The Power of the Ask in Social Media

Rick Wash
Communication Arts and Sciences
Michigan State University
wash@msu.edu

Cliff Lampe
School of Information
University of Michigan
cacl@umich.edu

ABSTRACT
Social computing and social media systems depend on contributions from users. We posit the existence of a latent demand for contribution: many users want to contribute but don't. We then test a simple interface that can induce these users to actually contribute: we display a popup window asking users to contribute. In a real-world randomized field experiment, we found that asking them to contribute right now is ineffective, but reminding the users to contribute actually leads to approximately a 23% increase in contributions with no reduction in quality. However, this effect wanes as users habituate to the popups.

Author Keywords
power of the ask, social media, social computing, discussion

ACM Classification Keywords
H.5.3 Information Interfaces and Presentation: Group and Organizational Interfaces

INTRODUCTION

The real promise of social media systems is that rather than simply consuming content, as on a traditional website, users can interact with website content and with other users who are also consuming content. For this to happen, users must *contribute* to social media systems; they must take the time to leave comments, to participate in the discussion, and to collaborate with others.

However, contribution can't be taken as a given. Contributing to a social media system requires effort. Typing information into a text box takes up valuable time. Packaging information for contribution by deciding how to phrase things isn't always straightforward. Participating in a discussion requires even more time because users must first read and comprehend the discussion that has happened to this point. For these reasons and others, users often choose not to contribute to online social media systems [7].

Even when users have sufficient motivation to contribute to social media systems, they still suffer two additional problems. First, which system should they contribute to? Choosing which social media system to participate in is a difficult undertaking. And second, when should this contribution happen? Users could contribute when they first visit a site. They could wait until they've thought about it more before contributing. Users often choose to wait, expecting to contribute later but never actually getting around to it.

To overcome these problems, we suggest a simple mechanism inspired by research in philanthropy: *the power of the ask* [1]. Explicitly asking is considered one of the most powerful tools for charitable fundraising [1]; all charities employ this technique as part of their fundraising work. By asking, a social media system can signal that it values user contributions, helping to overcome the "which system?" problem. And explicitly asking users to contribute can help overcome the urge to procrastinate and actually make a contribution now. On Wikipedia, suggesting users edit specific content has lead to increases in participation [3]. We propose that the much of the behavioral benefit can be achieved by simply asking for contributions.

We examine the "power of the ask" in the context of social media systems by conducting a randomized field experiment on an existing social media system: the Great Lakes Echo. The Echo is an online news service run by the Knight Center for Environmental Journalism. It currently uses the Wordpress blog engine. The Echo has original reporting from student journalists on various environmental issues in the Great Lakes region. In addition, users discuss the news in the form of comments on stories. This is a fairly typical news site with a community of readers engaging in discussion.

THEORETICAL BACKGROUND

Contribution problems are not unique to social media systems. These two challenges listed above are shared with another similar situation: charitable giving. Charities report that exactly these two challenges cause people to contribute less money than the charities would like. Often people seem to have a *latent demand* for giving to charities: they are willing to contribute but do not because they can't decide which charity to give to, and because they procrastinate the actual act of giving [1]. Despite these problems, though, millions of dollars a year are contributed to charities. How do charities overcome these problems?

Many charities engage in fundraising activities. These activities are expensive, but (hopefully) end up leading to a large increase in donations. One of the most popular and effective strategies is also among the simplest: ask people to contribute to your charity. The *power of the ask* is that by simply approaching potential donors and asking for a contribution, you solve the two problems mentioned above. The charity has solved the "which charity" problem; the donor should donate

CSCW'12, February 11–15, 2012, Seattle, Washington, USA.

to the charity that asked them for money. It also has solved the "when to donate" problem; the donor can easily make a donation now, as they are being asked [2, 1].

Charities and social media systems are both instances of what economists call *public goods* [10]. In general, it is difficult to motivate people to contribute to the creation of public goods. When we rely on voluntary contributions for creating a public good, we often find that the good is *underprovided*; not enough people contribute despite the widespread benefits of the good [12]. Social psychologists call this problem *social loafing*; when working in groups, people usually exert less effort than they would if they were working individually, hoping that others will pick up the slack [6].

Applying social science findings to design better social media systems is not always straightforward [8]. Ling et al. [9] attempted to apply a number of findings from social psychology (including suggestions from the social loafing work of Karau and Williams [6]) to design online communities, and had very mixed results. Therefore, it is worthwhile to replicate the *power of the ask* in this online setting; because it is computers doing the asking instead of people it is unclear how well it will work.

