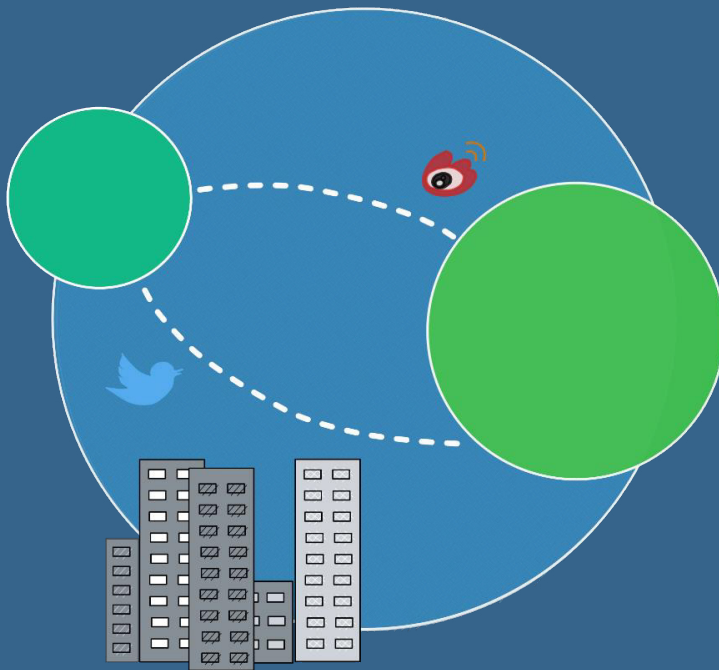


IT Companies on Social Networking Sites

Understanding microblog practices and user preferences
in Western countries and China



Shu Zhang

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This dissertation has been approved by:

Supervisor
prof. dr. ir. M.D.T. de Jong

Co-supervisor
dr. J.F. Gosselt

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IT COMPANIES ON SOCIAL NETWORKING SITES

UNDERSTANDING MICROBLOG PRACTICES AND USER
PREFERENCES IN WESTERN COUNTRIES AND CHINA

DISSERTATION

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by

Shu Zhang

born on the 8th of June, 1990
in Guizhou, China

Graduation Committee:

Chair /
secretary: prof.dr. T. Bondarouk

Supervisor: prof.dr.ir. M.D.T. de Jong
Universiteit Twente, BMS, Communication Science

Co-supervisor: dr. J.F. Gosselt
Universiteit Twente, BMS, Communication Science

Committee
Members: prof.dr.ing. A.J.A.M. van Deursen
Universiteit Twente, BMS, Communication Science

prof.dr. M.E. Iacob
Universiteit Twente, BMS, Industrial Engineering &
Business Information Systems

prof. dr. H.H.J. Das
Radboud Universiteit

prof. dr. P. Kerkhof
Vrije Universiteit

prof. dr. K. St.Amant
Louisiana Tech University

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CHAPTER 1

General Introduction

Over 3.6 billion people across the globe spend, on average, around 144 minutes each day on social networking sites (SNSs) (Statista, 2022). SNSs have become an important platform through which people can access information, pass the time, and communicate with each other. In recent years, there has been a near universal adoption of SNSs by leading companies, largely because of the manifold opportunities they provide them with (Lin et al., 2017). The large number of users of SNSs provide companies with the opportunity to reach wider audiences. For example, establishing accounts on SNSs allows companies to provide their stakeholders with up-to-date information on their products, latest activities, or notable achievements, while, simultaneously, increasing their visibility. Through such regular and personalized communication with their users, companies can positively influence their brand image (Beukeboom et al., 2015), strengthen consumer loyalty and engagement (K. Zhang et al., 2018), foster trust and commitment, and establish long-term relationships with stakeholders (Men & Tsai, 2014).

The irresistible appeal of SNSs has also resulted in a surge of constantly updated information, which, in turn, has forced companies to rise to the challenge of competing for attention in the marketplace (Handley & Chapman, 2000) and continuously monitor the messages posted (DiStaso et al., 2011). Indeed, companies can only yield the benefits from SNSs if they carefully plan and implement effective strategies, listen to and implement user demands, and communicate with their users in a genuine manner (Culnan et al., 2010).

However, when one examines extant literature on corporate usage of SNSs, there remain many inconsistencies and ambiguities regarding the formulation of effective strategies. To address this issue, this dissertation aims to put forward expedient insights related to how to develop effective strategies, from the perspectives of both companies and their stakeholders. By carrying out multiple studies that utilize different methodologies, this dissertation focuses on how companies use SNSs, why people follow and engage with the company SNSs, and what determines users' level of appreciation and online engagement. Moreover, although SNSs have radically expanded and spread to virtually every corner of the world, in the process broadening the geographic

boundaries of online communication as well as enabling companies to easily connect with their overseas stakeholders, these users come from diverse backgrounds and thus may have different needs and preferences regarding SNSs, which, in turn, requires companies to provide culturally appropriate content (Florenthal & Chao, 2016b; Men & Tsai, 2012; Tsai & Men, 2017). Despite this fact, most research continues to focus solely on Western contexts, which means that there is a relative dearth of knowledge about what is happening beyond the Western context. For this reason, cultural differences are embedded as a key research topic within this dissertation.

Specifically, this dissertation aims to provide companies with helpful insights into how to develop effective SNSs strategies, namely an awareness of (1) how companies are currently using SNSs, with a particular focus on how their accounts are arranged and the characteristics of their messages; (2) why users follow and engage with companies on SNSs; and (3) what factors influence users' level of appreciation of and online engagement with companies' posts. In addition to examining the Western context, this dissertation also analyzed companies' usage and adaptation of SNSs overseas as well as the differences between Chinese and Western users.

This introductory chapter begins by providing a brief overview of the key concepts applied in this dissertation (section 1.1). Next, it reflects on the relationship between SNSs and culture (section 1.2). Thereafter, in section 1.3, we describe our research context — the platform we studied and the companies we selected. Section 1.4 summarizes the principal research aims of the dissertation, before section 1.5 brings the chapter to a close by providing an outline of the dissertation.

1.1 Core concepts of the dissertation

The core concepts used in this dissertation involve companies and users on SNSs. From companies' perspective, although they have a strong presence on SNSs, there is a lack of systematic and detailed knowledge about how they arrange their activities on SNSs. Most of the available studies either focus on rather specific uses of SNSs (e.g., CSR, customer service) or largely, or

sometimes exclusively even, on generic characteristics of messages (e.g., one-way vs. two-way communication, hashtags). Consequently, in this dissertation, we want to provide a more comprehensive overview of companies' use of SNSs, including how they set up and *arrange their accounts* as well as the specific *message characteristics* that they choose. From the users' perspective, they may have certain *motives for following* companies on SNSs and *engaging* with them. Given that research suggests that active engagement can help to promote brand attachment, trust, and loyalty among consumers (Fernandes & Castro, 2020; Kamboj et al., 2018; Laroche et al., 2013; Lim & Kumar, 2019), it is important for companies to understand both why users follow companies and how to improve their engagement. In addition, these core concepts were studied in two different cultural contexts (China vs. Western countries). Figure 1.1. shows the core concepts. We introduce each of these concepts in turn in this chapter, in conjunction with discussing the role of culture.

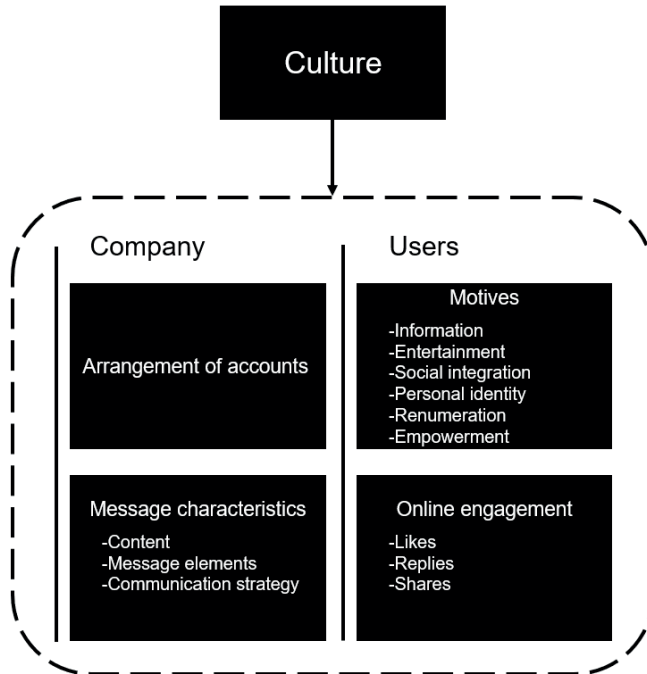


Figure 1.1. Core concepts used in this dissertation.

1.1.1 Arrangement of accounts

Most companies have several accounts on SNSs that may vary in terms of their degree of specificity. For example, Microsoft has multiple accounts on Twitter, including accounts for different products and services (e.g., Microsoft Excel), accounts for different stakeholders (e.g., Microsoft Developers), and accounts for different countries and regions (e.g., Microsoft Asia). Having multiple accounts can aid companies' efforts to provide more refined and diversified services to their users, alongside increasing the likelihood of user identification with their brand (Jin & Huang, 2017; T. Li et al., 2013). However, the actual use of multiple accounts has received scarce attention in the research on companies' use of SNSs. Rather, extant studies tend to focus exclusively either on companies' main accounts (Shin et al.; Tao & Wilson, 2015) or on the official accounts that have the largest number of followers (Kwon & Sung, 2011), thus ignoring accounts with fewer followers and accounts used for specific purposes. These neglected accounts also require close consideration, because accounts with a clear functional positioning make it easier for users to understand and identify with them (Jin & Huang, 2017). At the same time, having multiple accounts might impede users' effectiveness in finding the account that is most helpful or informative for them. Hence, our study begins with an exploration of how companies manage their multiple accounts.

1.1.2 Message characteristics

Effectively communicating on SNSs implies posting and receiving messages. Given that they are a platform's primary mode of communication, messages can thus be said to be its fundamental building block. For companies, the actual messages they post are the most important aspect of how they use SNSs (Lovejoy & Saxton, 2012). Particularly in instances when certain SNSs have specific limitations (e.g., word limits), companies must find effective ways to express themselves in short messages. Studies of companies' messages on SNS mainly focus on message characteristics, namely three aspects: content, message elements, and communication strategies. However, varying degrees of attention have been paid to these three aspects of messages. Most studies focus largely, or even exclusively sometimes, on communication strategies (e.g., Lovejoy & Saxton, 2012; Rybalko & Seltzer, 2010; Watkins, 2017) or message

elements (e.g., Mamic & Arroyo Almaraz, 2013), while only few studies have examined the content of companies' messages (e.g., Tao & Wilson, 2015). Therefore, this dissertation aims to provide an extensive overview of how companies actually use all three of these message characteristics: content, message elements, and communication strategy.

Content. Many studies have highlighted that “content matters”, suggesting that the content of messages influences users' intentions to subscribe to, promote, and engage with a company's SNSs (Chun & Lee, 2016; Sabate et al., 2014). However, extant academic research on this topic has predominantly concentrated on specific subdomains, such as corporate social responsibility (Araujo & Kollat, 2018; Gomez et al., 2016) or health promotion (Park et al., 2013), which means that an overall picture of companies' SNSs content remains lacking. To address this lacuna in the field, we attempted to provide a holistic analysis of the content posted by companies on SNSs. The traditional domains of corporate, marketing, and technical communication were included in order to provide a comprehensive framework through which to analyze the content of companies' messages.

Message elements. Various message elements can be used to enrich the content of information and increase user interaction. Visual cues, such as videos, images, and emojis can be used to supplement text. Similarly, referential elements can be used to complement textual content. Hyperlinks, for example, can serve to connect tweets to other online sites, hashtags (#) can be thematically connected by topical terms and used to join bigger discussions on the platform, while mentions (@) can be used to both identify and link to other people or organizations on SNSs. The use of these additional elements can help to enhance user-friendliness (Abitbol & Lee, 2017), interactivity (De Vries et al, 2012; J. Liu et al., 2017), and the vividness of the message itself (De Vries et al., 2012; J. Liu et al., 2017). According to research examining the effects of such message elements, visual cues can have a favorable influence upon online engagement, whereas referential elements produce mixed effects (Abitbol & Lee, 2017; Saxton & Waters, 2014).

Communication strategy. In light of the interactive and engaging affordances of SNSs, several researchers have argued that restricting the use of SNSs to merely the one-way sharing of information would be a waste (Culnan et al., 2010; T. Li et al., 2013). Conversely, the authors recommend that the optimal communication strategies would be to use SNSs for interactivity, two-way communication, and community building in order to interact and engage with people. To clarify the differences between communication strategies, Lovejoy and Saxton (2012) distinguished between information (sharing and distributing information about the company or its product), community (interacting with people to create a sense of community), and action strategies (encouraging and mobilizing people to take action). Several other studies have subsequently adopted this framework (e.g., Saxton & Waters, 2014; J. Wu et al., 2019). Research that has investigated the effects of communication strategies on online user engagement have produced mixed results: Some studies found that interactive and engaging strategies positively impacted upon online engagement (e.g., Araujo & Kollat, 2018; Saxton & Waters, 2014), while others found either no such effect (Read et al., 2019) or found that engaging and interactive strategies produced negative effects (Brubaker & Wilson, 2018; Watkins, 2017).

1.1.3 Motives for following companies on SNSs

By adopting a user-centric perspective, we want to understand users' motivations behind following and engaging with companies on SNSs. These motives can provide companies with valuable insights for better understanding and anticipating users' needs, not to mention helping them implement strategies to meet these needs. A variety of theoretical lenses have been adopted in the extant literature to investigate users' motives to start following companies on SNSs, to continue doing so, and to interact with them. The most often used theory is uses and gratifications theory (U&G; Azar et al., 2016; Q. Gao & Feng, 2016; Muntinga et al., 2011), which assumes that people are active and selective in seeking out media that is capable of satisfying their specific needs or motives (Katz et al., 1973). Other theoretical frameworks, such as Ajzen's (1991) theory of planned behavior (Chu et al., 2016; Logan, 2014), H. W. Kim et al.'s (2007) value-based adoption model (Zhao et al., 2016),

and Tajfel's (1978) social identity theory (Jin & Huang, 2017), all share the same basic assumption that users make active and more or less deliberative choices over following companies on SNSs and engaging in a range of company-related activities. By exploring the primary drivers behind users' behaviors or intentions, Muntinga et al. (2011) have proposed six motives that make people inclined to follow companies online and have been adopted by several other studies (De Veirman et al., 2017; Kitirattakarn et al., 2020; Tsai & Men, 2013, 2017). The six motives include *information* (finding information relating to brands, products, or the services offered by companies), *entertainment* (having fun or having a good time), *social integration* (connecting or interacting with the companies or other users with similar interests), *personal identity* (expressing a strong personal connection with the brand, product, or services), *renumeration* (getting discounts, goodies, or sweepstakes), and *empowerment* (applying one's influence or authority over other individuals or companies).

1.1.4 Online engagement

Users who are more engaged with a company are more likely to pay attention to it and have more positive emotions toward it, not to mention interact with and trade with it. Engagement is a multidimensional construct, a mental state which is characterized by certain levels of cognitive, emotional, and behavioral activity in the process of user/brand interactions (Hollebeek et al., 2014). The prevailing perspective of user engagement in SNSs is based on online engagement, which refers to the three built-in features that can be found at the bottom of every SNSs message: liking, sharing, and replying (Menon et al., 2019). These three immediately visible metrics are widely regarded as the optimal outcome of the communication process on SNSs: Together they contribute toward companies' evaluation of their performance on SNSs (Carim & Warwick, 2013), provide proof of users' usage and appreciation, further dissemination, and willingness to interact (e.g., Abitbol & Lee, 2017; Araujo & Kollat, 2018; Saxton & Waters, 2014), alongside positively influencing users' purchase intentions (Lin et al., 2017). Still, it should be noted that the step from online engagement to offline engagement might be a large one, with two possible routes: (1) online engagement helps to disseminate and draw

attention to company posts among other users, and (2) online engagement may reinforce users' beliefs, attitudes, and intentions regarding the company or brand.

1.2 Culture and SNS communication

Culture is a complex and multifaceted concept that can be described and defined in a variety of ways. Broadly speaking, culture is the “complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society” (Tylor, 1871, p. 1). In this sense, culture is a comprehensive system comprising both explicit and implicit components. Boyacigiller et al. (2004) identified two opposing cultural assumptions: a static and deterministic view of culture versus a dynamic view of culture. The former is grounded in the notion that culture is “a cohesive and lasting set of values that citizens of the nation-state bear and inevitably act upon”, while proponents of the latter view state that culture is “acquired and passed on to new members of the group via social contact; culture is dynamic—it evolves over time” (p. 100–101).

The static and deterministic view of culture posits that it is best to learn and understand culture by dividing it into types, and that culture requires contrast to be manifested. The most prominent of this type of approach is Hofstede's cultural dimensions. Hofstede et al. (2010) compare culture to an onion, with values lying at its core. Rituals, heroes, and symbols are all layers of skin around the core. While social practices may be constantly changing, basic values remain largely stable. To measure the difference in values between countries, the authors developed a set of cultural dimensions, including individualism versus collectivism, power distance, uncertainty avoidance, long-term versus short-term orientation, masculinity, and restraint versus indulgence.

Similarly, Hall (1976) proposed that all cultures can be classified according to their communication style. A key factor in his theory is context, which relates to the situational and environmental information that must be known in information processing. Hall (1976) characterized cultures into either high-

context and low-context cultures. In low context cultures, “the mass of the information is vested in the explicit code”, which is to say that communication should be explicit, detailed, and direct. In high-context cultures, “most information is already in person, while very little is in the coded, explicit, transmitted part of the message” (Hall, 1976, p.91).

When studying the influence of national culture on SNSs, both of these cultural theories are often used to test their applicability in this specific context (Goodrich & de Mooij, 2013; Lo et al., 2017; Shi & Xu, 2020; R. Wang et al., 2020). Although these dimensions can undoubtedly aid our understanding of basic cultural differences, they can also cause several problems. First, cultural dimensions view culture as coherent, stable, and static, thus ignoring its dynamic nature as well as how it changes and develops over time (Fang, 2005-2006; McSweeney, 2009). Second, testing the applicability of the selected cultural dimensions may potentially overlook other differences that exist in practice. For instance, McSweeney (2009) purported that both culture and non-cultural forces act upon culture. Notwithstanding widely acknowledged cultural systems, other factors like laws, institutions, and leaders can also explain uniform social practice. Fang’s (2005-2006) dynamic view of culture compares culture to an ocean, likening values and behaviors to “visible wave patterns on the surface of the ocean” (p.83) in a specific context and period. “Nevertheless, the culture we see at this moment does not represent the totality and the entire life process of that culture” (p.83).

As aforesaid, this dissertation focuses on both Chinese and Western culture (primarily referring to West Europe and North America). Hence, alongside value-based cultural differences, it is also important to consider the socio-material environment and habits that have developed over time. Within these two regions, the landscape of online communication and social networking sites differs markedly. In an absolute sense, China has the most people connected to the internet worldwide. According to a recent report from the China Internet Network Information Center (CNNIC, 2021), China had more than one billion internet users and was ranked first among the countries with the most internet users. As for Western countries, the United States, which ranked third in the world, had just over 313 million users (Johnson, 2022a). In

Western Europe, Germany has the most users with 79 million, followed by France with 60 million (Johnson, 2021). Despite the enormous number of internet users in China, the country is not leading in terms of online penetration. Western Europe was ranked second in the world (after northern Europe), with 94% of the population having internet access; this was followed closely by the United States at 90%. China had an online penetration rate of 73%, which leaves a lot of space for development compared to Western countries (Johnson, 2022b).

China is also the largest social media market in the world, with up to one billion users, which is higher than Europe and the United States combined (Statista, 2021). China's online environment is highly active and closely related to people's daily lives. Its large user base has helped it become the world's biggest ecommerce market, reaching \$1.7 trillion in online transactions in 2020, twice as much as the United States. The explosive growth of ecommerce and the quick adoption of digital payments have resulted in over 800 million people using mobile payments on a daily basis, which is eight times more than in the United States (Bu et al., 2021). The SNS ecosystem in China is both highly competitive and continuously evolving, as ever-more new companies emerge to meet the significant demands. Indeed, many of these platforms have more advanced features than their Western equivalents. Weibo, for example, allowed the embedment of multimedia content 18 months prior to Twitter, while it launched its mobile app six months before Twitter (R. Zhang, 2018).

In addition, Chinese and Western users differ greatly in terms of their online habits and related online activities. Specifically, Chinese users spend more time on SNSs and are more reliant on SNSs than their American counterparts (Chu & Choi, 2010; B. Li et al., 2017). Chinese people often have smaller and closer networks, have more established relationships, and use SNSs to receive social support from their existing networks; conversely, Western users tend to have larger but looser networks and use SNSs more for entertainment (Chu & Choi, 2010, 2011). Chinese users appear to be more engaged in company-related activities, such as electronic word-of-mouth, as well as in replying, sharing, and uploading content (Chu & Choi, 2011; Tsai & Men, 2017).

In light of these significant differences in culture, online environment, and user habits, we were interested in learning how these differences affect both the message strategies of companies and the preferences and behaviors of users.

1.3 Research context

Twitter was chosen as the platform through which to study company messaging and user engagement. In order to gain a comprehensive understanding of companies' communication activities, a specific type of company— large IT (information technology) companies— were chosen for the studies.

1.3.1 Twitter

Twitter is a social networking site and microblogging service which allows users to post short messages (tweets) of up to 280 (originally 140) characters. By limiting tweets to short, digestible pieces of information, Twitter serves to accelerate information exchange. With 206 million daily active users who send 500 million tweets each day, it is one of the most popular SNSs (Twitter, 2021). Twitter's name derives from the definitions of "a short burst of inconsequential information" and "chirps from birds" (Sarno, 2009). Every tweet is an independent message, and different tweets are not necessarily related to one another. Like little birds' whistles, each of them carries only a brief message.

Twitter is an open community in which all messages are public by default. Users can easily read and comment on messages posted by strangers. Unlike most SNSs, Twitter does not require bi-directional confirmation for establishing a friendship (Kwak et al., 2010). Rather, following on Twitter can be one-way or mutual, insofar as a user can follow any other user they so wish, while the user that is being followed need not follow back. It is for this reason that these one-way relationships are labeled as "followers" (Boyd & Ellison, 2007).

Twitter's brevity, real-time nature, and expansive reach makes it a potentially effective and powerful way for organizations to reach relevant stakeholders, build relationships, spread information, and monitor public opinion. This explains why Twitter is the most popular platform among Fortune 500 companies, with 96 percent of them having a presence on the platform (Barnes et al., 2020).

Twitter is blocked in the Chinese national context. In our cross-cultural comparisons, we used Weibo as the Chinese counterpart of Twitter. Weibo is the main Chinese microblogging platform, which is known as the Chinese equivalent of Twitter. Weibo had an average of 224 million daily active users, more than Twitter (Weibo, 2020). Like its American counterpart, Weibo allows users to follow other users, browse, comment on, and share real-time information and is characterized as simple, asymmetric and distributed (Weibo, n.d.). Both Chinese and international companies have widely used Weibo to promote their brands and products around the country (e.g., C. Li & Wu, 2018; R. Wang et al., 2020).

1.3.2 Large IT companies

This dissertation focuses on large IT companies because they were early adopters of social media, have relatively high adoption rates of SNSs (Culnan et al., 2010; Veldeman et al., 2017), and engage users at a higher level than other industries (Araujo & Neijens, 2012). There are probably several reasons for this, including that managers of technology companies have a better grasp of how to use internet technology, while users of technological products are both more familiar with and more likely to use social media (Perry & Bodkin, 2000; Veldeman et al., 2017). Among IT companies, the larger IT companies may be expected to use Twitter in a more sophisticated and elaborate manner than smaller companies. This is in accordance with Xiong et al.'s (2018) argument that company size influences how companies use Twitter for communication: smaller companies with fewer resources use the platform more for one-way communication rather than for marketing purposes.

1.4 Research aims

Given that social media offers tremendous opportunities and challenges to companies, and since stakeholders are instrumental to the success or failure of a company's communications, we sought to conduct a series of studies investigating companies' use of social media, from the perspectives of companies and stakeholders. From companies' perspective, there is a lack of a holistic picture of how companies use SNSs, which is why we wanted to provide a comprehensive overview of companies' specific activities on Twitter, including how they organize their accounts and develop their messaging strategies. Therefore, our research started with the question:

RQ1: How do large IT companies use Twitter with respect to their arrangement of corporate accounts and message characteristics?

On the user side, we wanted to shed light upon what motivates users to follow companies on social media and what reasons they have for interacting with them. Furthermore, whether certain message characteristics and factors underpin their willingness to engage in interaction when reading information posted by the company. This leads to the second and third research questions:

RQ2: What are users' motives for following and engaging with companies' microblogs?

RQ3: What factors influence users' online engagement with companies' microblogs

In addition, another key issue we sought to explore is how cultural differences affect the communication between companies and users on social media in today's increasingly globalized world—more specifically, how companies use social media both in their own country and abroad. Do users from different cultures follow companies for different reasons, and do they interact with companies differently? Therefore, the following three research questions were proposed:

RQ4: What impact does culture have on companies' use of microblogs?

RQ5: How does culture affect users' motivation to follow and engage with companies?

RQ6: How does culture affect users' engagement with companies' microblogs?

Three complementary research approaches were used to address the aforementioned research questions: (1) a series of content analyses of IT companies' microblogging practices focusing on Western IT companies' use of Twitter, a detailed examination of technical communication tweets, and the Sino-Western differences in IT companies' use of microblogging; (2) an online survey that investigated cultural differences between Western and Chinese users in terms of SNS dependency, motives for following companies, and companies' SNS-related behaviors; and (3) an online user experiment to investigate the effects of certain message characteristics (communication strategy and emoji use) on the online engagement of Western and Chinese users.

1.5 Overview of the dissertation

The studies in this dissertation cover the core concepts of companies' arrangement of accounts, companies' message characteristics, user motives, online engagement, and cultural differences. From Chapter 2 onwards, we discuss each of these studies in turn in their own chapter. Table 1.1 shows the concepts that are covered in each chapter.

Table 1.1 *Core concepts used in each chapter.*

Chapter	Core concepts
Chapter 2	Arrangement of accounts, message characteristics
Chapter 3	Message characteristics, online engagement
Chapter 4	Arrangement of accounts, message characteristics, culture
Chapter 5	Motives, culture
Chapter 6	Online engagement, culture

Chapter 2 describes a comprehensive content analysis of large IT companies' use of Twitter. In this study, the arrangement of different Twitter accounts and the message characteristics of tweets (N=5,277) were analyzed. The analysis of message elements focused on three aspects: content, message elements, and communication strategies.

Chapter 3 focuses specifically on how companies use Twitter within the technical communication domain, since technical communication is a potentially important topic for IT companies and there has been scarce attention to Twitter's role in this field. This chapter provides a detailed categorization of the content of IT companies' technical communication tweets (N=1,604) as well as investigates if certain message characteristics received more online engagement (likes, retweets, and replies).

Chapter 4 complements the data used in Chapter 2 and studies cultural differences and cultural adaptation processes, by comparing data from the Twitter and Weibo accounts of Western companies as well as comparing Western companies' Weibo activities to those of similar Chinese companies. The analyses presented here focus on comparisons of company accounts and three message characteristics (content, message elements, and communication strategies).

Chapter 5 presents the results of an online survey of Chinese and Western users' motives for following company accounts and consuming and engaging with company posts.

Chapter 6 describes an online experiment aimed at studying the effects of two message characteristics and two more stable factors on users' appreciation and engagement with companies' messages on Twitter and Weibo. A 2 (prior company involvement: high vs. low) \times 3 (communication strategy: information vs. action vs. community) \times 2 (emojis: present vs. absent) \times 2 (national culture: Western vs. Chinese users) experiment was conducted.

Chapter 7 reflects on the main findings, before proceeding to delineate both the theoretical and practical implications of the various studies. Finally, the

limitations of the studies as well as suggestions for future research are discussed.

CHAPTER 2

How Large Information Technology Companies Use Twitter: Arrangement of Corporate Accounts and Characteristics of Tweets

Zhang, S., Gosselt, J. F., & De Jong, M. D. T. (2020). How large information technology companies use Twitter: Arrangement of corporate accounts and characteristics of tweets. *Journal of Business and Technical Communication*, 34(4), 364-392.

2.1 Introduction

The transformation to Web 2.0 has significantly boosted the development of social networking sites (SNSs). More than 70% of Internet users use SNSs, and that percentage is only expected to grow (eMarketer, 2017). The increasing popularity of SNSs has transformed the way companies communicate with their stakeholders: Many companies have established corporate accounts on popular SNSs, such as Facebook, Twitter, LinkedIn, and Instagram, to get and stay in touch with relevant interest groups (Kaplan & Haenlein, 2010). Social media have become important elements of companies' internal and external communication strategies.

Culnan et al. (2010) argued that SNSs will only benefit organizations if they are carefully adopted and implemented, emphasizing the importance of a well-considered ("mindful") decision to align SNSs with other strategies and practices, a continuous attention to community building, and an absorptive capacity to listen to, learn from, and respond to stakeholders. Various types of insights could contribute to developing effective social media strategies: about the ways organizations are using SNSs, people's motives to visit and follow company SNSs, and the effects of accounts and posts on stakeholders. Because platforms differ in many respects, such insights might depend on the specific platform.

This article focuses on the way large information technology (IT) companies use Twitter. Having 321 million active users monthly, Twitter is one of the prominent social media platforms in business contexts (Culnan et al., 2010; Tao & Wilson, 2015). As a microblogging platform, Twitter enables users to post messages of up to 280 (originally 140) characters that can also contain links and pictures. Apart from actively contributing themselves, users can follow accounts, like messages, react to them, or share (retweet) them with others. Posts can be linked to larger discussions on the platform using hashtags (#) and to other Twitter accounts using public messages or mentions (@) (see Jones, 2014, for an account of how hashtags affect communication processes). Unlike Facebook, Twitter is an open community in which users can easily reach content provided by strangers. These characteristics make Twitter suitable for

companies to disseminate information, build relationships, interact with stakeholders, and monitor public opinions.

We focused this study on large IT companies, which are forerunners in social media use, having higher adoption rates of SNSs than do other industries (Culnan et al., 2010; Veldeman et al., 2017). Investigating the adoption of SNSs from a technology acceptance perspective, Veldeman et al. (2017) found that large IT companies have higher expectations of SNSs' usefulness than do other types of companies—perhaps because of their familiarity with computer-mediated communication but also because their stakeholders are more active on social media. Among IT companies, we expected that large companies would show more sophisticated and elaborate usage of Twitter than would smaller companies. Xiong et al. (2018) found that company size affects the way companies adopt Twitter in their communication: Smaller companies with limited resources tend to use the platform less for marketing purposes and more for one-way communication. Xiong et al. (2019) came to similar conclusions.

Companies' Twitter use can be investigated in two ways: by analyzing the content of Twitter accounts or by interviewing or surveying professionals in organizations (cf. Iankova et al., 2018). In this article, we describe the design and results of a content analysis aimed at filling two gaps in the literature on how companies manage their Twitter accounts.

First, the way companies manage multiple Twitter accounts has not been systematically investigated. Various researchers suggest that companies strategically set up more than one Twitter account to effectively reach and engage different groups of stakeholders (Jansen et al., 2009; Jin & Huang, 2017; Li et al., 2013), but we know little about what companies actually do in this respect. The issue of multiple accounts is hardly acknowledged in research on the characteristics of companies' Twitter accounts. Therefore, in our study, we investigated how companies manage multiple Twitter accounts.

Second, we have no systematic and detailed knowledge about what companies specifically post on Twitter. Most of the available content-analytic research can be categorized in two types. The first type focuses on rather specific Twitter uses, such as the use of Twitter for communicating about corporate social responsibility (CSR; e.g., Araujo & Kollat, 2018; Gomez & Vargas-Preciado, 2016), customer services (Berry, 2018; Einwiller & Steilen, 2015; Page, 2014), public affairs (Gaither & Austin, 2016; Watts et al., 2019), or health promotions (Park et al., 2013). Other studies focus specifically on the presence of CEOs on Twitter (Capriotti & Ruesja, 2018; Yue et al., 2019). As a result, there is an emphasis on topics that are more or less prolific in some branches of the academic literature, but the entire picture of Twitter use has never been sketched. The second type of research focuses mainly or exclusively on generic characteristics of Twitter posts, such as technicalities (e.g., tweet frequency, hashtags, retweets; Mamic & Arroyo Almaraz, 2013) and the use of engaging strategies (Lovejoy & Saxton, 2012; Rybalko & Seltzer, 2010; Watkins, 2017) or one-way versus two-way communication (Waters & Jamal, 2011). Only few studies provide coarse-grained indications of the actual content of organizational tweets (Swani et al., 2013; Tao & Wilson, 2015). Thus, in our study, we give a comprehensive overview of the way large IT companies use Twitter.

We formulated two research questions: (a) How do large IT companies arrange their accounts on Twitter? and (b) How do large IT companies use Twitter? In answering the second question, we focus specifically on three aspects of tweets: content, message elements, and communication strategies.

