Developers and Moderators: Observations in the Co-development of an Online Social Space

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Abstract. Online social spaces have emerged at the confluence of three notable trends: an increasing amount of interaction occurring over digital channels, an awareness of the range of technical and social affordances such spaces provide, and a growing participatory culture that fosters member involvement in the creation and maintenance of digital locales. At the same time, these trends offer both great promise and significant challenges to the creation and maintenance of online social spaces. This paper unpacks the observations from the creation of one such online social space developed with involvement from the moderators tasked with facilitating its operation. Observations run the gamut from the technical (modifying system features to meet described work practices) to the social (fostering a joint ownership in the success of the social space) and set the stage for a broad research agenda for discovering best practice in constructing social spaces online.

Keywords: Online Communities, Sociotechnical Systems, Adolescents, Moderation, Design, Tools.

1 Introduction

There is a buzz around participatory, collaborative development. Shown to foster increased efficiency in the development process and improved satisfaction of the final product [1, 2], organizations have adopted collaborative development approaches to design software [3-5], deliver course material [6], and enhance organizational processes [7]. Just as collaborative approaches to development have been embraced by organizations, they have also become an accepted practice in the creation and maintenance of online communities. As with YouTube's reliance on user-generated media and the army of writers and editors needed to sustain Wikipedia, many online communities have grown reliant on members to handle the critical tasks of creating and maintaining the online social spaces for these communities. Yet more than just serving as managers of existing community artifacts, these members are now filling another role by helping to guide the ongoing development of these spaces.

Designers have long lauded the incorporation of feedback loops into the design of online social spaces as a means for providing a legitimate channel for members to

communicate concerns or voice opinions [8-10]. However three unique trends are changing the nature of the conversation that these channels can support. These trends include:

A substantial (and increasing) amount of interaction is now occurring over digital channels. With a growing number of users connecting and participating in online communities [11], involvement in online social spaces has become a norm for those accustomed to the Internet and digital life. They have become adept at communication devoid of non-verbal cues, limiting the amount of discussion needed to ascertain meaning.

Users have an awareness of the range of technical and social affordances such spaces provide. The popularity of online communication has given rise to a variety of different formats, styles, and processes for handling this discourse. As such it is common for users to have experience using a number of different online communication systems and it is natural for users bring their knowledge of interaction within other social spaces to bear on the plethora of communities they frequent.

There is a growing participatory culture that fosters member involvement in the creation and maintenance of digital locales. It has become the norm to request members to help maintain and improve the shared resources of the community. As of December 2006, it was reported that over a quarter of Internet users had tagged photos, rated content, or posted reviews [12]. Moreover, many large-scale online social spaces rely on member participation for daily operations, as with the submission and scoring of news stories at Digg.com [13] and the moderation and meta-moderation of comments at Slashdot [14].

   Together, these trends point toward a new dialogue that is related not just to the purpose of the communities hosted within an online space, but to the very way these spaces are functionally constructed to support the community. But the widespread involvement of members in the co-development of the spaces hosting their communities is still a relatively new practice and community managers are still in need of effective ways to leverage this new paradigm. This paper expands on the growing body of literature that investigates this emerging field. We do so by looking at the unique interchange that accompanied and informed the development of the social space created to support the moderators of the nascent online community "Fieldtrip".
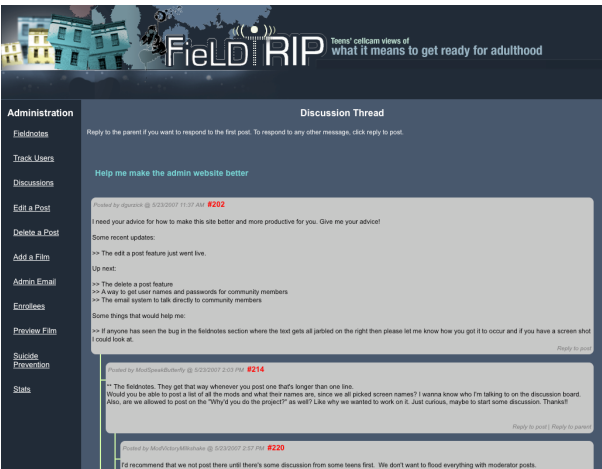
2   The Fieldtrip Online Community

Fieldtrip is an online community launched as part of a research project that sought to explore whether the growing use of information and communication technologies by adolescents could be leveraged to help them rethink their ideas about learning and education. Nearly eighty adolescents enrolled to take part in a month-long pilot of the community that was run during the Spring of 2007. Joining the adolescents in this community were seventeen moderators, college undergraduates that were primarily tasked with ensuring that the discourse in the community remained civil and on topic[1]. To assist in these tasks, the moderators were given access to a special administrative

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[1] Institutional board requirements mandated that the community be staffed by at least one moderator during each hour of its operation (from 6AM – 2AM EST daily).

portion of the website distinct from the main community. A number of communication tools were provided in this administrative site, including a threaded discussion forum (fig. 1) and a utility to record and display field notes (fig. 2).

