

# Latent Users in an Online User-Generated Content Community

Alcides Velasquez<sup>1</sup>, Rick Wash<sup>2</sup>, Cliff Lampe<sup>3</sup> & Tor Bjornrud<sup>4</sup>

<sup>1</sup>*Departamento de Comunicacion, Pontificia Universidad Javeriana, Transversal 4 No. 42 - 00 Ed. 67 Sexto Piso, Bogota, Colombia (E-mail: alcides@javeriana.edu.co);* <sup>2</sup>*Department of Telecommunications, Information Studies, and Media, Michigan State University, 404 Wilson Rd. # 342, East Lansing, MI 48824, USA (E-mail: wash@msu.edu);* <sup>3</sup>*School of Information, University of Michigan, Ann Arbor, 4388 North Quad 105 S. State St., Ann Arbor, MI 48109, USA (E-mail: cacl@umich.edu);* <sup>4</sup>*Department of Telecommunications, Information Studies, and Media, Michigan State University, 404 Wilson Rd. # 411, East Lansing, MI 48824, USA (E-mail: bjornrud@msu.edu)*

**Abstract.** Online communities depend on the persistent contributions of heterogeneous users with diverse motivations and ways of participating. As these online communities exist over time, it is possible that users change the way in which they contribute to the site. Through interviews with 31 long-term members of a user-generated content community who have decreased their participation on the site, we examined the meaning that these users gave to their contribution and how their new participation patterns related to their initial motivations. We complement the reader-to-leader framework (Preece and Shneiderman: *AIS Transactions on Human-Computer Interaction*, vol. 1, no. 1, pp. 13–32, 2009) by propounding the concept of latent user to understand decreasing content contribution and user life-cycles in online communities. We showed that even though latent users decrease their content contribution, their participation becomes more selective and remained consistent with initial motivations to participate.

**Key words:** content contribution in online communities, motivations to contribute, latent users, online communities, online participation, reader-to-leader framework

## 1. Introduction

One of the most fascinating and at the same time problematic aspects of online communities is their dependency on users for the generation of content. Sites such as social networking sites, blogs, and online communities share the characteristic that any user can be a producer of the content consumed on the site (Baumer et al. 2011). However, not all users participate in the same way, nor have the same motivations for their online activities (Lampe et al. 2010). Some only consume content; others contribute opinions or feedback about others' contributions—like in blogs or rating systems in many online communities—while others opt for a much more active role in the production of content, like Wikipedia editors.

A recurring finding in studies of online communities that strongly depend on the creation of original content by users is that usually a very small fraction of users contribute most of the content to these types of sites (Wilkinson 2008).

Motivations to contribute to online communities have been studied in a variety of types of systems including Usenet discussions (Kollock 1999), Open Source Software projects (Lakhani and Wolf 2005), articles in Wikipedia (Nov 2007), and Facebook interactions (Joinson 2008; Lampe et al. 2006). Findings have suggested that motivations vary depending on the nature of the outlet (Dholakia et al. 2004). Nov (2007), for example, found that what motivated Wikipedia editors was the enjoyment they derived from their tasks, while Joinson (2008) found that Facebook users that posted content were motivated by social and shared identity motivations. Lampe et al. (2010) found that users that tended to contribute more with write-ups, the type of content consumed in the online community Everything2, were motivated by the need of providing information; while those that interacted more with others through private messages were motivated by the need of maintaining the connectivity with others. However, the meaning that long-term users of online communities give to their contribution, how it may decrease over long periods of time, and the relationship between motivations and participation as contribution declines has been explored less.

This study looked at long-term users of an online community and their trajectories of use on a site, and focused on the meaning that these users gave to their content contribution; paying special attention to motivations and decreases in contributing behavior. This study used the reader-to-leader framework (Preece and Shneiderman 2009) as a starting point to examine this research problem. This framework provides a way to understand user life-cycles in online communities, suggesting a progressive trajectory of online social participation. It describes how users follow successive levels of social participation in online communities, while in each of these stages a user typology is characterized by a set of activities and motivations. The usefulness of this framework is that it offers a description for understanding the transitions that users might experience during their membership in online communities.

This paper analyzed data taken from interviews of long-term members of an online community called Everything 2. This site started in 1999 as a user-generated encyclopedia similar to Wikipedia, but with key differences described below. Based on the analysis of these interviews we propounded the concept of 'latent user' as a way of understanding decreasing content contribution over time in online communities. Latent users are a type of user that has learned the skills of participating in different ways in an online community, but is not currently actively contributing content. This user is different than what is traditionally viewed as a 'lurker' (Nonnecke and Preece 2000). Unlike 'lurkers', latent users know, and may be expert in, the norms and mechanisms of the community, but are currently not actively contributing content. Additionally, results of the analysis suggested that for long-term users that have transitioned into a stage of latency, their current participation, although different from their initial behaviors when they were actively contributing, is consistent with their original motivations to participate on the site.

## Latent Users in an Online User-Generated Content Community

Preece and Maloney-Krichmar (2005) defined online communities as groups of people that get together with a shared purpose or interest and are guided by a set of policies that define some conventions and norms for behaving, all this facilitated and supported by an online application. In this sense, we saw online communities as systems that contain information and communication technology to support many-to-many social interactions. We considered the term ‘online communities’ to be a super-set for descriptions that helped define these technology mediated social interactions. The term is related to formats such as social media, social network sites, and social computing. We did not intend to provide a canonical definition of the differences between these formats. Rather, we considered the salient characteristics of online communities were 1) expression through information and communication technology, 2) interaction between users of that site, and 3) dependence on user-generated content.