2.2 Earlier research

Kaplan and Haenlein (2010) defined social media as “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and allow the creation and exchange of user-generated content” (p. 61). They distinguished between six types of social media, of which social networking sites (SNSs) are the most widely used. SNSs are applications that enable users to construct a public or semipublic profile, display their connection with others, and build and maintain connections (Boyd & Ellison,

2007). They offer interesting options for nonprofit organizations (e.g., Guo & Saxton, 2014; Lovejoy & Saxton, 2012) and private companies (e.g., Rybalko & Seltzer, 2010; Vernuccio, 2014).

Although it is hard to establish the real-world effects of using Twitter, several studies hinted at ways in which Twitter might benefit companies. Majumdar and Bose (2019) investigated the relationship between Twitter adoption and firm value and found that implementing Twitter can have a positive impact on companies' market value. In an experimental study, Li et al. (2013) found a relationship between features of a company's Twitter account and its corporate reputation. E. -H. Kim and Youm (2017) showed that company-initiated and customer-initiated tweets affect analyst stock recommendations. In the same realm, Prokofieva (2015) concluded that corporate tweets, even when they contain information already available elsewhere, affect investors by attracting their attention and reducing information asymmetry.

2.2.1 People's motives to follow companies online

Research on people's motives to start following companies on SNSs, to continue doing so, and to spread companies' messages points in various directions, starting from theoretical perspectives as diverse as uses and gratifications theory (Azar et al., 2016; Q. Gao & Feng, 2016; Muntinga et al., 2011), social identity theory (Jin & Huang, 2017; Zhao et al., 2016), the value-based adoption model (Zhao et al., 2016), and the theory of planned behavior (Logan, 2014).

All these studies explored the (correlational) relationship between predicting variables and people's behavior or behavioral intentions with companies' SNSs. Based on the significant relationships found between predictors and behaviors or intentions, these studies suggest several factors that make people inclined to follow companies online. The first five factors are motivators, or reasons why people might decide to follow companies online. A first factor is information (Azar et al., 2016; Q. Gao & Feng, 2016; Jin & Huang, 2017; Logan, 2014; Muntinga et al., 2011; Taylor et al., 2011; Zhao et al., 2016). People connect to companies' SNSs to find information that could be useful to them, about, for

instance, brands, products, or services. Muntinga et al. (2011) distinguished four subfactors to this factor: surveillance (staying up-to-date), knowledge, prepurchase information, and inspiration (getting new ideas). A second factor is entertainment (Azar et al., 2016; Q. Gao & Feng, 2016; Jin & Huang, 2017; Muntinga et al., 2011; Taylor et al., 2011). People use companies' SNSs to have a good time. Muntinga et al. (2011) mentioned the subfactors enjoyment, relaxation, and pastime. A third factor involves rewards (Azar et al., 2016; Muntinga et al., 2011). People are inclined to use companies' SNSs if they expect to get rewards from them (e.g., discounts, goodies, or sweepstakes). A fourth factor involves identification (Gao & Feng, 2016; Jin & Huang, 2017; E. Kim et al., 2014; Muntinga et al., 2011; Taylor et al., 2011). People connect with companies' SNSs when they feel a strong link between their personal identity and the brand, products, or services. Muntinga et al. (2011) further distinguished self-expression, self-presentation, and self-assurance as subfactors, and Q. Gao and Feng (2016) distinguished self-expression and impression management as subfactors. A fifth factor is connectedness (Azar et al., 2016; Q. Gao & Feng, 2016; Jin & Huang, 2017; E. Kim et al., 2014; Muntinga et al., 2011; Zhao et al., 2016). People use companies' SNSs as opportunities to interact with the company (responsiveness) or other followers.

In addition, the studies identify two factors that might make people reluctant to follow companies online. The first is the conglomerate of trust, reliability, privacy, and invasiveness (Azar et al., 2016; E. Kim et al., 2014; Taylor et al., 2011; Zhao et al., 2016). People might refrain from using companies' SNSs when they doubt their trustworthiness or reliability or fear privacy violations. The second is ease of use (Logan, 2014). People might decide not to follow companies online when they think doing so will be difficult.

People's motives might differ between different types of SNSs (Logan, 2014). On Twitter, for example, people tend to follow companies to satisfy their need for information whereas on Facebook they tend to follow companies to hear about others' experiences. So the content companies post on their Twitter accounts is quite important (Verhoeven et al., 2012).

2.2.2 Corporate use of Twitter

With the rise of Twitter, many researchers started to investigate how organizations incorporate this SNS into their communication strategy. In their studies, three main themes emerged: content of Twitter accounts, message elements (mainly technicalities such as the use of hashtags, videos, and images), and communication strategies (mainly the conglomerate of interactivity, two-way communication, and community building). A central underlying conclusion appears to be that companies do not fully benefit from the affordances of Twitter, so the professionalism of strategically setting up and managing corporate Twitter accounts can be much improved. Here is an overview of the research on each theme.

Content of corporate Twitter accounts. Instead of sketching an overall view of how Twitter is used, researchers predominantly focused on specific communication domains. Sometimes they offered new and surprising insights. Einwiller and Steilen (2015), for instance, drew attention to the changing nature of handling complaints, which in Twitter are visible to the public, partly replacing the private negotiations of the past. Schneiker et al. (2019) observed that controversial organizations use Twitter's informality and low threshold of disseminating information to distract from their business and come across as normal citizens. But most researchers used the Twitter environment to contribute to broader and more traditional discussions in the literature.

So far, considerable attention has been paid to the use of Twitter for CSR communication. Araujo and Kollat (2018) reported the importance of CSR communication on Twitter, finding high levels of endorsement (likes) and diffusion (retweets) for CSR messages and even such (halo) effects for the Twitter account as a whole. Gaither and Austin (2016) examined people's reactions to different CSR types, finding that people are critical about company tweets highlighting positive initiatives in areas for which the company's products or production processes are known to make negative contributions. Gomez and Vargas-Preciado (2016) and Tao and Wilson (2015) drew attention to the low proportion of CSR-related tweets on corporate accounts. And Suárez-Rico et al. (2018) conducted a study that attempted to explain the amount of attention paid to CSR in corporate tweets. Their study had two

significant findings: Companies operating in sensitive industries and companies whose CEOs have shorter tenures post more tweets about CSR. These studies all developed and used various ad hoc categorizations of CSR tweets.

Other researchers tried to make sense of the content of Twitter accounts from different perspectives. Einwiller and Steilen (2015) focused on the handling of complaints and used a rather specific categorization of possible strategies companies use in deliberating customer complaints, concluding that the strategies that customers find more satisfying are used less often. Likewise, Page (2014) and Berry (2018) characterized typical elements of corporate apologies in reaction to customer complaints. Xiong et al. (2019) investigated the financial reporting of companies on Twitter, differentiating between various types of financial information, and warned that the use of Twitter for opportunistic financial disclosures is on the rise. Park et al. (2013) analyzed health-related messages on Twitter, focusing on guidelines for effective health messages, showing that health organizations predominantly focus on simple language use, but often do not comply with other guidelines (e.g., making important things stand out). Yue et al. (2019) investigated CEO tweets, using a coding scheme focusing on leadership, with a lot of emphasis on CEOs' personal life and vision. They found many differences between CEOs of Fortune 200 companies and those of top start-up companies. And Watts et al. (2019) studied the Twitter accounts of tobacco companies from a public affairs perspective, mainly highlighting how these firms try to influence government policy and use CSR to bolster their reputation.

But comprehensive analyses of the content of company tweets are lacking. Swani et al. (2013) and Tao and Wilson (2015) offered starting points with sets of rudimentary, nonexhaustive main categories. In our study, we tried to fill in this gap in the literature by analyzing how the domains of corporate, marketing, and technical communication are represented in the tweets of large IT companies. In corporate communication, Twitter can be used to build and maintain relationships with stakeholders (Shin et al., 2015) and to promote the company's image or reputation (Vernuccio, 2014). In marketing communication, Twitter can be used to attract consumer attention (Kwon &

Sung, 2011) and promote word of mouth communication between consumers (Jansen et al., 2009). Kaplan (2012) proposed that firms use mobile SNSs for marketing research and sale promotions and Taylor et al. (2011) highlighted the effectiveness of SNS advertising. And in technical communication, technology companies can use Twitter to provide user support (see Lam & Hannah, 2016, for an overview of how Twitter is used for technical support). Regarding the prevalence of the domains, Verhoeven et al. (2012) found that organizations' social media strategies are largely controlled by their public relations department, followed by their marketing and customer service departments. As a result, the corporate communication perspective might dominate the marketing and technical communication perspective.

Message elements. Several studies focused on message elements used on corporate Twitter accounts. Specifically, they analyzed the use of hashtags (#), public messages (@), hyperlinks, and visuals. In addition, Page (2014) drew attention to the use of emoticons. Guillory and Sundar (2014) assumed that links and video content contribute to the functional interactivity of tweets. Araujo and Kollat (2018) showed that the presence of links, hashtags, and images or videos indeed corresponds to more likes and retweets. Content analyses, all conducted more than 5 years ago, suggest that the inclusion of such elements cannot be taken for granted, with relatively high percentages for hyperlinks (60–68%) and hashtags (30–55%), and lower percentages for public mentions (16–18%), pictures (3–14%), and videos (2–9%) (Lovejoy et al., 2012; Mamic & Arroyo Almaraz, 2013; Swani et al., 2013). In our study, we tried to update these findings in the specific context of large IT companies.

Communication strategies. A major discussion in the literature about companies' communication strategies for using Twitter involves the conglomerate of interactivity, two-way communication, and community building. The literature generally agrees that it would be wasteful to limit the use of Twitter to just broadcasting messages, and several studies confirmed the usefulness for interactivity, two-way communication, and community building, suggesting that its main function is engaging and involving people (Guillory & Sundar, 2014; Li et al., 2013; Saffer et al., 2013; Saxton & Waters, 2014; Watkins, 2017). But some studies have more nuanced findings. Araujo and

Kollat (2018) did not find different effects for the strategies of engaging people versus broadcasting messages, and Saxton and Waters (2014) found that despite a preference for dialogical messages, people are more likely to share one-way messages with others. Many content analyses found that companies do not optimally use the dialogical possibilities of Twitter on their accounts (Capriotti & Ruesja, 2018; Gomez & Vargas-Preciado, 2016; Lovejoy & Saxton, 2012; Rybalko & Seltzer, 2010; Shin et al., 2015; Waters & Jamal, 2011; Yue et al., 2019). Lovejoy and Saxton (2012), for instance, analyzed 100 nonprofit organizations' tweets and identified three communicative functions: information, community, and action. The information function involves tweets that merely inform people about the organization or its products and services, the community function involves tweets that interact with people to build an online community, and the action function involves tweets that encourage and mobilize people to act for or on behalf of the organization. In this study, we explore whether the dominance of one-way asymmetrical communication also applies to the Twitter accounts of large IT companies, using as our framework Lovejoy and Saxton's three communicative functions of information, community, and action.

2.3 Method

We used content analysis to answer our two research questions. We analyzed a corpus of tweets from large IT companies using a coding scheme based on current research (deductive approach) complemented with bottom-up insights that emerged when analyzing the individual tweets (inductive approach) (cf. Potter & Levine-Donnerstein, 1999). Because we wanted to get a detailed view on the companies' Twitter activities, including their management of different Twitter accounts, we used a limited sample of four large IT companies. To ensure the reliability of our findings, we included an intercoder reliability assessment in our procedure.

2.3.1 Corpus

To focus on large IT companies' use of Twitter, we selected four companies from the top 10 of the Fortune 500 technology and telecommunications companies, excluding companies without an account (Apple), online stores (Amazon), and social media companies (Facebook). To be able to analyze the companies' arrangement of different accounts, we selected companies that had at least 10 accounts. This process resulted in the following companies: Hewlett-Packard (HP), IBM, Intel, and Microsoft.

Using the company names as search terms, we gathered all the Twitter accounts of these four companies and then filtered the results using the Account/People tab to ensure that only company-owned accounts were included in the sample. Some accounts were verified as official accounts, but others were not. When an unverified account systematically posted the company's official information and presented a link to the company's official Web site on its profile page, we labeled it as an "unverified official account" and included it in the sample. To keep variations of different regions and cultures from being a factor, we only used accounts targeting international followers, excluding accounts for specific countries (e.g., Microsoft India or Microsoft UK).

Many tweets contained links to materials outside the Twitter platform (e.g., a report about current technology developments and future trends, an e-book about the company's products and services, or a webinar discussing new features of the latest software version). Because these links might clarify the tweet content, we followed each link, read its material, and included its content in the analysis.

We collected data over two weeks: The first week was from January 10–16, 2018, and the second week was from April 18–24, 2018. We included all tweets posted during these two weeks, which resulted in a total of 5,277 tweets (see Table 2.1 for an overview).

Table 2.1 *Overview of the corpus of accounts and tweets.*

Company	Number of accounts	Number of verified accounts	Number of tweets in week 1	Number of tweets in week 2	Total number of tweets
IBM	38	16 (42%)	1651 (31%)	1315 (25%)	2966 (56%)
Microsoft	39	38 (97%)	636 (12%)	773 (15%)	1409 (27%)
HP	18	14 (78%)	212 (4%)	323 (6%)	535 (10%)
Intel	13	13 (100%)	221 (4%)	146 (3%)	367 (7%)
Total	108	81 (75%)	2720 (52%)	2557 (48%)	5277 (100%)

2.3.2 Coding scheme

To analyze all the tweets, we constructed a coding scheme with three main categories based on and adapted from previous research. Each tweet was analyzed concerning its content, message elements, and communication strategy. We did an open-coding process of one week's tweets from our sample companies in order to check the suitability of previous codes and complete the coding scheme with emerging categories. The tweets we used for developing our coding scheme were not part of the actual tweets we analyzed in the main research.

For the content of the tweets, we started by distinguishing between corporate, marketing, and technical communication but discovered that we also needed to account for combinations of those domains. For each main category, then, we defined potential subcategories based on the literature but also inductively defined subcategories based on our analysis of the tweets.

For the message elements of the tweets, we focused on any deviation from plain text. As a result, we coded the following features: navigation hyperlinks, hashtags (#), public messages (@), visuals (e.g., photos, videos, and infographics), and emojis.

And for the communication strategies of the tweets, we used the framework developed by Lovejoy and Saxton (2012). Earlier research (e.g., Guo & Saxton, 2014) confirmed this framework's usefulness for understanding the extent to which companies use Twitter to engage with relevant interest groups. The framework consists of three main categories—information, action, and community—and 11 subcategories. We used the subcategories as a starting point but inductively created new subcategories when needed.

2.3.3 Coding procedures and intercoder reliability

Two coders independently coded a random sample of 150 tweets. These 150 tweets were selected from the sample companies but were not part of the actual tweets that we analyzed in this study. We selected at least three sample tweets from each subcategory to ensure both coders checked all subcategories. Using the codebook they coded each tweet for its content, message elements, and communication strategy. Some tweets appeared to provide more than one type of content. For instance, some tweets had a combination of corporate and technical content. In such cases, the coders double coded or triple coded them. After two rounds of coding, the intercoder reliability was 0.95 for the main content categories, 0.88 for the subcategories, 0.92 for the message elements, and 0.87 for the communication strategies.

2.4 Results

We will first describe the results regarding the companies' arrangement of different Twitter accounts. After that, we will present the results on the message level, focusing on content, message elements, and communication strategies, respectively.

2.4.1 Corporate accounts on Twitter

All four companies used multiple accounts to shape their presence on Twitter. Compared to Intel and HP (13 and 18 accounts, respectively), IBM and Microsoft (38 and 39 accounts, respectively) had many different accounts. The

differences are not attributable to the number of main categories per company but rather appear to reflect the number of accounts per main category. Table 2.2 gives an overview of all the different Twitter accounts that we found in our analysis.

Although at first sight, we might assume that the large number of different Twitter accounts per company would obscure stakeholders' view of which accounts to follow, the majority of the accounts (68%) focused on either specific products (49%) or stakeholders (19%), both of which reflect a strong, easily recognized focus on the needs of self-identifiable stakeholder groups. The remaining accounts largely followed conventions in the way that organizations present themselves to the outside world, focusing on, for instance, job seekers, journalists, people with interests in public affairs, or people interested in social and environmental issues. As such, our findings underline the assumption that having an architecture of different Twitter accounts helps companies to optimally connect with a diversity of stakeholders (Jansen et al., 2009; Jin & Huang, 2017; Li et al., 2013). Corporate communication and technical communication are better represented in the various accounts than is marketing communication.

2.4.2 Content of corporate tweets

As Table 2.3 shows, three main categories, two combinations of main categories, and 18 subtypes of content emerged from the coding process. The most frequent main category was corporate communication (35%), followed by technical communication (30%) and marketing communication (19%). The remaining tweets (16%) involved combinations of main categories.

Table 2.2 Overview of different Twitter accounts used by the four companies.

Type of account	Example	Total	HP	IBM	Intel	Microsoft
Service and products	IBM Storage, Microsoft Excel	51 (47%)	3 (17%)	21 (55%)	8 (62%)	19 (49%)
Stakeholders	HP Developers, Microsoft Partner	20 (19%)	3 (17%)	7 (18%)	1 (8%)	9 (23%)
News	IBM News Room, HPE News	7 (6%)	3 (17%)	2 (5%)	1 (8%)	1 (3%)
Region and policy	Microsoft Europe, IBM Policy	6 (6%)	0 (0%)	1 (3%)	1 (8%)	4 (10%)
CSR	HP Sustainability, IBM Accessibility	5 (5%)	2 (11%)	1 (3%)	0 (0%)	2 (5%)
Main	IBM, Microsoft	5 (5%)	2 (11%)	1 (3%)	1 (8%)	1 (3%)
Human resources	Jobs at Intel, HP Careers	4 (4%)	2 (11%)	1 (3%)	1 (8%)	0 (0%)
User support	Microsoft Support, HP Support	4 (4%)	1 (6%)	2 (5%)	0 (0%)	1 (3%)
Lab and research	IBM Research, Microsoft Research	3 (3%)	1 (6%)	1 (3%)	0 (0%)	1 (3%)
Technical documentation	IBM Redbooks, docs.microsoft.com	2 (2%)	0 (0%)	1 (3%)	0 (0%)	1 (3%)
Event	HPE Discover	1 (1%)	1 (6%)	0 (0%)	0 (0%)	0 (0%)
Total		108 (102%)	18 (102%)	38 (101%)	13 (102%)	39 (102%)

Note. Percentages total more than 100% due to rounding¹

Table 2.3 *Content of company tweets*

Content Category	Examples	Frequency (Percentage)
Corporate communication		1827 (35%)
Community relations	"Engage in a hands-on robotics experience at STEM Saturdays. Walk-in, FREE activity at your nearest @MicrosoftStore on any Saturday in April. @Hacking_STEM @MicrosoftEDU #STEM https://bit.ly/2ji1WzI "	473 (9%)
Corporate social responsibility	"Today we celebrate Dr. Martin Luther King Jr.'s legacy and honor his enduring message of equality, opportunity, and service to others with a day of service. Proud of all our employees who are giving back and making a difference in their communities."	352 (7%)
Research and development	"At our booth at #CES2018 we are demonstrating #VR powered by Intel that allows viewers to experience the thrill of downhill skiing, ice skating, or snowboarding as if they were actually there. #PyeongChang2018"	310 (6%)
Business insights	"Will G-Commerce Disrupt Gift Delivery? (via @forbes) http://ibm.co/2EscmJX #WatsonCommerce"	250 (5%)
Partner relations	"IBM and shipping giant Maersk have formed a new #blockchain company for tracking international cargo @business "	176 (3%)
Human resources	"@HPE we are bringing together the brightest minds to create breakthrough technology solutions that advance the way people live and work 🌐 Join our Sales Graduate Rotational Program & take UR career to the next level 📄 http://hpe.to/6011DbM67 "	122 (2%)
Corporate achievements	"We're honored to be recognized on @Forbes' list of World's Most Reputable Companies for the 10th year running. We dedicate ourselves to that same commitment to excellence for the next 10!"	83 (2%)
Government relations	"We joined more than 115 businesses urging Congressional leadership to act now and pass a #DACA fix by Jan 19. Here are some of @IBM's #Dreamers telling their own stories:"	62 (1%)
Technical communication		1604 (30%)
Information on specialized topics	"9 great articles you might have missed about data management"	962 (18%)
User instructions	"Easy steps to change Microsoft Edge home page: http://msft.social/C6Od2n "	478 (9%)

Table 2.3 *Continued*

Content Category	Examples	Frequency (Percentage)
Updates and feedback	"#AppService and Functions hosted apps can now update TLS versions! Find out more"	164 (3%)
Marketing communication		1009 (19%)
Commercial advertising	"Take every moment an adventure! Hold on to those great memories with the HP ENVY Photo printer and Instant Ink. #ReinventMemories http://hp.tl/6008DKWmm "	507 (10%)
Successful business cases	"Real stories of service providers who are transforming their business and disrupting the market with #IBMAalytics: http://bit.ly/2Ac5nm0 "	286 (5%)
Product launch	"Check out these 5 new product launches from @HP! http://hp.tl/6015DwunL #KeepReinventing"	86 (2%)
Sales promotions	"Try #IBM #MaaS360 free for 30 days and breed customer confidence in your #security offering. Exploit the cognitive power of #Watson to prevent attacks on your clients' devices before they can have an effect. http://bit.ly/2sjfH6v "	71 (1%)
Word of mouth	"@anandtech says Intel #Optane SSD 900P is so reliable it's "almost taken all the fun out of testing a #SSD." http://intel.ly/2ERCM95 "	59 (1%)
Corporate, technical, and marketing communication		512 (10%)
Business insights, commercial advertising, info on specialized topics	"Learn how an #IBM partnership can leverage the latest #cognitive technology to solve complex #business problems http://bit.ly/2tVpZQI "	
Corporate and technical communication		325 (6%)
Business insights, communication about technical or specialized topics	"AI is driving digital transformation and is fast becoming a staple of modern marketing organizations: http://ibm.co/2HoW4UW #WatsonMarketing"	

Within corporate communication, we distinguished eight subcategories. The most frequent subcategory was community relations (9%), which involved building relationships with stakeholders by sending greetings, offering entertaining items (e.g., quizzes and games), and promoting community activities (e.g., inviting people for an in-person gaming activity in their local store). The second subcategory was corporate social responsibility (7%), which mostly involved activities that go beyond the companies' self-interest: for instance, removing barriers for disabled people, providing support for social equality and diversity, or protecting the environment. The third subcategory was research and development (6%), in which companies showcased their latest products and technologies or published research findings from their labs. The fourth category was business insights (5%), in which companies shared business-related knowledge, such as how to improve customer loyalty or create brand awareness. The fifth category, partner relations (3%), covered tweets about companies' alliances and collaborations with other parties (e.g., joining other companies to establish a new company or introducing partners in manufacturing). The sixth subcategory, human resources (2%), focused on the companies as employers, providing information about recruitment and corporate working environments and sharing employees' career experience. The seventh subcategory, corporate achievements (2%), announced noteworthy achievements, such as being recognized as most reputable company or getting a high score on relevant rankings. The last subcategory, government relations (1%), involved the companies' public affairs efforts, informing people and influencing lawmakers about legislation and public policy (e.g., safe transportation policies concerning driverless cars, fair immigration processes, or clear operational guidelines for drones).

Within technical communication, we distinguished three subcategories. The most frequent subcategory was information on specialized topics (18%), which focused on technological developments and their implications (e.g., describing how artificial intelligence (AI) and mixed reality will shape the future of learning or how self-driving vehicles can make life easier, providing demos for new products and applications, and sharing programming knowledge for developers). The second subcategory involved user instructions (9%), in which

tweets provided step-by-step procedural and operational information on, for instance, how to install and get started with a product. The third subcategory, updates and feedback (3%), used the platform's interactivity and timeliness to solicit users' feedback on products or manuals or to notify them about software updates and fixes. Within marketing communication, we distinguished five subcategories. The most frequent subcategory was commercial advertising (10%), which involved persuading followers to purchase certain products or services. The second subcategory, successful business cases (5%), included customer stories of how the company's products helped them to achieve their goals. The third subcategory, product launches (2%), announced new products in the market. The fourth subcategory, sales promotions (1%), contained short-term incentives (e.g., coupons, discounts, or free trials) to encourage purchases. The last subcategory, word-of-mouth (1%), included recommendations about companies' products and service from satisfied customers or professional agents (e.g., a computer magazine praising the speed and performance of a laptop, or customers stating that certain products are easy to use).

We found two combinations of main categories. The first was a combination of corporate, technical, and marketing communication (10%), in which companies shared business and management strategies, talked about the latest technologies, and simultaneously promoted their associated products and service. Such content was usually linked to an external article, report, or study giving more detailed descriptions. For example, one of the companies first introduced the importance of brand awareness, then gave a detailed analysis of how brand awareness can be improved through applying the Internet of Things (IoT), and ended by promoting its IoT-related service.

The second combination, corporate and technical communication (6%), resembled the previous one in that it connected technical and business knowledge, but the tweets in this this combined category did not explicitly attempt to promote the companies' products. For instance, a company connected background information about AI with an explanation of how AI will change the marketing landscape of organizations. Tweets in this category, then, did not address specific products but focused more on the industry as a whole.

2.4.3 Message elements

For our analysis of the message elements in company tweets, we used a subsample of the total number of tweets. In many cases, the IT companies reused or passed on information from other accounts without adding any new elements to their retweets. These retweets functioned as recommendations of the original author's information, including content and communication strategies but not adding any new message elements; therefore, we only included original tweets posted by the companies themselves in our analysis, which amounted to 4,068 tweets (77%). Table 2.4 gives an overview of the message elements found in this subsample of tweets.

Most tweets included navigational hyperlinks (88%), hashtags (87%), and visuals (84%). Public messages (26%) and emojis (9%) were considerably less prevalent. Within the visuals, infographics and photos were most often used; other types of visual elements were much less popular.

Table 2.4 *Message elements in company tweets.*

Message Element	Frequency
<i>Navigation hyperlinks</i>	3600 (88%)
<i>Hashtags (#)</i>	3530 (87%)
<i>Visuals</i>	3409 (84%)
Infographics	1489 (37%)
Photos	1075 (26%)
Graphics	285 (7%)
Live streaming video	186 (5%)
GIFs	173 (4%)
Videos	111 (3%)
Screenshots	85 (2%)
Memes	5 (0%)
<i>Public messages (@)</i>	1043 (26%)
<i>Emojis</i>	353 (9%)

Note. Only original tweets of the companies are included here (n = 4,068 tweets).

2.4.4 Communication strategies

Table 2.5 lists the frequency of the communication strategies used in the 5,277 tweets in our sample. The broadcasting of information, merely informing the public about internal and external activities and developments, was the most prevalent communication strategy in the IT companies' tweets (53%). But a considerable number of tweets (40%) were action oriented. The most common action involved promoting events, followed by selling products or services, providing instructions, offering downloads or updates, and calling for feedback (by commenting or filling out a survey). The least prevalent communication strategy focused on community (7%). These tweets, which were aimed at facilitating a dialogue with followers and creating and maintaining an online community, often solicited responses and sometimes responded to public messages.

Table 2.5 *Communication strategies in company tweets.*

Communication Strategy	Example	Frequency
Information	"IBM Releases Tools to Outsmart Machine Learning https://www.esecurityplanet.com/news/ibm-releases-tools-to-trick-machine-learning-at-rsa-conference.html "	2792 (53%)
Action		2093 (40%)
Promoting events	"Are you a developer? Hone your craft with Clint Byrum at #indexconf, Feb. 20-22, 2018 in San Francisco: http://spr.ly/6010Dz10K "	768 (15%)
Selling products or services	"Embrace the #MaaS360 Unified Endpoint Management platform and see why it's great news for service providers. http://bit.ly/2eNyeLi "	655 (12%)
Providing instructions	" http://msft.social/2PwmoE - See how to use #VSTS to build your assets in source control & automate deployment to one or many environments."	509 (10%)
Offering downloads or updates	"Yes, you CAN take it with you! Download the new IBM Verse mobile app for Android: http://spr.ly/6013DKPt or iOS: http://spr.ly/6014DKPtQ "	149 (3%)
Calling for feedback	"Are you a #WatsonSupplyChain user? Click the link and tell us what you think! http://ibm.co/2EbAwlm "	12 (0%)

Table 2.5 continued.

Communication Strategy	Example	Frequency
<i>Community</i>		392 (7%)
Response solicitation	"When it comes to building an amazing #gaming rig— what do you think is the most important thing to include?"	352 (7%)
Responding to public messages	"@ UserID Sweet. We will most definitely be there for that."	40 (1%)

Note: $N = 5,277$.

2.5 Discussion

This study has explored the way that large IT companies use Twitter by analyzing the Twitter accounts and tweets of four large IT companies. Our first main finding is that the IT companies managed large numbers of different Twitter accounts in an apparently meaningful way, confirming the practicality of the advice given by Jansen et al. (2009), Jin and Huang (2017), and Li et al. (2013) that companies should strategically arrange an architecture of different Twitter accounts to optimally reach their various stakeholders. All four companies differentiated between Twitter accounts in a way that largely focused on stakeholders. We discerned three complementary directions of stakeholder orientation. The first type of account focused on specific products instead of on the company behind them. Users and potential users of these products can easily recognize the relevance of these specific accounts, in which technical and marketing communication perspectives might merge. The second type of account explicitly focused on certain stakeholder groups, such as developers or partners. These accounts offered diverse content that was particularly relevant to these stakeholder groups. The account names help stakeholders to find them, but most likely these stakeholders also have other ties with the company that motivate them to use the Twitter account as a channel. In these accounts, companies provide information that might be relevant for these stakeholder groups, describing it from their perspectives. The third type of account used organizational conventions for presenting the company to the outside world (e.g., human resources and news). These

conventions are not only predictable; they are also connected to certain types of stakeholders. By using these conventions, the four companies enabled people to select the right Twitter accounts to follow. Having a clear architecture of Twitter accounts, then, is a good starting point for companies in developing their content strategy.

Our second main finding involves the content of the combined Twitter accounts. To our knowledge, this is the first study to sketch a comprehensive picture of the types of content companies post on Twitter. We found that the traditional domains of corporate, marketing, and technical communication formed a good overall framework for analyzing the content of the Twitter accounts. All three domains appeared to be relevant, with some interesting cross-overs between the domains.

Twitter erases boundaries between the traditional communication domains. Corporate communication on Twitter becomes less isolated and more closely related to companies' daily activities (Argenti, 2006). Within corporate communication, internal and external communication processes become more integrated. Still, the nature of the Twitter content within the corporate communication domain does not seem to differ substantially from that in traditional channels. Technical communication is broadening as a discipline, still providing all sorts of user support but also making sense of technological developments and explaining them to stakeholders. On Twitter, boundaries between technical and marketing communication become less clear as user support and sense making are now a prominent part of the product story. This insight might provide new fuel for the added value discussions within technical communication (cf. Mead, 1998; Redish, 1995). For marketing communication, Twitter provides opportunities to further explore indirect marketing strategies. Z. F. Chen et al. (2017) and Wall and Spinuzzi (2018) found that companies provide nonmarketing content to establish trust, expertise and thought leadership, which in the long run might affect purchasing decisions. As such, the marketing strategy becomes more integrated.

Our third main finding, which involves message elements in tweets, is that the use of navigational hyperlinks, hashtags, and visuals was more common in the

tweets of large IT companies than in previous studies (Lovejoy et al., 2012; Mamic & Arroyo Almaraz, 2013; Swani et al., 2013). To what extent this usage has evolved over time or can be attributed to the specific type of organization in our research is unclear. Visuals were used not only to draw people's attention but also to convey information. But the variation of visuals used was rather limited: Most were infographics or photos. Public messages and emojis were still relatively scarce. The scarcity of emojis might indicate that the use of emojis is considered to be less appropriate in formal communication (Danesi, 2016).

Our fourth main finding is that, as earlier literature suggests, one-way information sharing was the main communication strategy that companies used on Twitter (Capriotti & Ruesja, 2018; Gomez & Vargas-Preciado, 2016; Lovejoy & Saxton, 2012; Rybalko & Seltzer, 2010; Shin et al., 2015; Waters & Jamal, 2011; Yue et al., 2019). Compared to the nonprofit organizations in Lovejoy and Saxton's (2012) study, the IT companies included more tweets with a call to action but fewer tweets contributing to community building. Given the earlier research highlighting the advantages of interactivity, two-way communication, and community building (Guillory & Sundar, 2014; Li et al., 2013; Saffer et al., 2013; Saxton & Waters, 2014; Watkins, 2017), our finding suggests an area in which IT companies might improve. On the other hand, research on people's motives to visit or follow company SNSs indicates that obtaining information is one of the key motives (Azar et al., 2016; Q. Gao & Feng, 2016; Jin & Huang, 2017; Logan, 2014; Muntinga et al., 2011; Taylor et al., 2011; Zhao et al., 2016). Further research is needed in order to gain more detailed and nuanced insights into the possibilities of community building in various company contexts and the pros and cons of a focus on interactivity and engagement.

