvement is more important for Chinese users than for Western users. This confirms the salience of building company-consumer relationships in the Chinese context (Jiao et al. 2018; Yum 1988). Interestingly, culture did not significantly matter for the effectiveness of the message characteristics: Our findings about message strategy and the use of emojis did not differ between Western and Chinese users.

Regarding the two message characteristics we investigated, our findings call for caution. Despite assumptions in the literature about benefits of using emojis (Arya, Sethi, and Verma 2018; Bai et al. 2019; Beattie, Edwards, and Edwards 2020, Daniel and Camp 2020; Das, Wiener, and Kareklas 2019; McShane et al. 2021), the use of emojis did not affect users' appreciation and online engagement. This might have to do with the relatively rich visual context of the microblogs used: Emojis were placed

Table 7. Overview of hypotheses.

H1	Users' prior company involvement is positively related to their appreciation of and engagement with companies' microblogs	Confirmed
H2	Companies' microblogs using interactive or engaging communication strategies evoke higher appreciation and more online engagement than companies' microblogs that broadcast	Rejected
H3	Companies' microblogs with emojis evoke higher appreciation and more online engagement than companies' microblogs without emojis	Rejected
H4	Chinese users have a higher appreciation of and more online engagement with companies' microblogs than Western users	Confirmed
H5	Prior company involvement has a stronger positive effect on appreciation and online engagement among Chinese users than among Western users	Confirmed
H6	The use of interactive and engaging strategies in companies' microblogs has a stronger positive effect on appreciation and online engagement among Chinese users than among Western users	Rejected
H7	The use of emojis in companies' microblogs has a stronger positive effect on appreciation and online engagement among Chinese users than among Western users	Rejected

in messages that always also contained a visual. It is imaginable that emojis will be more salient and therefore have stronger effects in purely textual microblogs.

Communication strategy had a small effect on users' appreciation of microblogs, but in an opposite direction than expected. Microblogs that restricted themselves to informing were appreciated more than those aiming at community building or action. This finding contradicts earlier advice on companies' microblogs (Culnan, McHugh, and Zubillaga 2010; T. Li, Berens, and De Maertelaere 2013; Morsing and Schultz 2006) as well as correlation-based studies of message strategies and online engagement (Araujo and Kollat 2018; C. Kim and Yang 2017; S. Kim, Kim, and Sung 2014; Saffer, Sommerfeldt, and Taylor 2013; Saxton and Waters 2014). It confirms the earlier findings of experimental studies (Read et al. 2019; Watkins 2017) and is in line with the dominance of one-way communication established in many content-analytic studies of companies' SNSs (Gomez and Vargas-Preciado 2016; Guo and Saxton 2014; Lovejoy and Saxton 2012; Shin, Pang, and Kim 2015; Waters and Jamal 2011; S. Zhang, Gosselt, and De Jong 2020). Our results suggest that these companies might be right in emphasizing information provision.

Our finding regarding communication strategy is somewhat puzzling, since the community- and action-focused versions of the microblogs in our experiment contained the same information as the version only providing information; the community and action cues were additions to this basic information. Our explanation consists of two observations. First, the community and action cues apparently failed to have an effect on online engagement, as all microblog versions had similarly low scores on active engagement. They may not have been strong enough to really engage users (even though users recognized them as such in the manipulation check). Second, conciseness might be an implicit criterion users have when forming an opinion about microblogs. The extra words used in the community and action cues, then, might have contributed to a lower appreciation of the microblogs.

Implications and directions for future research

Our findings contribute to two discussions at the crossroads of theory and practice. First, the relationship between including engaging elements in microblogs and, ultimately, creating company or brand engagement is not as simple and straightforward as suggested in the literature (e.g., Culnan, McHugh, and Zubillaga 2010). Our research shows that including engaging elements does not automatically contribute to online engagement. It is imaginable that such elements work, but only if they are genuine and functional, not as simple extras that can be added to any posting. Looking around on companies' SNSs nowadays, we see many examples of perfunctory additions of engaging elements, which are highly unlikely to contribute to anything. Second, assumptions about linear relations between online engagement and company involvement and engagement may be questioned. Our research shows that, in addition to being a potential outcome of online engagement, prior company involvement may also be an important ingredient needed to achieve online engagement. Developing a comprehensive and realistic framework of antecedents and consequences of online engagement should be one of the concerted research efforts in the coming years. Which message characteristics contribute to online engagement? Under which circumstances do engaging elements work and when are they useless? How can we further make sense of the relationship between online engagement and stakeholder engagement?

