

Using Twitter to Reassure Users During a Site Outage.

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Executive Summary. Increasingly, people are turning to Twitter during crises ranging from the extreme to the everyday. In the case of an online service outage, the responsible company often feels compelled to join the conversation, but there is little research to guide them on what they should say, who should say it, and what the impact will be. Microsoft Learning and Psychster Inc. conducted a multivariate scenario study to explore how best to acknowledge, inform and reassure users during an outage, and how tweets affect brand perception and call center demand. The results showed that:

- Half of the respondents in the sample would consult a Twitter feed to get information about an outage.
- All tweets tended to reduce negative feelings about an outage and increase the perception that the responsible company cares.
- Acknowledging the outage and giving an explanation in the tweet reduced users' likelihood to contact support – but only when the tweets were made by an employee/social media manager rather than the company or its executives.
- Explaining the outage (regardless whether it was caused by internal or external factors) and informing users about the breadth of the impact (regardless whether it was global or specific) reduced users' likelihood to contact support more so than tweeting about whether the outage was frequent or expected.

Attribution.

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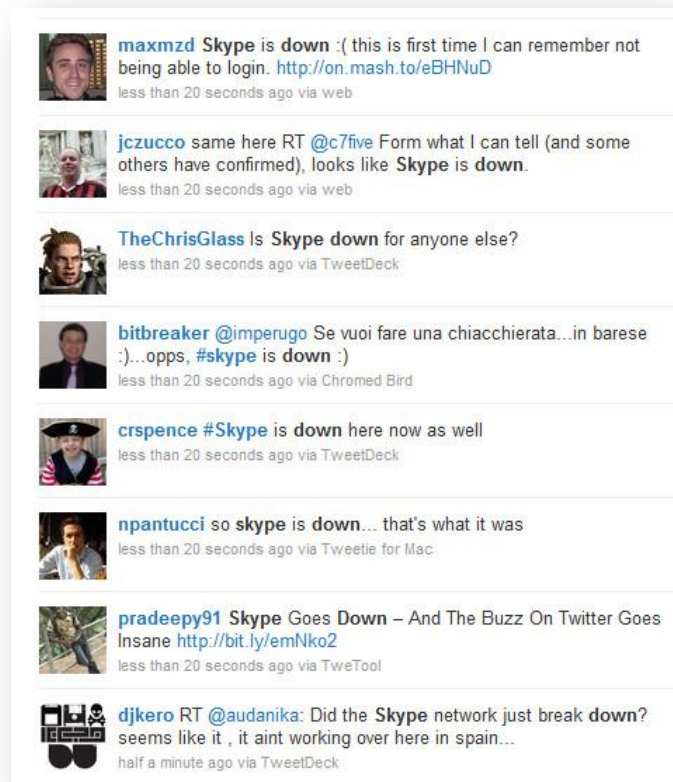
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Background and Research Questions. Although the many-to-many microblogging service Twitter was launched in 2006, many would argue it was the 2009 crisis in Iran that demonstrated its usefulness. As a tool for people to communicate – with authorities, each other, and the outside world – Twitter has since played a role in crises ranging from floods in North Dakota to grassfires in Oklahoma ([Vieweg, Hughes, Starbird & Palen, 2009](#)).

This has not gone unnoticed by organizations with a significant online presence. Certainly, a site outage, service interruption, or downed data center is by no means a fire or flood (something we should remind ourselves of in the moment), but in all cases, a group of affected users is spontaneously formed who need to be acknowledged, informed, and reassured. Such was the case with the Facebook and Skype outages in late 2010. Users almost instantly began following corporate feeds and saved search terms, which effectively set up a distribution channel through which they could receive both confirmation and information about their interrupted service.

Social media consultants often recommend that organizations take part in crisis conversations, if for no other reason than to provide rumor control. Beyond that, however, there is little empirical guidance about what they should say. Twitter’s 140-character limit on each tweet poses a challenge in trying to “acknowledge, inform, and reassure” users, to say nothing of explaining the outage and helping users determine what if anything they should do. But “sitting it out” is also an unattractive option, especially since users who do not get answers to their questions via Twitter will naturally escalate to customer support, which in a time of crisis can be quite costly and even delay an ultimate resolution by draining resources away from the core problem. Perhaps even more critical than escalations to customer support is that a company can be perceived as disconnected, and can ultimately lose loyal customers simply through the absence of information.