2.5.1 Limitations and suggestions for future research

Several limitations must be taken into account when interpreting our findings. First, our findings are based on only four large IT companies. In designing our study, we prioritized depth over breadth because we wanted to address both the arrangements of accounts and the characteristics of tweets. Furthermore,

we drew a purposive sample of the largest companies, so we cannot be sure that our findings would also apply to much smaller companies or could be generalized beyond IT companies. At the least, our findings regarding technical communication would not apply to several other types of companies. Future research should investigate the extent to which our findings can be generalized to other IT companies and can apply to other types of organizations. Our coding scheme could be a starting point for such future research.

Second, our findings provide a general overview of the content within the various domains but do not describe the tweets' content in great detail. Future research could further explore what the content in each domain looks like, either by qualitative analysis or by a more detailed system of categories and subcategories. In addition, future research might further explore the relationship between content categories and message elements or communication strategies in order to determine if certain types of content lead to richer messages or more interactivity.

Third, our analyses focused only on the characteristics of the content that the IT companies provided. We did not include the reactions of stakeholders, in terms of likes, comments, and retweets, to the various types of content. Future research could investigate whether certain types of content, message elements, or communication strategies lead to higher appreciation, more engagement, or more retweets.

Fourth, our findings are based only on our content analysis of accounts and tweets. We did not include the objectives, motives, and perspectives of the companies involved in our study. Future research could combine the results of content analysis with in-depth interviews company with representatives who are responsible for the various Twitter accounts.

And fifth, our research focused implicitly on Western contexts. Future research could compare our findings to those in other cultures, such as in China, not only because of the cultural differences but also because the microblog infrastructure (Weibo) is entirely different from that in Western countries (Twitter).

2.5.2 Practical implications

Our findings lead to several practical implications for organizations that have or aspire to a presence on Twitter or other SNSs. The first implication is that it is important to invest in a good architecture of organizational accounts. Our analysis showed that having many different accounts does not have to be a problem as long as they can be clearly recognized by the various stakeholder groups. The principles used by the four IT companies—that is, to have accounts that focus on products, that explicitly address certain stakeholder groups, and that follow traditional conventions—appear to be effective.

The second implication involves the content of organizational Twitter accounts. Organizations should carefully weigh the relevance of corporate, technical, and marketing communication on their Twitter accounts, looking for more integrative approaches and removing strict boundaries between the traditional domains, which can strengthen each other. Within the domain of technical communication, sense making and storytelling about technological developments and their future implications appear to be important on Twitter. Within the domain of marketing communication, the development of indirect, long-term marketing strategies might be relevant.

The third implication involves the use of message elements. Plain tweets appear to be rare nowadays, so it seems relevant to add useful hyperlinks to more information as well as hashtags (#) and public mentions (@) for their embedding in the overall Twitter context. Visual content appears to be important as well, either to draw people's attention or as an alternative and attractive way of conveying information. Our research showed that when considering visual elements, IT companies often used the same types of visuals (infographics and photos). Organizations, then, might consider a broader spectrum of visuals. In any case, creative graphic design experts should form part of an organization's social media team.

The fourth and last implication involves interactivity and community building. Instead of blindly following general advice that organizations should always aim for interactivity and community building on Twitter, companies might identify and focus on specific interactive and community opportunities. Not all

stakeholders on all Twitter accounts will have a preference for interactive participation and community building. Genuine interest, reciprocity, and long-term commitment are important requirements for realizing interactive Twitter accounts and building on a community.

CHAPTER 3

Twitter as a Technical Communication Platform: How IT Companies' Message Characteristics Relate to Online Engagement

Zhang, S., De Jong, M. D.T., & Gosselt, J. F. (2022). Twitter as a technical communication platform: How IT companies' message characteristics relate to online engagement. *Technical Communication*, 69(2), 18-35.

3.1 Introduction

Communicating about technology is increasingly important and multifaceted in our technologized society. Technology is engrained in most aspects of our private and professional lives. User-friendliness may be valued more than ever before, but the affordances of technology are getting progressively more complex. Branding and competition have gained importance in the technological domain and technology firms have become big and influential players in society. The prominent position of technology calls for a broad conception of technical communication, beyond providing user support.

Various developments in the literature reflect the higher demands currently placed on technological products and technical communication. The evolution from usability engineering to a user experience (UX) orientation is an example (Haaksma et al., 2018; Hassenzahl & Tractinsky, 2006). Compared to usability, UX stretches ambitions from optimizing task execution to realizing gratifying experiences, acknowledging that such experiences encompass more than smooth interactions with the product and also depend on, for instance, product usefulness, aesthetics, image, service quality, word of mouth, and news coverage. Abel (2018) therefore argued that the value of technical communication involves every stage of the customer journey.

Another development is an increased attention to technology acceptance (Davis, 1989; Venkatesh et al., 2016) and appropriation (Dourish, 2003; Zamani et al., 2020). Technology acceptance suggests that people's decision to start using certain products depends on several factors, which may be affected by communication (for instance, social influence or perceived ease of use and usefulness). Technology appropriation draws attention to the way users actually co-create technology-in-use by developing their own ways of using it, underusing some of its affordances or finding new and creative usage possibilities. Appropriation can be seen as an individual process, but social influence and exchanges of experiences might play important roles.

Effective technical communication accommodates technology to users (Dobrin, 1983), builds relationships with relevant stakeholders (Andersen, 2014; Bailie

& Urbina, 2013), and helps companies to maintain a strong image in competitive markets (Andersen, 2014; Willerton, 2007). Several scholars suggested that social networking sites (SNSs) can help companies to improve and expand technical communication in practice. Companies, for instance, could use SNSs to provide information about software updates and specific tips and tricks (Katajisto, 2010). The direct link to users makes SNSs suitable for providing timely information, for instance in times of crises and emergencies (Bowdon, 2014; Potts, 2013). The potential of two-way communication gives opportunities for collaborating with users to improve products or manuals (Andersen, 2014; Swarts, 2018), promote user engagement, and build and maintain relationships with stakeholders (Saffer et al., 2013; Chapter 6).

This article focuses on the use of Twitter for technical communication purposes. Twitter is the most prominent microblogging platform worldwide, involving real-time dissemination of short messages (up to 280 words); text may be complemented with visuals, video, or emojis. Hyperlinks can be used to connect tweets to other internet sources, hashtags (#) may connect tweets to larger discussions on the platform, and mentions (@) may link them to other persons or organizations on Twitter.

So far, only two studies empirically investigated how companies use Twitter for technical communication purposes. Lam and Hannah (2017) analyzed how customers seek technical support on Twitter. They found that Twitter was often used for user-support questions, although these help-seeking processes were rather ineffective, were often alternated with complaints about products, and did not lead to engagement or a sense of community. Taking a broader perspective, the study reported in chapter 2 investigated how large information technology (IT) companies use Twitter. They found that the technical communication domain was well-represented in the IT companies' tweets: Roughly one-third of all tweets involved technical communication content (the other domains being corporate and marketing communication). However, this study only provided a general overview of types of tweets and did not explore technical communication in-depth. Moreover, it was entirely descriptive and did not relate the tweets to user responses.

Companies that want to benefit from SNSs in the domain of technical communication need to gain an understanding of the range of possible technical communication content and their effects, and learn how communication strategies (e.g., one-way information sharing vs. action- or community-oriented tweets) and message elements (e.g., hyperlinks, visuals, and emojis) may affect user engagement. A dominant view on user engagement in SNSs research involves online engagement: the extent to which likes, retweets, and replies provide evidence of active use and appreciation, further dissemination, and willingness to interact (e.g., Abitbol & Lee, 2017; Araujo & Kollat, 2018; Saxton & Waters, 2014).

In this article, we describe a first attempt to gather such knowledge for IT companies using Twitter. Taking chapter 2's corpus of tweets as a starting point, we developed a more detailed categorization of technical communication content and analyzed how different types of content, message elements, and communication strategies relate to online engagement, specifically in terms of likes, retweets, and replies. We thus tried to answer the following research questions:

RQ1: *How do large IT companies use Twitter (in terms of content, message elements, and communication strategies) for technical communication?*

RQ2: *What are the effects of different types of content, message elements, and communication strategies on users' online engagement (likes, retweets, and replies)?*

3.2 Literature review

Below, we first discuss earlier research on SNSs within technical communication. After that we give an overview of earlier findings on the message characteristics we studied: content, message elements, and communication strategies. These earlier findings largely originate from other research fields, such as public relations, marketing communication, and human-computer interaction.

3.2.1 Technical communication and SNSs

Technical communication researchers have regularly paid attention to SNSs, but their research mainly focused on the pedagogical uses of SNSs and the roles SNSs play for practitioners and academics. Pedagogical studies addressed the importance of SNS literacy for future technical communicators as well as the way SNSs can be integrated in courses and curricula, often connecting both angles. Based on reflections on social media, the notion of media literacy, and classroom practices, Daer and Potts (2014) developed guidelines for incorporating social media in technical and science communication curricula. Vie (2017) conducted a survey among program administrators of technical and professional communication programs, showing that SNSs have found their way to academic curricula, not only as a recruitment and teaching tool, but also as a topic of interest. Verzosa Hurley and Kimme Hea (2014) argued that a critical disposition toward SNSs is an essential competence for technical communication practitioners and presented a teaching case encouraging students to use and evaluate social media critically. Bowdon (2014) focused on the role of ethos in SNSs and described a classroom project in which students coded Twitter feeds to improve their social media expertise.

Regarding the benefits and consequences of SNSs for practitioners and academics, Ferro and Zachry (2014) explored which types of SNSs are used by knowledge workers in professional settings. They found that various types were popular; Twitter was particularly used for developing associations, learning about topics, conversing with others, and sharing information. On the basis of a case study, Longo (2014) argued that technical communicators should take the participatory nature of SNSs into account, without making the mistake to assume that social media can replace face-to-face interactions. Pigg (2014) studied how SNSs are ingrained in the work practices of a technology consultant: The process of writing documents involved a constant switching between producing text and accessing SNSs. The consultant used SNSs to maintain an online presence and gain access to and leverage communities of practice. Lam (2021) analyzed the themes, members, and networks in the #TechComm community on Twitter. The themes found underline the platform's versatility in members' professional lives, including hands-on work support (authoring tools, DITA, and software documentation), professional

development, job opportunities, academic perspectives, and the STC (plus the STC Summit). Members appeared to be diverse. Analyzing the networks, he discerned a practitioners and an academics network. He then suggested possible bridges between both networks, one of which uses Twitter to gather feedback on academic research, aiming at spreading research findings among practitioners, deepening them with practical insights and experiences, and potentially influencing the research agenda.

A few conclusions can be drawn from these earlier studies. First, many academics and practitioners acknowledge the potential of SNSs for the field of technical communication. Second, the role of Twitter in the external communication of technology companies is a neglected area of research. The attention to SNSs in technical communication programs suggests that future technical communicators will have to consider the possibilities of SNSs, but research to support their future decisions is still scarce. Third, the majority of insights on SNSs are based on reflection and analysis, not on systematically collected empirical data. Research further exploring what technology companies do on SNSs and how this relates to user engagement is needed. This is the contribution we aimed for with our study.

3.2.2 Earlier findings on SNS content

They study reported in chapter 2 distinguished three types of technical communication content that companies share on Twitter: (1) information on specialized topics, focusing on technological developments and their implications, (2) user instructions, offering procedural and operational information for using products, and (3) updates and feedback, using the platform's interactivity and timeliness to seek input from users or alert them of software updates and warnings. These broad categories sketch an overall picture of technical communication content but could be detailed further. Taking this categorization as a starting point, we therefore further analyzed the technical communication content shared by IT companies.

They study reported in chapter 2 did not investigate how users react to the various types of content. The study by Lam and Hannah (2017), focusing on the

use of Twitter for user support, underlines the importance of considering user responses. Their results showed that Twitter is not the effective and straightforward platform for user support as might be expected. The online engagement associated with the posts appeared to be extremely low; most tweets had zero likes, retweets, and replies. We therefore analyzed how various types of technical communication content relate to online engagement.

3.2.3 Earlier findings on message elements

Message elements that can be added to tweets include visuals, video, emojis, hyperlinks, hashtags (#), and mentions (@). The use of such additional elements has been linked with user-friendliness (Abitbol & Lee, 2017), interactivity (De Vries et al., 2012; Liu et al., 2017), and vividness (De Vries et al., 2012; J. Liu et al., 2017). Several studies, conducted almost ten years ago, examined companies' use of such message elements, finding higher percentages for hyperlinks (60%-79%) and hashtags (22%-55%) and lower percentages for mentions (16%-18%), visuals (3%-14%), videos (2%-9%), and emojis (1%-6%) (Lovejoy et al., 2012; Mamic & Almaraz, 2013; Swani et al., 2013; Waters & Jamal, 2011). The more recent study (chapter 2) suggested that the use of these message elements has become more common than before: Tweets consisting of text without additional elements are exceptional. However, none of the earlier studies focused specifically on tweets in the technical communication domain, in which the role of message elements might differ from that in other domains. We thus analyzed message elements used in tweets with technical communication content.

Research into the effects of message elements on user engagement had mixed results. Several studies found that visuals contributed to likes and retweets (Abitbol & Lee, 2017; Ji et al., 2019; C. Kim & Yang, 2017; D.-H. Kim et al., 2015; J. Liu et al., 2017; Saxton & Waters, 2014), but did not affect the number of replies (Abitbol & Lee, 2017; De Vries et al., 2012; D.-H. Kim et al., 2015; J. Liu et al., 2017; Saxton & Waters, 2014). Videos, which may be considered to be even more vivid than visuals, also help to generate online engagement, but not necessarily more than visuals (Abitbol & Lee, 2017; D.-H. Kim et al., 2015). Emojis, too, can lead to more likes and retweets (McShane et al., 2021).

Brubaker and Wilson (2018) and C. Kim and Yang (2017), however, found a negative effect of visuals on the number of replies.

Luarn et al. (2015) found that adding hyperlinks to tweets might result in more likes, retweets, and replies and that hyperlinks are much more effective than visuals and videos. Abitbol and Lee (2017) only found a positive effect on replies, not on likes and retweets. On the other hand, J. Liu et al. (2017), Sabate et al. (2014), De Vries et al. (2012), and Schultz (2017) found that hyperlinks did not influence likes and retweets and even decreased the number of replies. Schultz (2017) found that hashtags increased the numbers of likes and replies but did not influence the number of retweets. Ji et al. (2019) suggested that including too many interactive elements (hyperlinks, hashtags, and mentions) might decrease the likelihood of online user engagement due to a higher cognitive load.

In all, there is too little consistency in previous research findings to formulate hypotheses about the effects of message elements on online engagement. It seems likely that discrepancies between studies are at least partially caused by differences in context. None of the earlier studies focused on technical communication. Our research was therefore exploratory.

3.2.4 Earlier findings on communication strategies

The most researched message characteristic on Twitter is the communication strategy used. Given the interactive possibilities of Twitter, several researchers argued that an optimal use of Twitter (and other SNSs) would involve more than one-way information provision (Culnan et al., 2010; Li et al., 2013; Morsing & Schultz, 2006). To make sense of differences in communication strategies, Lovejoy and Saxton (2012) distinguished between the strategies of information (sharing and distributing info), community (creating a feeling of the community), and action (mobilizing people and encouraging them to take action), a framework that was later adopted in other studies (Saxton & Waters, 2014; J. Wu et al., 2019; Chapter 2). Araujo and Kollat (2018) used the somewhat related distinction between broadcasting, reacting, and engaging. The main difference involves the two interactive strategies: Engaging might be

a strategy aiming for community and action; reacting might be part of a community strategy and a logical follow-up to an action strategy. Other researchers used the broad terms interactivity (Abitbol & Lee, 2017; Luarn et al., 2015; C. Kim & Yang, 2017) or dialogic communication (Rybalko & Seltzer, 2010; Watkins, 2017) for messages exceeding one-way communication provision. Brubaker and Wilson (2018) used the term “crowdsourcing” for soliciting participation and requesting responses.

Most empirical studies on the use of communication strategies on company SNSs found that companies predominantly used SNSs for one-way information provision (Carim & Warwick, 2013; Gomez & Vargas-Preciado, 2016; Guo & Saxton, 2014; Lovejoy & Saxton, 2012; Rybalko & Seltzer, 2010; Shin et al., 2015; Waters & Jamal, 2011; Chapter 2). However, these studies did not focus specifically on the domain of technical communication. Lam and Hannah’s (2017) study, entirely focusing on user support via Twitter, suggests that the choice of communication strategies might be different in tweets within the technical communication domain. We, therefore, analyzed the communication strategies used in the corpus of tweets with technical communication content.

Many studies investigated the effects of communication strategies on online user engagement. Several of them found positive effects of interactive and engaging communication strategies on all or some of the online engagement indicators (likes, retweets, and replies) (Abitbol & Lee, 2017; Araujo & Kollat, 2018; C. Kim & Yang, 2017; Luarn et al., 2015; Saxton & Waters, 2014; J. Wu et al., 2019). In general, community strategies seemed to have more positive effects than action strategies, which in some studies even scored lower than the baseline information strategy (Saxton & Waters, 2014; J. Wu et al., 2019; Chapter 6). Other studies, however, did not confirm that engaging and interactive strategies had a positive effect on online engagement (Read et al., 2019; Watkins, 2017), or even found negative effects of engaging and interactive strategies (Brubaker & Wilson, 2018; Chapter 6).

In our view, the research findings on the effects of communication strategies are too inconsistent to formulate hypotheses, especially because the content of the tweets might play a role. All earlier studies predominantly involved the

domains of corporate and marketing communication, not of technical communication. Therefore, this part of our study was exploratory as well.

3.3 Method

To answer our research questions, we conducted a content analysis of large IT companies' tweets with technical communication content. Chapter 2's coding scheme formed the starting point for our analysis, which was inductively complemented with subcodes that emerged when analyzing tweets. Below, we will describe the corpus of tweets, the coding scheme, the intercoder reliability assessment, and the data analysis.

3.3.1 Corpus of tweets

The companies included in our study were selected from the Fortune 500 Technology and Telecommunications Companies. After excluding companies without Twitter accounts, social media companies, and online retailers and using the requirement that companies should at least have ten different Twitter accounts, we included four companies in our sample: HP (Hewlett-Packard), IBM, Intel, and Microsoft.

We used the company names as search terms in the "Account/ People" tab to gather all company-owned accounts of the companies. Some accounts were officially verified (with a blue verified badge), but others were not. We included all official accounts in the sample. If unverified accounts linked to the companies' Web sites and routinely published official company information, we included them as well. To set aside variations due to national backgrounds, we excluded accounts specifically focusing on certain countries or regions (e.g., Microsoft UK). The final sample consisted of 108 different Twitter accounts:

- HP: 18 accounts
- IBM: 38 accounts
- Intel: 13 accounts
- Microsoft: 39 accounts

Many tweets contained hyperlinks to external materials (e.g., reports about technological developments or videos discussing new software features). As such hyperlinks might illuminate the tweet content, we followed them, read or viewed the materials, and incorporated their content in the analysis.

Data were collected in the weeks of January 10-16, 2018 and April 18-24, 2018. All tweets posted in these weeks were included in the analyses (N = 5,277 tweets). Based on chapter 2's categorization, we limited our analysis to tweets with technical communication content. The final sample for this study included 1,604 technical communication tweets. We used the companies' tweets in the corporate and marketing communication domains (N = 3,623) as a benchmark in some of the analyses. Table 3.1 provides descriptions and examples of the three overall content categories. A sample of all tweets was coded by two independent coders. A Cohen's kappa of .95 indicated a very good inter-coder reliability.

Table 3.1 *Identification of the three overall content categories.*

Content Category	Examples of Tweets
Technical communication Tweets fostering the acceptance and successful usage of current and future technologies in society	9 great articles you might have missed about data management Easy steps to change Microsoft Edge home page: http://msft.social/C60d2n
Corporate communication Tweets building or maintaining relationships with different stakeholders and providing information about the company	We're honored to be recognized on @Forbes' list of World's Most Reputable Companies for the 10th year running. We dedicate ourselves to that same commitment to excellence for the next 10! From energy and water conservation to waste reduction and environmental design, #Intel is reducing our footprint to protect the planet we call home. #EarthDay https://intel.ly/2F1mid8
Marketing communication Tweets promoting or selling products or services	Try #IBM #MaaS360 free for 30 days and breed customer confidence in your #security offering. Exploit the cognitive power of #Watson to prevent attacks on your clients' devices before they can have an effect. http://bit.ly/2sjfH6v Check out these 5 new product launches from @HP! http://hp.tl/6015DwunL#KeepReinventing

For the analyses regarding message elements and online engagement, we had to limit our sample to original tweets. Twitter does not allow users to add new message elements to retweets and only displays engagement indicators for original tweets. For these analyses, the sample consisted of 1,354 (84%) original technical communication tweets and 2,714 (75%) original corporate and marketing communication tweets.

3.3.2 Coding scheme

Our coding scheme consisted of three categories—content, message elements, and communication strategies—and was largely based on the study reported in chapter 2. Each tweet was analyzed according to all three categories.

Regarding content, we used chapter 2's three main technical communication codes as a starting point: (1) information on specialized topics, (2) user instructions, and (3) updates and feedback. Using an open coding process, we inductively developed new subcodes emerging from the tweets.

Regarding message elements, we coded all elements that deviated from plain text, including: hyperlinks, hashtags (#), mentions (@), visuals (e.g., photos and infographics), videos, and emojis.

Regarding communication strategies, we took Lovejoy and Saxton's (2012) framework—distinguishing information, community, and action—as the starting point. This framework had been used by several earlier studies to understand companies' level of interaction and engagement with stakeholders (Saxton & Waters, 2014; J. Wu et al., 2019; Chapter 2). We used the framework's main codes and inductively created subcodes when needed.

Finally, we recorded users' online engagement with the tweets. Twitter provides three indicators of online engagement with tweets: likes, retweets, and replies. For all tweets, all three metrics were recorded approximately one week after they were posted.

3.3.3 Intercoder reliability

Two independent coders analyzed a random sample of 150 tweets. Cohen's kappas were calculated as measures of inter-coder reliability. After two rounds of coding, the intercoder reliability was .80 for main content categories, 0.76 for subcategories, 0.92 for message elements, and 0.87 for communication strategies. All Cohen's kappas indicate sufficient levels of inter-coder reliability.

3.3.4 Data analysis

The analyses for the first research question were largely descriptive. We merely report and illustrate how the IT companies used Twitter, focusing on content, message elements, and communication strategies. However, for message elements and communication strategies, we compared the frequencies in the IT companies' technical communication tweets with their tweets in the other two domains (corporate and marketing communication), using chi-square tests to analyze the significance of the differences.

The analyses for the second research question involved correlations between the independent variables (the message characteristics) and dependent variables (the online engagement indicators). All three dependent variables (likes, retweets, and replies) were count variables with a Poisson distribution. Poisson and negative binomial regression analyses are commonly used to model such data. In our study, the variance of the three dependent variables appeared to be considerably higher than the means (see Table 3.2). Taking this overdispersion of all dependent variables into account, we used negative binomial regression analyses (Cameron & Trivedi, 1998). For the analyses regarding content and communication strategies, we had to choose one of the categories as a baseline to compare the other categories with. For the analysis regarding message elements, we could analyze differences between tweets with and without each element.

Table 3.2 *Descriptive statistics for the three dependent variables*

Dependent Variable	Mean	Variance	Range (Min – Max)
Like	18.02	1143.64	0 – 387
Reply	.41	1.82	0 – 16
Retweet	10.59	275.02	0 – 160

Note: Only original tweets (n=1,354) were analyzed for online engagement.

3.4 Results

The research aimed at answering two research questions. The first question involved the characteristics of the companies' tweets, specifically focusing on content, message elements, and communication strategies. Below, we will present the results regarding these three characteristics first, in separate subsections. The last subsection presents the results of the second research question, focusing on the relationship between tweet characteristics and users' online engagement (likes, retweets, and replies).

3.4.1 Content of tweets

Table 3.3 gives an overview of the main categories and subcategories of message content that emerged from our analysis. A majority of the technical communication tweets involved *information on specialized topics* (60%). Tweets within this main category drew attention to technological developments, tried to sketch the bigger technological picture, or raised awareness for technological possibilities. The second main category involved *user instructions*. Tweets within this category provided people with instructions to actually use technology and are therefore most closely connected to the traditional technical communication themes of manuals, online help, user forums, and helpdesks. The last main category involved *updates and feedback* (10%). Tweets within this category used the platform's affordances to directly connect with users. For all main categories we distinguished subcategories, which will be described in more detail below.

Information on Specialized Topics. Four subcategories were distinguished within the information on specialized topics. Two of the subcategories involved information provision on specialized topics. Raising awareness for technological developments and sketching the bigger picture of technological developments appeared to be important goals of such tweets. We distinguished between *specialized topics for professionals* (22%) and *specialized topics for users* (15%), with tweets addressing professionals (e.g., software engineers or product experts) outnumbering those aimed at normal users. The content of tweets aimed at professionals was clearly beyond the knowledge scope of ordinary users, with topics such as Python, Java 10, future trends of programming language, and artificial intelligence (AI). Most of these tweets explicitly used words like “developer,” “programmer,” or “builder.” The specialized topics for users focused on the impact of technology on daily life. Examples of such topics were the history and future of mobile technology, the impact of AI on agriculture and manufacturing, the impact of 5G on our daily lives, or forecasts of what life will be like five years from now. Trendy topics like self-driving cars, smart cities, AR/VR applications, IoT, and 5G were often addressed.

The two other subcategories drew attention to possible benefits of technology. The first, *product features* (21%), were close to technical marketing. Tweets in this subcategory described available functionalities, configurations, or capabilities of products or services. Tweets demonstrated the advantages and characteristics of products and services without explicitly trying to persuade people to buy them. The second, *tips and tricks* (2%), bordered user support. Tweets in this category provided directions for using technology more efficiently—e.g., the keyboard shortcut of Windows 10 to hide or display the desktop, the recovery of files from the recycling bin, or the customization of the browser appearance.

Table 3.3 Content of the technical communication tweets.



Main Category	Subcategory	Description	Example	Frequency (%)
Information on specialized topics (N = 962, 60%)	Specialized topics for professionals	The tweet provides specialized information to developers or IT professionals (e.g., programming concepts, software development knowledge).	5 things you didn't know about Java 10	346 (22%)
	Product features	The tweet describes, explains, or demonstrates the functionality of specific products or services (e.g., a demo introducing what a software is capable of doing).	Check out this short introduction of the #IBMCloudPrivate platform, and discover how it could work for your customers: http://bit.ly/2zYKJJX	340 (21%)
	Specialized topics for users	The tweet introduces or explains technical products, concepts, trends, applications, or expectations.	 Dance your way to a better understanding of collaborative robots, aka #cobots: http://msft.social/zgRmEj	245 (15%)
	Tips and tricks	The tweet provides information aimed to optimize user experience (e.g., the optimal use of a device).	Customizing the appearance of your Chromebook is half the fun! Check out these cool tips: http://hp.care/2zl7vD2	31 (2%)
	Instructions for professionals	The tweet provides developers with tutorials, manuals, or instructions for building apps or designing software.	Developers, this new code pattern shows you how to use visualizations and analytics in your apps http://ow.ly/qoGD30jB3nN #Angular #NodeJS #IBMCode	390 (24%)
User instructions (N = 478, 30%)				

Table 3.3 Continued.

Main Category	Subcategory	Description	Example	Frequency (%)
Updates and feedback (N = 164, 10%)	Instructions for users	The tweet provides users with procedural information about how to use a product or how to perform a task.	 Do you know how to replace the ink in your Deskjet, Officejet, or HP Envy All-in-One printer? Check out these videos and steps: http://hp.care/2juCpLP	72 (4%)
	Troubleshooting	The tweet provides a guide to help users to detect, diagnose, and correct problems in emergent and ill-defined situations.	Video driver error message? Check out this guided troubleshooter for some answers: https://hp.care/2j565cd	16 (1%)
	Updates information	The tweet informs about software updates, new features added, and bugs fixed.	Preview build 17074 is available to insiders, with lots of new features in Edge: * Variable fonts * Notifications API for extensions * Vertical docking for DevTools * Push notification fixes * Credit card autofill * Extensions InPrivate * PDF/EPUB improvements And lots more!	149 (9%)
	Feedback solicitation	The tweet seeks input or feedback in product development and information design processes.	What do you look for in docs? What's missing? What's good? The @docsmsft team is listening and wants your feedback. https://docs.microsoft.com/en-us/teamblog/help-make-docs-microsoft-com-better...cc//@erinrifkin	12 (1%)
	Warnings and alerts	The tweet informs about product-related security vulnerability, safety recalls, or potential risks.	IBM Security Bulletin: API Connect Developer Portal is affected by Drupal vulnerability (CVE-2018-7600) https://ibm.biz/BdZgJf #askIBMStorage @IBMStorageSupt	3 (0%)

User Instructions. Three subcategories emerged regarding user instructions. Two of them involved how-to information: *instructions for professionals* (24%) and *instructions for users* (4%). Again, the tweets for professionals clearly outnumbered those for users. The instructions for professionals involved specialized tasks such as building an app or chatbot or designing a cloud-powered AI platform. Instructions for users provided step-by-step information about how to use a product or perform certain tasks, focusing on more or less regular tasks with the products—e.g., how to use cloud storage to store, share, and access documents securely or how to change a product’s settings. The last subcategory was *troubleshooting* (1%). Tweets in this subcategory provided stepwise technical support to help users solve ill-defined or emergent technical problems—e.g., how to cope with video driver error messages or how to solve problems with scanning. These tweets might be generic responses to frequent user problems companies became aware of.

Updates and Feedback. Three subcategories were distinguished within updates and feedback, all benefitting from the direct connections facilitated by Twitter. Two subcategories focused on real-time dissemination of important information. The first was *updates information* (9%), drawing attention to software updates, the release of new versions, or improved or new features of software. The second was *warnings and alerts* (0%, only 3 out of 1604 tweets) and focused on risks that companies became aware of—e.g., a safety recall of PC batteries, or a security breach of software. The third subcategory used the interactive features of Twitter: Under *feedback solicitation* (1%), companies, for instance, explored users’ satisfaction with and points of improvement for products or sent out surveys.

3.4.2 Message elements

Table 3.4 gives an overview of the message elements included in the companies’ technical communication tweets. We only analyzed original tweets, as companies cannot add new message elements in their retweets. Most tweets contained hyperlinks (96%), hashtags (81%), and visuals (79%); mentions (21%) were less frequently used and emojis (5%) were rarely used. Among the various types of visuals, infographics and photos were most popular, while

other sorts of visual elements were seldom used. In general, the results suggest that plain-text tweets are exceptional.

Table 3.4 *Message elements in technical communication versus corporate and marketing communication tweets.*

Message Element	Frequency Technical Communication Tweets (%)	Frequency Marketing and Corporate Tweets (%)	Chi-Square Test
Hyperlinks	1,303 (96%)	2,297 (85%)	$\chi^2 (1) = 119.4, p < .001$
Hashtags (#)	1,100 (81%)	2,430 (90%)	$\chi^2 (1) = 54.2, p < .001$
Visuals	974 (72%)	2,138 (79%)	$\chi^2 (1) = 23.5, p < .001$
Infographics	472 (35%)	1,017 (37%)	$\chi^2 (1) = 2.7, p = .10$
Photos	252 (19%)	823 (30%)	$\chi^2 (1) = 63.7, p < .001$
Graphics	116 (9%)	169 (6%)	$\chi^2 (1) = 7.6, p < .01$
Screenshots	80 (6%)	5 (0%)	$\chi^2 (1) = 144.7, p < .001$
GIFs	52 (4%)	121 (4%)	$\chi^2 (1) = 0.8, p = .36$
Memes	2 (0%)	3 (0%)	$\chi^2 (1) = 0.1, p = .75$
Video	97 (7%)	200 (7%)	$\chi^2 (1) = 0.1, p = .81$
Mentions (@)	281 (21%)	762 (28%)	$\chi^2 (1) = 25.4, p < .001$
Emojis	63 (5%)	290 (11%)	$\chi^2 (1) = 41.5, p < .001$
Total	1,354	2,714	

Note: Only original tweets of the companies are included in the analysis

A comparison of the companies' technical communication tweets with their tweets in the domains of corporate and marketing communication revealed various significant differences. The technical communication tweets used significantly more hyperlinks, graphics, screenshots, and videos than the corporate and marketing communication tweets, which might underline an inherently more complex nature of the information conveyed in the tweets. Their more limited use of several other message elements illustrated two other underlying differences: (1) The use of fewer hashtags and mentions showed that the technical communication tweets were less frequently connected to broader discussions and other actors on Twitter, and (2) the use of fewer

visuals (particularly photos) and emojis showed that vividness and attractiveness might be valued less in the technical communication domain than in corporate and marketing communication.

3.4.3 Communication strategies

Table 3.5 gives an overview of the communication strategies found in the companies' tweets. In addition to the three main strategies (communication, community, and action), four action strategies emerged from our data. We found that tweets aiming at action are dominant in technical communication tweets, followed by tweets aiming at providing information. Tweets focusing on community building were entirely missing in our sample. Of the four action strategies, providing instructions was the most prevalent, followed by promoting events and offering downloads or updates; calling for feedback only happened sporadically.