This work expands our current understanding of users in online communities, which is important for both scholarly and practice-oriented researchers of these spaces. The concept of ‘latent’ users is novel for this area of research, and helps to classify a type of user that might be increasingly present as social media sites age. Also, we expand and refine the terms presented in the reader-to-leader framework, and explore some of its intricacies, by providing examples and thick descriptions of motivations and changes of behavior over time. In order to productively research issues like user lifecycles, new user socialization, exit, and governance, it is important to understand online participation at its different stages. Finally, there is a broader audience outside of online communities who could benefit from these perspectives on motivation and latency in members. Volunteer organizations, such as charities, have many of the same characteristics that comprise online communities. It could be there are latent members in these organizations, and studying their composition may help understand patterns of participation more generally.

In summary, this study contributes to our current understanding of online participation by incorporating, through the analysis of qualitative data from long-term user interviews, information about decreasing user participation in an existing online community and by propounding the concept of ‘latent’ users in online communities. In Section 2 we present in more detail the theoretical framework used in this study. Section 3 introduces the methodology used for recruiting participants, a description of the analysis techniques that followed the data collection stage, as well as a description of the online community Everything2. In Section 4 we present our main findings organized under sub-categories, starting with a characterization of ‘user latency’ (4.1), followed by user types and motivations to participate (4.2), a section about how users believe that constraints changes on the site affected their participation (4.3), followed finally by a section providing more detailed evidence about latent users (4.4). Section 5 synthesizes and discusses the findings. In Section 6 we summarize the major contribution and most important implications of the study.

## 2. The reader-to-leader framework

The reader-to-leader framework provides a general view of how users become contributors of online communities. This framework, proposed by Preece and Shneiderman (2009), describes how members of online communities follow a process of socialization and transition from one stage to another as they become more active on the site. In this framework, users increase their levels of commitment and participation on the site passing from one user stage to another, whereas each of these stages is characterized by a set of motivations and user behaviors. In other words, this framework describes, based on the motivations users have to participate in technology mediated social spaces, how users' progress towards more participation and how their motivations to participate change over time as their role on the site changes.

However, this framework does not suggest that all users progress in the same way. Some abandon the site before becoming active members, others do not follow the process in a linear manner, while others do not advance from one stage to the other. Moreover, the framework assumes that fewer users will advance to the next stage of the process. In this sense, although users do not necessarily advance from one stage to another nor move linearly between stages, those that advance to other stages becoming a new type of user, do so by changing their motivations as well as by adopting the type of participation that characterizes that new user typology. Therefore, this framework proposes a general description of the way in which users change their behavior on these types of sites and the different motivations that shape their passage in each of these successive stages of social participation. The reader-to-leader framework offers a perspective to understand the way in which users increase their participation crossing from one stage to another through a change in their motivations. However, this framework did not provide enough information to understand the opposite process: the changes in participation and its relationship to motivations to participate on these sites as participation and contribution declined. In the following pages we present each stage proposed in the framework in terms of the motivations that give shape to the behavior in that stage of online participation, along with some studies that have provided evidence about the relationship between type of participation and motivations, and finally pointing at the existing gap in this framework.

### 2.1. 'Readers': information and entertainment consumption as motivations

The first stage in the model characterizes the 'reader' user type. When users visit or join an online community, they are interested in the content available on the site. Although many satisfy their need for visiting the site and

## Latent Users in an Online User-Generated Content Community

probably will not come back, some return and continue consuming the content they find useful or interesting. These users are motivated by information needs and to some extent by the entertaining aspect of the content, and they do not tend to interact with other users. However, they might start developing a sense of belonging as they acquire the ability to recognize and discriminate the characteristics of the content they consume over time.

### 2.2. 'Contributors': social status as motivations

'Contributors' are characterized by self-interest motivations. These users are interested in the visibility of their contribution and the recognition of its quantity and quality. These users, first through simple tasks and later, with more demanding contributions, add their effort to others within the online community. However, they do not collaborate, interact or form inter-personal relationships with other users. Their motivations are more focused towards building an image and gaining a status that will allow them to be noticed and recognized by other users, rather than in working together with others to help build the online community.

### 2.3. 'Collaborators': social relationships as motivations

While 'contributors' do not interact with other users; 'collaborators' do connect and interact. For this type of user the sense of belonging and shared identity become an important motivation to work together with other users. In this stage, social motivations are essential. 'Collaborators' seek contact with other members and cooperate to create new content or to share relevant information. The desire to share interests with other users, as well as building a community, move these users towards collaborating, sharing, and interacting with others even to the point of developing personal relationships.

However, there is a constant shifting from 'contributors' to 'collaborators' and vice-versa. The continuous shifting from 'contributor' to 'collaborator' and vice-versa allow for the emergence of social relationships similar to the ones in any offline social group.

### 2.4. 'Leaders': reputation as motivation

Finally, very few users advance and become 'leaders', which is the last stage in the user socialization model. 'Leaders' are those users that take voluntary responsibility of defining and enforcing community norms and policies, and define long term goals. They look for the respect and admiration from other users. For 'leaders' aspects such as credibility, supported by a consistent and coherent online identity that usually coincides with their offline identity, plays a central

role as they are motivated by an interest in getting in positions of power, honor, and respect on the site. These users are responsible for seeking solutions to any problems that might emerge in the community regarding other users or content. 'Leaders' help to build the identity of the community and might help improve the experience of newcomers.