Fig. 1. This figure shows one of the threads of discussion in the moderator/developer "back channel" that was available in the administrative page of the Fieldtrip online community
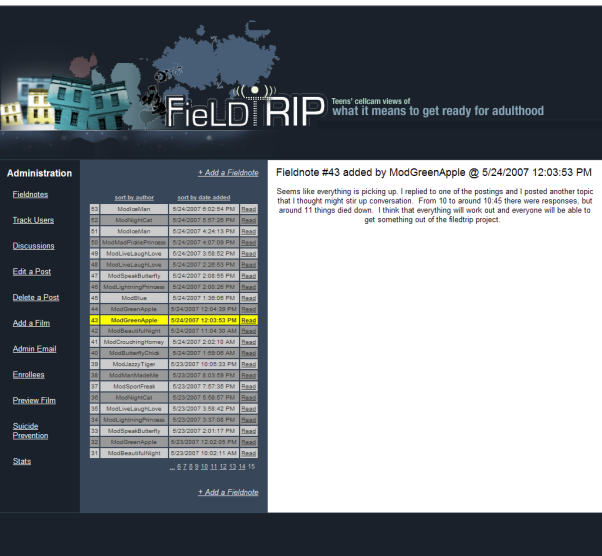
Fig. 2. This figure shows the field notes page in the administrative section of the Fieldtrip online community. Each moderator was asked to write a field note at the conclusion of his/her shift (normally lasting 1-2 hours). Over 400 field notes were recorded during the pilot.

The moderators, versed in the goals of the community, quickly began discussions surrounding unique ways of using the moderation tools in the administrative site. These included an activity-tracking tool, which allowed moderators to examine the actions in the site at the individual user level. This functionality, it was thought, would enable the moderators to quickly respond to a disruptive member by locating all of the places in the website where the member had previously posted and allow the moderators to establish a context for determining the severity of claims made by a participant [15]. Secondly, moderators were provided a facility to edit and delete messages in the main community forums. Finally, an email utility provided moderators opportunity to contact adolescents directly to correct behavior should the necessity arise.

Discussions between moderators quickly developed to include advice on workarounds to limitations imposed by the tools and desires for modifications to the site. The moderators were not alone in the administrative website; access was also given to members of the Fieldtrip development team. Through the field notes and discussion forum an interchange quickly arose between the developers and moderators concerning the construction of the online social space itself.

3   Method

The findings presented within this paper were extracted from a grounded theory analysis of the digitally recorded and archived points of interaction between the developers and moderators. These included the posts made to the administrative discussion forum, as well as a collection of field notes which moderators were required to submit at the end of their assigned shift. Field notes were visible to all members of the moderator community as well as site developers, but could not be accessed by the adolescents.

Textual data was first coded for interactions relevant to the design, construction, or maintenance of the community. These codes were then grouped into related concepts on the co-development of the online social space. It is the concepts that emerged from this process that are elaborated below.

3.1   Promoting a Formative Dialogue between Developers and Moderators

The first step to co-development is the cultivation of awareness around the use and expectations for the online social space. In the case of the moderators and developers of Fieldtrip, this step involved learning by both parties; the developers learned how the moderators went about performing their tasks, including how they used the tools available to them to meet their needs; the moderators learned how the developers envisioned the moderation tools to be used and the rationale behind their selection and construction.

This discussion was led by the moderators, who recounted their use of the tools while performing their daily tasks

> [Today I kept] refreshing the track page...nothing, no one looking around, absolute zero activity. I watched the new videos and updated on reading the comments like always.

And I noticed that it is handy to have a document open anyway to note things of interest while modding.

I watched the two new videos and then, kept refreshing the discussion page.

Not much activity around this time, so I spent most of my time reviewing new posts and videos. I also added a new suggestion for the site in the admin discussion page.

Such comments by the moderators were often accompanied by remarks on problems or difficulties encountered with the administrative tools.

The fieldnotes. They get [jarbled] whenever you post one that's longer than one line.

Is it by any chance possible to have everything on the community site accessible directly from the admin site? i mean it's really not a big deal to switch back and forth - especially if you just keep two windows open - but I just figure if it can be done then why not? just wondering;)

Hearing of these problems prompted the developers to become involved, at times acknowledging the problems with the tools, "Thanks, I'm posting the first update to the admin site tonight. It should fix the fieldnote problem", and at other times adding their insight into the why particular aspects of the system operated as they did:

Moderator - *I noticed that there are 2 pages for the last discussions...would it be possible to keep it on one page or could the first page show the most recent posts? It just gets annoying to going back and forth to make sure all the posts are read.*

Developer - *This was actually a design decision to ensure that the topics and films are only permitted 10 entries on the main page (to ensure the topics doesnt get all filled up and take over the other areas).*

Occasionally the developers would step in with advice and suggestions for using the tools, "*One suggestions is to sort by last comment to avoid that hassle.*" This practice was quickly joined by the moderators:

I responded to an older video ... because I wanted to leave the newer videos for students to comment on, and bring up older videos to see if we can get some fresh opinions ... I think that's going to be my strategy from now on - every shift I'll pick an old thread to bump back up to the top

The only way to know this is (a) are they doing activity? if so, you can see this in track users, (b) are they logged in? plenty of people don't log out of a site just because they aren't looking at it, so this data would be nigh-useless.