A comparison with the communication strategies used in the domains of corporate and marketing communication showed that the strategies used in the technical communication domain differ significantly in the other domains ($\chi^2(2) = 5623.6, p < .001$). Compared to the technical communication tweets, the tweets in the other two domains focused more on information and community, and less on action.

3.4.4 Relation between message characteristics and online engagement

To explore the relation between message characteristics and the dependent variables (likes, retweets, and replies), we conducted three negative binomial regression analyses, one for each dependent variable. The results of these analyses are summarized in Table 3.6. Regarding content, the analyses showed that tweets involving *user support* and *updates and feedback* led to more online engagement than tweets involving *information on specialized topics* did. Tweets in the category of *user support* resulted in more likes and retweets, but not replies. The latter might be related to the nature of these tweets: Expressions of gratitude and feedback on instructions might be expected, but vivid discussions are less likely. Tweets in the category of *updates and feedback* did better on all three dependent variables.

Table 3.5 *Communication strategies in technical communication versus corporate and marketing communication tweets.*

Communication Strategy	Technical Communication Example	Frequency Technical Communication Tweets (%)	Frequency Marketing and Corporate Tweets (%)
Information	With 3D printed parts, @NASA could significantly lower the cost of building rockets. http://hp.tl/6015DKEx3 #3Dprinting"	624 (39%)	2,168 (60%)
Community	[No example available]	0 (0%)	392 (11%)
Action			
Providing instructions	Learn how to utilize #ElasticDatabase client library to create and manage scaled-out databases:	980 (61%)	1,113 (31%)
Promoting events	Developers, architects, middleware administrators, IT managers. You are invited to the upcoming, complimentary WebSphere Liberty V18.0.0.1 Virtual Proof of Technology (vPOT) session scheduled on April 23 rd from 9 am to 11 am ET. http://spr.ly/6016DwiZr	478 (30%)	31 (1%)
	#MicrosoftEdge improvements, Quiet Hours, Improved Storage Settings, and more. Check it out. #Windows10 #WindowsInsiders	341 (22%)	427 (12%)
Offering downloads or updates	Are you a #WatsonCommerce user? We'd love to hear your experience with our solutions. Please leave a review on @G2Crowd - http://ibm.co/2HFm2n1 #WatsonCommerce"	149 (9%)	0 (0%)
Calling for feedback		12 (1%)	0 (0%)
Total		1,604	3,623

Table 3.6 Results of negative binomial regression analyses.

	Likes		Retweets		Replies	
<i>Content</i>	B (SE)	Exp (B)	B (SE)	Exp (B)	B (SE)	Exp (B)
User instructions	(base category)		(base category)		(base category)	
Information on specialized topics	-.42 (.27)	.65***	-.44 (.11)	.65***	.31 (.24)	1.36
Updates and feedback	.87 (.12)	2.39***	.65 (.13)	1.92***	1.54 (.27)	4.66***
<i>Message Elements</i>						
Hyperlinks	-.57 (.22)	.57**	-.15 (.20)	.86	-.82 (.39)	.44*
Hashtags (#)	.02 (.11)	1.02	.18 (.09)	1.19*	-.50 (.20)	.61*
Visuals	.41 (.10)	1.51***	.35 (.09)	1.43***	.69 (.22)	2.01**
Video	.80 (.17)	2.23***	.67 (.16)	1.96***	.94 (.33)	2.58**
Mentions (@)	.06 (.10)	1.06	.16 (.09)	1.18*	.17 (.19)	1.18
Emojis	.39 (.20)	1.48*	.30 (.17)	1.35*	.54 (.35)	1.72
<i>Communication Strategy</i>						
Information	(base category)		(base category)		(base category)	
Action	-.42 (.11)	.67***	-.50 (.10)	.61***	-.17 (.22)	.84

Note: *** p < .001, ** p < .01, * p < .05.

Regarding message elements, the analyses showed that particularly elements that make tweets more lively, entertaining, or playful resulted in online engagement. Tweets with visuals and videos did better on all three dependent variables than tweets without these elements. Even the use of emojis had a positive effect on the numbers of likes and retweets. The two elements that can be used for connecting tweets to other contributions on Twitter—hashtags and mentions—only had a positive effect on the numbers of retweets. However, hashtags led to fewer replies, possibly due to a reluctance to take part in larger discussions on Twitter. Hyperlinks had negative effects on the numbers of likes and retweets, not on the numbers of replies. In the literature, an increased cognitive load has been suggested as an explanation for lower engagement in the case of hyperlinks. An alternative explanation would be that hyperlinks lead users away from tweets, which reduces the tweets' role to merely being the entrance to the message behind the link, which might make users less inclined to express engagement with the tweets themselves.

Regarding communication strategies, our analyses showed that the information strategy led to more online engagement than the action strategy for two of the three dependent variables (likes and retweets). This might reflect the fact that the action-oriented tweets actually call for entirely different types of user engagement: using instructions, registering for events, downloading software, and, only in very few cases, providing feedback or other input.

3.5 Discussion

3.5.1 Main findings and implications

This study investigated large IT companies' use of Twitter for technical communication purposes, focusing on current practices and their relation to online engagement (likes, retweets, and replies). Several insights emerged from our data. The first is that technical communication is an important domain in the Twitter activities of technology companies. Almost one third of all tweets posted by the IT companies had technical communication content. This finding suggests that SNSs have become an important element in the

technical communication practice of companies and therefore should be an important theme in technical communication research and education.

Closely related to the first observation, it also became clear that the companies' use of Twitter further expands the field of technical communication. Even though supporting users remains a central and much appreciated content element, our results showed that such content is complemented with several other types of communication facilitating relationships between people and technology—e.g., bolstering the company's image and reputation, telling the bigger story of technological developments, immediately alerting users of updates, bugs, or risks, bridging gaps between product functionality and practical use, raising people's interest in current and future technological products, and maintaining lasting relationships with relevant stakeholders. This broadening of content reflects the platform's possibilities discussed in earlier studies, such as providing timely information (Bowdon, 2014; Katajisto, 2010; Potts, 2013), interacting and collaborating with users (Andersen, 2014; Swarts, 2018), and, to a lesser extent, promoting user engagement and building and maintaining relationships with stakeholders (Saffer et al., 2013; Chapter 6). Twitter also is used as a niche platform to communicate with professionals: Within the main categories of *information about specialized topics* and *user instructions*, tweets aimed at professionals outnumbered those aimed at regular users. In all, the content of technical communication on Twitter is broad and multifaceted.

A third observation involves the message elements included in tweets. Within the technical communication domain, the usage of message elements appeared to primarily support the explanation of complex subject-matter (with hyperlinks, graphics, screenshots, and videos), focusing less strongly on enhancing the vividness and attractiveness of tweets. This observation is based on a comparison with tweets of the same four companies in the corporate and marketing communication domains. It is imaginable that the differences will even be larger with tweets of non-technological firms. As vividness and attractiveness appeared to be important features for generating online user engagement, it might be worthwhile to explore options of adding more of these message elements in technical communication tweets. This seems to be in line

with the general development in the field from usability engineering to UX (Haaksma et al., 2018; Hassenzahl & Tractinsky, 2006).

A fourth insight involves the use of communication strategies. The technical communication tweets differed considerably from the tweets in the corporate and marketing communication domains: Action was the dominant strategy and none of the technical communication tweets aimed at community building. It could be interesting to explore possibilities and effects of community-building tweets within technical communication. One can think of communities of practice, among regular users and particularly among professionals. Building communities could enhance the effectiveness of many communication activities: Alerting users, raising their awareness of and interest in new products, optimizing their use of products, and maintaining a favorable company reputation will be easier in a lively community. Of course, the viability of communities depends on many factors and success is not guaranteed, but our findings suggest that the companies did not even try to work toward such communities.

Our last observation involves the online engagement indicators that we used. Just like other studies into the effects of organizations' SNSs on people, we used the readily available numbers of likes, retweets, and replies as indicators of users' engagement. Considering some of our surprising findings, we have to relativize the importance of these indicators. The first finding is that action tweets generate less online engagement than tweets merely broadcasting information. This is a puzzling result—although corroborated by some earlier studies (Saxton & Waters, 2014; J. Wu et al., 2019; Chapter 6)—as most literature suggested the opposite (Culnan et al., 2010; Li et al., 2013; Lovejoy & Saxton, 2012). However, many of the action tweets within the technical communication domain call for activities that may easily distract users' attention to the tweets themselves. If users, for instance, read a tweet about a software update, they will primarily decide whether to download the update or not. Liking the tweet may not be the first thing on their minds, even if they gratefully download the update. Retweeting does not really make sense as they may assume that all people in need of the update will be exposed to the same message. Replying is unlikely because the tweet cannot be seen as the start of a

discussion. The real indicator of engagement would be how many people actually downloaded the update. The other surprising finding is that hyperlinks are negatively related to online engagement. It is imaginable that users forget all about the tweet after following the hyperlink. The real engagement indicator here is how many people actually followed the hyperlink. The online engagement indicators might be typical examples of low-hanging fruit, which could be complemented with more sophisticated and context-sensitive indicators of user engagement. Our results can be seen as a plea for a more comprehensive view on online user engagement, comprising immediately visible (likes, retweets, and replies) and less visible (downloads, followed hyperlinks) indicators of engagement and relating them to the types of appeals that are made in tweets (or, for that matter, other SNS posts).

3.5.2 Limitations and suggestions for future research

Three limitations must be taken into consideration when interpreting our findings. A first limitation involves our sample. We included four large IT companies in this study and it remains to be seen whether our findings also apply to other types of technology companies. It is imaginable that smaller companies, companies in different technology branches, companies with different mixes of regular users and professional users, or companies that focus more strongly on brand attachment, image, and relationships with stakeholders would generate (partially) different results. Future research could further explore the applicability of our findings to different types of companies.

A second limitation involves the age of our data. We collected our data in 2018. As developments on social media go fast, we cannot exclude that some specific results may have changed over time, for instance reflecting developments in companies' communication strategies. Follow-up research, preferably periodically mapping the development of technical communication tweets over time, would be interesting. Our research strategy and codebook can be used in such research and our findings may serve as a benchmark to compare future results with.

A third limitation is that we used likes, retweets, and replies as indicators of online engagement. These indicators are certainly meaningful: Likes give an indication of users' appreciation, retweets actually contribute to the dissemination of informations, and replies indicate actual interaction with the company. But our findings suggest that users' inclination to like, retweet, or reply may not be the entire story when it comes to online engagement. Developing other possible measures of user engagement, comparing and validating different indicators, and understanding why users decide to like, retweet, or reply would be essential steps in developing a more comprehensive overview of the way SNSs can promote online engagement.

3.5.3 Conclusion

Our research showed that Twitter is a platform on which technical communication plays a significant role. Although user support is a prominent aspect in the companies' Twitter accounts, the content of technical communication tweets represents more comprehensive perspectives on the human-technology relationship. Our findings provided two considerations that might be beneficial for technical communication tweets: more attention to message elements that enhance the attractiveness and vividness of tweets and more attention to community-building as a message strategy. Furthermore, they relativize the universal importance of online engagement indicators (likes, retweets, replies) and call for more comprehensive research on user engagement. In all, our study showed that technical communication activities of technology companies are a highly relevant study object, which may contribute to a broader conception of technical communication, stronger positions of technical communication practitioners in companies, and a stronger position of technical communication in the range of academic communication disciplines.

CHAPTER 4

Cultural Differences in Microblogging: How Western and Chinese IT Companies Use Twitter and Weibo

4.1 Introduction

In our digitalized world, social networking sites (SNSs) have become important channels for companies to build and maintain stakeholder relationships, promote products, and provide services. When people need information about companies, brands, or products, they use SNSs more frequently than websites (Men & Tsai, 2014). The popularity of SNSs helps companies to reach stakeholders beyond national borders. But international communication comes with challenges. SNS content may be affected by cultural differences (Capriotti & Ruesja, 2018; Prakash & Majumdar, 2021) and companies must balance between overall consistency and culturally appropriate content (De Mooij, 2014). Customizing communication may be important to appeal to specific international markets (Florenthal & Chao, 2016b; Men & Tsai, 2012; Tsai & Men, 2017). Carefully considering cultural differences may contribute to users' appreciation of posts (Y. Liu et al., 2020) and might even enhance business performance (Shi & Xu, 2020). Knowing how companies use global and local platforms in international settings is an important step toward effective cross-cultural communication on SNSs.

This study focuses on companies' activities on two microblogging platforms: Twitter and Sina Weibo (Weibo hereafter). Twitter is the most prominent microblogging platform worldwide, Weibo its Chinese counterpart. Microblogging involves real-time dissemination of short messages, consisting of at the most 280 (Twitter) or 2,000 (Weibo) characters. Text may be replaced by or complemented with elements such as visuals, video, audio, hyperlinks, or emojis. Both platforms facilitate immediate and interactive communication and are thus suitable for effectively disseminating information and building stakeholder relationships (Potts & Jones, 2011). The similarity of the two isolated platforms offers opportunities to study cross-cultural differences in companies' SNS presence and the way Western companies adapt their SNS activities to the Chinese market (Han et al., 2016).

This article describes a content analysis comparing how four large Western IT companies use Twitter and Weibo and how their adaptations relate to the way four similar Chinese IT companies use Weibo. We focused on large IT

companies, because they are assumed to have more advanced social media usage than other industries (Culnan et al., 2010; Veldeman et al., 2017). We aimed at a comprehensive analysis of their microblogging practices, comprising numbers and types of accounts and three message characteristics (content, message elements, and communication strategies). By doing so, we answered two research questions: (1) How do Western and Chinese IT companies differ in their use of microblogging? (2) How do Western IT companies localize their microblogging activities from Twitter to Weibo?

4.2 Literature review

Research confirms that companies may benefit from microblogging. Twitter and Weibo are low-cost channels with enormous user bases, capable of delivering timely information and reducing information asymmetry (Prokofieva, 2015; Zu et al., 2019) and strengthening the relationship customers have with products, brands, and companies (Laroche et al., 2013). Accounts on both platforms may enhance companies' financial performance (Majumbar & Bose, 2019; Zu, Diao, & Meng, 2019) and stock market value (Dong et al., 2018; E.-H. Kim & Youm, 2017).

Two types of research on companies' usage of Twitter and Weibo can be distinguished: monocultural studies and cross-cultural comparisons. Most monocultural research focused on Twitter; research on Weibo is scarcer. We will first discuss monocultural findings on Twitter and then take them as a starting point for discussing monocultural research on Weibo and cross-cultural comparisons.

4.2.1 Monocultural studies on companies' use of Twitter

Companies' use of Twitter has been extensively studied in Western contexts (Olanrewaju, 2020). Research focused strongly on message characteristics, specifically on content, message elements, and communication strategies. Content-wise, most studies analyzed specific communication domains, such as corporate social responsibility (Araujo & Kollat, 2018; Gomez & Vargas-Preciado, 2016), customer services (Berry, 2018; Einwiller & Steilen, 2015;

Page, 2014), public affairs (Gaither & Austin, 2016; Watts et al., 2019), or health promotion (Park, Rodgers, & Stemmler, 2013). Chapter 2 gave a comprehensive overview of types of content IT companies post on Twitter, covering a variety of topics within the domains of corporate, marketing, and technical communication. Regarding message elements, research showed that tweets consisting of plain text are rare; most company tweets contain visuals, hyperlinks, or hashtags (e.g., Lovejoy et al., 2012; Chapter 2). Emojis are seldom used (Waters & Jamal, 2011; Chapter 2). Regarding communication strategies, the main discussion involves the extent to which companies try to benefit from the interactive and engaging affordances offered by Twitter. Findings suggest that companies predominantly share information on Twitter, without fully utilizing more engaging possibilities like establishing dialogue, calling for action, and building communities (Gomez & Vargas-Preciado, 2016; Lovejoy & Saxton, 2012; Rybalko & Seltzer, 2010; Shin et al., 2015; Chapter 2).

The study reported in chapter 2 investigated companies' use of multiple Twitter accounts. Literature suggests that using different Twitter accounts might help companies in addressing different stakeholder groups (Jansen et al., 2009; T. Li, et al., 2013). Chapter 2 found that companies indeed host many different accounts and arrange them meaningfully using three basic principles: a focus on products, explicit stakeholder labels, and conventional content areas.

4.2.2 Monocultural studies on the corporate use of Weibo

Fewer studies investigated how companies use Weibo. In line with the Twitter research, studies on message characteristics concentrated on content, communication strategies, and message elements, with largely comparable results. Regarding content, research focused on the use of Weibo for marketing and promotion purposes, specifically in the cultural (X. Li & Duan, 2018; J. Chen et al., 2020), health (Q. Song et al., 2019), and non-profit sectors (Tian et al., 2021). Comprehensive overviews of Weibo content are not available. Regarding message elements, Y.-Y. R. Chen and Fu (2016) found that corporate weibos rarely consist of only text, but F. Gao (2016) found that the possibilities of adding videos, visuals, hyperlinks, and hashtags are not optimally used by

many Chinese non-profit organizations. Zhou and Pan (2016) reported that emojis served to engage users. Concerning communication strategies, research showed that information sharing is prevalent on Weibo as well (F. Gao, 2016; Zhou & Pan, 2016).

No empirical findings are available on how Chinese companies use multiple Weibo accounts. Research by Jin & Huang (2017), however, confirmed that having different corporate accounts enhances people's microblog identification, especially for well-known companies.

4.2.3 Cross-cultural studies comparing Twitter and Weibo

Two types of cross-cultural studies can be distinguished. The first is deductive, testing whether cultural differences established in existing theoretical frameworks—especially Hofstede's cultural dimensions (Hofstede, 2001; Hofstede et al., 2010) and Hall's distinction between high- and low-context cultures (Hall, 1976)—can be identified when comparing Twitter and Weibo. R. Wang et al. (2020) analyzed multinational luxury brands' communication strategies on Twitter and Weibo. They found a clear impact of culture, particularly regarding Hofstede's dimensions of collectivism-individualism and indulgence-restraint. On Twitter, with its diverse cultural environment, luxury brands tried to be neutral and inclusive. On Weibo, situated in the more collectivistic and restrained Chinese culture, luxury brands not only connected more to collectivistic values, but also appealed more to individualism and indulgence, which reflects the nature of luxury goods. A problem of such deductive approaches is that differences between microblogging platforms in reality might depend on more than just the selected cultural dimensions.

The second research type is inductive, comparing specific aspects of microblogs and trying to tie findings to theoretical notions afterwards. Below, we will discuss the comparative findings for the three message characteristics.

Content. Research comparing the content of corporate microblogs predominantly focused on marketing and corporate communication. The main discussion involved the prevalence of corporate/product-related versus

corporate/product-unrelated content. Different studies led to different conclusions. X. Zhang et al. (2014) compared global brands' use of Twitter and Weibo, finding that brands posted more product-related promotional content on Twitter and more relationship-oriented content on Weibo. These findings confirmed earlier research by Men and Tsai (2012) who compared companies' use of Facebook and Renren: They also found that Western companies generally posted content directly related to their products and corporate achievements, whereas Chinese companies posted more educating and entertaining messages, including posts that seemed completely irrelevant to the company or its products. Such differences may be framed in terms of low-context versus high-context cultures: In (Western) low-context cultures, people are used to direct forms of communication; in high-context cultures such as China, communication tends to be more indirect, aiming for long-term relationships rather than explicitly trying to immediately persuade people (Hall, 1976).

One study, however, had opposite findings. Comparing luxury hotels' use of Twitter and Weibo, W. Wu et al. (2016) found that Weibo was more often used for advertising and sales promotion than Twitter, which might reflect the fast developments of online commerce in China. Other studies found that companies used similar strategies on both platforms. C. Li and Wu (2018) compared how top global brands try to build positive images on Twitter and Weibo, finding that companies on both platforms put more effort in building interpersonal relationships with the public than in providing corporate information and calling attention to accomplishments. Ngai et al. (2020) compared how global companies from China and Germany used Weibo, finding that Chinese and German companies posted similar proportions of content on products/services, corporate achievement, and relationship building. These findings suggest an accelerated globalization of corporate practice and an emergence of a global corporate culture.

Message elements. Research found that companies in China use more non-textual cues on SNSs than Western companies do, including emojis (R. Wang et al., 2020; D. D. Wu & Li, 2018; X. Zhang et al., 2014) and visuals (R. Wang et al., 2020; W. Wu et al., 2016). A possible explanation is that Chinese people have a

stronger visual orientation than Western people (Q. Li et al., 2020), which might be attributed to their pictographic script (Y. Wang & Y. Wang, 2009) or their high-context culture. X. Zhang et al. (2014) suggested that differences between both platforms might also play a role: Weibo offers considerably more different emojis than Twitter does. Western companies, on the other hand, appeared to use more hyperlinks (Men & Tsai, 2012; W. Wu et al., 2016), hashtags (W. Wu et al., 2016), and mentions (Florenthal & Chao, 2016b; W. Wu et al., 2016). This might reflect the difference between high-context and low-context culture: Hyperlinks, hashtags, and mentions can be seen as explicit text elements, which makes them more suitable for low-context cultures (H. Kim et al., 2009).

However, familiarity with the platform and embedding in the platform's context might influence the use of message elements. Florenthal and Chao (2016b) compared Western and Chinese companies' use of message elements on Weibo and Twitter, finding that companies outperformed their counterparts on their home platform: Chinese companies used more interactive elements on Weibo than Western companies, whereas Western companies used more interactive elements on Twitter than Chinese.

Communication strategies. Regarding the use of communication strategies, research revealed different levels of engagement and interaction. Chinese companies were found to be more interactive than Western companies (Florenthal & Chao, 2016ab; Huang et al., 2017; Waters & Lo, 2012; D. D. Wu & Li, 2018). They more often solicited feedback, requested action, and tried to develop a sense of community. This might be attributed to differences between individualistic and collectivist cultures. Individualistic Western cultures value individual expression more; social media are predominantly used to distribute information, aiming at increasing popularity and attracting followers. In China, social media usage can be seen as a form of collectivist behavior, aimed at promoting togetherness, harmony, and interpersonal relationships (Florenthal & Chao, 2016b; C. Li & Wu, 2018; Yuan, 2019).

4.3 Method

We used content analysis to answer our research questions. We systematically analyzed how Western IT companies use Twitter and Weibo, with comparable Chinese IT companies' usage of Weibo as a benchmark. We used coding schemes from earlier research on companies' use of Twitter (Chapter 2) and communication strategies (Lovejoy & Saxton, 2012). To ensure the reliability of our findings, we included inter-coder reliability assessment in our procedure. We will elaborate on these elements below.

4.3.1 Corpus

This study compares three kinds of corporate microblogging accounts: Western Twitter accounts, Western Weibo accounts, and Chinese Weibo accounts. For Western companies, we selected four of the top 10 Fortune 500 Technology and Telecommunications Companies, excluding online stores (Amazon), social media companies (Facebook), and companies without accounts (Apple). To analyze companies' arrangement of different accounts, we required that each company needed to have at least ten different accounts. The companies that met all inclusion criteria were HP, IBM, Intel, and Microsoft. For Chinese companies, we selected four similar companies with global counterparts from China's Top 100 Electronic Information Companies. Using the same selection criteria as for the Western companies, we selected Huawei, Lenovo, Xiaomi, and ZTE.

We gathered all Twitter and Weibo accounts of the Western companies and all Weibo accounts of the Chinese companies. The results were then filtered using the "account/people" tab to ensure that only company-owned accounts were included. Not all accounts could be verified as official company accounts. Only unverified accounts that systematically posted official company information and included a link to the company website were included. To set aside national, regional, and cultural variations, we excluded Twitter accounts aiming at specific countries (e.g., "Microsoft India") and Weibo accounts aiming at specific provinces or regions (e.g. "Huawei Jiangsu").

Tweets and weibos often contained links to external materials. As such links help to explain microblog content, we followed each link, read its material, and included its content in the analysis.

Data for both platforms were collected in two weeks: January 10-16, 2018 and April 18-24, 2018. All tweets and weibos posted during these two weeks were included in the corpus. In total, we analyzed 5,277 tweets and 543 weibos by Western companies, and 1541 weibos by Chinese companies, accounting for a total of 7,361 microblogs (see Table 4.1).

4.3.3 Coding Scheme

A coding scheme was constructed with three main categories, based on and adapted from previous research. For the microblog content, we used the comprehensive framework by chapter 2 as a starting point. The framework consists of three main categories (corporate, marketing, and technical communication), possible combinations of these categories (e.g., corporate and technical communication; corporate, marketing, and technical communication), and 18 subcategories (see Appendix).

For message elements, we focused on deviations from plain text, distinguishing the following features: hyperlinks, hashtags (#), mentions (@), visuals, video, and emojis.

For communication strategies, we used the framework developed by Lovejoy and Saxton (2012), consisting of three main categories (information, action, and community) and eleven subcategories. We used the subcategories as a starting point, but inductively created new subcategories when needed.

4.3.4 Inter-coder reliability

Two coders coded a random sample of 150 microblogs independently. Each microblog was coded for its content, message elements, and communication strategy. After two rounds of coding, Cohen's kappas were 0.88 for content, 0.92 for message elements, and 0.87 for communication strategies.

Table 4.1 Overview of the corpus of microblog accounts and posts.

Platform	Company	Number of accounts	Number of microblogs in week 1	Number of microblogs in week 2	Total number of microblogs
Twitter	IBM	38	1651 (31%)	1315 (25%)	2966 (56%)
	Microsoft	39	636 (12%)	773 (15%)	1409 (27%)
	HP	18	212 (4%)	323 (6%)	535 (10%)
	Intel	13	221 (4%)	146 (3%)	367 (7%)
	Total	108	2720 (52%)	2557 (48%)	5277 (100%)
Weibo	IBM	5	15 (3%)	14 (3%)	29 (5%)
	Microsoft	14	155 (29%)	137 (25%)	292 (54%)
	HP	8	41 (8%)	48 (9%)	89 (16%)
	Intel	8	52 (10%)	81 (15%)	133 (24%)
	Total	35	263 (48%)	280 (52%)	543 (100%)
Weibo	Huawei	22	346 (22%)	314 (20%)	660 (43%)
	Lenovo	19	93 (6%)	124 (8%)	217 (14%)
	Xiaomi	21	297 (19%)	293 (19%)	590 (38%)
	ZTE	10	70 (5%)	4 (0%)	74 (5%)
	Total	75	806 (52%)	735 (48%)	1541 (100%)

4.4 Results

Below, we will first discuss the way the companies arranged multiple microblog accounts. We will then analyze the characteristics of all microblogs (content, message elements, and communication strategies).

4.4.1 Number and types of corporate microblog accounts

Table 4.2 gives an overview of all microblog accounts found. Western companies on Twitter had most accounts (n=108), followed by Chinese companies on Weibo (n=75); Western companies on Weibo lagged behind (n=35). The discrepancy between Western companies' Twitter and Weibo accounts might reflect the difference between the home platform and the platform abroad: The companies were not prepared to maintain the same comprehensive network of accounts on Weibo as they had on Twitter.

Table 4.2 *Overview of different Twitter and Weibo accounts.*

Type of account	Western companies on Twitter	Western companies on Weibo	Chinese companies Weibo
Service and products	51 (47%)	16 (46%)	56 (75%)
Stakeholders	20 (19%)	3 (9%)	6 (8%)
News	7 (6%)	0 (0%)	1 (1%)
Region and policy	6 (6%)	0 (0%)	0 (0%)
CSR	5 (5%)	1 (3%)	1 (0%)
Main	5 (5%)	5 (14%)	4 (4%)
Human resources	4 (4%)	3 (9%)	3 (4%)
User support	4 (4%)	4 (11%)	3 (4%)
Lab and research	3 (3%)	3 (9%)	1 (1%)
Technical documentation	2 (2%)	0 (0%)	0 (0%)
Events	1 (1%)	0 (0%)	0 (0%)
Total	108 (100%)	35 (100%)	75 (100%)

Furthermore, Western companies on Twitter showed most diversity in types of accounts. The accounts appeared to use three principles to help users navigate them: a product orientation, a stakeholder orientation, and traditional organizational conventions (Chapter 2). Western companies appeared to limit themselves to smaller numbers of essential accounts on Weibo. In contrast, Chinese companies on Weibo had a strong product orientation, with less attention to the other categories, particularly news and CSR.

A more detailed difference involved the labeling of accounts for stakeholders. Western companies on Twitter generally used neutral terms such as “IBM Developer” or “Microsoft Partner” as account names. Chinese companies on Weibo labeled their accounts as communities, alliances, or clubs—e.g., Huawei Developer Community (华为开发者社区), Huawei Developer Alliance (华为开发者联盟), and Huawei Fan Club (花粉俱乐部).

4.4.2 Microblog content

As shown in Table 4.3, all companies on both platforms posted microblogs within the domains of corporate, marketing, and technical communication, as well as in combinations of these categories.

We conducted chi-square tests to check whether the distribution of microblogs over the three domains differed. For this analysis, we collapsed the microblogs from the two mixed categories into the original domains of corporate, technical, and marketing communication: Microblogs categorized under corporate and technical communication, for instance, were counted for corporate and for marketing communication. An overall chi-square analysis showed that the three groups had significantly different distributions of microblogs over the three domains ($\chi^2 (4) = 466.8, p < .001$). Pairwise chi-squares revealed that there was no significant difference between Western companies’ Twitter and Weibo microblogs ($\chi^2 (2) = 4.5, p = .11$), but that the Western tweets ($\chi^2 (2) = 315.6, p < .001$) and Western weibos ($\chi^2 (2) = 105.3, p < .001$) both differed significantly from the Chinese weibos. On the level of overall domains, Western Weibo accounts thus remained close to the Western Twitter approach, without culturally adapting their overall content.

Table 4.3 *Content of the microblogs.*

Type of content	Western companies on Twitter	Western companies on Weibo	Chinese companies on Weibo
<i>Corporate communication</i>	1827 (35%)	238 (44%)	797 (52%)
Community relations	473 (9%)	144 (27%)	605 (39%)
CSR	351 (7%)	11 (2%)	14 (1%)
Research & development	310 (6%)	40 (7%)	37 (2%)
Business insights	250 (5%)	9 (2%)	18 (1%)
Partner relations	176 (3%)	9 (2%)	29 (2%)
Human resources	122 (2%)	10 (2%)	15 (1%)
Corporate achievements	83 (2%)	15 (3%)	76 (5%)
Government relations	62 (1%)	0 (0%)	0 (0%)
Crisis communication	0 (0%)	0 (0%)	4 (0%)
<i>Technical communication</i>	1604 (30%)	172 (32%)	174 (11%)
Information on specialized topics	478 (9%)	54 (10%)	21 (1%)
User instructions	962 (18%)	106 (20%)	142 (9%)
Updates and feedback	164 (3%)	12 (2%)	8 (1%)
<i>Marketing communication</i>	1009 (19%)	101 (19%)	540 (35%)
Commercial advertising	507 (10%)	41 (8%)	130 (8%)
Successful business cases	286 (5%)	3 (1%)	21 (1%)
Sales promotion	71 (1%)	24 (4%)	119 (8%)
Word of mouth	59 (1%)	5 (1%)	36 (2%)
Product launch	86 (2%)	28 (5%)	236 (15%)
<i>Corporate and technical communication</i>	325 (6%)	18 (3%)	18 (1%)
<i>Corporate, marketing, and technical communication</i>	512 (10%)	14 (3%)	12 (1%)
Total	5277 (100%)	543 (100%)	1541 (100%)

Differences were found for all main categories. Corporate communication was the main content category in all three groups, but was even more prevalent on Weibo accounts of Chinese companies than on Western Twitter and Weibo accounts. Chinese companies' attention to corporate communication can be largely attributed to the "community relations" subcategory, which was far less prominent on Western Twitter accounts. Western Weibo accounts took an in-between position, which might indicate an attempt to culturally adapt. Three other conspicuous differences, in the opposite direction, involved posts about CSR, business insights, and research & development, which were considerably more represented on Western companies' Twitter accounts than on Chinese companies' Weibo accounts. Regarding CSR and business insights, Western companies on Weibo followed Chinese practice, paying less attention to both topics than they did on Twitter. Regarding research and development, however, they stuck to the Western tradition of posting about it.

The latter might relate to the attention paid to technical communication. Western companies on Twitter and Weibo posted many microblogs on technological developments and user instructions, while Chinese companies paid substantially less attention to the technical communication domain. This might indicate that the Chinese companies profile themselves less technologically. It may also have to do with the status of technical communication as an emerging discipline in China (cf. Li, 2019).

Marketing communication content was more prominent on the Chinese companies' Weibo accounts than on the Western companies' Twitter and Weibo accounts. This difference mainly involved two subcategories: sales promotion and product launches, which might refer to a different marketing eco-system in China, which Western companies are only beginning to understand. On Weibo, Western companies paid slightly more attention to these subcategories than on Twitter, without getting close to their prevalence on Chinese companies' accounts.

A final observation was that the two platforms differed in numbers of reposts. For Western companies on Twitter it was quite common to retweet messages posted by others: 23% of their tweets were retweets. On Weibo, reposting

messages was very rare: Both for Western and for Chinese companies, reposting occurred in less than 1% of all weibos. This significant difference ($\chi^2(2) = 549.4, p < .001$) is remarkable because Weibo offers more possibilities to keep original message elements and add new ones when reposting.