Several studies have provided evidence supporting this framework. For example, Burke et al. (2009) examined the effect that Facebook new user's social networks structure and behavior had on patterns of participation of newcomers and found that a process of social learning took place when new users joined. As new users observed the behavior of others and became familiar with how the site was used, they increased their content contribution to the site. Users began their membership to the site as 'readers' and slowly started increasing their participation as they learned from other members of their social network. In another study, Lampe and Johnston (2005) examined the effect of feedback on new users behavior on an online community and found that, new users that spent more time as 'readers' tended to contribute more content to the site, possibly turning into 'contributors' or 'collaborators' later on. Finally, Bryant et al. (2005) examined the way in which motivations and perceptions of active collaborators of Wikipedia changed as they became more engaged with the community. Findings from a set of interviews suggested that the changes in users' participation were hand in hand with a transformation in the motivations. These changes and motivations coincided with the reader-to-leader framework. For example, findings showed that 'novices' rarely interacted with others, while 'experts' viewed themselves as members of the community and as such, saw interaction with others as a fundamental part of their activity, just like 'collaborators' in the reader-to-leader framework.

In sum, the reader-to-leader framework and previous studies have found that users of online communities followed a cycle of social participation comprised by four stages. Each stage describes a user typology and is characterized by a set of exemplar behaviors and a set of motivations. However, the framework and the studies are focused mostly in explaining increasing participatory behavior. Although the framework suggests that a return to previous stages might take place, or that users might stop their participation and become lurkers, scarce evidence exists regarding the meaning users give to their participation as it decreases and how their new patterns of participation relate to their motivations.

### **3. Methods**

The study of users' integration into online communities demands the use of methodologies that allow us to capture the complexity and variety of user experiences. We considered that interviews with long-terms users of an online

## Latent Users in an Online User-Generated Content Community

community would provide us with enough depth to understand users' motivations to participate, their changes in participation and why and how they changed their participation over the course of their usage of the site.

We conducted 31 hour-long semi structured interviews of long-term members of a user-contribution site, Everthing2. In this section we present a brief description of Everything2, then we describe the procedure used to recruit participants, and finally we describe the interview protocol and methodology we used to analyze the data.

### 3.1. Everything2

Everything2 is a user-generated encyclopedia started in 1999 as an offshoot of the popular news and discussion site Slashdot. As a reference point, Wikipedia started in 2001. Everything2 currently receives about 2 million visits a month, of which 260,000 occur from repeat visitors according to the site's internal analytics. The site has changed in many ways over the past 12 years. Originally, it was intended to be similar to an encyclopedia, containing factual articles on a range of topics. Over time, the site changed and users posted articles that had more creative writing elements, or related personal anecdotes. The personal anecdotes were described as "GTKY" (Getting To Know You) articles by the early users of the site. In order to keep that content separate from other, more factual articles, the site designers created an early form of blogging tool. This was before 'blogging' as a term was in wide use, and before the introduction of Livejournal, one of the first websites dedicated mainly to blogging as an activity. Currently, Everything2 is framed as a place where people can post multiple types of writing, and receive feedback on that writing. Content ranges from factual articles, to poetry and short fiction.

Although similar to Wikipedia in many ways, there are crucial differences between the sites. Content is arranged by 'nodes', which represent discrete topics, and each node is comprised of any number of 'Write-ups', which are articles written by users. Users retain ownership and attribution for the content they write, and each article is written by a single author, not collaboratively as in Wikipedia. Everything2 is almost entirely text-based, with no pictures attached to content. Any visitor to the site may read content, but only registered users are allowed to contribute Write-ups.

Registering a pseudonymous account in order to post content allows more complex socio-technical interactions, including the ability to communicate with users over time, and rate the contributions of those users. Registered contributors receive reputation scores, known as 'XP', through writing content, the rating of their content, their reading behavior, and voting behavior. As a user's reputation increases, users gain privileges in the system, such as the ability to post a profile picture, or have an increased pool of votes used to rate content, add votes to another user's vote pool, or gain the ability to 'cool' a Write-up.

All Write-up content is ratable by users with positive reputation. Content rating is an aggregation of +/- voting. Some users may also use a ‘cool’ vote (also referred to as ‘chings’ by users) on a ‘Write-up’, which pushes the content into different filtered areas of the site and allows the poster of the content more positive reputation.

Registered users can communicate to each other through an asynchronous messaging system, or through a synchronous chat function, known as the ‘catbox’, visible on all pages.

There are two groups of volunteers who run the daily operations of the site. The first group is labeled ‘e2gods’ and the second, ‘content editors’. Content editors have more system-privileges than typical users, most importantly the right to edit and delete the content of other users. E2gods have all of the system privileges of a content editor, plus more control of the software to do maintenance tasks like moving content, changing user accounts and so forth. Members of both groups are maintained by a primary ‘editor-in-chief’ who is chosen at irregular times by the previous editor-in-chief when they wish to quit the role. Membership in both administrative groups is nominated by current members, who identify users who have made significant contributions to the site, and seem to display the types of skills the administrative group values, namely ability to communicate clearly and a sense of the goal of the site. While the site is currently owned by a former administrator of the site, owners do not interfere with any of these volunteer operations of the site.

For the purposes of the analysis here, the differences between the administrative groups is not important; both groups mainly set site policies, enact those policies by communicating with contributing users, and editing or deleting content, and communicate with each other using the internal messaging system to come to consensus on site policies.

Everything2 is a compelling case to study for the questions we raise above because it has a long history that has been documented relatively well, and is still in operation, unlike other similar systems that existed before Wikipedia, like H2G2<sup>1</sup> and Interpedia<sup>2</sup>. As the site has persisted over time, users have come and gone, new sites have arisen that challenge its role, and the goals of Everything2 itself shifts as new administrators come on board.