Second, the large cultural differences in appreciation of microblogs and online engagement seem to be particularly interesting. Our research suggests that the online culture surrounding microblogs is considerably more lively and responsive in China than in Western countries. More detailed research into online behaviors and motives could shed more light on this difference, especially if users' online engagement is seen in context with company involvement. What does liking, sharing, and replying mean to Chinese and Western users? How do they value the likes, shares, and replies of others? How do they decide whether to like, share or reply to companies' microblogs? And is the relation between online

engagement and company involvement and engagement comparable in both cultural settings?

Limitations

Several limitations must be taken into account when interpreting our findings. First, our research only involved microblogs of international IT companies, so we cannot be sure if our results can be generalized to other types of companies. It is, for instance, imaginable that users react differently to communication strategies or emojis used in messages from companies that are closer to their daily lives. Second, our participants were university students. They certainly formed part of the target audience of the microblogs, but it is important to realize that the user groups in real life are more diverse, including older people and people with lower levels of education. It remains to be seen whether the mechanisms uncovered in our study will work the same way among users with different background characteristics. Third, all microblogs contained visual elements (e.g., a picture or a graphic). These visual elements might have had a strong effect on users, overshadowing the effects of communication strategy (users might pay less attention to textual content) and emojis (the emojis might be less conspicuous to users). These limitations call for replication studies aimed at confirming our findings with different message characteristics.

Conclusion

We experimentally investigated the effects of prior company involvement, communication strategy, the use of emojis and national culture (Western-Europe versus China) on users' appreciation of and engagement with companies' microblogs. Our results show that national culture made an enormous difference. Chinese users were considerably more appreciative and responsive to companies' microblogs than Western users are. This raises questions about differences in online culture between Western countries and China. Furthermore, our results show that prior company involvement affected users' appreciation of and engagement with companies' microblogs, whereas the two message characteristics (communication strategy and emoji use) did not have the expected effects. This raises questions about best ways of promoting user engagement. The super highway between engaging elements in social media posts and real-life company involvement should be reconsidered.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

Araujo, T., and J. Kollat. 2018. Communicating effectively about CSR on Twitter: The power of engaging strategies and storytelling elements. *Internet Research* 28 (2):419–31. doi: 10.1108/IntR-04-2017-0172.

Arya, V., D. Sethi, and H. Verma. 2018. Are emojis fascinating brand value more than textual language? Mediating role of brand communication to SNS and brand attachment: An insight from India. *Corporate Communications: An International Journal* 23 (4):648–70. doi: 10.1108/CCIJ-03-2018-0036.

Bai, Q., Q. Dan, Z. Mu, and M. Yang. 2019. A systematic review of emoji: Current research and future perspectives. *Frontiers in Psychology* 10:2221. doi: 10.3389/fpsyg.2019.02221.

Beattie, A., A. P. Edwards, and C. Edwards. 2020. A bot and a smile: Interpersonal impressions of chatbots and humans using emoji in computer-mediated communication. *Communication Studies* 71 (3):409–27. doi: 10.1080/10510974.2020.1725082.

Casado-Molina, A. M., M. M. Rojas-de Gracia, P. Alarcón-Urbistondo, and M. Romero-Charneco. 2019. Exploring the opportunities of the emojis in brand communication: The case of the beer industry. *International Journal of Business Communication*: 232948841983296. Advance online publication. doi: 10.1177/2329488419832964.

Cho, M., T. Schweickart, and A. Haase. 2014. Public engagement with nonprofit organizations on Facebook. *Public Relations Review* 40 (3):565–7. doi: 10.1016/j.pubrev.2014.01.008.

Chu, S.-C., and S. M. Choi. 2011. Electronic word-of-mouth in social networking sites: A cross-cultural study of the United States and China. *Journal of Global Marketing* 24 (3):263–81. doi: 10.1080/08911762.2011.592461.