4.4.3 Message elements

Table 4.4 gives an overview of the message elements of the three groups. Here we only focused on original microblogs, leaving out the reposts. For each possible message element, we conducted a chi-square test comparing the three groups, followed by pairwise comparisons in the case of significant differences.

Table 4.4 *Message elements in the microblogs.*

Message elements	Western companies on Twitter	Western companies on Weibo	Chinese companies on Weibo	Chi-square test comparing the three groups
Hyperlinks	3600 (89%)	236 (44%)	340 (22%)	$\chi^2 = 2415.4^*$
Hashtags (#)	3530 (87%)	259 (48%)	1118 (73%)	$\chi^2 = 510.4^*$
Mentions (@)	1043 (26%)	39 (7%)	284 (19%)	$\chi^2 = 110.1^*$
Visuals	3112 (77%)	329 (61%)	938 (61%)	$\chi^2 = 160.6^*$
Video	297 (7%)	71 (13%)	135 (9%)	$\chi^2 = 22.7^*$
Emojis	353 (9%)	158 (29%)	806 (53%)	$\chi^2 = 1291.5^*$
Total	4068 (100%)	540 (100%)	1536 (100%)	

Note: This analysis was limited to original microblogs; reposts were excluded. * $p < .001$

In line with previous research, hyperlinks were most frequently used by Western companies on Twitter and least frequently used by Chinese companies on Weibo ($\chi^2(2) = 2352.0, p < .001$). Western companies on Weibo took an in-between position, significantly differing from Western companies on Twitter ($\chi^2(2) = 685.8, p < .001$) and from Chinese companies on Weibo ($\chi^2(2) = 92.7, p < .001$).

Hashtags, too were used most by Western companies on Twitter, significantly more than by Chinese companies on Weibo ($\chi^2 (2) = 154.2, p < .001$).

Remarkably, however, Western companies on Weibo used hashtags even less, significantly less than both Western companies on Twitter ($\chi^2 (2) = 491.4, p < .001$) and Chinese companies on Weibo ($\chi^2 (2) = 110.2, p < .001$). The foreign context might play a role here: Western companies might see fewer opportunities to connect to relevant Weibo threads.

A similar pattern was found for mentions, albeit with much lower frequencies overall. Western companies on Twitter used mentions significantly more than Chinese companies on Weibo did ($\chi^2 (2) = 31.5, p < .001$). Western companies on Weibo used them even less frequently, significantly less than Western companies on Twitter ($\chi^2 (2) = 90.0, p < .001$) and Chinese companies on Weibo ($\chi^2 (2) = 38.6, p < .001$). Again, it seems most likely that they saw fewer opportunities to publicly connect to persons or organizations in the Chinese context.

Although earlier research suggested a strong visual orientation within the Chinese culture, our results showed that Western companies on Twitter used more visuals in their tweets than Chinese companies on Weibo ($\chi^2 (2) = 132.5, p < .001$) and Western companies on Weibo ($\chi^2 (2) = 61.1, p < .001$). There was no significant difference between the two types of Weibo accounts ($\chi^2 (2) = 0.0, p = .95$).

A completely different pattern was found for the inclusion of videos. Western companies on Weibo used relatively more videos than Western companies on Twitter ($\chi^2 (2) = 22.2, p < .001$) and Chinese companies on Weibo ($\chi^2 (2) = 8.5, p < .005$). The difference between Western companies on Twitter and Chinese companies on Weibo was not significant ($\chi^2 (2) = 3.5, p = .06$). This might be caused by the lower number of microblogs on Western Weibo accounts, which the relative prominence of weibos with video.

Finally, the use of emojis followed the expectations based on earlier research. Chinese companies used most emojis, significantly more than Western companies on Twitter ($\chi^2 (2) = 1303.7, p < .001$). Western companies on

Weibo took an intermediate position between Western companies on Twitter ($\chi^2(2) = 204.8, p < .001$) and Chinese companies on Weibo ($\chi^2(2) = 86.6, p < .001$).

4.4.4 Communication strategies

Table 4.5 presents the results regarding communication strategies used. A chi-square analysis showed that there were significant differences regarding the use of the three main categories (information, action, and community) between the three groups ($\chi^2(4) = 490.7, p < .001$). Pairwise chi-squares showed significant differences between Western Twitter and Chinese Weibo accounts ($\chi^2(2) = 469.1, p < .001$), between Western Twitter and Western Weibo accounts ($\chi^2(2) = 120.0, p < .001$), and between Western Weibo and Chinese Weibo accounts ($\chi^2(2) = 21.8, p < .001$). Differences mainly involved the information and community strategies. On Western Twitter accounts, providing information was substantially more prevalent than on Chinese Weibo accounts; the Western Weibo accounts took an in-between position. On Chinese Weibo accounts, building community was considerably more widespread than on Western Twitter accounts, again with Western Weibo accounts taking an in-between position.

The frequency of the action strategy was similar in Western companies' Twitter accounts and Chinese companies' Weibo accounts; Western companies' Weibo accounts used the strategy somewhat less frequently, which might be attributed to the foreign context in which they had to operate. Looking at the subcategories of the action strategy, some differences between Western Twitter accounts and Chinese Weibo accounts stood out. Promoting events and providing instructions were more prevalent on the Western Twitter accounts than on the Chinese Weibo accounts. The Western Weibo accounts paid even less attention to promoting events than the Chinese Weibo accounts, which might reflect fewer opportunities to organize events abroad. Providing instructions corresponded to Western Twitter and Weibo accounts' attention for the domain of technical communication. Chinese Weibo accounts, on the other hand, offered many sweepstakes, whereas we did not find a single example of sweepstakes in Western tweets. Western Weibo accounts showed a

Table 4.5 Communication strategies used in the microblogs.

Communication strategies	Western companies on Twitter	Western companies on Weibo	Chinese companies on Weibo
<i>Information</i>	2823 (53%)	248 (46%)	531 (34%)
<i>Action</i>	2062(39%)	179 (33%)	596 (39%)
Promoting events	768 (15%)	19 (3%)	95 (6%)
Selling products or services	655 (12%)	68 (13%)	191 (12%)
Providing instructions	478 (9%)	72 (13%)	28 (2%)
Offering downloads or updates	149 (3%)	0 (0%)	0 (0%)
Calling for feedback	12 (0%)	0 (0%)	1 (0%)
Sweepstake	0 (0%)	20 (4%)	285 (18%)
<i>Community</i>	392 (7%)	116 (21%)	414 (27%)
Response solicitation	352 (7%)	105 (19%)	366 (24%)
Responding to mentions	40 (1%)	11 (2%)	43 (3%)
Total	5277 (100%)	543 (100%)	1541 (100%)

cautious attempt to use sweepstakes, by no means proportional to the Chinese use of sweepstakes.

4.5 Discussion

4.5.1 Main findings and implications

This study analyzed how large Western IT companies localize their microblogging practices on Twitter to the Chinese Weibo platform. We also compared their Weibo activities with those of similar Chinese IT companies. Such comparisons lead to insights on cultural differences and cultural adaptation practices. Table 4.6 summarizes our findings, which boil down to many differences between Western and Chinese companies' microblog practices and many different ways in which Western companies responded to the Chinese context. Below we will focus on the more generic lessons that can be learned from our research.

Differences between Western and Chinese microblogs (the third column in Table 4.6) appear to be multifaceted and comprehensive. We compared Western and Chinese microblogs on four main aspects (arrangement of accounts, microblog content, message elements, and communication strategies) and found clear differences for every aspect. Some main findings confirmed earlier research outcomes—especially the importance of community building in China and the Chinese orientation on products and marketing (even though the literature is not unanimous about the latter). Also in the use of message elements we saw some previous findings confirmed: Chinese companies use fewer hyperlinks, hashtags, and mentions and use more emojis than Western companies did. Regarding visuals, however, our results contradict earlier findings: Not Chinese Weibo accounts but Western Twitter accounts used more visuals.

Furthermore, our findings suggest that different microblogging practices originate from a broad constellation of factors. Only few of the differences found could be easily related to established cultural dimensions such as Hofstede's individualism-collectivism continuum (Hofstede, 2001; Hofstede et

al., 2010) or Hall's (1976) distinction between high- and low-context cultures. Many differences seem to relate to much broader developments. Differences in corporate communication—most notably regarding CSR communication, research and development, and business insights—suggest that sharing such types of corporate information may be less common in the highly competitive Chinese business environment. Differences in technical communication suggest that Chinese IT companies are less inclined to profile themselves as technological enterprises and may also reflect the current status of technical communication as a recently emerging academic and professional discipline in China. Differences in marketing communication practices—with sales promotion, product launches, and sweepstakes as relatively prominent ingredients—might refer to different marketing eco-systems, in which the best way of raising consumers' purchase interest has developed in different directions.

Regarding the way Western companies try to adapt to the Chinese context on Weibo (the fourth column in Table 4.6) we found three basic strategies. The first is adapting to the Chinese way of communicating. We can see this strategy especially in Western companies' increased attention for communities on Weibo. This cultural difference is quite clear and prominent in the literature and connects well to Hofstede's individualism-collectivism dimension, which may have resulted in a strong awareness among Western companies to focus more on communities in Chinese contexts. Other possible examples are the downplaying of CSR and business insights, which Chinese companies only included sporadically on their weibos.

The second strategy is not adapting to the Chinese way of communicating. The clearest example involved the technological profile of the companies. Whereas Chinese companies' attention to the technical communication domain, including research and development and user instructions, was relatively limited, Western companies on Weibo followed their practices on Twitter and paid ample attention to it. In the same vein, they kept a broad orientation in types of accounts and content categories and did not seem to follow the dominant product orientation of Chinese companies on Weibo. Not adapting was usually chosen when adapting would require discarding essential

Table 4.6 Summary of the findings.

Aspect	Research finding	Western-Chinese difference	Cultural adaptation by Western-W companies
<i>Accounts</i>	Western-T companies have more microblogging accounts than Chinese-W companies; Western-W companies have the fewest accounts	Possible explanation: evolving business practices	No adaptation; more likely caused by the foreign context
<i>Content</i>	Chinese-W companies' accounts are less diverse (more product-oriented) than Western-T and Western-W companies' accounts	Confirms W. Wu et al. (2016); contradicts X. Zhang et al. (2014) and Men and Tsai (2012)	No adaptation
	Compared to Western-T companies, Chinese-W companies pay more attention to community relations; Western-W companies take in-between position	Confirms X. Zhang et al. (2014) and Men and Tsai (2012)	Adaptation
	Compared to Western-T and Western-W companies, Chinese-W companies pay less attention to CSR and business insights	Possible explanations: less of a CSR tradition and stronger competitiveness	Adaptation (or alternative explanation)
	Compared to Western-T and Western-W companies, Chinese-W companies are less likely to share research & development information	Possible explanations: stronger competitiveness and less technological profile	No adaptation
	Compared to Western-T and Western-W companies, Chinese-W companies focus considerably less on technical communication	Possible explanations: less technological profile and technical communication discipline only emerging	No adaptation
<i>Message elements</i>	Compared to Western-T and Western-W companies, Chinese-W companies pay more attention to marketing communication	Confirms W. Wu et al. (2016); contradicts X. Zhang et al. (2014) and Men and Tsai (2012)	No adaptation
	Compared to Western-T companies, Chinese-W companies' marketing communication content is different: more sales promotion and product launches; Western-W companies take an in-between position	Possible explanation: different marketing eco-systems	Cautious adaptation
	Compared to Western-T companies, Chinese-W companies use fewer hyperlinks; Western-W companies take an in-between position	Confirms Men and Tsai (2012) and W. Wu et al. (2016)	Cautious adaption (or alternative explanation)

Table 4.6 Continued.

Aspect	Research finding	Western-Chinese difference	Cultural adaptation by Western-W companies
<i>Communication strategies</i>	Compared to Western-T companies, Chinese-W companies use fewer hashtags and mentions; Western-W companies use the fewest hashtags and mentions	Confirms W. Wu et al. (2016) and Florenthal and Chao (2016b)	Adaptation (or alternative explanation)
	Compared to Western-T companies, Chinese-W and Western-T companies use fewer visuals	Contradicts R. Wang et al. (2020) and W. Wu et al. (2016)	Adaptation (or alternative explanation)
	Compared to Western-T and Chinese-W companies, Western-W companies use more videos		Relative prominence due to fewer microblogs in foreign context
	Compared to Western-T companies, Chinese-W companies use more emojis; Western-W companies take an in-between position	Confirms R. Wang et al. (2020), D. D. Wu and Li (2018), and X. Zhang et al. (2014)	Cautious adaptation
	Compared to Western-T companies, Chinese-W companies focus less on merely providing information; Western-W companies take an in-between position	Confirms Florenthal & Chao (2016ab), Huang et al. (2017), Waters and Lo (2012), and D. D. Wu and Li (2018)	Cautious adaptation
	Compared to Western-T and Western-W companies, Chinese-W companies provide fewer user instructions	Possible explanations: less technological profile and technical communication discipline only emerging	No adaptation
	Compared to Western-T companies, Chinese-W companies pay less attention to events promotion; Western-W companies provide the least attention to events	Possible explanation: different marketing eco-system	No adaptation; more likely caused by the foreign context
	Compared to Western-T companies, Chinese-W companies include more sweepstakes; Western-W companies take an in-between position	Possible explanation: different marketing eco-system	Cautious adaptation
	Compared to Western-T companies, Chinese-W companies put more emphasis on community strategies; Western-W companies take an in-between position	Confirms Florenthal and Chao (2016ab), Huang et al. (2017), Waters and Lo (2012), and D. D. Wu and Li (2018)	Adaptation

company characteristics, such as its self-identity or its conception of relevant stakeholder relationships.

The third strategy is cautious adaptation. This means that companies moved a little in the direction of the way Chinese companies manifest themselves on Weibo, but did not do this wholeheartedly and convincingly. Examples of this included using sales promotion and product launches as marketing tools, using fewer hyperlinks, using more emojis, limiting the strategy of providing one-way information, and offering sweepstakes. In all cases, Western companies changed their microblog practices but stayed far removed from the Chinese companies' communication on Weibo.

In all, adaptation to the Chinese context appeared to be a mix of cultural assumptions, self-identity considerations, and contextual factors. Some of the cultural assumptions are based on established, value-based cultural dimensions. In particular, the increased attention paid to community-building seems to reflect canonized knowledge about differences between individualistic versus collectivistic cultures (Hofstede, 2001; Hofstede et al., 2010). Other differences are less theoretically supported and might be more superficial than the value-based differences, involving customs that people got used to, which raised their expectations of companies' microblogs. Such assumptions might go back to (more or less systematic) observations and input from local experts. Examples include the use of sweepstakes or emojis in posts. In some respects, Western companies seriously adapted their SNS strategy, in other cases their attempts at adapting were so cautious and reluctant that they are not very likely to have effects. Self-identity considerations were clearest in all differences regarding the companies' technological profile: The Western companies treated providing technological information and support as a core element of their identity and did not follow their Chinese counterparts in drastically reducing these types of information.

Contextual factors largely involved limitations of operating in a foreign context (Florenthal & Chao, 2016b). We can see the influence of this factor in numbers of accounts and numbers of posts: It may not be feasible for companies to maintain the same number of different microblog accounts and post similar

numbers of microblogs in a foreign context. Likewise, it may also be harder to meaningfully connect to earlier online discussions (using hashtags) and persons or organizations (using mentions) in foreign contexts, which would require detailed insights in the media dynamics at hand. Availability of visuals might also be a problem, especially when they are combined with texts (e.g., infographics).

4.5.2 Limitation and suggestions for future research

Several limitations should be kept in mind when interpreting our findings. The most important limitation is that we only focused on companies' microblogging practices, not on perceptions of or effects on users from the two different cultures. An interesting alley for future research would focus on user experiences of Western and Chinese people. Such research could be conducted in artificial (experimental) contexts. An alternative option would be to analyze established indicators of user engagement (e.g., likes, reposts, replies).

A second limitation is that we only focused on companies' manifest microblogging accounts, setting aside all motives, considerations, and doubts regarding the posts. Future research focusing on the way Western and Chinese communication professionals decide on microblogs and on cultural adaptation, similar to Cui and Lin's (2015) study on journalistic microblogs, could further enrich our findings.

A third limitation is that we selected one particular company type for our research. We only focused on large IT companies and it remains to be seen whether our findings also apply to other types of businesses, smaller companies, or government or non-profit organizations. It seems plausible that the technical communication content will play a less prominent role in many other contexts, but what about the other findings? Future research replicating our study in different types of organizations would be an important new step.

A fourth limitation pertains to the quantitative nature of our study. We tried to make sense of the microblogging activities of IT companies by categorizing characteristics of their microblogs. In practice, however, the devil might be in

the details. It would be very interesting to complement our quantitative insights with more qualitative and detailed insights exploring the exact ways in which companies communicate in their microblogs.

4.5.3 Practical implications

Despite the limitations mentioned, our study already offers many detailed insights companies can use when developing their microblogging presence abroad. Knowing how the Chinese Weibo platform differs from the Western Twitter platform can be equally useful for Chinese companies that want to establish or improve their Twitter accounts as for Western companies that want to use Weibo for reaching consumers or other stakeholders in China. In addition, our findings can serve as a mirror to reflect on microblogging practices in their own culture. Chinese IT companies, for instance, might want to consider whether more attention to the technical communication domain could work for them as well. Western companies, in turn, might want to learn from the community focus Chinese companies realized on Weibo. Finally, our findings help in reflecting about cultural adaptation. Decisions to adopt or not to adopt certain characteristics can be based on a multitude of valid or less valid considerations. The category of cautious adaptations, however, seems to be in need of critical consideration: Nudging a little to the other culture without wholeheartedly adopting change might just be symbolic instead of having substantial effect.

CHAPTER 5

Understanding Western and Chinese users'
Interaction with Companies' Social Media
Accounts: Roles of SNS Dependency and
Motives for Following

5.1 Introduction

The rise of social networking sites (SNSs) has profoundly changed the media landscape in corporate and marketing communication. Companies worldwide are exploring which constellations of account and message characteristics work best on various platforms. Like traditional ads, paid SNS advertisements might raise brand awareness and reach non-committed consumers. But SNSs also provide opportunities to more structurally bond with stakeholders who already have special feelings about the company, brand, or products. Having followers on SNSs means that important messages will reach substantial groups of committed stakeholders and that companies have an infrastructure to strengthen their relationships with them. Research suggests that active SNS participation may contribute to brand attachment, trust, and loyalty (Fernandes & Castro, 2020; Kamboj et al., 2018; Laroche et al., 2013; Lim & Kumar, 2019). One of the challenges companies face with their SNS strategies is how to seduce stakeholders to follow (and keep following) account(s).

Research suggests that the content of SNS accounts is crucial. High-quality content persuades people to follow companies or brands (Zhu & Hsiao, 2021) or continue following them (Osatuyi & Qin, 2018; Seol et al., 2016; Tang & Chen, 2020). There are no universal content typologies that can guarantee successful SNS strategies. But understanding SNS users' motives might be an important step toward developing the right kinds of content. Several studies already investigated such motives: for following company SNSs (Kwon et al., 2014; Logan, 2014; Phua et al., 2017), continuing to follow them (Osatuyi & Qin, 2018; Zhao et al., 2016), or actively engaging with them (Azar et al., 2020; Fernandes & Castro, 2020). Six core motives have been identified: information, entertainment, social integration, personal identity, remuneration, and empowerment (De Veirman et al., 2017; Kitirattarkarn et al., 2020; Muntinga et al., 2011; Tsai & Men, 2013, 2017).

In this article, we extend existing literature by comparing the role motives play for Chinese and Western SNS users, distinguishing between motives for people who actually follow companies' microblog accounts and motives that would matter to nonfollowers. Comparing Chinese and Western users' motives is

increasingly relevant in our globalized world, as it contributes to our understanding of differences in digital consumer culture (Dey et al., 2020). Comparing motives of actual followers with potential motives of nonfollowers helps to identify the motives that particularly trigger users to follow company accounts and develop strategies to turn nonfollowers into followers. We thus formulated the following research question: To what extent do Western and Chinese SNS users differ in their motives and behaviors regarding company SNS accounts?

5.2 Earlier research

5.2.1 Company SNSs and digital consumer culture

The functioning of company SNSs is not a standalone phenomenon, but forms part of a digital consumer culture, a recently coined concept underlining the impact of information technology on consumer culture. According to Dey et al. (2020), digital consumer culture ‘encapsulates the practices, identities and symbolic meanings embedded within people’s daily lives, constituted through the iterative and reciprocal interactions between the online and the offline world, through individual, social and business behaviours and practices’ (p. 2). They discussed three prominent aspects of digital consumer culture: consumer-company relationships, online-offline reciprocity, and consumer identities. Consumers’ use and perceptions of SNSs in company-consumer relationships both reflect and enact digital consumer culture.

Hofstede (2001) defined culture as ‘the collective programming of the mind that distinguishes the members of one group or category of people from another’ (p. 9). According to Hofstede, values are at the core of cultures, surrounded by the more visible manifestations of symbols, heroes, rituals, and practices. Digital consumer culture may be affected by national or regional differences. Given the strictly separated online eco-systems in China and Western countries, international comparisons of digital consumer cultures are relevant.

Research on digital consumer culture involves mapping the proportion and nature of online transactions, analyzing the role of digital media in sales promotion and consumer decision making, and establishing the contribution of digital media in consumers' company or brand awareness, engagement, and loyalty. Especially the last-mentioned topics have received ample research attention (e.g., Barger et al., 2016; Dessart et al., 2016; Morgan-Thomas et al., 2020; Tafesse, 2016). In addition to such manifest and instrumental views on digital consumer culture, it is important to develop an understanding of consumers' perspectives on their online-offline world. This would start with exploring the role online media play in consumers' daily lives. Research into SNS use (S. E. Cho & Park, 2013; J. Wang et al., 2015) and SNS dependency (Soror et al., 2021) suggests a profound impact of social media in all walks of life. Specific knowledge is needed about consumers' online behaviors regarding companies, brands, and products. Research has predominantly focused on consumers' following or unfollowing behavior (Yun et al., 2019; Zhu & Hsiao, 2021) and online engagement (e.g., liking, sharing or replying) (Panagiotopoulos et al., 2015).

For a better understanding of digital consumer culture, it is also relevant to analyze the motives consumers have for following or engaging with company or brand accounts. Various theoretical angles have been used for studying these motives. Uses and gratifications theory (Katz et al., 1973), which basically assumes that people more or less deliberately decide on their media use in order to satisfy their needs, is most often used as a theoretical underpinning (Azar et al., 2016; Q. Gao & Feng, 2016; Muntinga et al., 2011). Other theoretical frameworks, such as Ajzen's (1991) theory of planned behavior (Chu et al., 2016; Logan, 2014), H. W. Kim et al.'s (2007) value-based adoption model (Zhao et al., 2016), and Tajfel's (1978) social identity theory (Jin & Huang, 2017), basically have the same underlying assumption of users making deliberate decisions about using SNSs. Understanding the motives users have for following or contributing to companies' SNSs may thus unveil underlying values of digital consumer culture.

5.2.2 Success factors of company SNSs

Academic research has gradually developed insights to help companies in providing the right SNS strategies to satisfy stakeholders. Some authors argued that a diversification of accounts is helpful for effectively reaching people on social network platforms (Jansen et al., 2009; T. Li et al., 2013). Content-analytic research of companies' Twitter presence showed that companies indeed host multiple accounts, using insightful account structures to help users find the one(s) they are looking for (Chapter 2).

Most studies focused on message characteristics: communication strategies, message elements, and, to a much lesser extent, content. Regarding communication strategies, research showed that companies only reluctantly use interactive and engaging opportunities facilitated by SNSs and instead often stick to the traditional strategy of broadcasting information (e.g., Lovejoy & Saxton, 2012; Waters & Jamal, 2011; Chapter 2). Research on effects of communication strategies on online engagement, however, led to mixed conclusions: Some studies found that interactive and engaging strategies promoted online engagement (e.g., Araujo & Kollat, 2018; Saxton & Waters, 2014), while others did not find such effects (Read et al., 2019) or even found that broadcasting information worked best (Brubaker & Wilson, 2018; Watkins, 2017; Chapter 3; Chapter 6). Regarding message elements, research showed that companies increasingly complement textual content with visual cues (e.g., video, pictures, emojis) and referential elements (hyperlinks, hashtags, mentions) (e.g., Lovejoy et al, 2012; Chapter 2). Research into the effects of such message elements showed that visual cues may have positive effects on online engagement, whereas referential elements have mixed effects (Abitbol & Lee, 2017; D.-H. Kim et al., 2015; Saxton & Waters, 2014; Chapter 6). In spite of the dominant research attention to communication strategies and message elements, it seems plausible that the content of SNS posts might play a more substantial role.

Regarding content, research has been largely descriptive, either characterizing all content of company accounts (Chapter 2) or focusing on specific subdomains—e.g., corporate social responsibility (Araujo & Kollat, 2018; Gomez & Vargas-Preciado, 2016) or customer service (Berry, 2018; Einwiller &

Steilen, 2015). Some studies arrived at the seemingly obvious but important conclusion that users' content appreciation is a crucial success factor for company SNSs (Seol et al., 2016; Y.Wang & Yang, 2020; Watkins, 2017; Zhu & Hsiao, 2021). Research into motives for following and engaging may contribute to the development of successful content strategies, both generically (for company SNSs in general) and specifically (for the SNS presence of particular companies or brands).

5.2.3 Users' motives for following and engaging with companies' SNSs

Many researchers have investigated users' motives for following company SNSs or engaging with them. Taking uses and gratifications theory as underlying framework, Muntinga et al. (2011) proposed, defined, and explored six motives: information, entertainment, social integration, personal identity, remuneration, and empowerment. Several other researchers adopted their framework (De Veirman et al., 2017; Kitirattarkarn et al., 2020; Tsai & Men, 2013, 2017). Others used some of the motives, sometimes combining them with variables that do not seem to refer to motives, like brand reputation (Kwon et al., 2014; M. Song et al., 2017), brand likeability (Kamboj et al., 2018; Lim & Kumar, 2019), convenience (M. Song et al., 2017), or trust (Azar et al., 2016). Kamboj et al. (2018) did not differentiate between motives, but integrated them into one motivation variable.

Table 5.1 summarizes earlier studies on user motives. It shows a wide variety of approaches. First, the dependent variables differed between studies, including visiting or appreciating, consuming or lurking, contributing or engaging, continuance or commitment, following, and purchase intentions. Second, the research methods varied: Most studies had a correlational design, using regression analyses or structural equation modeling to investigate relationships between motives and dependent variables, but some relied on users' self-reports about the relevance of motives, either qualitatively (based on interviews) or quantitatively (reporting mean scores from survey data). Third, the studies included different sets of potential motives.

Table 5.1 Summary of earlier research into the six motives for following or engaging with companies' SNSs.

Study	Research type	Dependent variable(s)	INF	ENT	SOC	ID	REN	EMP
Kwon et al. (2014)	Correlational	Continuance/commitment	x		x		-	
Logan (2014)	Correlational	Following	(x)					
Zhao et al. (2016)	Correlational	Continuance/commitment	x		x			
De Veirman et al. (2017)	Correlational	Consuming/lurking Contributing/engaging	- -	x -	x x	- -	- -	- x
Jin & Huang (2017)	Correlational	Contributing/engaging	x	-	-	x		
M. Song et al. (2017)	Correlational	Contributing/engaging Continuance/commitment	(x) (x)	x x	x x		x x	
Alalwan (2018)	Correlational	Purchase intention	x	x				
B. Li et al. (2019)	Correlational	Following	x	(x)		(x)		
Lim & Kumar (2019)	Correlational	Continuance/commitment	-	x	x		-	
Fernandes & Castro (2020)	Correlational	Consuming/lurking Contributing/engaging	x -	x -	x x	x x	x -	
Muntinga et al. (2011)	Qualitative	Consuming/lurking Contributing/engaging	x -	x x	- x	- x	x -	- x
Kitirattarkarn et al. (2020)	Qualitative	Consuming/lurking Contributing/engaging	x x	x x	- x	- x	- x	- x
Tsai & Men (2013)	Mean scores	Visiting/appreciating	x	-	-	-	x	-
Tsai & Men (2017)	Mean scores	Visiting/appreciating	x	(x)	(x)	(x)	x	-

Note: x = importance confirmed; (x) = importance partially confirmed; - = importance not confirmed; empty space = not included in the research.

The combined studies provide evidence for the potential relevance of all six motives, but none of the motives is univocally supported by all studies. It is hard to discern differences in importance of motives between the various dependent variables, but studies that included more than one dependent variable suggested that the relevance of motives might differ between dependent variables. Most likely, specific research settings—combinations of national context, types of users, types of companies, measurement, and combinations of motives included—influenced the findings. It is safe to say that the six motives are potentially relevant; it is too early to draw generic conclusions about which matter most.

5.2.4 Cross-cultural comparisons of user motives

The studies on user motives were conducted in a wide diversity of national contexts (United States, Belgium, the Netherlands, Portugal, China, South Korea, India, and Jordan), but due to the variety in research approaches conclusions about the influence of cultural or national differences cannot be drawn.

Few studies assessed the impact of national or cultural differences on the relevance of user motives. M. Song et al. (2017) compared motives of Chinese and South Korean users and found minor differences: The information motive was less important to Chinese users than to Koreans.

Others compared cultures with larger differences (Eastern and Western countries). Tsai and Men (2017) compared the self-reported importance of the six motives among respondents from the United States and China. They found significant differences for all six motives: Five were significantly more important to Chinese respondents; the sixth (renumeration) was more important to Americans. They also found that Chinese respondents were more engaged with social media than Americans, with higher social media dependency, higher parasocial interaction perceptions, stronger community identification, and more engagement with company SNSs. They did not analyze the relationship between motives and SNS-related behaviors.

B. Li et al. (2019) explored the relationship between motives and behavior, comparing American and Chinese users' interest in the Twitter/Weibo account of the Los Angeles Lakers. Different motives predicted both respondent groups' degree of engagement with the account: For Chinese users, significant predictors were general information and personal identity (team support); for Americans, technical information and entertainment played a significant role. It is questionable, however, how these findings can be translated to other types of accounts, first because a prolific sports organization differs in many respects from other types of organizations, and second because American and Chinese SNS users might have very different relations with and perceptions of a US-based basketball club.

Kitirattarkarn et al. (2020) qualitatively compared the importance of the six motives for individualistic Western (United States and the Netherlands) and collectivistic Eastern (South Korea and Thailand) users. All six motives appeared to be relevant for both cultural backgrounds, but more detailed differences were found in the participants' interpretations of the motives, for instance due to different views on online privacy. They also observed an influence of particular national habits among collectivistic participants.

In all, cross-cultural comparisons of user motives for following or engaging with company SNSs are scarce in the academic literature. Findings so far suggest that national and cultural factors might make a difference, but it is too early to say what the exact influence is.

5.2.5 Conceptual model and hypotheses

In research on cross-cultural communication, Hofstede's (2001) value-based cultural dimensions are often used to make sense of cultural differences. Various researchers argued that this dimension of individualism versus collectivism is best suited to understand differences in user motives and SNS-related behaviors between Western and Eastern cultures (Hsu et al., 2015; Jiao et al., 2018; Kitirattarkarn et al., 2019, 2020; Lu, 2018; Sheldon et al., 2017; Tsai & Men, 2017; Yum, 1988). In individualistic cultures, such as Western Europe, people emphasize independence and personal goals and achievements.

In collectivistic cultures, such as China, people value interdependence, long-lasting relationships, and reciprocity. Comparing American and South Korean SNS users, Choi et al. (2011) showed that American users had more elaborate but loose networks with many weak ties, whereas South Korean users generally had smaller but tighter networks. Research suggests that the tendency people in collectivistic cultures have to strive for lasting relationships also translates to their relationships with companies or brands—e.g., a dominant striving for social value (Jiao et al., 2018) and brand loyalty (Mattison Thompson et al., 2014; S. Zhang et al. 2014).

To develop a comprehensive theoretical perspective on international and cross-cultural differences in user motives between Western countries and China, however, it is important to not only consider (value-based) cultural differences but also have an eye for the socio-material environment and habits that have grown over time. Figure 5.1 depicts the conceptual model underlying our study. The model assumes that Western and Chinese users’ behaviors

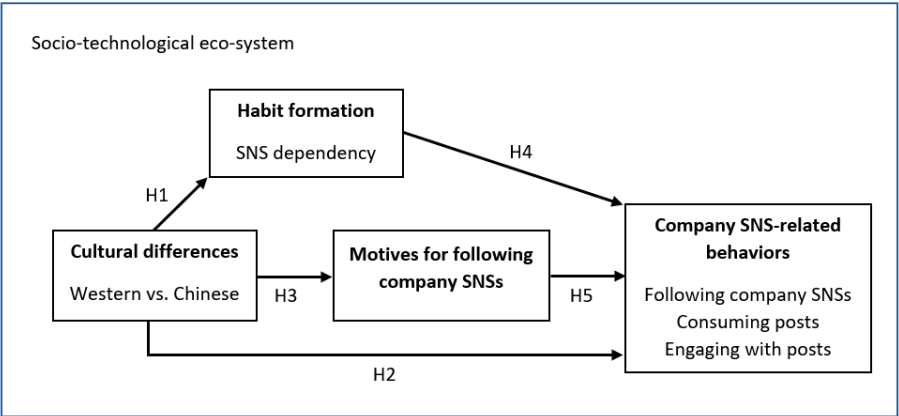


Figure 5.1. Conceptual model.

regarding company SNSs take place within strictly separated socio-technological eco-system. Within the two eco-systems, habits have formed over time, which to some extent correspond with the value-based cultural differences between the user groups. In our model, we focus on SNS dependency, which reflects the role SNSs play in users’ daily lives. In addition to habits, value-based cultural differences are assumed to affect users’

behaviors regarding company SNSs. We placed the six motives in-between the cultural differences and three SNS-related behaviors (following company SNSs, consuming company posts, and engaging with company posts), acknowledging that habits might also influence behaviors.