### 3.2. Participant recruitment

Our goal was to recruit users who had been significant contributors to the site at some point in its history, but who had stopped participating by the time of our data collection. We defined these as “long-term” users because they had typically contributed to the site for a period of time of over a year, and had contributed more content than average. We were not interested in people who made an account without contributing content, or people who had been actively contributing for less than a year. Recruitment began with snowball sampling (Kuzel 1999). Since two members of the research team



## Latent Users in an Online User-Generated Content Community

had been long time participants on the site, had attended offline meetings of Everything2 members, and had participated in non-site communications with Everything2 users previous to the study, we were able to begin with one established member of the Everything2 community that knew a great number of users. This user referred us to other users that fitted our criteria. We then continued to snowball based on respondent referrals by asking our respondents to recommend other long-term users.

Eventually, our initial sample approached saturation from referrals only. In order to increase the diversity of experience in our respondents, we continued to sample using information from server log data maintaining the criteria of recruiting long-term users as previously defined. Within these criteria we also used different spectrums of usage including users who messaged or voted, or who have not logged-in in months. Examples include users who were selected because of having edited their profile page or private messaged a large amount, but have not posted write-ups for months or even years or have posted very few compared to posting patterns at the beginning of membership. Other users were contacted because they had asked administrators to delete the content they contributed to the site. We generated a list of users who would fit our criteria, but encountered the problem of contacting users who were not participating on the site, and had interacted pseudonymously on it, leaving no contact information. Our most successful strategy for contacting these users was through current users. In many cases, current users had maintained contact with users we had perceived as leaving the site, having moved their communication to telephone, email, or Facebook rather than through the site. The site had email addresses stored for users as part of the registration process, but these addresses mostly were not useful because they had been set up as “junk mail” addresses, or had become inactive. A group of Everything2 users, including those who fit our criteria, were known to participate regularly on an IRC channel, so the research team went into that channel to request interviews from some of the users there. Recruitment through the IRC channel was highly successful, as users there felt more connection to each other, and were more likely to have been very active users in the past. In addition, there is a Facebook group for current and past Everything2 users, but that site did not prove to be very useful for recruitment as users there were less likely to have been heavy users, and users who left the site due to conflict were less likely to use Facebook than the IRC channel to stay in contact with other users.

We used these sample methods to recruit a variety of different types of users (Kuzel 1999) and to address homophily bias of snowball sampling (Heckathorn 1997). However, it should be noted that our sampling method was designed to maximize diversity and to characterize in rich detail a variety of user experiences, and not to be representative of a larger population. We interviewed 31 users by the end of the study. Potential participants were given a short online screening questionnaire, which asked for demographic information and current perceptions of their site use. In addition, since each respondent’s profile and user table

information was inspected to show the pattern of their posting behavior, the 'level' on the site, account creation date, and related information was also collected. Participants were then contacted and interviewed by telephone. Figure 1 illustrates in aggregate the pattern of decreasing participation of interviewed users during 9 years.

### 3.3. Interview protocol

Over the course of an hour, we conducted a semi-structured interview, using a key-point interview guide (King and Horrocks 2010). We asked questions about differing periods in the lifespan of their use, periods of high and low rate of contribution, and their perceptions of what drove these changes in behavior; we also asked them about their motivations and perceptions of use of specific features of Everything2 software. Lastly, users were asked to describe and recollect relationships with other users both online and offline.

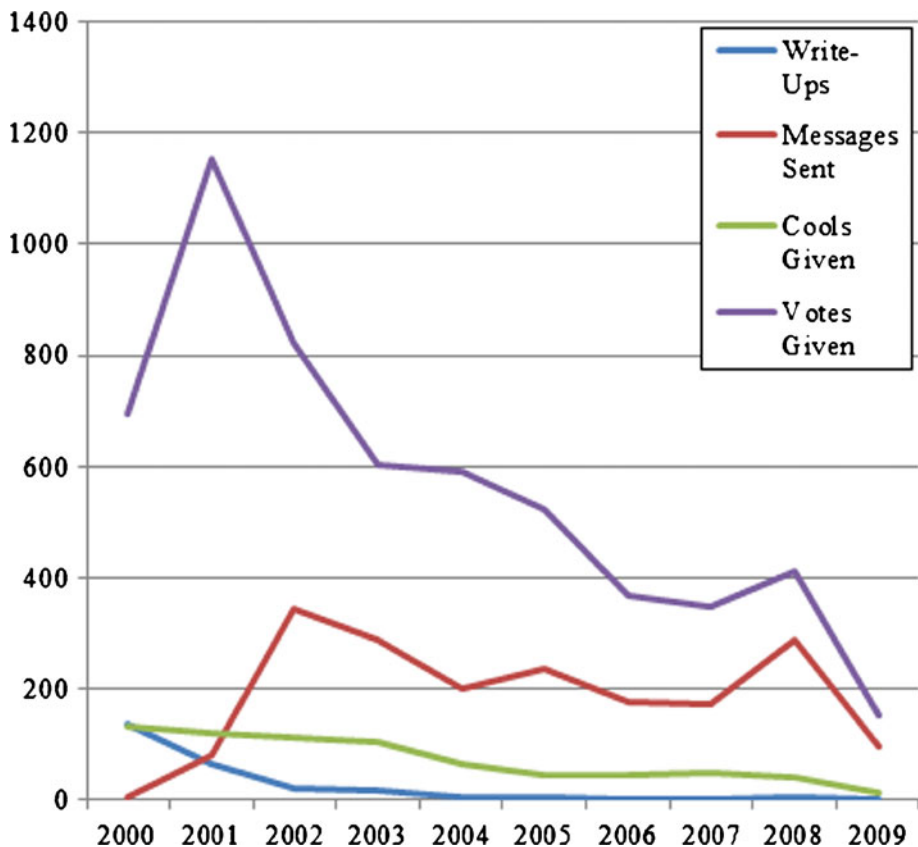


Figure 1. Decreasing participation over time of interviewed users.