Chun, J. W., and M. J. Lee. 2016. Increasing individuals' involvement and WOM intention on social networking sites: Content matters!. *Computers in Human Behavior* 60:223–32. doi: 10.1016/j.chb.2016.02.069.

Culnan, M. J., P. J. McHugh, and J. I. Zubillaga. 2010. How large U.S. companies can use Twitter and other social media to gain business value. *MIS Quarterly Executive* 9 (4):243–59.

Daniel, T. A., and A. L. Camp. 2020. Emojis affect processing fluency on social media. *Psychology of Popular Media Culture* 9 (2):208–13. doi: 10.1037/ppm0000219.

Das, G., H. J. D. Wiener, and I. Kareklas. 2019. To emoji or not to emoji? Examining the influence of emoji on consumer reactions to advertising. *Journal of Business Research* 96:147–56. doi: 10.1016/j.jbusres.2018.11.007.

Florenthal, B., and M. C.-H. Chao. 2016a. A cross-cultural comparison of a global brand's strategies on micro-blogging sites. *International Journal of Online Marketing* 6 (4):54–72. doi: 10.4018/IJOM.2016100104.

Florenthal, B., and M. C.-H. Chao. 2016b. A comparison of global companies' performance on Twitter and Weibo. *International Journal of Business Environment* 8 (3):242–64. doi: 10.1504/IJBE.2016.10000548.

Gomez, L., and L. Vargas-Preciado. 2016. 140 characters for CSR communication: An exploration of Twitter engagement of fortune companies. *Accountability and Social Responsibility: International Perspectives* 9:205–21. doi: 10.1108/s2043-052320160000009009.

Gómez, M., C. Lopez, and A. Molina. 2019. An integrated model of social media brand engagement. *Computers in Human Behavior* 96 (3):196–206. doi: 10.1016/j.chb.2019.01.026.

Guo, C., and G. D. Saxton. 2014. Tweeting social change: How social media are changing nonprofit advocacy. *Nonprofit and Voluntary Sector Quarterly* 43 (1):57–79. doi: 10.1177/0899764012471585.

Hall, E. T. 1976. *Beyond culture*. New York, NY: Anchor Books.

Harrigan, P., U. Evers, M. P. Miles, and T. Daly. 2018. Customer engagement and the relationship between involvement, engagement, self-brand connection and brand usage intent. *Journal of Business Research* 88:388–96. doi: 10.1016/j.jbusres.2017.11.046.

Hofstede, G. 2003. *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage.

Hollebeek, L. D., M. S. Glynn, and R. J. Brodie. 2014. Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of Interactive Marketing* 28 (2):149–65. doi: 10.1016/j.intmar.2013.12.002.

Jiao, Y., M. Ertz, M.-S. Jo, and E. Sarigollu. 2018. Social value, content value, and brand equity in social media brand communities: A comparison of Chinese and US consumers. *International Marketing Review* 35 (1):18–41. doi: 10.1108/IMR-07-2016-0132.

Kim, S., S. Y. Kim, and K. H. Sung. 2014. Fortune 100 companies' Facebook strategies: Corporate ability versus social responsibility. *Journal of Communication Management* 18 (4):343–62. doi: 10.1108/JCOM-01-2012-0006.

Kim, C., and S.-U. Yang. 2017. Like, comment, and share on Facebook: How each behavior differs from the other. *Public Relations Review* 43 (2):441–9. doi: 10.1016/j.pubrev.2017.02.006.

Kwon, E. S., and Y. Sung. 2011. Follow me! Global marketers' Twitter use. *Journal of Interactive Advertising* 12 (1):4–16. doi: 10.1080/15252019.2011.10722187.

Li, C., and D. D. Wu. 2018. Facework by global brands across Twitter and Weibo. *Discourse, Context and Media* 26:32–42. doi: 10.1016/j.dcm.2018.03.006.

Li, M., E. Chng, A. Y. L. Chong, and S. See. 2019. An empirical analysis of emoji usage on Twitter. *Industrial Management & Data Systems* 119 (8):1748–63. doi: 10.1108/IMDS-01-2019-0001.