Some parts of the model have been investigated in earlier research. Based on several empirical studies, we expected that SNS dependency is higher among Chinese users than among Western users (Chu & Choi, 2010; B. Li et al., 2017; Tsai & Men, 2017). This might be linked to their collectivistic cultural background, as social media are eminently suitable for maintaining relationships and close relationships via SNSs call for regular and intensive SNS use. This leads to our first hypothesis:

H1: *SNS dependency is higher among Chinese users than among Western users.*

Based on earlier studies by Chu and Choi (2011) and Tsai and Men (2017), we also expected that Chinese users will be more involved in company SNSs than Western users. Chu and Choi (2011) focused on American and Chinese users' willingness to engage in electronic word-of-mouth, showing that Chinese users are more active in giving, forwarding, and seeking opinions than Americans. Tsai and Men (2017) arrived at similar conclusions for users' engagement with company SNSs: Compared to American users, Chinese users tended to expose themselves more frequently to company posts and contribute to them. These findings might again reflect differences between individualistic and collectivistic cultures. In collectivistic cultures, users may be more willing to express their loyalty to a company or brand by following company accounts, exposing themselves to posts, and actively contributing to them. In our research, we used three measures of company SNS-related behaviors: following company accounts, consuming posts, and actively engaging with posts. This leads to the following hypotheses:

H2a: *Chinese users are more inclined to follow company SNS accounts than Western users.*

H2b: *Chinese users are more inclined to consume company posts than Western users.*

H2c: *Chinese users are more inclined to engage with company posts than Western users.*

The third set of hypotheses involves the motives Western and Chinese users have for their company SNS-related behaviors. We assume that there is a relation between culture and motives for following company SNSs. The literature on such differences is still limited. Tsai and Men (2017) compared the importance of the six different motives for American and Chinese users, finding that Chinese attached significantly more importance to information, entertainment, social integration, personal identification, and empowerment; Americans had a higher score for remuneration. However, this might first and foremost reflect Chinese users' overall willingness to engage with company SNSs. We would argue that correcting motives scores for overall motivation to interact with company SNSs is imperative. Analyzing the six motives through the lens of Hofstede's (2001) individualism-collectivism dimension, we believe that a distinction between transactional and relational motives can be meaningful. Transactional motives aim at satisfying immediate desires or needs and do not depend on longer-lasting relationships. Information, entertainment, and remuneration can be characterized as transactional. Relational motives take the formation of a longer-lasting relationship as a starting point. Social integration is a relational need, as it reflects a desire to connect with certain companies or brand-related communities. Personal identity is relational, as it shows a willingness to define or express oneself in relation to certain companies or brands. Empowerment is relational, as it aims at shaping or altering relations with companies or brands. In line with the aforementioned differences between individualistic and collectivistic cultures, we hypothesize that the transactional motives are relatively more important to Western users and relational motives are more prominent among Chinese users. An earlier study by Y. Kim et al. (2011) indeed found that South Korean college students used SNSs more to obtain social support from their networks, while American students emphasized seeking entertainment. Other studies showed that relationships and social values are more important to Chinese users than to Western users (Jiao et al., 2018; 2017; Yum, 1988). This leads to the following hypotheses:

H3a: Western users' motives for company SNS-related behaviors are more transactional than Chinese users' motives (information, entertainment, remuneration).

H3b: Chinese users' motives for company SNS-related behaviors are more relational than Western users' motives (social integration, personal identity, and empowerment).

The fourth set of hypotheses involves the relation between SNS dependency and company SNS-related behaviors. Only two studies, with partly overlapping data, investigated this (Tsai & Men, 2012, 2017). Both found significant positive relationships between the two variables. The underlying assumption is that not all company SNS-related behaviors may be explained by more or less deliberate motives: Being more active on SNSs by itself might also affect company following decisions and level of engagement. This leads to the following hypotheses:

H4a: *SNS dependency is positively related to users' inclination to follow company SNSs.*

H4b: *SNS dependency is positively related to users' consumption of company posts.*

H4c: *SNS dependency is positively related to users' engagement with company posts.*

Our next assumption is that relational motives have stronger positive effects on company SNS-related behaviors than transactional motives. Following company SNSs is a way of making emotional connections with companies, brands or products manifest. Consuming posts and, particularly, engaging with posts can be seen as acts of investing in such connections. This is more in line with the relational motives, which assume longer-term investments, than with transactional motives, which involve immediate and one-sided benefits. We therefore hypothesized:

H5a: *Relational motives (social integration, personal identity, and empowerment) are more positively related to users' inclination to follow company SNSs than transactional motives (information, entertainment, and remuneration).*

H5b: *Relational motives (social integration, personal identity, and empowerment) are more positively related to users' consumption of company posts than transactional motives (information, entertainment, and remuneration).*

H5c: *Relational motives (social integration, personal identity, and empowerment) are more positively related to users' engagement with company posts than transactional motives (information, entertainment, and remuneration).*

The final set of hypotheses take a more comprehensive perspective. The previous hypotheses can actually be seen as steps in a mediation analysis. The last two hypotheses assume that users' SNS dependency and their motives mediate the relation between culture and company SNS-related behaviors:

H6a: *The effect of culture on users' company SNS-related behaviors (following, consuming, engaging) is mediated by users' SNS dependency.*

H6b: *The effect of culture on users' company SNS-related behaviors (following, consuming, engaging) is mediated by users' motives for following company SNSs.*

5.3 Method

To answer the research question, an online survey was conducted asking Chinese and Western respondents about their SNS dependency, motives to follow companies online, and company SNS-related behaviors. The research was approved by the ethical committee of University of Twente.

5.3.1 Measures

To measure all constructs, a bilingual survey was designed: Western respondents answered questions in English, Chinese respondents in Chinese. The questions were originally formulated in English, translated to Chinese by

the first author, and translated back into English by an independent bilingual researcher. The original and back-translated versions were compared to ensure similarity of the questions. Besides the questions discussed below, background questions were asked on age, gender, and education. All constructs were measured using seven-point Likert scales (1 = strongly disagree, 7 = strongly agree).

SNS dependency (Cronbach's $\alpha = .72$) was measured with four items based on Tsai and Men (2017). Examples of items were 'If I cannot use social media, I would really miss it' and 'I would rather spend my leisure time on social media than do something else.'

Motives for following company SNSs included the six motives identified by Muntinga et al. (2011) and used in earlier studies (De Veirman et al., 2017; Kitarattarkarn et al., 2020; Tsai & Men, 2013, 2017). For each motive, we formulated three to five items. We then conducted a factor analysis (with varimax rotation) to check whether the six motives were distinctive. This led to the deletion of two confounded items. The Cronbach's alphas of all six motives were satisfactory, ranging from .79 to .94. Table 5.2 presents the final factor solution. To correct the scores for specific motives, we also calculated an overall motivation score, consisting of the mean score of all 21 motives items (Cronbach's $\alpha = .91$).

Company SNS-related behaviors involved three constructs. The first was whether or not respondents at the time of the research followed company accounts on Twitter. The second and third involved the extent to which they, respectively, consumed company posts and engaged with them. Inspired by Tsai and Men (2013, 2017), we asked eight questions to assess both types of behavior. Again, a factor analysis (with varimax rotation) was conducted to check the distinctiveness of both constructs (see Table 5.3). Both constructs appeared to be reliable (Cronbach's $\alpha = .85$ for consuming and .80 for engaging with posts).

Table 5.2 Factor analysis of the motives items.

Survey items	SOC	ENT	EMP	INF	REN	ID
I want to share ideas with others.	.86					
I want to get to know other people.	.85					
I want to stay in touch with other followers.	.83					
The company's account helps me to connect with similar people.	.79					
I think the content of the company's account is entertaining.		.87				
I think the content of the company's account is fun.		.84				
I think the content of the company's account is appealing.		.84				
The content of the company's account helps me pass time when I feel bored.		.67				
I want to complain about the company or its products.			.91			
I want to express criticism about the company or its products.			.90			
I want to post dissatisfaction with the company or its products.			.89			
I want to obtain product-related information.				.81		
I want to stay informed about the company or its product.				.80		
I want to learn about the company or its products.				.80		
I am interested in news about the company or its products.				.65		
The company's account helps me get free trials, gifts, or samples.					.90	
The company's account offers opportunities to get free products or special offers.					.89	
The company's account helps me get discounts and promotions.					.85	
I feel attached to the company.						.79
I am proud to be a follower of the company.						.78
I share similar interests and hobbies with other followers of the company.						.69
Eigenvalue	7.35	2.99	2.46	1.41	1.28	1.01
Percentage of variance	35.0	14.2	11.7	6.6	6.11	4.85
Cumulative percentage	35.0	49.3	60.1	67.6	73.7	78.7
Cronbach's alpha	.92	.88	.94	.84	.92	.79

Table 5.3 *Factor analysis of the company SNS-related behaviors items.*

Survey items	Consuming	Engaging
Viewing pictures and videos posted on companies' social media pages.	.807	
Reading posts, comments and reviews on companies' social media pages.	.791	
Following companies on social media.	.754	
"Liking" posts on companies' social media pages.	.695	
Commenting on content on companies' social media pages.		.883
Engaging in discussions on companies' social media pages.		.864
Posting content on companies' social media pages.		.797
Sharing/retweeting/reposting content from companies' social media pages.		.687
Eigenvalue	3.9	1.4
Percentage of variance	49.1	17.6
Cumulative percentage	49.1	66.7
Cronbach's alpha	.85	.80

5.3.2 Data collection and sampling

To create comparable samples of users active on SNSs in both cultural contexts, we recruited undergraduate university students as respondents. Western respondents were recruited at University of Twente (the Netherlands). Almost all programs at this university are taught in English. Most Western respondents were Dutch (60%) or German (37%). Chinese respondents were recruited at Zunyi Normal University (China). All were native speakers of Mandarin. Respondents were recruited in several ways: via social media (WhatsApp, LinkedIn, Facebook, and WeChat), via snowball sampling, and via the universities' pool of research participants (offering students credits for participating in studies).

In total, 388 undergraduate students completed the survey. On average, respondents were 21.6 (SD = 2.1) years old; there were no significant age differences between Western and Chinese respondents. The male-female ratio was almost in balance: 49.7 vs. 49.5 percent, respectively, with 0.8 percent choosing an 'other' option. Again, there were no significant differences

between Western and Chinese respondents. However, we did find a significant difference in respondents' academic background: In the Western sample, science & engineering and social science students were almost in balance (48 vs. 52 percent); in the Chinese sample, science & engineering students were outnumbered by social science students (38 vs. 62 percent). As academic background significantly correlated with some of our dependent variables—SNS dependency ($r = .25$), information ($r = .16$), enumeration ($r = .17$), and empowerment ($r = .13$)—we included this variable in our analyses.

5.4 Results

5.4.1 Relation between culture and SNS dependency

To investigate differences in habit formation between Western and Chinese users, we compared the SNS dependency scores of both groups using ANOVA with culture and disciplinary background as independent variables. A significant difference was found between Western and Chinese users (3.37 vs. 4.04; $F(1,384) = 35.246$, $p < .001$, partial $\eta^2 = .08$), confirming that Chinese users had a higher degree of SNS dependency than Western users. In addition, a significant difference was found for disciplinary background: Social science students had a higher degree of SNS dependency than science & engineering students (3.96 vs. 3.45; $F(1,384) = 21.019$, $p < .001$, partial $\eta^2 = .05$). No interaction effects were found. This finding confirms H1, stating that Chinese users have a higher SNS dependency than Western users.

5.4.2 Relation between culture and company SNS-related behaviors

Our first analysis on SNS-related behaviors involved the percentage of participants who followed company accounts. Disciplinary background did not have a significant relationship with following company SNSs ($p = .13$). Regarding culture, we found the percentage to be significantly higher among Chinese respondents than among Western respondents (41 vs. 26 percent; $\chi^2(1, N = 388) = 96.8$, $p < .001$, Cramer's $V = .16$). Still, it should be noted that the majority of the respondents did not follow any company accounts.

We then conducted a MANOVA with consuming company posts and engaging with company posts as dependent variables and culture and disciplinary background as independent variables. The multivariate test indicated significant effects for culture (Wilks' lambda = .754, $F(2,383) = 62.419$, $p < .001$, partial eta² = .25) and disciplinary background (Wilks' lambda = .983, $F(2,383) = 3.355$, $p < .05$, partial eta² = .02), but no interaction effect. The subsequent univariate tests, using a Bonferroni adjusted alpha level of .025, showed that the difference of culture only involved the extent to which respondents engaged with company SNSs: Although the engagement scores were overall quite low, Chinese respondents were significantly more inclined to engage with company SNSs than Western respondents (2.3 vs. 1.4, $F(1,384) = 83.191$, $p < .001$, partial eta² = .18). The scores of consuming company posts were almost the same (2.9 vs. 3.0, $F(1,384) = .267$, $p = .61$). Regarding disciplinary background, no effect was found for consuming ($F(1,384) = 4.751$, $p = .03$) and engaging with posts ($F(1,384) = .000$, $p = 1.0$) based on the adjusted alpha level.

These findings confirm H2a and H2c, assuming higher following rates and a stronger tendency to engage with company posts among Chinese users than among Western users. However, hypothesis H2b, assuming a similar pattern for consuming company posts, must be rejected: Chinese and Western users were comparable in their inclination to consume posts.

5.4.3 Relation between culture and motives

To investigate differences in respondents' motives for following company SNSs, we conducted a MANCOVA with the six motives as dependent variables, culture, disciplinary background, and company SNS following status as independent variables, and overall motivation to follow as a covariate. The multivariate test results indicated significant main effects of all three independent variables: culture (Wilks' lambda = .741, $F(5,375) = 26.232$, $p < .001$, partial eta² = .26), disciplinary background (Wilks' lambda = .962, $F(5,375) = 2.927$, $p < .05$, partial eta² = .04), and company SNS following status (Wilks' lambda = .912, $F(5,375) = 7.195$, $p < .001$, partial eta² = .09). In addition, significant two-way interaction effects were found for culture and

following status (Wilks' lambda = .959, $F(5,375) = 3.166$, $p < .05$, partial $\eta^2 = .04$) and for culture and disciplinary background (Wilks' lambda = .965, $F(5,375) = 2.741$, $p < .05$, partial $\eta^2 = .04$), not for disciplinary background and following status. No three-way interaction effect was found. For conciseness reasons, we will focus on the main and interaction effects of culture and following status.

Table 5.4 presents the univariate test results regarding the main effects of culture. The results provide partial support for H3a, which stated that Western participants put more emphasis on transactional motives. Our analysis showed relatively higher scores among Western participants for information and entertainment; remuneration is also higher but not statistically significant. The results provide partial support for hypothesis H3b, which stated that Chinese participants put more emphasis on relational motives. We found significant effects in the expected direction for social integration and empowerment. In addition, there is a significant effect regarding personal identity, but not as expected: Western users put more emphasis on personal identity motive.

Table 5.4 *Univariate test results: Main effects of culture on the importance of various motives to follow companies' SNSs.*

Motives	Western users	Chinese users	Test results
Information	4.99 (.07)	4.67 (.07)	$F(1,379) = 9.563$, $p < .005$, partial $\eta^2 = .03$
Entertainment	4.63 (.07)	4.09 (.07)	$F(1,379) = 30.756$, $p < .001$, partial $\eta^2 = .08$
Social integration	2.73 (.07)	3.75 (.06)	$F(1,379) = 108.507$, $p < .001$, partial $\eta^2 = .22$
Personal identity	3.81 (.08)	3.49 (.07)	$F(1,379) = 8.720$, $p < .005$, partial $\eta^2 = .02$
Remuneration	4.06 (.10)	3.71 (.09)	$F(1,379) = 5.759$, $p = .009$
Empowerment	2.98 (.10)	3.43 (.09)	$F(1,379) = 10.387$, $p < .005$, partial $\eta^2 = .03$

Note: Estimated mean scores (standard error in parentheses). Measured on seven-point scales (1 = strongly disagree, 7 = strongly agree). As the dependent variables were considered separately, we used a Bonferroni adjusted alpha level of .008.

Table 5.5 presents the univariate test results regarding company SNS following status. Followers distinguished themselves from non-followers with stronger information and personal identity motives: They seemed to be more optimistic about the informational value of company SNSs and had a stronger need to express their identity by connecting to companies or brands. Non-followers, on the other hand, would be more interested in remuneration and empowerment. Realizing that company SNSs may provide personal benefits or strengthen their position in possible disputes with companies might work for them. No differences were found for entertainment and social integration.

Table 5.5 Univariate test results: Main effects of following status on the importance of various motives to follow companies' SNSs.

Motives	Followers	Nonfollowers	Test results
Information	4.98 (.08)	4.69 (.06)	$F(1,379) = 8.920, p < .005, \text{partial } \eta^2 = .02$
Entertainment	4.37 (.08)	4.35 (.05)	$F(1,379) = .029, p = .87$
Social integration	3.30 (.08)	3.18 (.05)	$F(1,379) = 1.608, p = .21$
Personal identity	3.86 (.08)	3.43 (.06)	$F(1,379) = 18.282, p < .001, \text{partial } \eta^2 = .05$
Remuneration	3.59 (.10)	4.19 (.07)	$F(1,379) = 22.580, p < .001, \text{partial } \eta^2 = .06$
Empowerment	3.01 (.11)	3.40 (.08)	$F(1,379) = 8.790, p < .005, \text{partial } \eta^2 = .02$

Note: Estimated mean scores (standard error in parentheses). Measured on seven-point scales (1 = strongly disagree, 7 = strongly agree). As the dependent variables were considered separately, we used a Bonferroni adjusted alpha level of .008.

A significant interaction effects were found for personal identity ($F(1,379) = 14.046, p < .001, \text{partial } \eta^2 = .04$). The differences between followers and non-followers were larger among Western participants than among Chinese participants. Personal identity was for Western followers more important than for Western non-followers (4.2 vs. 3.4), but for Chinese followers and non-followers equally important (3.5 vs. 3.5).

5.4.4 Explaining company SNS-related behaviors using motives and SNS dependency

Table 5.6 presents the results of three logistic regression analyses, predicting whether users follow company SNSs, with SNS dependency and motives for following company SNSs as independent variables. The first analysis included the entire sample of respondents, the second focused on Western respondents, and the third on Chinese respondents. The explanatory value of the three models is limited. Overall, SNS dependency, information, and personal identity are positively related to following behavior; remuneration and empowerment have a negative relation with following behavior. This confirms H4a and partially H5a. The separate logistic regression analyses of Western and Chinese users show that the relation between motives and following behavior is unpredictable: For Western participants, the only significant positive motive is a relational one (personal identity); the transactional remuneration motive only contributes negatively. For Chinese users, the only significant positive motive is a transactional one (information).

Table 5.7 presents the three regression analyses focusing on users' consumption of company posts. Again, the three models have little explanatory value. Overall, SNS dependency and entertainment are positively related to company post consumption. This confirms H4b, but H5b must be rejected: There is no evidence that relational motives lead to a stronger tendency to consume company posts. The separate analyses of Western and Chinese users show that the relation between motives and company post consumption is unpredictable: Most motives do not contribute significantly. The only motive contributing significantly is social integration for Chinese users, which is in line with the assumption that relational motives matter more to Chinese users.

Table 5.8 presents the last series of regression analyses, focusing on users' engagement with company posts. The explanatory value of the models somewhat higher. Overall, SNS dependency and social integration have a positive relation with engagement; entertainment a negative one. This confirms H4c and partially H5c. A comparison of the regression models for Western and Chinese participants shows that the relational motive of social integration makes a significant contribution for both groups of users; the

transactional motive of entertainment is negatively related to engagement for Western users.

5.4.5 Mediating role of SNS dependency and motives

The analyses discussed before already made clear that some of the assumptions for mediation were not met. Only one potential model could be discerned: with culture as independent variable, SNS dependency and social integration (one of the six motives) as mediators, and engagement with company posts as dependent variable. We used Hayes’ (2018) PROCESS macro to investigate the possibility of mediation here. Figure 5.2 presents the final mediation model with all coefficients. Both mediation paths appeared to be significant at $p < .05$. Mediation via SNS dependency explained 7% of the effect of culture on engagement; mediation via social integration accounted for another 32%. The remaining 61% refers to a direct, unexplained effect of culture on engagement.

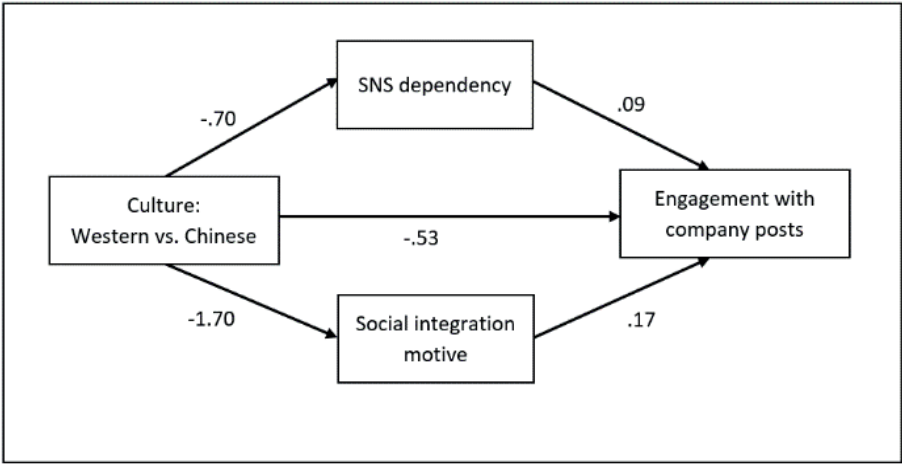


Figure 5.2. Mediation model for engagement with company posts.

Table 5.6 Logistic regression analysis predicting users' actual following of company SNSs.

	Overall				Western users				Chinese users			
	B	p	Odds ratio	B	p	Odds ratio	B	p	Odds ratio	B	p	Odds ratio
SNS dependency	.274	.009**	1.316	.196	.201	1.216	.253	.112	1.287			
Information	.272	.034*	1.313	.055	.782	1.057	.426	.021*	1.531			
Entertainment	-.134	.271	.874	-.211	.218	.810	-.051	.786	.950			
Social integration	.198	.058	1.219	-.006	.970	.994	.200	.292	1.222			
Personal identity	.254	.033*	1.289	.549	.004***	1.732	.071	.677	1.074			
Renumeration	-.285	.002***	.752	-.333	.007**	.717	-.092	.563	.912			
Empowerment	-.207	.036*	.813	-.144	.273	.866	-.311	.054	.733			
Model significance	$\chi^2(7, N = 388) = 44.280^{****}$				$\chi^2(7, N = 388) = 26.609^{****}$				$\chi^2(7, N = 388) = 18.012^*$			
Cox and Snell R ²	.11			.14			.09					
Nagelkerke R ²	.15			.21			.12					
Percentage correctly classified cases	69.6			76.4			67.5					

Note: * significant at p < .05; ** significant at p < .01; *** significant at p < .005, **** significant at p < .001.

Table 5.7 *Regression analysis predicting users' consumption of company posts.*

	Overall			Western users			Chinese users		
	Beta	t	p	Beta	t	p	Beta	t	p
SNS dependency	.232	4.607	.000****	.335	4.893	.000****	.196	2.767	.006**
Information	.058	.975	.330	.075	.879	.380	.054	.674	.501
Entertainment	.129	2.091	.037*	.053	.651	.516	.141	1.477	.141
Social integration	.035	.554	.580	.072	.888	.376	.201	2.115	.036*
Personal identity	.033	.521	.603	.076	.895	.372	-.084	-.895	.372
Renumeration	-.050	-.879	.380	-.106	-1.384	.168	-.034	-.367	.714
Empowerment	.004	.074	.941	.055	.750	.454	-.002	-.027	.979
Model significance	F (7,380) = 6.365****			F (7,183) = 5.606****			F (7, 189) = 3.503***		
Adjusted R ²	.09			.15			.08		

Note: * significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .005$, **** significant at $p < .001$.

Table 5.8 *Regression analysis predicting users' engagement with company posts.*

	Overall			Western users			Chinese users		
	Beta	t	p	Beta	t	p	Beta	t	p
SNS dependency	.162	3.435	.001***	.179	2.575	.011*	.112	1.549	.123
Information	-.061	-1.098	.272	-.113	-1.394	.194	-.047	-.580	.562
Entertainment	-.123	-2.140	.033*	-.189	-2.281	.024*	-.083	-.848	.397
Social integration	.444	7.429	.000****	.302	3.657	.000****	.315	3.251	.001***
Personal identity	-.061	-1.045	.297	.046	.529	.597	-.127	-1.336	.183
Renumeration	.009	.171	.864	.046	.590	.556	.046	.491	.624
Empowerment	.045	.849	.397	.051	.687	.493	.037	.426	.671
Model significance	F (7,380) = 15.408****			F (7,183) = 4.793****			F (7,189) = 2.384*		
Adjusted R ²	.21			.12			.05		

Note: * significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .005$, **** significant at $p < .001$.

5.5 Discussion

5.5.1 Main findings

Our research sheds light on the roles of SNS dependency and user motives in the digital consumer cultures of Western Europe and China (see Table 5.9 for an overview of hypotheses tested). In line with earlier research (Chu & Choi, 2010; B. Li et al., 2017; Tsai & Men, 2017), we found that SNS dependency is higher in China than in Western Europe. We also partially confirmed earlier research findings (Chu & Choi, 2011; Tsai & Men, 2017) suggesting that Chinese users are more prone to interact with company SNSs than Western users. We found differences in following behavior and engagement with posts; in contrast to Tsai and Men (2017), we did not find differences in consumption of posts, probably because this is a more random and less deliberate activity.

Investigating the role of user motives, we found that transactional motives (information, entertainment, and remuneration) generally outweigh relational ones (social integration, personal identity, and empowerment). For users, company SNSs may first and foremost be sources of information, entertainment, and financial or other benefits. However, in line with Hofstede's distinction between individualistic and collectivistic cultures, we uncovered significant differences in emphasis on motives between Western and Chinese users: Transactional motives are more important to Western users than to Chinese users; relational motives are more important to Chinese users than to Western users. The only exception is the personal identity motive, which is more important for Western users instead of Chinese users. This finding differs from Tsai and Men's (2017) results, who found higher scores of Chinese users for five of the six motives (except remuneration). The difference with that study is that we used overall motivation as a covariate, thus correcting for more generic differences in overall attitudes toward company SNSs between Western and Chinese users.

Regarding the relationship between SNS dependency and company SNS-related behavior, our results suggest that SNS dependency plays a role in the

Table 5.9 Overview of the hypotheses of this study.

H1	SNS dependency is higher among Chinese users than among Western users	Confirmed
H2a	Chinese users are more inclined to follow company SNS accounts than Western users	Confirmed
H2b	Chinese users are more inclined to consume company posts than Western users	Rejected
H2c	Chinese users are more inclined to engage with company posts than Western users	Confirmed
H3a	Western users' motives for company SNS-related behaviors are more transactional than Chinese users' motives	Partially confirmed
H3b	Chinese users' motives for company SNS-related behaviors are more relational than Western users' motives	Partially confirmed
H4a	SNS dependency is positively related to users' inclination to follow company SNSs	Confirmed
H4b	SNS dependency is positively related to users' consumption of company posts	Confirmed
H4c	SNS dependency is positively related to users' engagement with company posts	Confirmed
H5a	Relational motives are more positively related to users' inclination to follow company SNSs than transactional motives	Partially confirmed
H5b	Relational motives are more positively related to users' consumption of company posts than transactional motives	Rejected
H5c	Relational motives are more positively related to users' engagement with company posts than transactional motives	Partially confirmed
H6a	The effect of culture on users' company SNS-related behaviors is mediated by users' SNS dependency	Partially confirmed
H6b	The effect of culture on users' company SNS-related behaviors is mediated by users' motives for following company SNSs	Partially confirmed

cultural differences in company SNS-related behaviors between Western and Chinese users. This confirms earlier research by Tsai and Men (2012, 2017). For all three types of behaviors (following, consuming, and engaging), we found that SNS dependency made a significant contribution. For users' engagement with company posts, we even found that SNS dependency partially mediated the effect of culture on engagement, although the percentage of variance accounted for was somewhat low (7%).

The relationship between motives and company SNS-related behavior is not a straightforward one. We found no evidence for a stronger contribution of relational motives to company SNS-related behaviors. Instead, different types of behaviors appear to have different motivational antecedents. For the decision to follow company accounts, information and personal identity are significantly contributing motives; for consumption of company posts, it is entertainment; for engagement, social integration is the only significant motive. These findings correspond to those of earlier research (as outlined in Table 5.1), but the differentiation in relevant motives between behaviors was not so clear in earlier studies. For users' engagement with company posts, we found that the social integration motive partially mediated the effect of culture on engagement, with a considerable percentage of variance accounted for (32%).

5.5.4 Theoretical contributions

Our research makes two theoretical contributions. First, our findings underline and clarify differences between the digital consumer cultures of Western-Europe and China. We not only found differences in self-reported behavior—with Chinese users having a stronger SNS dependency and being more willing to interact with company SNSs than Western users—but also in users' motives when dealing with company SNSs. Hofstede's (2001) individualism-collectivism dimension appeared to be a useful cultural framework to anticipate and explain the differences found, especially when it is connected to our typology of transactional versus relational motives. Transactional motives (information, entertainment, and remuneration) focus on getting immediate material or immaterial benefits, which do not require a longstanding

relationship with a company and could in principle be obtained from any SNS. Of course, users might still believe that certain SNS accounts provide more interesting benefits than others, which could persuade them to display more loyal behaviors. Relational motives, on the other hand, imply using SNSs to develop or maintain bonds with particular companies or brands. Users may feel the desire to in be in regular contact with the company or with its community of like-minded people (social integration), define or express aspects of their personal identity with their relationship to the company or brand (personal identity), or shape or change the relationship they have with the company (empowerment). In these three cases, a longer-term relationship seems to be the starting point for interacting with the company SNS. Our research showed that a cultural difference in motives helps to explain the differences in digital consumer culture between Western Europe and China.

The second theoretical contribution involves the relationship between user motives and self-reported company SNS-related behaviors. Our findings showed that the relationship between motives and company SNS-related behaviors is not a strong one. The percentage of variance explained in our regression analyses was relatively low. That means that company SNS-related behaviors may not be as deliberate and goal-oriented as earlier research on user motives suggests, calling for more attention to irrational and unconscious stimuli that might urge users to follow company SNSs and consume or engage with company posts. Much of what happens between users and company SNSs may be decided in the users' interaction with actual content they encounter. Some earlier studies found similar or somewhat higher percentages of explained variance (Fernandes & Castro, 2020; Kwon et al., 2014; Li et al., 2019); others found much higher percentages (between 40 and 85%). However, these studies either complemented user motives with other variables (Logan, 2014; M. Song et al., 2017) or focused users' attention on their judgments about company SNSs (Jin & Huang, 2017; Zhao et al., 2016).

Despite the limited value of motives, our findings showed that different company SNS-related behaviors might correspond with different dominant motives. The decision to follow or not may be primarily related to information and social identity needs. Decisions to merely consume company posts, seem

to involve an entertainment motive. Decisions to actually engage with company posts are quite strongly related to the social integration motive. The differentiation of motives for the three types of company SNS-related behavior can be as stepping stone to a better understanding of users' perspectives on and interactions with company SNSs.

5.5.5 Practical implications

Even though we are still in the middle of trying to fully understand why and how users connect and interact with company SNSs, our research already offers several insights that can be useful for practitioners. First, our research offers insights that can be helpful when localizing SNS accounts. Western companies are struggling in adjusting their SNS presence to the Chinese cultural environment (Chapter 4), and Chinese companies may have similar problems. Our research illustrates that the expectations of users' response should be quite different in the two cultural contexts, with Chinese users considerably more responsive to company SNSs than Western users. More importantly, the differences in emphasis on transactional versus relational motives might be helpful in developing SNS content strategies in the two cultural contexts.