Microsoft Learning, who trains and certifies software professionals in over 140 countries, asked Psychster Inc. to explore how outages might be most caringly and effectively addressed on Twitter. To do this, we prepared a number of online videos depicting an



outage scenario and the various ways they could be addressed on Twitter, and measured users' reactions to them.

The first factor manipulated in the videos was in **who** posted the tweets. On one hand, the tweets from a company or its managers may be best received if they are perceived to be legitimate authorities who have access to information that others don't ([Stasser, Stewart & Wittenbaum, 1995](#)). On the other hand, tweets from social media managers who have strong affiliations with an online fellowship may be best received ([Java, Song, Finin, & Tseng, 2007](#)). To resolve this question, the video variations depicted tweets by either MSLearning, an executive at MSLearning, or an employee/social media manager of MSLearning.

We sought to document whether posting any tweet about an outage was better than posting no tweet, and whether giving an explanation was better than giving no explanation.

The second way the videos differed was in **what** was tweeted. We first created control conditions to document whether posting any tweet about an outage was better than posting no tweet, and whether giving an explanation was better than giving no explanation. To guide us on what sorts of explanations might be given, we consulted psychological research ([Weiner, 1984](#)) showing that people's failures are more often accepted and forgiven when they are...

- caused by **external** factors like situational events (versus internal factors like their own judgments)
- have a **specific impact** on some people (versus a global impact on all people)
- are **infrequent** (versus frequent)
- and are **unintended** (versus intended).

This provided the basis of the different explanations for the outage that were inserted into the tweets (**see insert for details**).

Methodology. Respondents to the multivariate online experiment were shown only 1 of the 30 video scenarios depicting the various combinations of the 3 tweeters and the 10 different tweets. Unlike a field observation, this multivariate experimental design allows us to draw causal conclusions about the impact of who tweeted and what was tweeted. **To view the videos used in this survey, please visit <http://psychsterdata.com/video/mstwitter/>.**

A narrator accompanied all videos with this script: *"The scenario is: you visit the Microsoft Learning web site to take advantage of a discount on certification exams. Upon clicking 'Order Now' you get a message that the web page is inaccessible. After repeated attempts to access the page, you go to Twitter to seek more information on the problem. You find*

the tweets by [MSLearning, MSLearningChris] whose bio says [read bio]. Take a moment to read the latest tweet and examine the rest of the page, then hit 'Next' to answer the questions that follow."

Respondents. The study was completed in September, 2010 by **120 Microsoft Learning customers** who responded to a link posted on the [Born To Learn blog](#), tweeted by [@MSLearning](#), and included in a newsletter.

Of the registered Twitter users, **49% had their account for less than a year**, on average they had **180 followers** and **followed 161** others, and they reported making an average of **4.5 tweets per day**. Respondents were 83% male, and 54% were 35 years of age and under.

Metrics. Before viewing the video, respondents gave baseline ratings on 5-point scales of how likely they would be to **visit a Twitter feed**, and to **contact support** via email "to find more information if you were urgently trying to access a web site which was unavailable." After viewing the video, respondents repeated these two ratings, and also rated whether the tweet shown would **reduce their negative feelings about the outage**. Finally, they rated how much they felt **Microsoft Learning cares about its customers**. This metric was highly correlated with similar metrics about how satisfied respondents are with Microsoft and how likely they would be to purchase and recommend its products.

Who tweeted about the outage?

1. **MSLearning (the Company)**. Bio: "Follow us to know what is new w/ Microsoft training and certification."
2. **MSLearningChris (the Executive)**. Bio: "Chris, Global General Manager for Microsoft Learning. Follow us to know what is new w/ Microsoft training and certification."
3. **MSLearningChris (the Employee)**. Bio: "Chris, Social Media Community Mgr for Microsoft Learning. Follow us to know what is new w/ Microsoft training and certification."