3.2   Modifying System Features to Meet Work Practices

Once an understanding was established between the moderators and developers around the use and expectations for the online social space they shared, the discussion

moved towards an exploration of the ways that the tools provided to the moderators could be reconfigured to bring them into alignment with their work practices. Much of the discussion centered on functionality the moderators deemed missing from the current tools. This interchange was bidirectional, as the developers enlisted the moderators to test/debug changed features and reported their progress to the group. An example of this is seen in the exchange between the moderators and developers regarding the problem of handling duplicate posts:

Moderator - *How do I edit or delete [duplicate posts]?*

Developer - *I have a way of handling this through merging of records in the database (I'd make a tool for everyone, but by the time I was done the project would be over). If you send me an email … with the red ID #s of the duplicate posts I will merge them together. I should add that this is only within a single thread of discussion.*

Moderator - *They were duplicates, but I don't have the ability to delete them so I just put up (*duplicate post*). Deleting would've been much easier*

Developer -*I need someone to help me test this feature - any takers, and when are you on?*

Moderator - *I wouldn't mind testing it out...My shifts are usually 4-6pm but I'm on here and there throughout the day. Let me know if I can help.*

Developer - *Thanks … it looks to be working ok so far.*

Developer - *Hi there [delete has been added] - you can use this message thread as your testing area. Just enter in the number of the post you want to delete (ie 546) and the click "load this post". All the messages that will be deleted will show up in the area below. If these are acceptable, then click the submit button at the bottom right of the screen to delete them. Let me know if you still have problems.*

Moderator - *Delete function works as of 2:55!! :o)*

After witnessing the co-development activities that remedied a missing piece of essential functionality in the space, the moderators shifted to suggest modifications to existing tools that, while not considered essential, were perceived as aiding moderators in performing their assigned tasks. Once these ideas were presented, they gathered support from other moderators.

It would be great and helpful for us to be able to see who is logged on in the administration site. I know we can track movement, but it would be great if there was a list of current users on the site when we're monitoring - just to give us a feel for how active the site is when we're on.

Nah I agree, this would be a good addition

…it would give us an idea of whos on at one time. I've looked around and a lot of other forums and facebook have this option, so i think it can still be useful.

3.3 Fostering a Joint Ownership in the Success of the Social Space

The shared experience of creating and implementing modifications to the underlying online social space engendered a progressive consideration for how the space might be further augmented. In this new discourse, moderators took the role of introducing suggestions for new features not only to the developers, but also to their fellow moderators.

> *I was thinking that if there's time and if it isn't too much trouble we could look at adding a "tag" feature on this site. A lot of other sites have this, but basically you would just tag a video/post with the topic that it is discussing. For example, on ... Lauren's new Altercation video we could tag it with "fighting" and etc. ... This would really help organized the videos/posts to categories for viewers to easily find their topic of interest; just not sure the logistic of implementing it though.*

> *I was thinking about this yesterday, it would be great if we could initiate a "pop-up" message that said something like "don't forget to tell us what you think about the film to get the second half of your iTunes!" so the person watching the film could see it. It's not something that should pop up automatically, because we don't want to annoy those who do comment, but if we notice a person is just watching the clips but not commenting, we could remind them. I'm saying this because I've noticed that even if I apply the most intriguing question :), chances are I won't get an immediate reply. Just a thought.*

In some cases, the moderators were cognizant to the location of data that might lead to the inception of new features, even if they were unaware of what those features might be. To illustrate, one moderator described how an archive of tracking data, visible to the moderators through the activity-tracking tool, might be used in aggregate to suggest ways of dealing with a problem of scheduling moderators:

> *No activity at all. I can't even figure out a pattern to user activity except for weekends nothing generally happens, and on holidays nothing happens period. I'm sure with the saved time tracking data you can find out something interesting but I can't see it.*

4 Toward a Broader Research Agenda in the Co-development of Social Spaces

This study investigated an online social space co-developed through the shared labors of its developers and moderators. As this study was limited in scope, the reported observations should be construed not as generalizable findings, but rather as background to the creation of questions to guide more in-depth, empirical research. To start this process, we conclude this paper by offering a trio of questions that arose during our analysis:

Q1: With a preponderance of new programming tools and packaged services, the lines between developer and moderator are blurring. This draws the questions of whether

these roles should be distinct and what might be the pros and cons of separating the role of development from the role of moderation?

Q2: As online communities move to occupy many social spaces simultaneously, it seems inevitable that these spaces will become more intertwined. How will the activities of co-development present in this new environment? What new tools and practices will be needed to support this change?

Q3: Lastly, in this paper, we explored the co-development of an online social space that housed a community with a relatively limited geographic dispersion (mostly concentrated in one state in the US mid-Atlantic, with no international members). Do these concerns apply when considering a larger, international audience? How do cultural differences confound the roles of developers and moderators and impact the processes of co-development?

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