METHODS

To study the effects of *ask*ing in a social media context, we conducted a randomized field experiment on the Great Lakes Echo[1], an environmental journalism website run on the WordPress blogging platform. Each visitor on the site during the study period was randomly assigned to one of three conditions. This assignment was stored in a permanent browser cookie to ensure that upon return visits, they see the same version of the site.

The first of our three conditions is our control condition, *No Ask*. In this condition, we use the Wordpress default: on the bottom of the page that contains the full article is a form where a user can write a comment on the article. Its not really a "No Ask" condition; the title of the form instructs users to "Please Leave a Comment." This is a form of asking, but it is not as explicit as a popup. We suspect that an explicit popup asking users for comments is closer to the ideal of a human being soliciting contributions as they do in charity fundraising because it interrupts the user and forces them to consider the request. Additionally, an explicit popup may invoke a feeling of the computer as a social actor [11].

The remaining conditions vary the immediacy of the ask. This tests the idea that asking is a way to overcome procrastination; if there truly is a latent demand for contributing but users procrastinate entering comments, then we should be able to detect that with these conditions. In the *Immediate* condition, we ask users for an immediate comment. The users are presented with a popup window that asks them to "Please leave a comment"; the popup contains the comment form and a "Leave a comment" button. It also contains a "No Thanks" button that simply dismisses the popup. In the *Reminder* condition, we ask users to leave a comment later. The popup says "When you are finished reading this article, please go to the bottom of the page and leave a comment." There same two buttons exist on this popup, but the "Leave a Comment" button just automatically scrolls the page down to the commenting form, and focuses the comment textbox.

In both conditions, the popup window appeared 500ms after the document was fully loaded. We did some preliminary tests that involved a) immediate popups like this, b) 5-30 second delays before displaying popups, and c) detecting scrolling and displaying the popup 5 seconds after scrolling to the bottom of the news story. All of the options other than a) involved serious confounds. If the initial delay for b) was too low, then the popup appeared before completing the reading of the article – effectively the same as a). But if the delay was high, then a large number of people closed the window and never saw the popup. Individual reading speeds vary widely, and no timing worked well. We didnt want different conditions to have different rates of popup display, so b) didnt work. We tried c) as a way to adjust to reading speed. However, different readers have different resolution screens and browsers, so the bottom of the story appearing on the screen varies widely also.

In the end, we decided that we had no way to properly control for reading speed and screen resolution, as we cannot measure these for all readers of the news site. We decided to use a cleaner experimental design – everyone gets the popup while reading – to focus on the more theoretical questions at the expense of some amount of external validity. We plan to explore timing of asking as a future research questions; this is actually a really interesting question because asking users to contribute on stories they read a day or two ago might actually lead to greater insight and participation. Few users return to previous days posts to comment, but appropriate asking or reminders may actually produce higher quality discussion after readers have had some time to think about the story. Of course, too much time and people forget or stop caring.

Users are randomly assigned to one of the three conditions (No-Ask, Immediate, Reminder) upon arriving at the site. Only comments from other users in the same condition are displayed to a user. This avoids a potential confound: comments cause more comments. If one condition causes people to contribute and everyone saw those comments, then users in other conditions might also comment in response, artificially inflating the quantity of comments for other conditions. To avoid this, we isolate the conditions. The downside to this is floor effects; we might receive so few comments that we cannot differentiate the conditions. By running the experiment for multiple weeks, we hoped to get enough contributions to accurately measure any differences that exist.

The study ran for 10 weeks, from Feb 15, 2010 to Apr 29, 2010. During the study period, Echo news staff posted 140 news stories to the Great Lakes Echo. They continued posting news stories in their normal fashion, and were instructed not to do anything differently during the study period.

RESULTS

During the 10 week study period, the Great Lakes Echo received approximately 19,967 unique readers, or approxi-

[1] `http://www.greatlakesecho.org`

Table 1. Number of Comments submitted, per condition

Condition	*# Comments*
No Ask	83
Immediate	81
Reminder	102

Table 2. Estimated Rate of Change per week, by condition.