What was Tweeted?

1. *Control 1: No tweet acknowledging the outage appeared, only the feed shown below the other tweet variations.*
2. *Control 2: "We're getting reports of web performance issues. [Detail] More info here <http://tiny.cc/3h0mq>."*

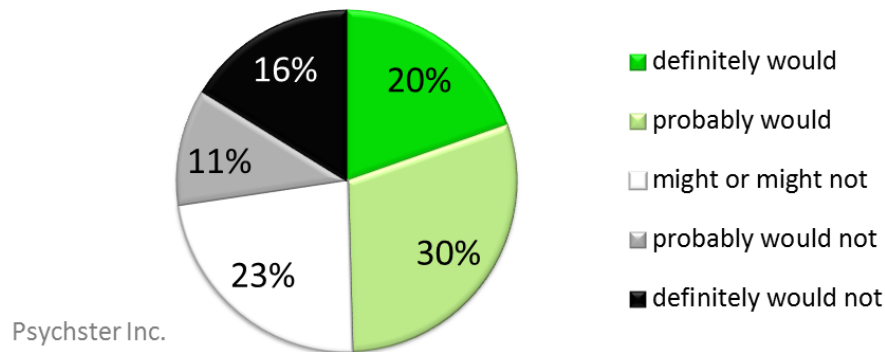
Same as Control 2 with these Details inserted into the tweet:

3. "Causes appear to be external to MS."
4. "Causes appear to be internal at MS."
5. "Affecting only current offer."
6. "Affecting all of MS Learning."
7. "First incident in 1 year."
8. "First incident in 3 months."
9. "Expected from current maintenance."
10. "Unexpected – no current maintenance."

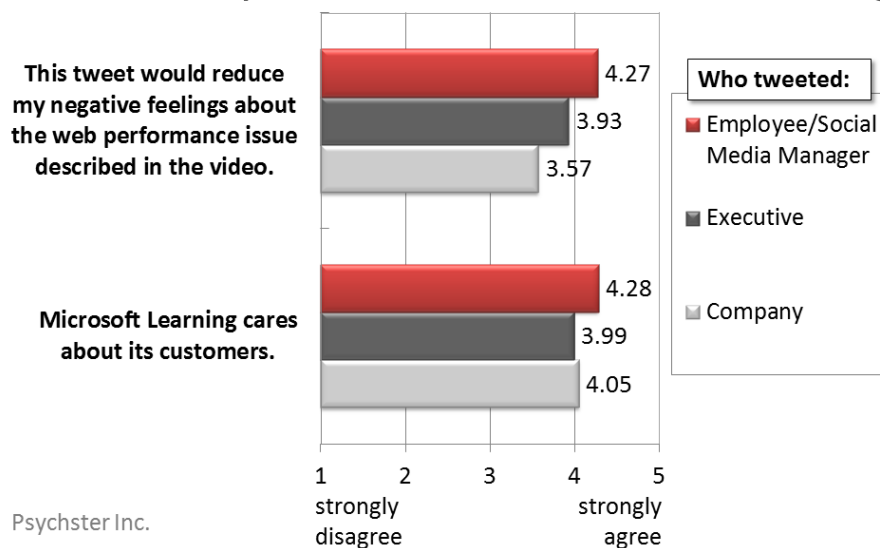
Results.

- 1. Half of the respondents would consult a Twitter feed to get information about an outage.** Before seeing the tweet scenarios in the videos, 50% “probably would” or “definitely would” consult Twitter in an outage. After seeing the video, this increased to 61% across the board without significant differences across who and what was tweeted, $ps > .05$.
- 2. All tweet variations tended to reduce negative feelings about the outage and increase the perception that the responsible company cares.** The average agreement on these metrics across all variations was well above the midpoint of 3 on the 5-point scales. The only difference across tweets to approach significance was that users’ negative feelings about the outage depended somewhat on who tweeted, $F(2,88)=2.07, p=.132$. Perhaps because 74% of the sample was satisfied or very satisfied with Microsoft in general, and 84% were satisfied with Microsoft Learning in particular, their brand perceptions and subjective reactions were not measurably affected by the outage scenarios shown in the videos.