Li, Q., M. D. T. de Jong, and J. Karreman. 2021. Getting the picture: A cross-cultural comparison of Chinese and Western users' preferences for image types in manuals for household appliances. *Journal of Technical Writing and Communication* 51 (2):137–58. doi: 10.1177/0047281619898140.

Li, Q., M. D. T. de Jong, and J. Karreman. 2020. Cultural differences between Chinese and Western user instructions: A content analysis of user manuals for household appliances. *IEEE Transactions on Professional Communication* 63 (1):3–20. doi: 10.1109/TPC.2019.2961010.

Li, T., G. Berens, and M. de Maertelaere. 2013. Corporate Twitter channels: The impact of engagement and informedness on corporate reputation. *International Journal of Electronic Commerce* 18 (2):97–125. doi: 10.2753/JEC1086-4415180204.

Lovejoy, K., and G. D. Saxton. 2012. Information, community, and action: How nonprofit organizations use social media. *Journal of Computer-Mediated Communication* 17 (3):337–53. doi: 10.1111/j.1083-6101.2012.01576.x.

Malhotra, A., C. K. Malhotra, and A. See. 2013. How to create brand engagement on Facebook. *MIT Sloan Management Review* 54 (2):18–20.

McShane, L., E. Pancer, M. Poole, and Q. Deng. 2021. Emoji, playfulness, and brand engagement on twitter. *Journal of Interactive Marketing* 53:96–110. doi: 10.1016/j.intmar.2020.06.002.

Men, L. R., and W.-H S. Tsai. 2014. Perceptual, attitudinal, and behavioral outcomes of organization–public engagement on corporate social networking sites. *Journal of Public Relations Research* 26 (5):417–35. doi: 10.1080/1062726X.2014.951047.

Menon, R. V., V. Sigurdsson, N. M. Larsen, A. Fagerstrøm, H. Sørensen, H. G. Marteinsdottir, and G. R. Foxall. 2019. How to grow brand post engagement on Facebook and Twitter for airlines? An empirical investigation of design and content factors. *Journal of Air Transport*

Management 79:101678. doi: 10.1016/j.jairtraman.2019.05.002.

Morsing, M., and M. Schultz. 2006. Corporate social responsibility communication: Stakeholder information, response and involvement strategies. *Business Ethics: A European Review* 15 (4):323–38. doi: 10.1111/j.1467-8608.2006.00460.x.

Read, W., N. Robertson, L. McQuilken, and A. S. Ferdous. 2019. Consumer engagement on Twitter: Perceptions of the brand matter. *European Journal of Marketing* 53 (9):1905–33. doi: 10.1108/EJM-10-2017-0772.

Riordan, M. A. 2017a. Emojis as tools for emotion work: Communicating affect in text messages. *Journal of Language and Social Psychology* 36 (5):549–67. doi: 10.1177/0261927X17704238.

Riordan, M. A. 2017b. The communicative role of non-face emojis: Affect and disambiguation. *Computers in Human Behavior* 76:75–86. doi: 10.1016/j.chb.2017.07.009.

Saffer, A. J., E. J. Sommerfeldt, and M. Taylor. 2013. The effects of organizational Twitter interactivity on organization-public relationships. *Public Relations Review* 39 (3):213–5. doi: 10.1016/j.pubrev.2013.02.005.

Saxton, G. D., and R. D. Waters. 2014. What do stakeholders like on Facebook? Examining public reactions to nonprofit organizations' informational, promotional, and community-building messages. *Journal of Public Relations Research* 26 (3):280–99. doi: 10.1080/1062726X.2014.908721.

Shi, X. S., and W. J. Xu. 2020. Do Chinese brands culturally adapt their overseas websites: Evidence from top Chinese brands' Sino-US websites? *Asian Journal of Communication* 30 (1):58–78. doi: 10.1080/01292986.2019.1709517.

Shin, W., A. Pang, and H. J. Kim. 2015. Building relationships through integrated online media: Global organizations' use of brand web sites, Facebook, and Twitter. *Journal of Business and Technical Communication* 29 (2):184–220. doi: 10.1177/1050651914560569.

