

A CROSS-NATIONAL STUDY OF CORPORATE TWITTER USE

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ABSTRACT

Growth in microblogging (most commonly associated with Twitter, the most common microblogging site) has been said to be ‘explosive’. However there is very little research examining how different organisations use microblogging. This paper analyses and contrasts use of Twitter by six different organisations in their Australian and USA markets, drawing on existing models of interactive communications. The results provide a framework for organisations and researchers to examine Twitter practices, in order to identify the best Twitter strategy for different organisations. Implications for organisational use of Twitter are discussed.

INTRODUCTION

Twitter is the most commonly used microblogging service, with 100 million users worldwide [e.g. 1], and recent growth which has been described as ‘explosive’ [2]. Twitter use is greatest in the USA, with 62.1% of all Twitter users, with Australia the fourth largest user of Twitter, with 2.8% of users [3]. There has been substantial research into why individuals use Twitter [e.g. 4, 5], including research into the content of Twitter postings [6], common Twitter practices and conventions [7] and on the potential of Twitter to build communities [8]. Previous research into the use of Twitter by organisations has included studies of Twitter use for *internal* communication [9-11], and for research, with Twitter described as an online listening tool [12] and as a means of crowdsourcing [9]. Twitter’s greatest potential for organisations, however, is arguably for *external* communication, but very few peer-reviewed studies have analysed this usage, and despite its potential importance for external communications, there is very little theoretical or empirical evidence to guide managers in developing a strategy for organisational use of Twitter. In the next section, we develop a theoretical framework for the analysis of organisational use of Twitter.

Twitter as an interactive communications medium

In a review of the changing role of corporate communication, Duncan and Moriarty [13] concluded that communication with customers is the foundation of customer-focused marketing efforts. In particular, they argued that interactivity between the organisation and customer is a ‘hallmark of the paradigm shift in both marketing and communication’ [ibid, 13p. 8]. Interactivity has also been said to be a key variable for studying the uses and effects of new media technologies [14] and with its potential for personalised communication with individuals who have chosen to follow an organisation’s Twitter feed, Twitter clearly increases the potential for interactive communication by organisations with their customers. Writing before microblogging was available, Duncan & Moriarty argued that an increase in interactivity makes communication ‘an even more valuable element of marketing’ (1998 p. 1).

Despite the growing interest in interactive communications, there is no clear agreement on the definition of interactivity, with a recent book stating that ‘an exact definition of interactivity is still being debated’ [15]. In widely cited work, Rafaeli [16] has described three levels of two way interactive

communications: *two-way non interactive communications* occur when messages flow bilaterally, but do not refer to each other: *reactive* communications occur when later messages refer to earlier messages and *full interactivity* occurs by incorporation of preceding messages, in a process which has been described as a 'related or threaded manner' (Sundar et al, 2003). Previous research into interactivity in websites would suggest that tweets demonstrating higher levels of interactivity may lead to more positive recipient response. However organisations may have different strategic aims in their use of Twitter; differences in the use of Twitter might be expected to arise from organisational differences (e.g. a service organisation might use Twitter differently from a product organisation). There may also be differences in the use of Twitter in different geographic markets (e.g. USA organisations might use Twitter differently from Australian organisations).

In summary, the preceding literature review shows that interactivity (in its dual forms of message exchange and in allowing customised information provision) has been argued to be important for marketing communication, and in studies of corporate websites, to be associated with more positive user responses. As a new form of interactive communication, Twitter clearly allows both forms of interactivity, allowing message exchange between individuals, and also (through the use of weblinks) allowing individuals to choose what (if any) extra information they will choose to receive. A basic premise of relationship marketing has been said to be the need for executional consistency, so that there is coherence of stakeholder perceptions (Duncan & Moriarty, 1998). If Twitter use is driven by organisational communication strategies, in the absence of strategic differences in different geographic markets, one would expect to see similarities within organisations in their use of Twitter across their different geographic markets, and differences across organisations operating in different product markets. However a lack of peer-reviewed research into the use of Twitter by organisations means that there is no guidance as to whether one form of Twitter communications is better for a particular type of organisations. In the following analysis, we compare use of Twitter by different organisations in its largest market, the USA, and by organisations in the smaller Twitter market of Australia, and consider the implications for strategic use of Twitter as an organisational communications device.