## Latent Users in an Online User-Generated Content Community

We iteratively analyzed the transcripts (Onwuegbuzie and Leech 2007) by annotating and assigning subject codes to respondent answers, and noting emergent themes in the data. We then interpreted and grouped these codes into larger over-arching themes. Afterwards, we summarized user responses pertaining to these themes in a data matrix (Miles and Huberman 1994).

These data matrices allowed us to identify emerging patterns of responses among participants, and to classify their responses along various categories. We then reviewed the original transcripts and pulled relevant quotes into another table based on the categories we have applied. We then compared each user's quotes and summaries and richly described thematic elements that existed across subjects' responses. This allowed us to define in full detail the categories we have created based on over-arching patterns between users recollections. Finally, we brought together our categories definitions, quotes and themes to construct this narrative.

### **4. Latent users and changes in participation through selective use**

The respondents we interviewed were largely people who had been active on the site 4 to 5 years previous to their interview. In examining their user data both from server logs and on the site, most had made very few contributions in terms of Write-ups in previous years (sometimes going over a year or more without contributing content in that form) and have often logged into the site only infrequently. In the Reader-to-Leader framework, Preece and Shneiderman identified that users left a site at each stage of their model, but they did not identify what happened to those users as they dropped out, other than to briefly mention that they may return to being lurkers. The Everything2 users interviewed had a change in participation, but still maintained some level of engagement with the site. Occasionally, that engagement led to activity, in a way that made them different than the typical conceptualization of a 'lurker'. We identified this type of user as a new type of role that has not been previously described in studying the ecology of online communities: the latent user.

#### 4.1. A characterization of latency

We defined 'latent' users as members of a site who have contributed to a level where they have learned the process and norms around adding their own content, but who have changed their behavior and no longer contribute content in the same fashion. Current membership for many of these long-term users can best be described as 'latent': they would regularly read content on the website and would occasionally talk with other users on the site, but felt like they did not have anything (yet) valuable enough to contribute. However, these users cannot be considered as having returned to the 'readers' stage, although apparently they have. There are major differences between these two user types. Latent users have

previously contributed in different ways to the community at different periods in time and have experience with the norms of the community, this makes easier for them to contribute to the site compared to ‘readers’, who do not have the experience of having been active in other subsequent stages. Besides, many of these latent users have formed personal relationships with other users and have interacted with them. Furthermore, their motivations may differ from those of the ‘readers’. Finally, for different reasons ‘latent’ users have changed their behavior regarding a main activity on the site, namely contributing Write-ups. An example of a latent user is Rachel<sup>3</sup>. She states she would post again if she had an experience comparable to the one she wrote about the last time she posted:

‘...just hasn’t been anything that has caught me the same way [...] I think that I would consider contributing something to [Everything2] if I had an experience like that where it’s like, it’s very clear that this is something that needs to be shared, but I just haven’t had that experience.’

‘Latent’ users kept an emotional connection with the site. The site was still a source for valuable social interactions since many of their ‘online friends’ could only be contacted through the site: ‘There are certainly still people out there that I only see through the site [...] that I consider friends and [the site is] probably the only way I would have to connect with [them].’ (Alice)

This emotional connection to the site made these users feel like they could easily contribute again, even though they may not. ‘Latent’ users still considered the community as something that was part of them and of their personal history, this allowed them to come and go as they wished. Isil felt that she ‘sort of had a history with [the site]’ and that because of this history, she ‘knew that I could come back there and probably still do what I had been doing.’

‘Latent’ users’ online behavior showed common characteristics. To a larger or smaller degree they still visited the site, occasionally read some posts, looked to see if they had any messages, and maybe voted on the content of other users: ‘I get on every day; maybe see what’s going on. Maybe read an article or two, upvote something or cool something [...] there are times when I may not go to the site even after weeks.’ (Bob).

#### 4.2. User types and original motivations to participate

‘Latent’ users are a different type of user from the ones proposed by the reader-to-leader framework. ‘Latency’ describes a stage that might be present for any other type of user. Although the behavior of many ‘latent’ users would suggest that they transitioned to another stage, such as the ‘readers stage’ or that they have become ‘lurkers’, their history and experience on the site, as well as their current participation indicate that they are in a ‘latent’ state. To understand this better we needed to look at what was it like for these users to contribute content. Why did

## Latent Users in an Online User-Generated Content Community

they spend time contributing Write-ups in the past? And why did they change their contributing behavior?

The publication of Write-ups is the core activity on Everything2. Other types of activities, such as votes, result from the publication of Write-ups. Write-ups can also represent a significant contribution of time, as each original article is typically comprised of hundreds of words, there is a high site norm around polished writing, and articles often include multiple drafts. Compared to other forms of contribution on the site (voting on content or communicating with other users), ‘nodding’ as it is called by site members is both a high-cost activity, and also essential for the site to be sustainable. Therefore, we started by looking at the attitudes towards publishing Write-ups and the meaning it had for these users, as well as related activities such as reception and provision of feedback, reading, and interacting with other users.

We found that respondents gave different meanings to the activities they performed on the site, and that these meanings were related to different motivations that users reported having for contributing Write-ups in the first place. When we asked participants about their original motivations to participate on the site, and their current attitudes towards the site, four user motivations for contributing Write-ups emerged from their statements. As such, these motivations likely did not cover the global range of motivations for participating on Everything2. Moreover, in many cases participation for users was related with more than one motivation to participate, and it is likely that individual Everything2 members had a mix of these motivations. However, the analysis indicated that one or the other of these was primary for the users interviewed. While for some publishing content allowed them to develop personal relationships, for others its importance was related to the development of their writing skills. Some respondents valued the reception of feedback as a way of improving as writers, for others it meant a possibility of building a reputation in the community.