Tsai, W.-H S., and L. R. Men. 2017. Consumer engagement with brands on social network sites: A cross-cultural comparison of China and the USA. *Journal of Marketing Communications* 23 (1):2–21. doi: 10.1080/13527266.2014.942678.

Wang, R., S. Huang, and N. G. Pérez-Ríos. 2020. Multinational luxury brands' communication strategies on international and local social media: Comparing Twitter and Weibo. *Journal of International Consumer Marketing* 32 (4):313–23. doi: 10.1080/08961530.2019.1710736.

Wang, Y., and D. Wang. 2009. Cultural contexts in technical communication: A study of Chinese and German automobile literature. *Technical Communication* 56 (1):39–50.

Wang, Y., and Y. Yang. 2020. Dialogic communication on social media: How organizations use Twitter to build dialogic relationships with their publics. *Computers in Human Behavior* 104:106183. doi: 10.1016/j.chb.2019.106183.

Waters, R. D., and J. Y. Jamal. 2011. Tweet, tweet, tweet: A content analysis of nonprofit organizations' Twitter updates. *Public Relations Review* 37 (3):321–4. doi: 10.1016/j.pubrev.2011.03.002.

Waters, R. D., and K. D. Lo. 2012. Exploring the impact of culture in the social media sphere: A content analysis of nonprofit organizations' use of Facebook. *Journal of Intercultural Communication Research* 41 (3):297–319. doi: 10.1080/17475759.2012.728772.

Watkins, B. A. 2017. Experimenting with dialogue on Twitter: An examination of the influence of the dialogic principles on engagement, interaction, and attitude. *Public Relations Review* 43 (1):163–71. doi: 10.1016/j.pubrev.2016.07.002.

Wu, D. D., and C. Li. 2018. Emotional branding on social media: A cross-cultural discourse analysis of global brands on Twitter and Weibo. In *Intercultural communication in Asia: Education, language and values*, ed. A. Curtis and R. Sussex, 225–40. Cham, Switzerland: Springer.

Würtz, E. 2005. Intercultural communication on Web sites: A cross-cultural analysis of Web sites from high-context cultures and low-context cultures. *Journal of Computer-Mediated Communication* 11 (1):274–99. doi: 10.1111/j.1083-6101.2006.00013.x.

Xie, A., P. L. P. Rau, Y. Tseng, H. Su, and C. Zhao. 2009. Cross-cultural influence on communication effectiveness and user interface design. *International Journal of Intercultural Relations* 33 (1):11–20. doi: 10.1016/j.ijintrel.2008.09.002.

Yum, J. O. 1988. The impact of confucianism on interpersonal relationships and communication patterns in East Asia. *Communication Monographs* 55 (4):374–88. doi: 10.1080/03637758809376178.

Zaichkowsky, J. L. 1985. Measuring the involvement construct. *Journal of Consumer Research* 12 (3):341–52. doi: 10.1086/208520.

Zhang, S., M. D. T. de Jong, and J. F. Gosselt. 2021. Cultural differences in microblogging: How Western and Chinese IT companies use Twitter and Weibo. Manuscript currently under review.

Zhang, S., M. D. T. de Jong, and J. F. Gosselt. Forthcoming. Twitter as a technical communication platform: How IT companies' message characteristics relate to online engagement. *Technical Communication* 69 (2).

Zhang, S., J. F. Gosselt, and M. D. T. de Jong. 2020. How large information technology companies use Twitter: Arrangement of corporate accounts and characteristics of tweets. *Journal of Business and Technical Communication* 34 (4):364–92. doi: 10.1177/1050651920932191.

Zhang, X., W. Tao, and S. Kim. 2014. A comparative study on global brands' micro blogs between China and USA: Focusing on communication styles and branding strategies. *International Journal of Strategic Communication* 8 (4):231–49. doi: 10.1080/1553118X.2014.886251.

Zhou, H., and Q. Pan. 2016. Information, community, and action on Sina-Weibo: How Chinese philanthropic NGOs use social media. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 27 (5):2433–57. doi: 10.1007/s11266-016-9685-4.