METHODOLOGY

Since one aim of the research was to compare Twitter use between USA and Australian branches of the same organisation, a variety of organisations were considered for analysis. To be considered, an organisation was required to be 1) publicly owned 2) have a corporate Twitter account based in both the USA and in Australia and 3) to have sent a minimum of 190 tweets from each account over the data collection period from December 2009 to May 2010. Since the Twitter strategy of an organisation is likely to vary with the customer's involvement with the product (and thus with customers' likely interest in related tweets), six companies which fulfilled these conditions were chosen for analysis: three product companies (Dominos Pizza, Billabong (a surf and leisure clothing company) and Cosmopolitan magazine (also known as Cosmo), a monthly magazine targeted at females) and three service companies (Qantas, Microsoft, and Virgin Mobile). The companies thus also reflect different involvement categories, ranging from low involvement products (Dominos Pizza) to Billabong (assumed to be medium or higher involvement for its target segment) and service companies assumed to be moderate (or higher) involvement.

Since there can be multiple accounts tweeting on behalf of one organisation (e.g. Billabong has additional Twitter accounts under the name of 'billabong girls'), we chose for analysis the Twitter account which appeared to be the most visible and/or central account for each organisation, in order to best reflect any organisational policy or practice on the use of Twitter. For each of our companies, this

identified one account: ('pizza_dominos', 'billabong1973', 'CosmopolitanAU', 'qftravelinsider', 'MSAU' and 'virginmobileaus' for the Australian accounts, and 'dominos', 'billabongusa', 'CosmoOnline', 'qantasusa', 'Microsoft' and 'virginmobileus' for the USA accounts. All tweets from these accounts were downloaded for the period from 6/12/09 to 27/5/10¹. A random selection of 200 tweets from ten of the corporate accounts was selected for quantitative and qualitative analysis. Two accounts (Billabong USA and Qantas USA) sent only 194 and 196 tweets respectively during the data collection period, so all of their tweets were used for analysis.

All tweets were coded to reflect the contrasting interpretations of interactivity discussed in the literature review section, thus reflecting both interpersonal and machine interactivity. Firstly, using Rafaeli's continuum of interactivity [16], tweets were classified as *two-way non interactive communications* when tweets forwarded or referred to an earlier tweet (in Twitter terminology 'retweets' and '@mentions'). Tweets were classified as *reactive* when the tweet was a direct reply to an earlier tweet (in Twitter terminology, an '@reply') and as *fully interactive* when the tweet contained a hashtag (or '#' - a Twitter convention allowing users to create and/or follow a thread of discussion by prefixing a tweet with a '#' character [17], thus increasing a tweet's conversational function [18]). Tweets which reflected more than one level of interactivity were coded for the highest level; that is, a tweet which contained a reply, but which also contained a hashtag, was coded in both categories. Tweets which did not include any of these interactivity features, with messages thus flowing in one direction only, were coded as one-way non-interactive communications.

RESULTS

The first of the accounts to be registered was Billabong USA (in May 2008) and the last was registered in September 2009 (VirginmobileAus), as shown in Table 1. Table 1 also shows the total number of tweets sent by each account since account registration, the number of followers of each account as at May 27, 2010, and the ratio of followers to tweets. Perhaps surprisingly, given the lower number of Twitter users in Australia, there was no significant difference between countries in the median number of tweets, followers, or ratio of tweets to followers ($p > 0.1$) on Mood's median test (a non-parametric test which is appropriate for comparing distributions which are not normally distributed and which contain outliers).

An analysis of Table 1 shows very large differences in the number of tweets sent by different accounts and in the number of followers for each account. Differences in the number of followers are not surprising, since a service like Microsoft (which had the largest number of followers) might be expected to have many more followers than a low involvement product like Dominos pizzas. However differences in the number of followers are not explained by the product type, with Microsoft USA being the top site, but Microsoft Australia having the lowest number of followers of all sites. Similarly, the US equivalent of Billabong Australia (the highest ranked Australian site) was one of the less-followed US sites. Table 1 also reveals large differences in the efficiency of organisational Twitter communication; the site with the largest ratio of users to tweets (and thus the highest efficiency of communication) was MicrosoftUSA, with 93.8 followers for every tweet ever sent. In contrast VirginMobile Australia and Microsoft Australia had the lowest efficiency, with more tweets sent than followers as of May 27, 2010. Because some people will follow for a short time, drop out and be replaced by others, the ratio of followers at one date to total tweets sent will under-estimate efficiency of communication at any one point of time, but the low number of followers of some organisations, relative to the number of tweets sent, does suggest that a significant amount of corporate time may be being invested in communicating with a relatively small number of followers.