The four different user motivations for contributing Write-ups characterized here are: *status building*, *personal relationship building*, *community building*, and *human capital building*.

### 4.2.1. *Status builders participate to bring attention to their work*

Contributing through Write-ups is considered for some as an effective way of building a status on the site and at the same time boost the user’s self-worth. Status building is a characteristic of ‘contributors’, according to the reader-to-leader framework. An indication that some of the participants seek recognition and admiration from other users based on individual motivations is expressed by Oscar when he refers to what motivated him to contribute content: ‘Vanity, the appeal of self-publishing was a pretty strong one.’ The social status motivation is centered on getting the attention of other users and having them read the Write-ups they create.

In this sense, although what motivates these users is the status and recognition they derive from their participation on the site, their participation includes other users through the feedback either through the voting system or through private messaging. In the interviews, status builders would express that they would usually look forward to the comments and votes they got from their contributions. They like seeing that their efforts of writing good quality Write-ups are compensated by positive feedback from other users: '[...] they were constantly saying things like 'you're doing a great job', 'you're a fantastic writer' [...], that's a tremendous amount of motivation for that sort of material.' (Rob)

Additionally, it is not only the amount and content of feedback that is important, but also who the source of that opinion is. Status builders have a particular audience in mind, and hope to build status among that group of users:

'[...] it depends which 'cool' you're getting from which people [...] because I do think even though each cool technically awards everyone the same points, if you do get a cool from somebody who is an editor, who has been on the staff as an editor, a god [...] there are some users whose cools rate a little bit higher with me than others.' (Dennise).

'[...] so when something I wrote got that [cool], it was validating, it was like they are smart after all and maybe I am. [laughter]' (Gerrol).

Therefore, just like 'contributors' in the reader-to-leader framework, we found that for those users that were motivated by 'status building', other users on the site play an important role. They provide the feedback that builds the image that 'status builders' want to build.

Status builders pay careful attention to their reputation (as articulated by the system reputation system), even going so far as to ask editors for the deletion of past Write-ups that affect their reputation score. Gerrol deleted Write-ups with negative reputations because he 'wanted more rep[utation], so I could move up.'

#### 4.2.2. *Personal relationship builders participate to legitimate social interaction*

Some of our respondents stated they contributed content to the site to build relationships with other users. They are motivated to contribute by the social support, entertainment and personal relationships they can build on the site. The publication of Write-ups facilitates the creation of social relations:

'I think that I started to see the sort of the social element was much more prevalent in the content itself, there were many insider jokes and many more references of the other people or nodes that referenced other people [...], very soon I got a real sense of the personalities and I found those people very attractive. I wanted to have relationships with them [...] that kept me going.' (Jack).

The Write-ups acquire a special meaning because they encourage interaction among users. Rachel contributed Write-ups to 'give my nice Internet friends

## Latent Users in an Online User-Generated Content Community

something good to read' (Rachel). She then elaborates: 'We weren't writing for the sake of writing, you were writing for this particular audience of people that you cared about.' Feedback from other users supplements the Write-ups, building relationships and connecting users: 'I like to hear about my Write-up, my writing touched somebody or people I talk to.' (Dennise). Rather than being focused on their reputation scores and overall audience in the way contributors motivated by status building were, these users had a segmented audience of "friends" for whom they were writing, with less focus on the system-generated feedback mechanisms like voting.

In this sense, in 'personal relationship builders' interactions and relationships with other users of the site are essential. This aspect is similar to 'collaborators' in the reader-to-leader framework. A difference between these two types of users, though, is that while the 'collaborator' has in mind the community, 'personal relationship builder' users center their attention on their closest social circle.

'Non-site related interactions', interactions that do not revolve around Write-ups or other activities exclusively related with the site, are of great importance for these users. This type of interaction is viewed as a way to pass time, relieve boredom or find social support. For example, Jack described his social experience as the most important thing he got from Everything2, as a way of meeting other people, having fun, and 'hanging out' with people of the opposite sex. The interaction with others is described not only as entertaining, but also as supportive: 'Mostly just, honestly, looking for a place to belong, looking for people to pay attention to me and give me some comfort and make me feel less alone.' (Queen).

These respondents were active users of all of the site's inter-user communication tools. '[the site] became a vehicle for hanging out with these people. [...] We were [...] writing about it in messages, writing about it in the [Catbox], and that was always very strong for me.' (Jack).

### 4.2.3. *Community builders participate to foster the goals of the site*

While some users see contributions as a way for building personal relationships, 'community builders' are more interested in fostering a set of interactions that lead to the site being successful over time, with a belief in the goals of the site. These users share elements with the 'collaborators' of the reader-to-leader framework. Like 'collaborators', 'Community builders' have a sense of common purpose and like to interact through the reception and provision of feedback with other users that share with them the pleasure of writing. Contributing with Write-ups is a way 'to contribute to the community' (Steve). These users do not see this site as a venue for inter-personal socialization, but rather as a place to build something together with other people: 'I viewed the site more as a potential community of writers more than an Internet social networking site.' (Xio).

Writing is viewed as the expression of what the community is; to them, the community has a clear sense of purpose that revolves around writing. However,

collaboration does not necessarily happen through the joint creation of write-ups, but through feedback. ‘I guess you’d call it a writing community [...] everybody reading material, offering comments, and in turn helping everybody else becomes a better writer. [...] It was a great place to basically talk with like minded people all centered around writing.’ (Henry).