Condition	*Slope*
No Ask	-0.52
Immediate	0.07
Reminder	-0.85

Differences are *not* statistically significant.

mately 2000 per week. About 1700 of these 2000 weekly readers were new and had not seen the site previously during the experiment. These readers viewed 36,773 full news stories on the Echo site. Like most news sites, the Echo has many readers who simply browse headlines (not included in these numbers) or read a very small number of stories (included). These readers submitted a total of 266 comments during the experiment.

We believe our site represents a very common class of social websites and that this sample size is similar to the population size of many small websites. However, this is actually a fairly small sample size (266 comments) to be dividing up across 3 conditions and 10 weeks. In situations like this, any result that achieves statistical significance is likely to be an overestimate, as only overestimates will be large enough to achieve statistical significance [4]. Therefore, we focus our analysis on our estimates of the size of the effect, recognizing the limits this places on our claims.

Table 1 contains the breakdown of these comments by condition. The first thing to notice is that asking for an Immediate comment was not effective; it produced basically the same number of comments as not asking at all. However, reminding the user to comment did lead to a 23% increase in the number of comments submitted.

While an extra 20 comments is not a lot, it does represent a noticeable increase in the number of comments. Since these readers were looking at the same news stories at the same time, and the readers were randomly assigned to conditions, we believe that this can be interpreted as our popup causing a 23% increase in participation. Additionally, it does not appear that a single individual contributed enough comments to alter the results; no one contributed more than 8 comments during the experiment, and the vast majority of commenters (179 out of 209) only contributed a single comment during the study.

Contributions Wane Over Time

In addition to this immediate effect, we have contribution data over time. The experiment ran for 10 weeks, and we can look at how contributions varied over those 10 weeks, and see how time and exposure to popups might change the effect of the treatments.

The first thing to note is that each week did not necessarily have the same number of news stories posted to the site; it varied from a low of 10 stories in a week to a high of 17, with a median week having 13 news stories. Interestingly, the number of news stories per week had very little correlation with the number of comments contributed in each condition.

Figure **??** shows how many comments were contribution in each week for each condition. The number of comments varied widely. The second week of the study had the reminder condition with 19 comments, more than twice of the other two conditions, which each had 7. But then the third week showed a reversal, with the Reminder condition only having 6 comments but Immediate and No Ask having 10 and 11 respectively. Despite this variance, all three conditions show a downward trend, and seem to be converging. The only exception is the Immedate comment condition, which has its highest weekly total of 13 contributions in the final week, which breaks from its otherwise downward trend.

Table 2 shows our estimates of the slope of each of those 3 regression lines. For example, we estimate that the Reminder condition loses 0.85 comments per week that it is active on the site. Because we have so few data points (10 weeks x 3 conditions) and the weekly variance in the number of comments is large, and a downward trend was observed in our control condition, we cannot confidently claim that this downward trend exists. Still, our best estimates indicate that indeed there is a dropoff in the effectiveness of the popups over time, and that all three conditions are converging to approximately the same number of comments, on average.

Quality of Comments

When asking for money, charities don't need to worry about the quality of the contribution; one person's $5 is the same as anyone else's $5. However, when social media systems ask for contributions of information, quality is often a top concern. More contributions don't really help if those contributions are uninformative or off topic. When asked, users may contribute whatever first pops into their head, rather than thinking deeply and making a substantive comment. However, reminding users to contribute in the future may prompt them to think about comments they might make as they read. Reminders may actually *increase* the quality of comments because they have more time to think about it.

After the experiment was completed, we asked 4 Great Lakes Echo journalists go through all 266 comments that were submitted during the experiment and rate the *quality* of each comment on a scale of 1-5 stars. The average quality across all 4 raters was used as the quality score for each comment. The inter-rater reliability (Cronbach's alpha) across raters was 0.82. The journalists did not know which condition the comments were from when they rated them. Table 3 shows the average quality of a comment in each of the three conditions. These differences were fairly small; an average different of 0.1 on a 1-5 point scale. Additionally, there was little evidence of quality decreasing over time. This indicates that explicitly asking users to comment does not materially change the overall quality of comments.

DISCUSSION

Our results suggest that using popups to remind users to participate in a social media site can indeed increase participation. We suspect that reminders serve as a *prompt* for users, prompting them to think about what they might have to contribute. This occasionally leads users to come up with valu-

Table 3. Average Quality of Comments per Condition.

Condition	*Quality*
No Ask	3.29
Immediate	3.40
Reminder	3.27

Differences are *not* statistically significant.

able contributions they otherwise wouldn't have. However, users need time to think about their contribution between the prompt and the contribution form. Asking users to comment *right now* doesn't work any better than not asking at all.