Second, our results shed light on the relevance of user motives. In general terms, information, entertainment, and remuneration appear to be the most prominent motives, followed by social integration and personal identity; empowerment seems to be least important. Still, none of the six motives were found to be unimportant. A comparison of followers and non-followers shows that information and personal identity are motives that are stronger for followers, whereas remuneration and empowerment would be valued more by non-followers. Strategies to turn non-followers into followers could include more emphasis on remuneration and empowerment in SNS content or in 'Follow us on Facebook/ Twitter/ Instagram' messages. Looking at the relationships between motives and company SNS-related behaviors, it seems important to prioritize behaviors. As gathering followers and fostering user engagement might be the most lasting and beneficial strategies, a priority on useful information and social integration appears to be recommendable. The

importance of well-selected information corroborates the findings of earlier research (Seol et al., 2016; Y. Wang & Yang, 2020; Watkins, 2017; Zhu & Hsiao, 2021). The importance of social integration reflects in the dominant research attention for engaging strategies (Araujo & Kollat, 2018; Lovejoy & Saxton, 2012; Saxton & Waters, 2014; Waters & Jamal, 2011).

5.5.6 Limitations and suggestions for future research

Several limitations should be considered when interpreting our findings. First, we surveyed consumer motivation to follow companies on two similar and widely used platforms in the respective cultures. Although Weibo is called the Chinese Twitter, different features and functions still exist among the two platforms, which might have influenced our findings.

Second, our participants were university students. Although they are certainly active on SNSs and form part of the target audiences of company SNSs, it is important to keep in mind that the target audiences in real life are broader and more heterogeneous, for instance in terms of age and educational level. Future research might investigate the extent to which our findings can be generalized to types of users.

Third, we used national differences in cultural orientation as the starting point for our research and did not measure cultural values on the individual level. It is plausible that there is variation in respondents' cultural values within both contexts. To further explore relationships between Hofstede's (2001) individualism-collectivism dimension and company SNS-related behaviors, it would be interesting to also include individual measures of the individualism-collectivism dimension in future research.

Fourth, we focused our research on motives in general and on decontextualized behaviors of following companies in general, consuming company posts, and engaging with company posts. Future research could extend our findings by investigating motives and SNS-related behaviors for specific company SNSs and longitudinal developments of users' interactions with company SNSs.

CHAPTER 6

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

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6.1 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 & 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 et al., 2014) or identification, enthusiasm, attention, absorption, and interaction (Gómez et al., 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 et al., 2014; Menon et al., 2019). Taking the efforts required and their potential impact into account, M. Cho et al. (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 et al., 2019; Harrigan et al. 2018; Hollebeek et al., 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 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?*

6.2 Literature review

6.2.1 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" (p. 324). Hollebeek et al. (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 et al. (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.*

6.2.2 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 et al., 2010; T. Li et al., 2013; Morsing & 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 & Vargas-Preciado, 2016; Guo & Saxton 2014; Lovejoy and Saxton 2012; Shin et al., 2015; Waters & Jamal 2011; Chapter 2). Y. Wang and Y. Wang (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 & Kollat, 2018; C. Kim & Yang, 2017; S. Kim et al., 2014; Saffer et al., 2013; Saxton & Waters, 2014; Y. Wang & Y. Wang, 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 et al., 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. Chapter 3 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).*

6.2.3 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 & Sung, 2011; M. Li et al., 2019; Waters & Jamal, 2011; Chapter 2). 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 et al., 2020; Daniel & Camp, 2020), online engagement (McShane et al., 2021), brand attachment (Arya et al., 2018), and overall affect and purchase intention (Das et al., 2019). Different explanations have been proposed for such effects, including playfulness and joy (McShane et al., 2021; Riordan, 2017ab), processing fluency (Daniel & Camp, 2020), similarity to face-to-face communication (Beattie et al., 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.*

6.2.4 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 & Wu, 2018; M. Li et al., 2019; Shi & Xu, 2020; R. Wang et al., 2020; X. Zhang et al., 2014; Chapter 4).

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, 2001). 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 & Chao, 2016ab; Waters & Lo, 2012; D. D. Wu & Li, 2018; Chapter 4). 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 2001). 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 & Chao 2016b; D.D. Wu & 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 & Wu, 2018; X. Zhang et al., 2014). A possible explanation is that Chinese people have a stronger visual orientation than Western people (Q. Li et al., 2020, 2021), which may be attributed to their pictographic script (Y. Wang & D. 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 low-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 et al., 2014). In addition, emojis appear to be used differently in the two cultures. Waters and Jamal (2011) analyzed tweets of top 200 non-profit 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.*

6.3 Method

6.3.1 Research design

To test the seven hypotheses, an online experiment was conducted using a 2 (prior company involvement: high vs. low) \times 3 (communication strategy: information vs. action vs. community) \times 2 (emojis: present vs. absent) \times 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).

6.3.2 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 6.1 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 6.1 shows how emojis were embedded in the text.

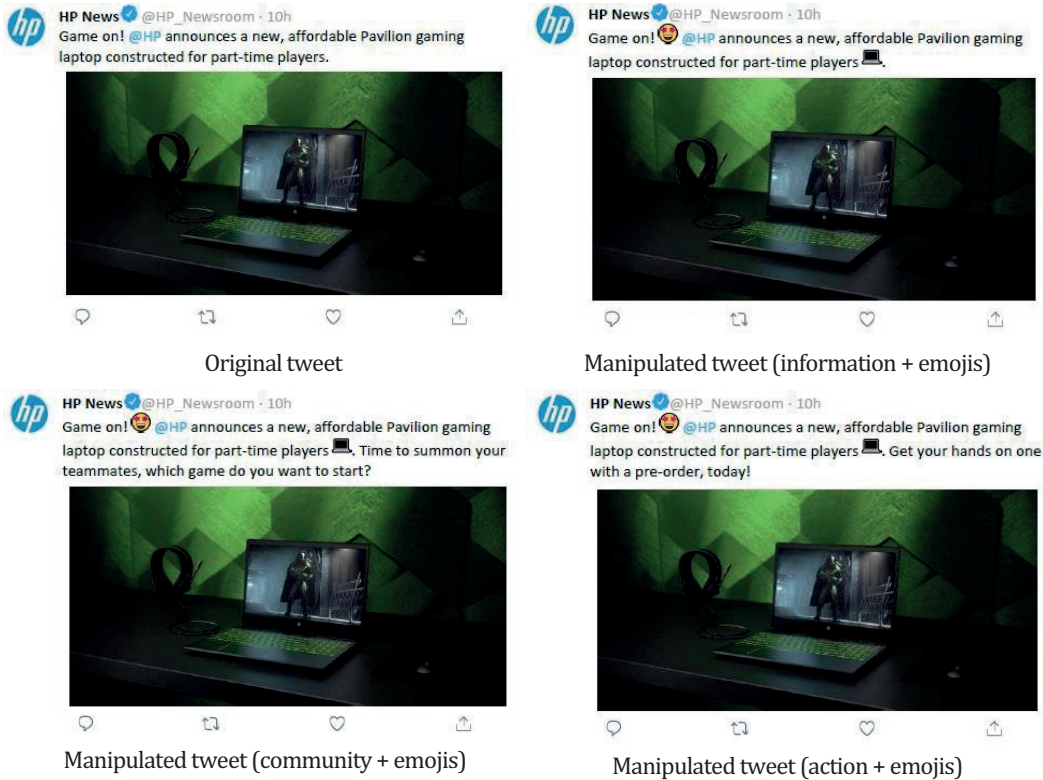


Figure 6.1. Example of one of the microblogs used in three communication strategy versions.

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.

6.3.3 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.

6.3.4 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.

6.3.5 Participants

To create comparable and more or less homogeneous groups, we recruited university students from the two national cultures. Western participants were recruited at University of University (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 Zunyi 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 6.1 shows their background characteristics. The participants’ gender was almost balanced 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

Table 6.1 *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)

6.4 Results

6.4.1 Manipulation check

Table 6.2 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.

Table 6.2 *Results of the manipulation checks for communication strategy.*

	Information	Community	Action	Significance
Community recognized	4.22 ^a (.105)	4.55 ^b (.92)	4.35 ^{ab} (.99)	$F(2,385) = 3.78, p < .05, \text{partial } \eta^2 = .02$
Action recognized	4.28 ^a (.95)	4.39 ^a (.90)	4.65 ^b (.86)	$F(2,385) = 5.77, p < .005, \text{partial } \eta^2 = .03$

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.

6.4.2 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 6.3). 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.

6.4.3 Effects of prior company involvement

The results of the univariate test of the effects of prior company involvement can be found in Table 6.4. 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 eta² 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.

Table 6.4 *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 6.3 *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	

6.4.4 Effects of communication strategy

Table 6.5 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 eta² 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.

Table 6.5 *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.

6.4.5 Effects of national culture

Table 6.6 presents the univariate test results of the effects of national culture. Culture had a 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 eta² 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.

Table 6.6 *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)	$F(1,364) = 14.454, p < .001, \text{partial } \eta^2 = .04$
Active engagement	1.25 (1.07)	2.58 (1.78)	$F(1,364) = 93.467, p < .001, \text{partial } \eta^2 = .20$

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

6.4.6 Interaction effects between national culture and prior company involvement

The interaction effects of national culture and prior company involvement are visualized in Figure 6.2 (overall appreciation) and Figure 6.3 (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 η^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.

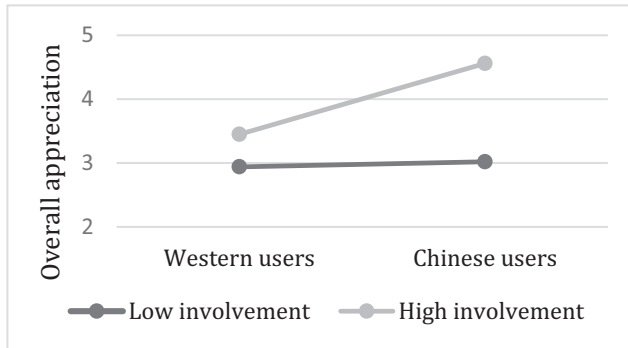


Figure 6.2. Interaction effect of culture and prior company involvement on overall appreciation.

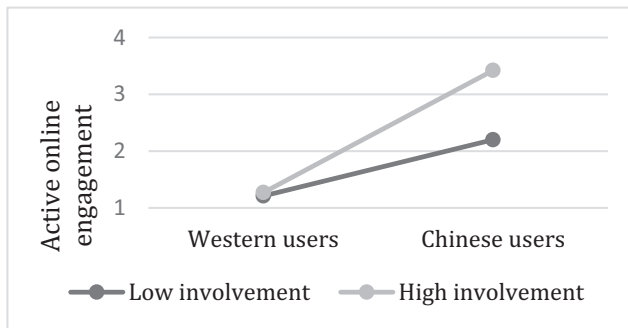


Figure 6.3. Interaction effect of culture and prior company involvement on active online engagement.

6.5 Discussion

6.5.1 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 6.7.

Table 6.7 *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

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 et al., 2014; Read et al., 2019). Rather than assuming a linear relationship between inviting online engagement and building company involvement, 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 & Wu, 2018; M. Li et al., 2019; Shi & Xu, 2020; R. Wang et al., 2020; X. Zhang et al., 2014) or surveys (Chu & Choi, 2011; Tsai & 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 et al., 2018; Bai et al., 2019; Beattie et al., 2020; Daniel & Camp, 2020; Das et al., 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: Emojis were placed 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 did have 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 et al., 2010; T. Li et al., 2013; Morsing et al.,

2006) as well as correlation-based studies of message strategies and online engagement (Araujo & Kollat, 2018; C. Kim & Yang, 2017; S. Kim et al., 2014; Saffer et al., 2013; Saxton & 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 & Vargas-Preciado, 2016; Guo & Saxton, 2014; Lovejoy & Saxton, 2012; Shin et al., 2015; Waters & Jamal, 2011; Chapter 2). 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.

6.5.2 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 engagement is not as simple and straightforward as suggested in the literature (e.g., Culnan, McHugh, 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 comparable in both cultural settings?

6.5.3 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.

6.5.4 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.

CHAPTER 7

General Discussion

Although many corporations across the globe utilize social media as a means through which to communicate with a broad range of stakeholders, little is known about how they actually use SNS platforms. Given that satisfying users is critical to the success of a company's communications, it is of critical importance to understand their motives and preferences with regard to SNSs. This dissertation explored how companies use SNSs, what motivates users to follow companies' SNSs and which factors influence their engagement with companies. Alongside this, the dissertation investigated differences between how Chinese and Western companies and users use SNSs. The present chapter first summarizes the main findings emerging from the study, before then proceeding to discuss the theoretical and practical implications of the research. Finally, the chapter delineates the limitations of the study and provides recommendations for future research.

7.1 Main findings in each chapter

Chapter 2 describes a content analysis of Twitter accounts and tweets from four large IT companies, focusing on the arrangement of their accounts and the message characteristics used. The analysis employed a coding scheme based upon findings from previous research, in addition to bottom-up insights drawn from pilot coding of a different set of tweets.

With respect to the arrangement of accounts, we found that these companies adopt a clear structure for their account arrangement, with different accounts targeted toward different stakeholder groups. Specifically, these accounts can be classified into three categories. The first is centered on specific products. The second category focuses on particular stakeholders (e.g., developers) and provides specialized information to them. The third category uses organizational conventions (human resources, news) to present information about the company to the outside world.

Regarding the message characteristics used, we found that IT companies' tweets cover a wide range of topics within three communication domains, namely corporate, marketing, and technical communication. These three domains provided a comprehensive framework through which to analyze the

content of the tweets. The most common category was corporate communication, which mainly involves tweets designed to either build or maintain relationships with different stakeholders, while, simultaneously, providing information about the company. The next frequent category was technical communication, which pertains to tweets that aim to promote the acceptance and effective use of both present and future technologies. Marketing communication came in third, which encompasses tweets that advertise or sell products. Regarding the message elements used, plain tweets appear to be something of a rarity, with hyperlinks, hashtags, visuals instead being widely deployed. The use of emojis and public messages (mentions) is less common. Regarding the communication strategy of tweets, the broadcasting of information is most prevalent, followed by promoting action and facilitating dialogue.

Chapter 3 describes a content analysis that examined in detail how IT companies use Twitter for technical communication purposes. This study builds upon chapter 2 by analyzing characteristics of the companies' technical communication tweets, namely by looking at more substantial content subcategories and by investigating how this content correlates with users' online engagement (likes, retweets, replies).

The categorization of content illustrates how versatile technical communication on Twitter can be: in addition to providing user support, other types of communication are used to help people connect with technology, thus presenting a more comprehensive picture of the interaction between humans and technology—for example, explaining technological developments in greater detail, notifying users of updates, bugs, or risks with the aim of reducing either underusage or incorrect usage of product functionalities. The usage of message elements was primarily focused on explaining complex technical content (e.g., via hyperlinks or screenshots). Less attention was paid to enhancing the vividness and attractiveness of the tweets. The communication strategies are quite different from what one sees in the corporate and marketing domains; actions are the dominant strategy, and community-building is entirely missing in these technical tweets. It was found that certain types of messages are associated with higher levels of online

engagement, especially those that offer content about user instructions or updates and feedback, and include photos or videos. Our results thus suggest two improvements that might be beneficial for technical communication tweets: first, adding more attractive message elements; and second, exploring community building strategies. Furthermore, the findings also cast doubt over the importance of online engagement indicators for technical communication. In fact, many of the engaging message elements (hyperlinks) and communication strategies (calls for updates and downloads) can easily distract users from the content of the tweets themselves. Although the real engagement already took place (follow the hyperlink or download the software), these online engagement indicators failed to record the less visible indicators. Hence, this chapter calls for a more comprehensive perspective on online user engagement, one that not only includes immediately visible indicators but also includes less visible indicators of engagement.

Chapter 4 describes a content analysis that also extends upon the one presented in chapter 2, insofar as it studies Sino-Western differences in companies' microblogs as well as the cultural adaptation processes of Western companies in the Chinese context. More specifically, we compared the data presented in chapter 2 with data on both Western companies' Weibo usage and data on similar Chinese companies' use of Weibo. Comparisons were made regarding both the numbers and types of company accounts as well as the use of message characteristics (content, message elements, and communication strategies). The findings demonstrate that Western companies' use of Twitter varies significantly from Chinese companies' use of Weibo. With respect to the arrangement of accounts, Western companies have more diverse accounts on Twitter which target different products, stakeholders, and traditional conventions. Chinese companies have fewer types of accounts which are primarily product-oriented. Regarding content, while both Western and Chinese companies publish a great deal of content pertaining to corporate communication, Western companies mainly focus on CSR, business insights, and research & development, whereas Chinese companies focus primarily on community relations. Western companies share a lot of content on technical communication pertaining to technological developments and user instructions; Chinese companies, on the other hand, share more about

marketing-related information like sales promotions and product launches. Regarding message elements, Western companies use more interactive elements like hyperlinks, hashtags and mentions, whereas Chinese companies use more emojis. Regarding communication strategies, Western companies are more likely to use one-way information sharing, but Chinese companies are more likely to use community building strategies to develop a sense of community.

Western companies adopt three approaches to deal with cultural differences. The first consists of adapting to the Chinese context on Weibo, which involves them incorporating more content about community relations and utilizing more community strategies on Weibo. The second approach is not adapting to the Chinese context and Chinese way of communication, and instead, for example, opting to maintain a more technological profile than Chinese companies. The third is cautious adaptation, which involves Western companies slightly adjusting their Weibo practices, by, for example, using more emojis or experimenting with sweepstakes, while still not fully adhering to Chinese companies' communication on Weibo. It seems questionable whether such cautious adaptations really make a difference for Chinese users.

Chapter 5 presents the results of a survey (N=388) exploring the role of SNS dependency and motives for following SNSs as well as how this relates to how both current and potential Western and Chinese users engage with companies' social media accounts. Hofstede's individualism-collectivism dimension was used to develop hypotheses on cultural differences pertaining to social media dependency, motives for following companies' accounts, and company SNS-related behavior (following, consuming, engaging).

The results show that Chinese users have a stronger SNS dependency and higher rates of following and are significantly more inclined to engage with company SNSs than Western users. We also found that transactional motives generally outweigh relational ones. For users, companies' SNSs can serve as a primary source of useful information, entertainment, and even financial gain. Chinese users' motives are more relational in nature, insofar as they value developing or maintaining bonds with particular companies or brands, while,

conversely, Western users prioritize transactional motives, and are focused on obtaining immediate material or immaterial benefits. Followers are more motivated by information and personal identity, while non-followers are more interested in remuneration and empowerment. SNS dependency impacts upon cultural differences in all three types of company SNS-related behaviors (following, consuming, and engaging) and even partially mediates the effect of culture on engagement. Despite the lack of a strong relationship between motives and company SNS-related behaviors, different company SNS-related behaviors nevertheless appear to be motivated by different antecedents. Following or not following appear to be primarily determined by information and social identity needs. Consuming companies' posts appears to be motivated, above all, by entertainment. Engaging with companies' posts is strongly influenced by a need for social integration, which, in turn, appears to partially mediate the influence of culture on user engagement. Both SNS dependency and the social integration motives are significant mediators on engaging with posts, which helps to explain the effect of culture on engagement with company posts.

Chapter 6 presents the results of an online experiment examining both the main and interaction effects of message characteristics, in addition to two exogenous factors. A 2 (prior company involvement: high vs. low) $\times 3$ (communication strategy: information vs. action vs. community), $\times 2$ (emoji use: present vs. absent) $\times 2$ (national culture: Western vs. Chinese users) between-subjects design was used. The participants' appreciation of and willingness to like, share, and reply to IT companies' microblogs acted as the dependent variables.

The results show that the exogenous factors have a significant impact. That is to say, prior company involvement is related to both a higher appreciation of and engagement with companies' microblogs. Culture also has a significant effect; specifically, Chinese users are more positive about microblogs and are considerably more willing to display forms of engagement with them. Furthermore, there is an interaction effect between the two exogenous factors, indicating that prior company involvement is more important for Chinese users than for Western users. The two message characteristics themselves

appear to be less influential. Contrary to our expectations, action- or community-focused microblogs do not generate greater online engagement and are even appreciated less than microblogs that merely provide information. The use of emojis has no effect on users' appreciation and online engagement.

7.2 Theoretical implications

Based on the outcomes of the studies described in the individual chapters, several overarching theoretical implications emerged. First, this dissertation provides a comprehensive overview of the content of companies' SNSs. While several studies have previously underlined the importance of SNS content (Seol et al., 2016; Y. Wang & Yang, 2020; Watkins, 2017; Zhu & Hsiao, 2021), current studies have either focused on rather specific forms of Twitter content (CSR; e.g., Araujo & Kollat, 2018) or only offered a rudimentary description of the actual content of companies' posts (Swani et al., 2013; Tao & Wilson, 2015). To the best of our knowledge, chapter 2 is the first study of its kind to provide comprehensive insight into the types of content that companies post on microblogs. We found that content from three traditional domains—marketing communication, corporate communication, and technical communication—formed a good framework through which to understand the content of both international (chapter 2) and Chinese (chapter 4) IT companies' microblogs.

Second, our findings suggest that content from traditional communication domains merge and evolve on SNSs. As demonstrated in chapter 2, content from corporate, marketing, and technical communication merge into one microblog while still remaining identifiable. While the amount of overlapping content remains limited (16%), such combined content may reinforce each other. Product stories now place strong emphasis upon user support and sensemaking, technical communication could provide insights into technological developments and their future impact, while marketing communication could provide indirect marketing content to build trust, expertise, and thought leadership, by using long-term marketing strategies to influence purchasing decisions (cf. Z. F. Chen et al., 2017; Wall & Spinuzzi, 2018). In addition, microblogs as a medium also influence the type of content

that is posted on the platform. The in-depth study of technical communication content presented in chapter 3 testifies to how the content of technical communication has become broader and more multifaceted: although technical communication continues to provide all sorts of user support, it also helps to makes sense of new technological developments and explains them to stakeholders, which is why technical communication can be said to provide a more comprehensive perspective on the human-technology relationship. An understanding of content can help us gain insight into companies' practices on SNSs and, in turn, set the stage for further exploration of users' content preferences.

Third, the studies presented in this dissertation cast doubt upon the effectiveness of interactive and engaging communication strategies. Given the interactive and engaging nature of social media, companies are encouraged to take advantage of this feature in order to bond with users. Indeed, the communication strategy of interactivity, two-way communication, and community have been extensively advocated (Culnan et al., 2010; Li et al., 2013; Morsing & Schultz, 2006). However, the analysis of companies' communication strategies presented in chapter 2 and chapter 3 illustrate that companies' primary communication strategy is actually one-way information sharing, which is in line with many other earlier studies on companies' usage of SNSs (Carim & Warwick, 2013; Gomez & Vargas-Preciado, 2016; Guo & Saxton, 2014; Lovejoy & Saxton, 2012; Rybalko & Seltzer, 2010; Shin et al., 2015; Waters & Jamal, 2011). Moreover, there is not universal support for the effectiveness of interactive and engaging strategies. The findings of chapter 6 underscore that compared to one-way information microblogs, action- or community-focused microblogs do not necessarily generate greater online engagement and are less appreciated, which confirms the earlier findings of some experimental studies (Read et al., 2019; Watkins, 2017). When viewed together, the findings prompt further reflection on and investigation of whether interactive and engaging strategies are truly more effective than one-way information provision.

Fourth, commonly used engagement metrics (likes, replies, and retweets) should be treated with caution. In accordance with most studies on how SNSs

affect users (e.g., Abitbol & Lee, 2017; C. Kim & Yang, 2017), we used these easily available indicators as proxies for users' engagement. However, given some of the findings presented in chapter 3 and chapter 6, we need to reconsider both the importance and the validity of these indicators. For instance, while posts that ask users to take action may successfully persuade them to participate in an activity, they are unlikely to return to the tweet to respond or like it. Downloading a document, watching a video, or clicking a hyperlink may all constitute effective forms of engagement, but these immediate indicators neither capture nor record less visible indicators of engagement. In this respect, online engagement indicators should be viewed as merely a starting point for incorporating more advanced and context-sensitive indicators that truly reflect user engagement in a more sophisticated way. Our findings thus point to the need to develop a more holistic perspective on online user engagement, one that incorporates both immediately visible (like, share, replies) and less visible (downloads, followed hyperlinks) indicators of engagement, and relates them to the types of appeals that are made in SNS posts.

The fifth theoretical contribution pertains to the relationship between users' motives and self-reported company SNS-related behaviors (chapter 5). In contrast to previous studies, we corrected motive scores for overall motivation in order to interact with companies' SNSs (Tsai & Men, 2017). Based on Hofstede's (2001) individualism-collectivism dimension, we further distinguished between transactional versus relational motives. Our findings show that Western users tend to focus more on transactional motives, while their Chinese counterparts focus more on relational motives. The only exception in this regard is that Western users tend to place greater value upon personal identity than Chinese users. In most cases, transactional motives outweigh relational motives. For users, companies' SNSs are primarily about providing information, entertainment, and financial or other benefits. However, a long-term relationship appears to be the starting point for interacting with companies' SNSs. In addition, in contrast to previous studies that found higher percentages of explained variance (e.g., Logan, 2014; Zhao et al., 2016), our findings show that motives do not strongly correlate with companies' SNS-related behavior. This may suggest that companies' SNS-

related behaviors are neither as consciously thought out nor purposeful as earlier research suggests, thus underscoring the need to pay greater attention to the irrational and unconscious stimuli that might influence users to both follow companies' SNSs and consume or engage with their posts.

Sixth, our findings reveal differences between the digital consumer cultures of Western Europe and China. More specifically, we found that users from the two cultures differs in terms of their habits, motives, and online behaviors toward companies. In line with previous research findings, we found that Chinese users are considerably more willing to interact with companies' SNSs than Western users (Chu & Choi, 2011; Tsai & Men, 2017). Not only did we find such differences in users' self-reported behavior (chapter 5), this was also experimentally confirmed (chapter 6). These findings echo other studies that were based on correlations between post characteristics and real-life user responses (e.g., Men & Tsai, 2012). This suggests that online engagement is different in China and Western countries, not merely because of the population size, but rather also because of distinct dispositions. Hofstede's (2001) individualism-collectivism dimension proved to be a useful framework for both anticipating and explaining some of the differences observed in our research. Relational and social values were found to be more important for Chinese users than Western users, while Chinese people's tendency to seek lasting relationships has also been transferred to and reflected in their relationships with companies and brands on SNSs. We found that Chinese' users' motives for companies' SNS-related behaviors are more relational than Western users (chapter 5). Chinese users are more likely to appreciate and engage with companies online when they know and like the company behind the microblog (chapter 6). In practice, Chinese companies also pay much more attention to building relationships with users (chapter 4). Our research shows cultural differences with respect to habits, motives, and online behaviors, which, in turn, helps to explain the differences in digital consumer culture between Western Europe and China.

The seventh theoretical contribution concerns the localization strategies employed by Western companies to adapt to Chinese SNSs (chapter 4). Western companies' localization strategies appear to be based on a

combination of cultural assumptions, self-identity considerations, and contextual factors, which leads them to adopt three strategies: adaptation, no adaptation, and cautious adaptation. Some of the cultural assumptions are based on established, value-based cultural dimensions. For instance, paying greater attention to community-building appears to reflect canonized knowledge about the differences between individualistic versus collectivistic cultures (Hofstede, 2001; Hofstede et al., 2010). Other differences are less theoretically supported and instead might be based on considerations of reality and the market environment. It was evident in our research that self-identity considerations are key to retaining essential characteristics of the companies, insofar as Western companies tend to retain their technological profile as a core element of their identity, and do not drastically reduce technological information and support in the way that their Chinese counterparts do. Contextual factors mainly refer to the limitations of operating in a foreign context (cf. Florenthal & Chao, 2016b).

7.3 Practical implications

Our research offers several insights that might be useful for practitioners. The findings regarding companies' SNS practices can act as a source of inspiration for practitioners managing companies' SNS accounts. The comparison between companies' use of Weibo and Twitter also provides insights into how to localize SNS accounts.

First and foremost, it is important to arrange a clear structure of organizational accounts in order to help users find the one(s) they are searching for. Companies can consider the three principles we found in our research: a focus on products, explicit stakeholder labels, and conventional content areas. The formulation of message characteristics can consider the three factors we studied, namely content, message elements, and communication strategies. Content-wise, practitioners should carefully select information that might be attractive to their stakeholders, as content is the primary reason users choose to follow their accounts (chapter 5) and the findings of earlier studies confirm the importance of providing high-quality information (Seol et al., 2016; Watkins, 2017; Zhu & Hsiao, 2021). Practitioners should look to develop a

more integrated content strategy, which allows them to carefully balance the importance of corporate, marketing, and technical communication, while, simultaneously, considering reducing the strict boundaries between traditional domains, thereby strengthening each other. Regarding message elements, while it is relatively common to use referential elements (hyperlinks, hashtags, mentions) and visual cues (video, picture, emojis) in microblogs, the number of visual cues is relatively low compared to the number of referential elements. In view of the fact that visual cues may have positive effects on online engagement, practitioners may consider including both a larger number and broader repertoire of visual cues in their microblogs. With regard to communication strategy, despite the fact that social integration may be the primary driver of user engagement (chapter 5), based on the limited effect of engaging and interactive strategies discussed in chapter 3 and chapter 6, practitioners should exercise caution toward general suggestions that companies should always strive for interactive strategies and community building on SNSs. Above all, it is important to keep in mind that such strategies should be used in a genuine and functional manner.

Second, our results provide insights into the importance of user motivations (chapter 5). Information, entertainment, and remuneration are the primary motives, followed by social integration and personal identity, with empowerment being the least important. Despite this, none of the six motivations were deemed to be unimportant. Followers are more motivated by information and personal identity than non-followers, while non-followers place greater value on remuneration and empowerment. Therefore, SNS practitioners could look to make remuneration and empowerment more prominent within their content in an attempt to attract non-followers. The relationship between companies' SNS behaviors and motives points toward the importance of prioritizing behaviors. Since gathering followers and encouraging engagement are the most enduring and beneficial strategies, prioritizing useful information and social integration is advisable.

Third, our research offers insights that could prove helpful when localizing SNS accounts. Hofstede's (2001) individualism-collectivism dimension is expedient for understanding specific differences between Western and Chinese users.

Based on this, practitioners should seek to apply culturally-specific strategies to attract more users. For example, the different emphases upon transactional versus relational motives might be helpful for developing SNS content strategies in the two cultural contexts (chapter 5). Moreover, relationships and social values are of much greater importance to Chinese users, which, in turn, influences their behavior (chapters 5 and 6). Hence, emphasizing relationship building might prove more effective in Chinese SNSs. In addition, understanding the differences between Chinese microblogging platforms and Western Twitter platforms can also help Chinese companies either set up or improve their Twitter accounts, alongside helping Western companies make better use of microblogging in order to reach Chinese users (chapter 4). These findings can serve as a foundation for both to learn from each other and improve microblogging practices in their own cultures. For example, Chinese IT companies could consider incorporating more technical communication content, whereas Western companies could consider whether to learn from the community-oriented practices of Chinese companies. Furthermore, our findings demonstrate that the responses of Chinese and Western users are quite distinct from one another, with Chinese users being significantly more responsive than their Western counterparts. Therefore, the responses that one can expect from Chinese and Western users should be treated separately.

7.4 Limitations and suggestions for future studies

In addition to the limitations discussed in the previous chapters of this dissertation, this dissertation also contains some overall limitations.

First, Western culture is not treated as a unitary concept in this dissertation. When we studied companies (chapter 4), the term Western companies referred to large international companies based in the United States, but when we focused on Western users (chapter 5, 6) this referred to users in Western Europe. Notwithstanding this limitation, treating Western Europe as a cohesive culture may also obscure the cultural diversity that characterizes Western European countries. One would assume that certain user behaviors are country-specific and that there is notable variation in users' cultural values at the individual level. In light of this, future research might wish to differentiate

between country-specific cultures by including participants from different countries. In addition, it would be interesting to include individual measures of cultural values in order to increase the understanding of the relationship between cultural values and user behaviors.

Second, in this dissertation, we attempted to analyze IT companies' microblogging practices by categorizing their characteristics, however such quantitative methods fail to properly consider why they choose these strategies as information senders. Future research could therefore conduct in-depth interviews with managers of microblogging accounts with the express aim of gaining insight into their motives and views on social media strategies, as well as how cultural differences and adaptations affect their judgements.

The third limitation pertains to the sample we selected. In chapter 2 and chapter 3, we only included four large Western companies, while only four large Chinese companies were included in chapter 5 for comparison. We designed the study with a focus on depth rather than breadth, in an attempt to understand both the arrangement of accounts and microblogging characteristics. As a result, our findings may not apply to other types of companies, or companies that are smaller in size. In particular, it might be hard to apply technical communication findings to other types of companies. Furthermore, the user research we carried out was also based on these large IT companies. It is thus possible that users may respond differently to message characteristics when they are exposed to companies that are more familiar and closely related to their daily lives. Future research should thus examine the applicability of our findings to other sorts of companies.

Notwithstanding these limitations and related directions for future research, the findings from this dissertation provide several other avenues for future research. First, future research should seek to further develop a more comprehensive view of online user engagement. In addition to the immediately visible indicators, less visible indicators such as, among other things, downloads and followed hyperlinks should also be considered as online engagement indicators. Future studies could then explore the relationship between the message characteristics and these more comprehensive

indicators. Second, the content of microblogging posts can be further explored. The content of corporate communication, marketing, and the crossover content between the domains could also be further refined (like we did for technical communication in chapter 3). Future research could thus examine the relationship between content and user engagement in greater depth. Third, both SNS platforms and companies' strategies and behaviors are rapidly evolving, which means that both companies' practices and users' behaviors may vary at different stages. Consequently, future research could seek to expand upon our findings by conducting a longitudinal study of companies' strategies and the evolution of user behavior.