The provision and reception of feedback plays an important role in the community building process. It is used to show what is and what is not acceptable in the community in terms of quality, type and topic of posts: ‘You could learn by looking at the kind of things that was getting voted up. What kinds of things would tend to stick?’ (Rachel). It is also a way of expressing what is valuable for the community: ‘My idea is by the time a Write-up gets 8 or 9 cools you should maybe think about this is something we want everyone to see.’ (Dennise).

‘Community builders’ share some elements with ‘leaders’, given the meaning ‘community builders’ give to feedback on the site. For these users, feedback also serves an important role for communicating community norms and standards. For Henry, feedback shows ‘[...] how to format a Write-up properly so it links to other things efficiently and a lot of first timers don’t know that or are even aware that that etiquette was around.’ While other users value more ‘non-site related’ interactions, community oriented users are focused on interactions with other users that allow them to provide feedback and collaborate on Write-ups.

#### 4.2.4. *Human capital builders participate to build their personal skills*

Another type of user, the ‘human capital builders’ use Write-ups to improve their writings skills; to increase their knowledge by investigating the topics they write about and as a channel for personal expression. Even though they share a focus with ‘community builders’ in using the site to build writing skills, ‘human capital builders’ are focused on their own writing skills, as opposed to the overall system for improving the skills of others. As these users see that their writing improves, they are more motivated to contribute more content to the site. Kim used Everything2 ‘To hone my technical writing skills and [...] to learn more about science things.’ Rob saw the site ‘Like a training wheel for writing.’

Similar to ‘contributors’ in the reader-to-leader framework, ‘human capital builders’ do not focus on building relationships with others, and only have individual motivations. However, they do not necessarily seek the recognition or reputation that ‘contributors’ look for. Feedback in this case is rather a way for improving writing skills. Both negative and positive feedback helps: ‘Yes, even the negative stuff [helped improve] [...] I took everything people said pretty seriously and I wanted to improve it [the Write-up] based on the feedback from the site.’ (Linda). These users welcome feedback, but see it as a way to take advantage of the opinions of other users. Some even use this feedback as a way



## Latent Users in an Online User-Generated Content Community

of building confidence in their communication skills: ‘I certainly got better and I felt much more confident from getting the people’s feedback’. (Bob).

### 4.3. Users changed their participation in the site over time

Over time, many of the users we interviewed had changed how they used Everything2. Mostly, people contributed fewer Write-ups over time, or engaged in less communication with other users. Factors for those changes in use were grouped into two large sets: changes derived from the site changing either through new competition or policies; and changes derived from the user’s life changing (e.g. having children or starting a new job).

Many changes in participation related to changes in the site had to do with changes in policies for contributing to the site that occurred because ‘leaders’ made explicit policy changes. In particular, our respondents identified two major policy modifications, and even gave them agreed-upon names:

‘Wiki-era’: A new content policy was put in place that strongly preferred encyclopedia-like Write-ups containing mostly factual information.

‘Raising the Bar’: A change in policy enforcement that raised the quality standards for Write-ups. Editors expected new content to meet strict quality criteria, and deleted Write-ups that fell short.

In addition, there were other changes to the site. At one point, administrators instituted a copyright policy that prevented users from contributing non-original content. There were a number of changes in the way feedback affects a user’s XP and level: downvotes stopped affecting XP, and the value of cools was decreased.

Changes to the site affected users differently, depending on how those changes affected what they wanted to get from the site. Most of these changes to the site were enforced by editors: users of the site given special permissions to enforce site policy by banning users or deleting nodes and Write-ups, role similar to the one of ‘leaders’ in the reader-to-leader framework. As will be explained in the following sections, as the site changed, each type of user reacted in a different way.

#### 4.3.1. *Status oriented users lost faith in the feedback system*

Status oriented users are those users that saw their activity as a way of building a reputation on the site. These users saw changes in site policies as barriers for this. Specifically, ‘Raising the bar’, changes in the leveling system, and the perceptions that the community was shrinking were seen to constrain usage of the site, and therefore restricted the ability to build status.

The idea of ‘Raising the bar’, although judged beneficial by some members of the community, had negative consequences in practice for another set of contributors of content. It made people more anxious about having their reputation on the site affected. It became more difficult to get something

published and receive positive votes, while it was easier to get negative feedback: ‘I liked the idea [of ‘Raising the bar’], but I think the end result was that people were too nervous about reputation’. (Zwank). For users that were especially concerned about their reputation, this became a significant constraint.

Status-conscious users were constantly worried about the opinion of their audience and also tended to be excessively self-critical: ‘[...] as I started writing more, I became more critical of my own writing.’ (Rob). When the site raised the quality standards, it ended up strengthening this tendency, and discouraged these users from writing:

‘I was putting myself up to a standard I didn’t think I could always meet. It was becoming more work than enjoyable. So I would write things, and I would say that’s not really a high enough caliber for the sort of write up I would post to [Everything2].’ (Rob)

Another discouraging change involved the leveling system and the value users got from the different kind of votes. ‘When I first started, a ching was worth ten experience and an upvote was worth one’. (Kim). After the change, chings lost their value and our respondents interpreted this change as devaluing the posting of quality Write-ups:

‘I really felt like you really, really need to ‘earn’ a ching. And to work hard enough to earn a ching and have it worth like 3 upvotes to me wasn’t... It devalued the meaning of the ching. [...]’ (Kim).

This change occurred at almost the same time as ‘Raising the bar’, and these two changes were especially discouraging when taken together. While chings were harder to get under the new quality standards, those points had a lower effect on the status of users.