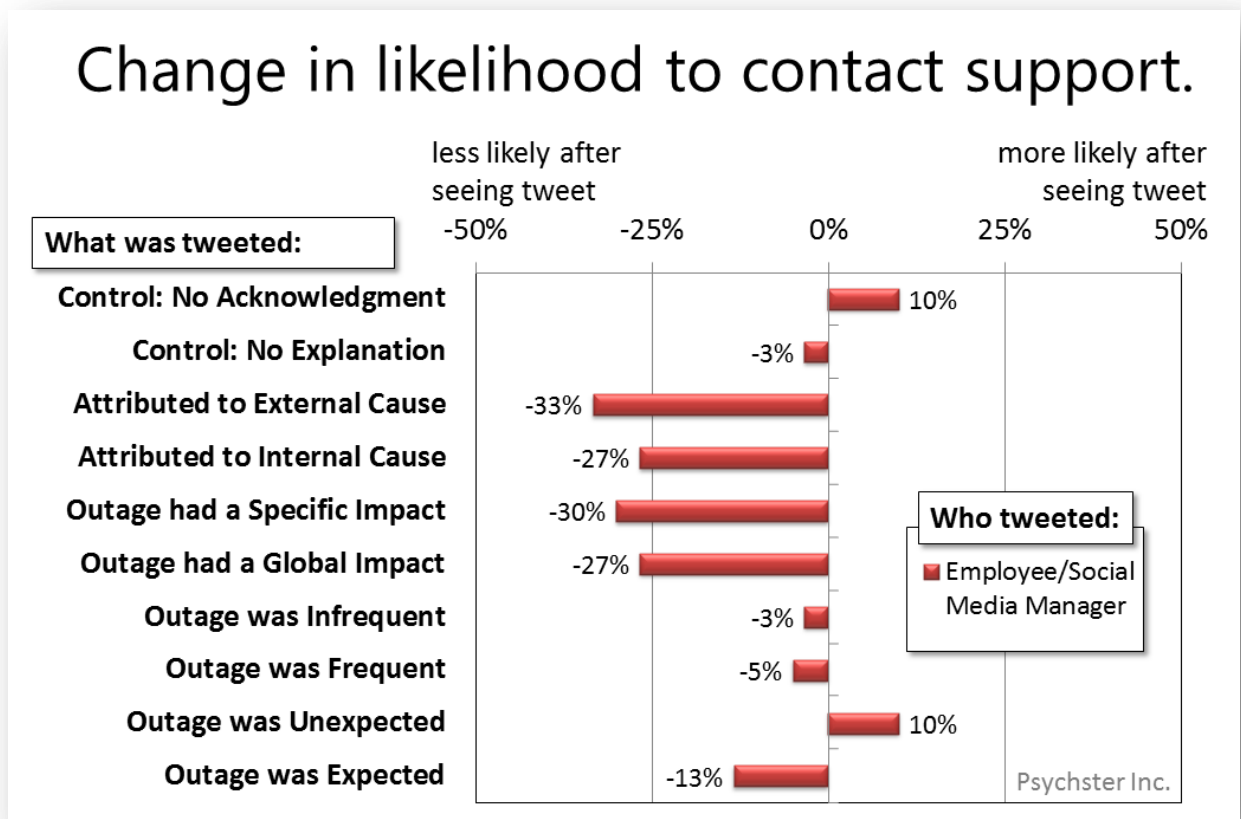
Likelihood to Consult Twitter in an Outage