7.5 Conclusion

The studies reported in this dissertation aim to contribute to the current scientific understanding of communication between companies and users on SNSs, and how cultural differences affect companies' microblog practices and their user preferences. This dissertation started with a content analysis of companies' microblogging practices, which provides a comprehensive overview of companies' arrangements of accounts and their message characteristics. Next, a detailed examination of companies' technical communication tweets presents a more comprehensive perspective on the human-technology relationship. Following that, the comparison of Chinese and Western companies' uses of microblogs revealed the comprehensive and multifaceted cultural differences in microblogging platforms. Furthermore, differences between Chinese and Western users' preferences were distinguished. Chinese and Western users differ in terms of habits, motives, and online behaviors related to companies. The results question the effectiveness of some widely encouraged communication strategies and require relativizing the importance of the universal importance of online engagement indicator

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Appendix

Appendix

Coding scheme

Content category	Description
<i>Corporate communication</i>	
Community relations	The company engages proactively with users, promoting relationships and creating a sense of community, for example using bonding messages (e.g., greetings), entertainment information (e.g., jokes, games), or announcements of offline activities (e.g., games, exhibits).
CSR	The company provides information about activities aimed at making a positive impact on the world (e.g., protecting the environment, supporting charity).
Research and development	The company provides news about new technologies, presents its latest innovations, or releases research findings from its labs or R&D center.
Business insights	The company shares insights about business management and operations (e.g., how to solve business challenges, build credibility, or improve customer loyalty).
Partner relations	The company provides information about its alliances (e.g., suppliers, service providers) and collaborations (e.g., joint product development).
Human resources	The company provides information for employees (e.g., employee achievements, career development) or potential employees (e.g., recruiting, employer rankings).
Corporate achievements	The company provides information about achievements or company awards (e.g., a high rank on the Fortune list, stakeholders recognition).
Government relations	The company tries to influence or persuade government officials or lawmakers to change or maintain public policy and legislation.
Crisis communication	The company responds in times of threats, crises, and unforeseen circumstances.

Coding scheme Continued

Content category	Description
<i>Technical communication</i>	
Information on specialized topics	The company informs people about technological developments and their implications (e.g., technological concepts, tips and tricks, programming knowledge).
User instructions	The company provides procedural and operational information about using products (e.g., installation, troubleshooting, practical applications).
Updates and feedback	The company provides information about product updates, errors and warning information, or asks for product feedback or reviews.
<i>Marketing communication</i>	
Commercial advertising	The company provides product information (e.g., quality, price, functionality, design) to persuade people to buy it.
Successful business cases	The company describes in detail how its products or services help customers to solve problems or make profit.
Product launch	The company provides information about the release of new products.
Sales promotion	The company provides short-term incentives to stimulate the purchase of products or services (e.g., discounts, free trials, coupons).
Word-of-mouth	The company broadcasts positive reviews by others (e.g., customers, professional agents) praising its products and services in order to encourage people to buy.
	The company shares business and management strategies and discusses latest technologies.
Corporate and technical communication	
Corporate, technical and marketing communication	The company shares business and management strategies, discusses latest technologies, and promotes its products or services.

Summary

Summary

The rise of SNSs has profoundly changed the way in which companies communicate with the public. Indeed, leading companies have almost universally adopted them within their practices. To stand out from the competition, companies must understand how to best utilize this medium and adopt well-considered SNS strategies. Furthermore, globalization has made cross-cultural communication ever-more prevalent. Understanding cultural differences as well as their potential impact on communication between companies and their users constitutes another important step toward effective SNS communication. Therefore, the aim of this dissertation was to investigate companies' use of SNS, both from the perspective of companies and target users. Given today's increasingly globalized world, we also attempted to understand how cultural differences affect communication between companies and users on SNSs.

From companies' perspective, there is a lack of a holistic picture of how companies use SNSs, which is why we wanted to provide a comprehensive overview of companies' specific activities on Twitter, including how they organize their accounts and develop their messaging strategies. From users' perspective, it appears absolutely essential to understand users' motives for both following and interacting with companies' accounts. Five complementary studies were conducted to develop a better understanding of communication between companies and users on SNSs.

Chapter 2 presents a systematic quantitative content analysis of the Twitter accounts of four large IT companies regarding their arrangement of accounts and message characteristics. The selected companies needed to have at least 10 accounts on Twitter to ensure that we could analyze their arrangement of accounts. The sample included all company-owned official accounts, which added up to 108 accounts in total. The data collection took place between January 10-16, 2018, and April 18-24, 2018. All tweets posted during this two-week period were included in the analysis, which resulted in a total of 5,277 tweets. A coding scheme with three main categories was used to analyze these tweets. The coding scheme was based on the findings of previous research and

was complemented with the exploratory results of an open-coding of one week's tweets from a sample of companies. Each tweet was analyzed with respect to its content, message elements, and communication strategy. On the accounts level, the results showed that companies used three principles to help users in selecting appropriate accounts: a product orientation, a stakeholder orientation, and traditional organizational conventions. On the message level, the results showed that the tweets included a broad variety of topics within the traditional domains of corporate, marketing, and technical communications, and in some instances the boundaries between these domains were somewhat blurred. Corporate communication on Twitter becomes less isolated and more closely related to companies' daily activities. Technical communication becomes broader, insofar as in addition to supporting users, it also includes sense-making of technological developments as well as explanations of these trends to stakeholders. Marketing communication calls for more attention to indirect forms of persuasion, providing nonmarketing content to influence long-term purchasing decisions. Our analysis of message elements showed that companies frequently complemented textual content with referential elements (hyperlinks, hashtags, mentions) and visual cues (e.g., video, picture, emojis). Regarding communication strategies, the tweets primarily focused on providing information and promoting action, rather than fostering dialogue with communities. Although technical communication is important for IT companies, there has been scarce attention paid to Twitter's role in the field of technical communication. Therefore, the tweets for technical communication were explored further.

Chapter 3 presents the results of a content analysis that delved further into characteristics of companies' technical tweets and related them to users' online engagement (likes, retweets, and replies). The analysis focused on the tweets that included technical communication content, which amounted to 1,604 tweets in total. The coding scheme was largely based on chapter 2, which focused on three message characteristics: content, message elements, and communication strategies. To further explore technical content, new subcodes were inductively developed for content categories by using an open coding process. Message elements and communication strategies were compared with those used in the companies' corporate and marketing communication tweets.

Negative binomial regression analyses were carried out to examine the relationships between message characteristics and online engagement. The results showed a total of ten content types were employed, thus demonstrating the versatility of technical communication on Twitter. While supporting users remained a central and much appreciated content element, the results revealed several other types of communication that help to build relationships between people and technology, such as, for instance, enhancing the company's image and reputation, sketching the larger technological picture, immediately alerting users of updates, bugs, or risks, integrating product functionality and practical use, and stimulating people's interest in both current and future technological products. Message elements were primarily used to convey complicated technical material (e.g., via hyperlinks or screenshots). Less emphasis was placed upon increasing the vividness and attractiveness of the tweets. In this respect, the communication tactics varied significantly from those used in the corporate and marketing areas: the majority of the tweets were action-oriented, followed by tweets that provided information, whereas tweets that focused on community building were entirely absent. Online engagement was found to be associated with many message characteristics, including providing users instructions or updates, offering opportunities for feedback, using photos or videos, and providing one-way information, all of which increased the level of online engagement. In addition, online engagement indicators for technical communication should be used with caution, which is why this chapter calls for a more holistic perspective of online user engagement that not only includes immediately visible (likes, replies, shares) indicators but also less visible indicators of engagement (followed hyperlink, participation in online event).

Chapter 4 builds upon the outcomes of the content analysis presented in chapter 2, by comparing the results of chapter 2 with Chinese companies' use of Weibo and Western companies' efforts to adapt to the Chinese context. Three kinds of corporate microblogging accounts were included in our analysis: Western Twitter accounts, Western Weibo accounts, and Chinese Weibo accounts. The data collection was carried out during the same time frame and using the same criteria as that of chapter 2. In total, 5,277 tweets and 543 weibos by Western companies, and 1541 weibos by Chinese

companies were analyzed. The comparison is based on the framework outlined in chapter 2 and once again focused on the arrangement of accounts and the three message characteristics (content, message elements, and communication strategies). On the account level, the results demonstrated that Western companies had a diverse set of accounts on Twitter, whereas on Weibo they only had a limited number of essential accounts. In contrast, Chinese companies on Weibo focused their accounts primarily on products. On the message level, with respect to content, while both Western and Chinese companies published a great deal of content about corporate communication, Western companies largely focused on the sub content of CSR, business insights, and research & development, whereas Chinese companies focused mainly on “community relations”. Western companies posted many microblogs about technical communication focused on technical developments and user instructions, while Chinese companies paid significantly less attention to the technical communication domain. Chinese companies tended to share more marketing-related information. In terms of message elements, Western companies used more interactive elements like hyperlinks, hashtags, and mentions, whereas Chinese companies used more emojis. In terms of communication strategies, Western companies shared one-way information more frequently, while Chinese companies tended to use community building. Depending on specific differences, Western companies either decided not to adapt (e.g., retained a more technological profile than Chinese companies), to adapt (e.g., paying more attention to community building), or to cautiously adapt (e.g., using somewhat more emojis or experimenting with sweepstakes). Operating in a foreign environment appeared to limit their options. Overall, the results demonstrated that cultural differences on microblogging platforms are comprehensive and multifaceted and cannot be easily reduced to established cultural dimensions. Processes of cultural adaptation are thus dependent on having a profound knowledge of the business environment and cultural differences.

Chapter 5 presents the results of an online survey investigating cultural differences between Western and Chinese users regarding SNS dependency, motives for following companies’ accounts, and companies’ SNS-related behaviors (following, consuming, engaging), which drew upon Hofstede’s

individualism-collectivism dimension to develop specific hypotheses. In addition, for the first time, we included non-followers in order to compare their motivations with those of actual followers. An online survey (N=388) was conducted in Western-Europe and China. The results showed that Chinese users have a stronger SNS dependency and higher following rates and a stronger tendency to engage with company SNSs than Western users. Chinese users also place greater emphasis on relational motives than Western users who place more emphasis on transactional motives. Hofstede's (2001) individualism-collectivism dimension proved to be a useful cultural framework for both anticipating and explaining the observed differences. Followers were found to have stronger information motives and personal identification motives than non-followers. In contrast, non-followers were more concerned with remuneration and empowerment. With regard to the relationship between motives and company SNS-related behaviors, two mediation effects were found, which helped to clarify cultural differences in engagement with companies' posts: both SNS dependency and social integration motives are significant mediators. Based on our regression analysis, we did not observe a strong relationship between company SNS-related behaviors and motivations, with a relatively low percentage of variance explained. This may suggest that companies' SNS-related behavior is less goal-oriented than earlier research suggested. In many cases, the behaviors are likely decided by how users interact with the actual content they encounter.

Chapter 6 describes the results of an online experiment that examined 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 IT companies' microblogs on Twitter or Weibo. A 2x3x2x2 between-subject experiment was conducted, with prior company involvement (high vs. low), communication strategy (information vs. action vs. community), emoji (present vs. absent), and national culture (Chinese vs. Western) serving as the independent variables, and participants' overall appreciation of the microblogs and their active online engagement with the microblogs (willingness to like, share, and reply) acting as the dependent variables. The participants were the same as in chapter 5 (N = 388). Participants were randomly assigned to a condition in which six

microblogs were present. They then read these microblogs and answered follow-up questions about them. The results showed that exogenous factors like prior company involvement and national culture had a notable effect upon users' reactions to companies' microblogs. Prior company involvement contributed to users' appreciation of and engagement with companies' microblogs, while Chinese users were found to be considerably more appreciative and responsive to companies' microblogs than Western users. However, the two types of message characteristics were less influential. In contrast to our expectations, action-or community-focused microblogs were found not to generate more online engagement and were even less appreciated than microblogs that solely provide information. Emojis did not affect users' appreciation and engagement.

Conclusion

Overall, several overarching theoretical and practical implications can be drawn from the results of the studies presented in this dissertation. First, this dissertation presents a comprehensive analysis of the content of companies' SNSs and develops an expedient framework for studying companies' SNS content.

Second, content from traditional communication domains merge and evolve on SNSs (chapter 2), while the platform also influences the type of content that is sent (chapter 3). Implementing a more integrated content strategy and reducing the strict boundaries between traditional domains could thus serve to strengthen each of them.

Third, this dissertation calls into question the effectiveness of interactive and engaging communication strategies. Further research is needed to see whether interactive and engaging strategies are more effective than one-way information provision.

Fourth, the universal importance of online engagement indicators must be relativized. Our findings show that some less visible indicators (downloads, followed links) were neglected (chapters 3 and 6). These online engagement

indicators should be complemented with more comprehensive and context-sensitive indicators of user engagement.

Fifth, our findings show that Western users tend to focus more on transactional motives, while Chinese users focus more on relational motives. Motives do not strongly correlate with SNS-related behavior of companies, which may suggest that companies' SNS-related behaviors are not as conscious and purposeful as previous research suggests, thus highlighting the need to pay greater attention to the irrational and unconscious stimuli that may influence users to follow companies' SNSs and engage with companies' posts. Different companies' SNS-related behaviors may correspond to different dominant motives. Differentiating between the motives for various types of SNS-related behaviors can enhance our understanding of users' perspectives on and interactions with companies' SNSs.

Sixth, Chinese and Western users differ in terms of their habits, motives, and online behaviors related to companies. Chinese users are considerably more willing to interact with companies' SNSs than Western users (chapters 5 and 6). Rational and social values are more important to Chinese users than Western users, while Chinese people's tendency to seek enduring relationships has also been transferred to and reflected in their relationships with companies and brands on SNSs.

Seventh, Western companies' localization strategies appear to be based on a combination of cultural assumptions, self-identity considerations, and contextual factors, which, in turn, leads them to adopt three strategies: adaptation, no adaptation, and cautious adaptation (chapter 4). Some of these cultural assumptions are based on established, value-based cultural dimensions, while other differences are less theoretically supported and potentially based on consideration of reality and the market environment.

Overall, the outcomes of the studies presented in this dissertation testify to the complexity of communication between companies and users on SNSs, as well as how cultural influences impact upon communication.

Nederlandse Samenvatting

(Summary in Dutch)

Samenvatting

De opkomst van sociale netwerksites (SNSs) heeft grote invloed gehad op de manier waarop bedrijven communiceren met hun doelgroepen. Vrijwel alle grote bedrijven geven SNSs een belangrijke rol in hun externe communicatie. Om zich te kunnen onderscheiden van de concurrentie moeten bedrijven leren hoe SNSs optimaal kunnen bijdragen aan hun communicatiestrategie. Daarbij vraagt de toenemende globalisering om aandacht voor interculturele communicatie. Inzicht in de manier waarop culturele verschillen invloed kunnen hebben op de communicatie tussen bedrijven en hun doelgroepen is voor veel bedrijven een voorwaarde voor effectief gebruik van sociale media. Het doel van deze dissertatie is te onderzoeken hoe bedrijven SNSs gebruiken en hoe gebruikers daarmee omgaan. Ook gaan we na hoe culturele verschillen van invloed zijn op het SNS-gebruik van bedrijven en hun doelgroepen.

In de literatuur over het zakelijke gebruik van SNSs ontbreekt voorsnog een totaalbeeld van de SNS-activiteiten van bedrijven. Daarom richt dit proefschrift zich op een omvattend overzicht van de microblogactiviteiten van bedrijven, gericht op de inrichting van verschillende bedrijfsaccounts en boodschapkenmerken. We kiezen daarbij voor bedrijven die werkzaam zijn in de IT-sector. Vanuit gebruikersperspectief is het vooral belangrijk zicht te krijgen op de motieven die SNS-gebruikers hebben om bedrijfsaccounts te volgen en ermee te interacteren en op de effecten van boodschapkenmerken op hun waardering en betrokkenheid. Dit proefschrift bevat vijf studies die de SNS-communicatie tussen bedrijven en gebruikers vanuit verschillende invalshoeken belichten.

Hoofdstuk 2 beschrijft een inhoudsanalyse van de Twitteraccounts van vier grote IT-bedrijven, gericht op de inrichting van hun bedrijfsaccounts en drie boodschapkenmerken. Om uitspraken te kunnen doen over de inrichting van bedrijfsaccounts hebben we bedrijven geselecteerd die elk ten minste tien verschillende accounts hadden. Alle officiële en eigen Twitteraccounts van deze vier bedrijven werden meegenomen. Dit leidde tot een selectie van 108 Twitteraccounts en 5.277 tweets. De analyse had betrekking op twee periodes in 2018: 10-16 januari en 18-24 april. Voor de analyse is een codeerschema

opgesteld met drie hoofdcategorieën: inhoud, boodschapelementen en communicatiestrategieën. Het schema was gebaseerd op inzichten uit eerder onderzoek, aangevuld met exploratieve resultaten van een open codering van een steekproef van eerdere bedrijfstweets. Met betrekking tot de inrichting van bedrijfsaccounts maakte het onderzoek duidelijk dat de bedrijven drie principes gebruikten om gebruikers te helpen bij het kiezen van de juiste accounts: een oriëntatie op producten, een oriëntatie op doelgroepen en aansluiting bij conventies (zoals de afdelingen van organisaties). De analyse van de inhoud van de tweets liet een grote diversiteit aan onderwerpen uit de domeinen van corporate, marketing en technische communicatie zien. De grenzen tussen deze domeinen vervaagden soms. Corporate communicatie was minder afgebakend op Twitter en was sterker gerelateerd aan de dagelijkse activiteiten van bedrijven. Technische communicatie werd breed opgevat en richtte zich naast gebruikersondersteuning op het schetsen van technologische ontwikkelingen en uitleg van de implicaties daarvan. Marketingcommunicatie had meer aandacht voor indirecte vormen van overtuiging en richtte zich ook op informatie die koopintenties op de langere termijn kunnen beïnvloeden. Wat betreft boodschapelementen maakte de analyse duidelijk dat de bedrijven tekstuele inhoud van tweets vaak combineerden met verwijzende elementen (hyperlinks, hashtags, mentions) en visuele inhoud (illustraties, video, emojis). Wat betreft communicatiestrategieën bleken de tweets vooral gericht op het verstrekken van informatie en het aanzetten tot actie; aandacht voor het bouwen aan een gemeenschap was minder prominent.

Hoewel het domein van technische communicatie belangrijk bleek voor de IT-bedrijven, is er nog weinig aandacht in de literatuur voor de rol van Twitter in technische communicatie. Daarom beschrijft **hoofdstuk 3** een nadere verkenning van de tweets in dit domein. Het ging om een meer gedetailleerde analyse van de inhoud van de tweets. Daarnaast werden boodschapkenmerken gerelateerd aan de online betrokkenheid van gebruikers (likes, retweets, replies). De analyse beperkte zich tot 1.604 tweets met inhoud uit het domein van de technische communicatie. Het codeerschema kwam grotendeels overeen met dat uit hoofdstuk 2, alleen met meer gedetailleerde subcategorieën voor de inhoud van tweets. De subcategorieën kwamen inductief tot stand in een open codeerproces. Boodschapelementen en

communicatiestrategieën werden vergeleken met de resultaten uit de corporate en marketingcommunicatie. Om relaties te onderzoeken tussen boodschapkenmerken en online betrokkenheidsindicatoren werd gebruik gemaakt van negatieve binomiale regressieanalyse. De analyse leidde tot tien inhoudscategorieën, die de veelzijdigheid van technische communicatie op Twitter onderstreepten. Hoewel gebruikersondersteuning nog steeds een belangrijk en gewaardeerd onderdeel was in de tweets, lieten de resultaten een veel breder arsenaal aan technische inhoud zien die op allerlei manieren kan bijdragen aan de relatie tussen mens en technologie. Voorbeelden daarvan zijn: het versterken van het imago en de reputatie van het bedrijf, het schetsen van de bredere context van technologie, het attenderen van gebruikers op updates, bugs of risico's, het inspireren van gebruikers met praktische gebruiksmogelijkheden van producten en het stimuleren van hun interesse in huidige en toekomstige technische producten. Boodschapelementen werden vooral gebruikt om complexe technische informatie over te brengen, zoals met hyperlinks of screenshots. Minder nadruk lag op elementen die de levendigheid en aantrekkelijkheid van tweets kunnen bevorderen. Op dit punt verschilden de tweets van die in de corporate en marketingcommunicatie. Ook de communicatiestrategieën vertoonden verschillen met de beide andere domeinen: de meeste tweets waren gericht op het aanzetten tot actie, gevolgd door tweets die zich puur op informatieverbreiding richtten; er waren geen tweets die gericht waren op het bouwen van een gemeenschap. Online betrokkenheid bleek gerelateerd aan diverse boodschapkenmerken. Zo bleken het geven van updates of gebruikersinstructies, het bieden van feedbackopties, het gebruik van foto's of video's en het (traditioneel) zenden van informatie alle geassocieerd met meer online betrokkenheid. Toch riepen de resultaten ook op tot voorzichtigheid bij het hanteren van online betrokkenheidsindicatoren. Een meeromvattende benadering waarin naast gangbare indicatoren (likes, retweets, replies) ook minder direct waarneembare effecten worden gehanteerd (bijvoorbeeld gevolgd hyperlinks, participatie aan online bijeenkomsten) ligt meer voor de hand.

Hoofdstuk 4 voegt een culturele dimensie toe aan hoofdstuk 2 door de resultaten van de daar beschreven inhoudsanalyse te vergelijken met de manier waarop dezelfde bedrijven hun SNSs voor Chinese gebruikers lokaliseerden op hun Weibo-accounts. Ter vergelijking voegden we daar een analyse van de Weibo-accounts van soortgelijke Chinese IT-bedrijven aan toe. Dit resulteerde in een vergelijking van drie soorten accounts: Westerse Twitteraccounts, Westerse Weibo-accounts en Chinese Weibo-accounts. De aanvullende Weibodata hadden betrekking op dezelfde periodes als die in hoofdstuk 2 en werden op dezelfde manier geselecteerd. In totaal werden 5.277 tweets en 543 weibo's van de Westerse bedrijven en 1.541 weibo's van de Chinese bedrijven geanalyseerd. De vergelijkingen waren gebaseerd op het kader uit hoofdstuk 2 en richtten zich op de inrichting van accounts en drie boodschapkenmerken (inhoud, boodschapelementen en communicatiestrategieën). Wat betreft bedrijfsaccounts bleek dat de Westerse bedrijven op Weibo slechts een beperkt aantal essentiële accounts hadden. De Chinese bedrijven hadden meer Weibo-accounts, maar ordenden die vooral rondom producten. Met betrekking tot de inhoud bleek dat Westerse en Chinese bedrijven zich vaak richtten op corporate communicatie, maar dat er binnen deze hoofdcategorie duidelijke verschillen waren: Westerse bedrijven besteedden veel aandacht aan maatschappelijk verantwoord ondernemen, zakelijke inzichten en research & development, terwijl Chinese bedrijven zich vooral richtten op het onderhouden van relaties met de gemeenschap. Westerse bedrijven besteedden veel aandacht aan technische communicatie, met name aan technologische ontwikkelingen en gebruikersinstructies; Chinese bedrijven besteedden veel minder aandacht aan deze op technologie georiënteerde inhoud en concentreerden zich meer op marketingcommunicatie. Ook de boodschapelementen verschilden: Westerse bedrijven gebruikten meer verwijzende en interactieve elementen (hyperlinks, hashtags, mentions), terwijl Chinese bedrijven meer emojis gebruikten. De communicatiestrategieën lieten ook een ander patroon zien: Westerse bedrijven gebruikten Twitter vooral om informatie te verspreiden; voor Chinese bedrijven was het bouwen aan een gemeenschap belangrijker. Afhankelijk van de specifieke verschillen kozen Westerse bedrijven ervoor om zich in sommige gevallen niet aan te passen aan Chinese gewoonten op Weibo (bijvoorbeeld door aandacht te blijven schenken aan technische

communicatie); in andere gevallen pasten ze de SNS-strategie aan (bijvoorbeeld met meer aandacht voor het bouwen aan een gemeenschap) of maakten ze kleine, voorzichtige aanpassingen (bijvoorbeeld door iets meer emojis te gaan gebruiken of enigszins te experimenteren met prijsvragen). Daarnaast leek de buitenlandse context hun opties voor het genereren van weibo's te beperken. De bevindingen leiden tot de conclusie dat culturele verschillen op microblogplatforms prominent en veelzijdig kunnen zijn en dat het moeilijk is om ze eenduidig te herleiden tot bestaande culturele dimensies. Geslaagde culturele aanpassingen hangen daarom sterk af van diepgaande ervaring met en een kennis van de culturele verschillen en de zakelijke omgeving.

Hoofdstuk 5 beschrijft de opzet en resultaten van een online survey naar culturele verschillen tussen Westerse en Chinese gebruikers op het gebied van SNS-afhankelijkheid, motieven voor het volgen van bedrijfsaccounts en gedragingen met betrekking tot SNS-activiteiten van bedrijven (accounts volgen, kennismaken van inhoud, betrokkenheid tonen met inhoud). Hypotheses over verschillen tussen Westerse en Chinese gebruikers waren gebaseerd op Hofstede's culturele dimensie van individualisme versus collectivisme. Een online vragenlijst (N=388) werd afgenomen in West-Europa en China. Respondenten waren zowel gebruikers die bedrijfsaccounts volgden als gebruikers die dat niet deden. Uit het onderzoek bleek dat Chinese gebruikers een sterkere SNS-afhankelijkheid hadden dan Westerse gebruikers en dat ze meer geneigd waren om bedrijfsaccounts te volgen en betrokkenheid te tonen met de SNS-boodschappen van bedrijven. Ook in de motieven was er sprake van een verschil: Chinese gebruikers legden meer nadruk op relationele motieven (persoonlijk identiteit, sociale integratie, mondigheid); Westerse gebruikers vonden transactionele motieven belangrijker (informatie, entertainment, financiële voordelen). Hofstede's individualisme-collectivisme dimensie bleek een waardevol theoretisch perspectief om de culturele verschillen tussen beide gebruikersgroepen te verklaren. Gebruikers die al bedrijfsaccounts volgden, hadden andere motieven dan gebruikers die dat niet deden: meer informatie en persoonlijke identificatie en minder financiële voordelen en mondigheid. Twee significante mediatie-effecten werden gevonden, die de culturele verschillen in betrokkenheid bij boodschappen van

bedrijven helpen verklaren: Zowel SNS-afhankelijkheid als nadruk op het motief sociale integratie medieerden deze relatie. Op grond van de regressieanalyses moet echter wel worden geconcludeerd dat de relatie tussen motieven en gedragingen niet sterk is, met relatief lage percentages verklaarde variantie. Deze laatste bevinding suggereert dat gedrag met betrekking tot de SNS-accounts en -boodschappen van bedrijven minder doelgericht is dan eerder onderzoek lijkt te suggereren. In veel gevallen lijkt het plausibel dat gedragingen worden bepaald door de manier waarop gebruikers reageren op de specifieke inhoud die ze tegenkomen.

Hoofdstuk 6 beschrijft de opzet en resultaten van een online experiment waarin de effecten van twee boodschapkenmerken (communicatiestrategie en het gebruik van emojis) en twee exogene factoren (eerdere betrokkenheid bij de bedrijven en nationale cultuur) op de waardering en de actieve online betrokkenheid van gebruikers zijn onderzocht. Het onderzoek richtte zich op zes microblogs van Westerse IT-bedrijven. Westerse gebruikers zagen deze in een Twitteromgeving, Chinese gebruikers op Weibo. Het ging om een 2 x 3 x 2 x 2 experimenteel design, met eerdere betrokkenheid (hoog versus laag), communicatiestrategie (informatie versus actie versus gemeenschap), emojis (aanwezig versus afwezig) en nationale cultuur (Westers versus Chinees) als onafhankelijke variabelen. De deelnemers, dezelfde als in hoofdstuk 5 (N=388), werden willekeurig aan de experimentele condities toegewezen. De resultaten wezen uit dat de twee exogene factoren een duidelijk effect hadden op de reacties van gebruikers. Eerdere betrokkenheid bij de bedrijven had een positieve invloed op waardering van en online betrokkenheid bij microblogs. Daarnaast bleken Chinese gebruikers meer geneigd om microblogs te waarderen en actieve online betrokkenheid te tonen dan Westerse gebruikers. De twee boodschapkenmerken hadden niet de verwachte effecten. In tegenstelling tot de verwachtingen leidden de actie- en gemeenschapgerichte microblogs niet tot meer actieve betrokkenheid en werden de microblogs in deze condities zelfs minder gewaardeerd dan de microblogs die alleen informatie verstrekten. Het gebruik van emojis had geen effect op de waardering en actieve online engagement van gebruikers.

Hoofdstuk 7 vat de inzichten uit de vijf studies samen. Verschillende overkoepelende theoretische en praktische implicaties kunnen op grond van het onderzoek worden geformuleerd. Ten eerste presenteert de dissertatie een eerste omvattende analyse van de inhoud van microblogs van bedrijven. Daarvoor is in hoofdstuk 2 een kader ontwikkeld dat ook in toekomstig onderzoek naar de inhoud van microblogs van bedrijven kan worden gebruikt.

In de tweede plaats blijkt de context van microblogs te leiden tot verschuivingen in de inhoud van de traditionele domeinen van corporate, technische en marketingcommunicatie. De grenzen tussen de domeinen vervagen en de inhoud verbreedt (hoofdstuk 2 en 3). De ontwikkeling van meer geïntegreerde inhoudsstrategieën voor SNSs lijkt een vruchtbare toekomstige ontwikkeling.

In de derde plaats plaatst het onderzoek in hoofdstuk 3 en hoofdstuk 6 vraagtekens bij de effectiviteit van de meer op interactiviteit en dialoog gerichte communicatiestrategieën (actie en gemeenschap). Het onderzoek in dit proefschrift leverde geen enkele aanwijzing op dat dergelijke strategieën leiden tot meer online betrokkenheid bij gebruikers. De resultaten wijzen eerder in de tegenovergestelde richting: het verstrekken van informatie zonder actie- of gemeenschapbevorderende doelen leek effectiever. Toekomstig onderzoek moet uitwijzen onder welke voorwaarden actie- en gemeenschapgerichte tweets eventueel wel kunnen leiden tot meer online betrokkenheid bij gebruikers.

In de vierde plaats roept het onderzoek in hoofdstuk 3 vragen op over de validiteit van de veelgebruikte betrokkenheidsindicatoren (likes, retweets, replies) op SNSs. Hoewel dergelijke indicatoren direct beschikbaar zijn, lijken ze niet altijd een correct en volledig beeld te geven van de effecten van tweets op gebruikers. Het lijkt zinvol om een breder perspectief te ontwikkelen op online betrokkenheid en daarin ook andere indicatoren te betrekken (zoals gevolgde hyperlinks en downloads).

In de vijfde plaats tonen de resultaten van hoofdstuk 5 dat Westerse en Chinese gebruikers in verschillende opzichten van elkaar verschillen in hun

gedrag met betrekking tot de SNSs van bedrijven. De online consumentencultuur in China is gunstiger voor bedrijven: gebruikers zijn meer dan in het Westen geneigd om bedrijfsaccounts te volgen en om online betrokkenheid te tonen. Dat uit zich in de motieven die gebruikers hebben voor hun omgang met bedrijfsaccounts: Voor Chinese gebruikers spelen relationele motieven een grotere rol dan voor Westerse gebruikers. Dit sluit aan op Hofstedes culturele dimensie van individualisme versus collectivisme. Daarnaast speelt een grotere SNS-afhankelijkheid van Chinese gebruikers een rol. Ook die lijkt dezelfde culturele dimensie te weerspiegelen.

In de zesde plaats relativeren de bevindingen van hoofdstuk 5 de rol van min of meer bewuste gebruikersmotieven als verklaringsgrond voor het gedrag van gebruikers. Verschillende motieven blijken te correleren met verschillende gedragingen. Nadere bestudering van de relatie tussen motieven en gedragingen zal leiden tot een beter begrip van gebruikersperspectieven op en interacties met bedrijfsaccounts. Daarnaast blijkt de relatie tussen motieven en gedragingen relatief zwak. Het gedrag van gebruikers blijkt minder bewust en doelgericht dan in eerdere studies wordt gesuggereerd. Meer aandacht is nodig voor irrationele en onbewuste processen die voorafgaan aan beslissingen om bedrijfsaccounts te volgen of betrokkenheid te tonen.

In de zevende plaats vraagt hoofdstuk 4 aandacht voor de manier waarop Westerse bedrijven hun SNS-activiteiten lokaliseren. Hun strategieën lijken een mengvorm van culturele aannames, overwegingen over de eigen identiteit en contextuele factoren. Deze leiden tot drie mogelijke strategieën: aanpassen, niet aanpassen en voorzichtig aanpassen. Bestaande culturele dimensies lijken te beperkt om de lokalisering van SNS-activiteiten ten volle te begrijpen.

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