Additionally, users appear to habituate to popups like this fairly quickly. After only 10 week, all three conditions were identical, and reminders seemed to no longer have any effect. This suggests that reminders should be used judiciously, and only used for short periods of time and for special purposes where contribution is particularly important. However, the majority of users (and the majority of commenters) on the site were first-time visitors; it is not clear how this habituation process works.

LIMITATIONS

As a small, special purpose news site, the Great Lakes Echo does not receive a large quantity of readers. There are many similar sites that exist right now, and better understanding small, special purpose sites is important because they may be different than extremely large websites like Facebook and Wikipedia. However, studying this type of website is difficult because the small sample size limits explicit hypothesis testing, and therefore limits our ability to make strong claims. Additionally, the fact that the effects of our intervention diminish over time makes it difficult to gather more data by extending the timeframe of the study. That said, the 40% improvement in the first few weeks and the 23% improvement overall represents a very large effect that warrants further study. Most social science attempts at design have found much smaller effects. For example, famed social psychologist Robert Cialdini found "large" effect sizes of 20-35% in his study of hotel towel reuse [5]. For some behaviors, like home energy conservation, changes in the 5-10% range are considered large [13].

CONCLUSION

By testing *the Power of the Ask* in a field experiment on a social media system, we have been able to show that asking users to contribute content is effective, at least initially, in generating more comments, though its effectiveness extinguishes over time. Contributions solicited directly from users showed no differences in quality based on expert ratings. Few social media systems actively guide user contribution by directing attention through asking for participation. Our field experiment has high external validity in measuring the effects of this real-world intervention. Our results here suggest this may be an effective method for increasing contribution to social media systems.

Acknowledgements

We thank the Great Lakes Echo for allowing us to conduct this research on their site.

REFERENCES

1. J. Andreoni. Philanthropy. In S.-C. Kolm and J. M. Ythier, editors, *Handbook of Giving, Reciprocity and Altruism*, pages 1201–1269. North Holland, 2006.
2. J. Andreoni and A. A. Payne. Do government grants to private charities crowd out giving or fund-raising? *American Economic Review*, 93:792–812, 2003.
3. D. Cosley, D. Frankowski, L. Terveen, and J. Reidl. Suggestbot: using intelligent task routing to help people find work in wikipedia. In *Proceeding IUI '07 Proceedings of the 12th international conference on Intelligent user interfaces*, 2007.
4. A. Gelman and D. Weakliem. Of beauty, sex and power. *American Scientist*, 97(4), 2009.
5. N. J. Goldstein, R. B. Cialdini, and V. Griskevicius. A room with a viewpoint: Using normative appeals to motivate environmental conservation in a hotel setting. *Journal of Consumer Research*, 35:472–482, 2008.
6. S. Karau and K. Williams. Understanding individual motivation in groups: The collective effort model. In M. E. Turner, editor, *Groups at Work: Theory and Research*, chapter 4, pages 113–131. Lawrence Erlbaums Associates, Mahwah, NJ, 2001.
7. A. Kittur and R. E. Kraut. Harnessing the wisdom of the crowds in wikipedia: Quality through coordination. In *CSCW 2008: Proceedings of the ACM Conference on Computer-Supported Cooperative Work*. ACM Press, New York, 2008.
8. R. Kraut and P. Resnick. *Evidence-based social design: Mining the social sciences to build online communities.* MIT Press, Cambridge, MA, Forthcoming.
9. K. Ling, G. Beenen, P. Ludford, X. Wang, K. Chang, D. Cosley, D. Frankowski, L. Terveen, A. M. Rashid, P. Resnick, and R. Kraut. Using social psychology to motivate contributions to online communities. *Journal of Computer-Mediated Communication*, 10(4), 2005.
10. A. Mas-Colell, M. D. Whinston, and J. R. Green. *Microeconomic Theory*. Oxford University Press, 1995.
11. C. Nass and Y. Moon. Machines an mindlessness: Social responses to computers. *Journal of Social Issues*, 60(1):81–103, 2000.
12. P. Samuelson. The pure theory of public expenditure. *The Review of Economics and Statistics*, 36(4):387–389, November 1954.
13. P. W. Schultz, J. M. Nolan, R. B. Cialdini, N. J. Goldstein, and V. Griskevicius. The constructive, destructive, and reconstructive power of social norms. *Psychological Science*, 18:429–434, 2007.