Table 1: Number of tweets, followers and efficiency of reach

Company Name	Account registration	Followers	No of tweets	No of followers to tweets
Qantas Aus	Jan 09	4,621	1,741	2.7
VirginMobile Aus	Sept 09	952	1,224	0.8
Microsoft AUS	May 09	820	889	0.9
Dominos Aus	Jan 09	3140	866	3.6
Billab Aus	Jan 09	11792	1,215	9.7
Cosmo Aus	Feb 09	8,046	1,894	4.2
Qantas USA	Mar 09	2,810	353	8.0
VirginMobile USA	Feb 09	6,602	1,635	4.0
Microsoft USA	Jul 09	83,049	885	93.8
Dominos US	Apr 09	13,060	3,829	3.4
Billab US	May 08	4779	478	10.0
Cosmo US	Mar 09	41028	1,156	35.5
Mean		15,058.25	1,347.08	14.7
St.dev.		24,009.26	912.76	26.6
median		5,691	1,186	4
Mood's median test (Aus vs US)		ns	ns	ns

Interpersonal interactivity: Use of replies, retweets and mentions

The level of interactivity of tweets, based on Rafaeli's [16] different levels of interactivity is shown in Table 2. There were again no significant differences in the median percentage of tweets in any of the three interactivity levels between USA and Australian companies ($p > 0.1$). More surprisingly, there was little or any evidence of consistent practices across USA and Australian accounts from the same companies: for example Qantas Australia was the highest user of hashtags, with 60.5% of its tweets containing hashtags, but Qantas USA was the seventh highest user of hashtags, with only 5% of its tweets containing hashtags. There were similar stark differences in the use of replies by organisations: 77.5% of tweets by Microsoft Australia were replies, but only 3% of tweets by Microsoft USA. Microsoft and Qantas showed similar strong differences in the use of retweets and mentions, with Qantas Australia being the largest retweeter, and Qantas USA equal lowest, and Microsoft USA being the second highest retweeter, and Microsoft Australia one of the lowest retweeters.

Table 2: Interactivity of tweets: interpersonal features

(Company Name)	Type of Post					
	Fully Interactive		Reactive		Non-Interactive	
	n #	% #	replies	% replies	n RT+mentions	% RT+mentions
Qantas Aus	121	60.5%	79	39.5%	58	29%
VirginMobile Aus	4	2%	180	90%	6	3.0%
Microsoft Aus	5	2.5%	155	77.5%	8	4%
Dominos Aus	17	8.5%	135	67.5%	11	5.5%

Billabong Aus	3	1.5%	16	8%	44	22%
Cosmo Aus	5	2.5%	51	25.5%	3	1.5%
Qantas USA	10	5%	179	91%	3	1.5%
VirginMobile USA	4	2%	122	61%	15	7%
Microsoft USA	44	22%	6	3%	70	35%
Domino USA	15	7.5%	172	86%	9	4.5%
Billabong USA	17	9%	5	3%	30	15%
Cosmo USA	46	23%	37	18.5%	33	16.5%
Mean	24.25	12.2%	94.75	47.5%	24.17	12.0%
St.dev.	33.89	16.9%	70.04	35.2%	22.81	11.4%
Median	12.5	6.3%	100.5	50.3%	13.0	6.3%
Mood's median test (Aus vs US)		ns		ns		ns

DISCUSSION

In an era where many organisations are experimenting with their use of Twitter, but where there is little evidence on what is best practice to guide corporate use of Twitter, the results provide useful data contrasting the use of Twitter across different companies, and within different companies, and provide a model for future analysis of corporate Twitter practices. There is no doubt that the importance of Twitter as an external communication medium is growing: over the period studied, all companies experienced an increase in followers, reflecting the growing use of Twitter. In contrast with the growth in the number of followers across all accounts, the number of accounts followed by Billabong Australia decreased over the period, presumably due to Billabong actively choosing not to follow some accounts. The difference between Billabong Australia's 55% *reduction* in the number of accounts followed, and the contrasting 8.7% increase in the number of accounts followed by Billabong USA demonstrates an apparent inconsistency in the use of Twitter within the company across the two locations. There were other differences between accounts: Cosmo's Australian and USA accounts had significantly different engagement scores, with Cosmo Australia having the highest score (0.69) and Cosmo USA the equal lowest (0.0) ($Z = 30.0, p < 0.001$).

CONCLUSION

The results show clear differences in Twitter practices between companies. The strategy employed by each of the six companies (though with varying levels of consistency across accounts) represent good examples of models which have been identified in literature examining website design [19] and in describing different public relations strategies [20]. Since this study involved analysis of only twelve corporate accounts, generalising results to other organisations using Twitter is difficult. However the results do show growing use of Twitter by organisations, and show evidence of divergent Twitter strategies. A lack of consistency across company accounts, however (e.g. in the use of hashtags) and in the apparent efficiency of Twitter communications suggests that organisations themselves are not sure of their best Twitter strategy. There is a need for further academic research exploring different Twitter strategies, to provide better guidance to organisations on optimising their use of Twitter. The results from this study can be used as a framework for the further study of organisational Twitter practice, and as a benchmark for further company comparisons.

ⁱ Using the address http://twitter.com/statuses/user_timeline/twitter_id.xml?count=count&page=page_number

REFERENCES

Due to limitations of space, a list of references is available from the first author