Brand Perception and Reactions to Outage



3. **Who and what was tweeted significantly affected users' likelihood to contact support.** A multivariate analysis of variance (MANOVA) revealed that users' likelihood to contact support depended on who tweeted, $F(2,88)=3.36, p=.039$, and interacted with what was tweeted, $F(16,88)=1.86, p=.036$.
4. **Acknowledging the outage and giving an explanation in the tweet reduced users' likelihood to contact support – but only when the tweets were made by an employee/social media manager rather than the company or its executives.** Before seeing the videos, 33% were somewhat or very likely to contact support via email; the figure below shows the percent change in the 5-point ratings depending on what was tweeted. Simple-effects tests confirmed that only when the tweeter was an employee/social media manager did the tweets with explanations differ from the control tweets, $F(9,25)=3.31, p=.009$. In the figure below, any difference between bars greater than 23% is significant at $p<.05$. However, when the tweeter was an executive or non-personified company, no tweet differed significantly from the no-acknowledgment control, $ps >.05$.
5. **Explaining the outage (whether caused by internal or external factors) and informing users about the breadth of impact (whether global or specific) reduced users' likelihood to contact support more so than tweeting about whether the outage was frequent or expected.** Interestingly, like not tweeting at all, reporting that the outage was “unexpected – no current maintenance” was the only tweet to actually increase users' chance of contacting support.



Conclusions. The results of this study strongly suggest that there are clear advantages to companies who address service outages on Twitter.

Specifically, tweeting about an outage reduces users' negative feelings about an outage, and increases their perception that the organization that maintains the site cares about its users.

In addition, tweeting about an outage reduces users' likelihood to contact customer support compared to not tweeting about it. This improves the experience of the user who obtains immediate information without further effort, and it also saves the company operational costs. In smaller companies, it may even reduce the duration of the crises by preventing people who could be fixing the problem from being called away to "man the phones."

Moreover, giving some explanation in the tweet, almost any explanation, reduces the support calls even more than just acknowledging the problem. The results of this study suggest that regardless whether the cause of the outage is external or internal, and regardless whether its impact is global to all services or specific only to some, companies who are forthright about this in the tweet can reduce users' need to contact support. By contrast, tweeting about the expected, unexpected, frequent or infrequent nature of the outage does nothing to reduce support calls and may increase them.

Armed with this new information, it is interesting to return to the tweets that Facebook made during the September, 2010 outage and speculate about their effectiveness. In the tweet shown at bottom (in reverse chronological order as on Twitter) Facebook acknowledged the problem, defined its impact to be **specific not global** by saying "some people can't connect," and attributed the outage to an **external cause**, a "third-party network provider." Based on the current study, we would speculate that this tweet was effective at reducing support calls. However, a link in a later tweet (not sequential) took users to a Facebook blog post which said "This is the worst outage we've had in over four years, and we wanted to first of all apologize for it ([Johnson, 2010](#))." Information about the **frequency** of outages was not shown in the current study to lessen support calls or assuage users' concerns. (Future studies will be needed to assess the impact of a simple apology, which common sense would say is completely appropriate.)



Turning to the Skype outage of December, 2010, their initial tweets were similar to the control tweet tested in this study: they acknowledged the issue but offered no explanation. This study suggested that it may be more effective to venture an explanation for the outage. A link appearing in a later tweet during the crisis took users to a blog post that said, “Earlier today, we noticed that the number of people online on Skype was falling, which wasn’t typical or expected, so we began to investigate ([Parkes, 2010](#)).” Without additional information about the cause of the outage, the results of this study suggest that merely confessing that the events were unexpected may actually increase calls to support among followers who read it.



As a final point, both of the above tweets were made by the Skype and Facebook **companies** rather than a person. Our study suggests that only when the tweeter is personified as an **employee or other non-executive social-media manager** is their acknowledgment and explanation of the users’ poor experience effective at reducing support calls.

Psychological Processes at Play.

Taken as a whole, users in this study seemed to respond more to information that helped them decide what to do rather than how to feel. Thus regardless of the scope of the outage and whether the company was to blame, all of that information told users that they did not need to seek personalized support. However, respondents preferred to receive information from a social media manager than from an executive. Perhaps such a tweeter was seen to have all the credibility, less vested interest, and maybe even more of the “we’re in this together” fellowship than a higher-ranking company representative. More research with larger samples is needed to shed light on crisis communications, and on the emotional, cognitive, and behavioral process at play in the complex social environment of Twitter.

Regardless whether the cause of the outage is external or internal, and regardless whether its impact is global or specific, companies who are forthright about this in the tweet can reduce users’ need to contact support.

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