Another site change that affected how status builders used the site was the decreasing membership of the site over time. Status builders cared significantly about their audience. For them, writing was an opportunity to create a positive impression. As the site aged, the audience—or, at least, the one seen by our respondents through feedback—shrank. Some users were banned and others left as the site implemented stricter policies. As the size of the audience got smaller, status building users were less motivated in writing; building status was less valuable in a smaller community.

#### 4.3.2. *Social relationships oriented users felt ostracized from participating*

Social relationships oriented users frequently wrote what they called the ‘getting to know you Write-up’: a creative and sometimes fictional Write-up about personal matters. For the most part, changes in content policies alienated these users. For example, Tim felt that the ‘Wiki-Era’ content policy change destroyed the usefulness of the site: ‘[...] That was my whole purpose there, getting to know people. And they seemed to want to take it in an encyclopedia direction.’ (Tim).

## Latent Users in an Online User-Generated Content Community

The ‘Wiki-Era’ policy change created the perception among these users that they were being excluded intentionally and that there was no place for their type of participation: ‘There was no room for opinion or subjective thoughts, no room for the original fiction, no room for the insightful discussion’. (Henry). They started feeling they could not participate as they wanted to, and that their contributions would not be as welcomed as before.

The feeling of not being welcome also stemmed from the way in which editors enforced the new policies, and caused these users to feel even worse: ‘I don’t like posting things and having editors tell me that it’s not worth it.’ (Alice)

Some social relationship builders responded to this site change by moving away from the site in order to maintain the relationships they had started there. As some other users became particularly good friends, they started getting together in real life. Relationships that started online moved offline. When this happened, they no longer needed the site to mediate their communications, and this caused a reduction in its use. Online interaction with those friends became obsolete. ‘Why do I need to log onto [Everything2] and read all of [user 1] stuff when the fact of the matter is, he was sitting right next to me [...]’. (Erin).

The transition from online to offline caused the site to be used less since these users had a bigger interest in spending time together in ‘real life’:

‘I think a lot of my friends had moved on from the site. I mean we were still part of it, but they didn’t really log in [...]. A lot of them became close actual human real life friends [...] and so you know we started spending more time in real life and less time on there.’ (Frank).

Even in cases where Everything2 members had not been friends before joining the site, other research has shown that they fulfilled their social goals by interacting with other users at face-to-face meetings called ‘Nodermeets’ and using those meetings as a springboard to move relationships into other channels besides the site (McCully et al. 2011).

### 4.3.3. *Community oriented users felt betrayed by administrators*

Community oriented users are those who saw their contributions as a way of building something together with others. Their interest was centered on what they considered was the best for the community as a whole. For many of these users, the changes in the policies and the ways in which they were implemented meant a transformation in the community they identified with. ‘The change in direction of the site made it a different kind of site. The kind of site it wanted to be was not a kind of site that I was as interested in being a part of.’ (Carol).

As editors enforced the new site policies, community-oriented users took deletions as a message from the community. Many of these users perceived that the way in which editors implemented policies, such as deleting Write-ups, did not recognize and appreciate their work for their community. When this was

combined with increased difficulty in getting Write-ups accepted (during ‘Raising the Bar’), these users became discouraged in their community-building efforts.

Also, community-oriented users—who share characteristics of ‘collaborators’ and of ‘leaders’- were quite sensitive to feeling betrayed by the community they helped build. The case of one of the respondents illustrated the importance that status and credibility had in order to be considered ‘leaders’ in this type of sites. One of the respondents expressed his disagreement with the promotion of a particularly disliked user to the team of editors of the site. For him, that editor was someone whose personality he did not like and whose ‘writing sucked’. (Frank). This perceived betrayal was enough for him to stop contributing Write-ups to the site. Other users mentioned that the combination of policy changes was a factor in changing their participation.

‘[...] While I’m still on the site often, the whole raising the bar epoch, the change with the copyright rules, various other things, have made it more difficult for me to hit submit like I used to.’ (Zwank).

#### 4.3.4. *Human capital oriented users felt their style was constrained*

These users were also opposed to many of the site policy changes. They saw the ‘Wiki-Era’ policy change as imposing a style that for many did not reflect their topic interests and their writing styles. Several users saw this policy as the end of personal and expressive types of writing. For them, this particular policy implied a transformation of the site to something that did not offer the same conditions for developing their skills.

The ‘Raising the Bar’ change was largely uncontroversial among these users. However, around the same time, there were a number of small changes in the structure of XP and levels and the value of feedback. These changes were interpreted by these users as implying that quality of writing was not appreciated as it was before. The effort required to improve writing was no longer rewarded by the points system: ‘It [the ching] wasn’t like it was making us money or anything like that, but at the same time; it felt like it devalued the meaning of actually doing something.’ (Kim).

#### 4.4. Latent users’ current participation is consistent with original motivations

One of the ways ‘latent’ users are different from other type of users proposed in the reader-to-leader framework is that, as we observed, their current participation, although small in frequency and in amount, is consistent with the original motivations that participants said they had when they were more actively participating on the site.

Most of the interview respondents reported still considering themselves to be members of Everything2, even when they had not contributed Write-ups for a significant period of time. They reported that they still actively read other users’

## Latent Users in an Online User-Generated Content Community

Write-ups on the site, voted on content, checked their inbox for messages, and/or messaged and chatted with other users. Infrequently, they would also contribute Write-ups. Each type of user, made different adjustments in their participation, but it appeared like their current activities on the site were still consistent with what motivated them initially to be active on the site. All of our respondents decreased the amount of Write-ups they contributed to the community, but as latent users they still continued using the site in one way or another. Below, we describe how they have changed the ways in which they participated and how that participation can be considered to be consistent with the motivations they indicated for contributing to the site in the first place.

### 4.4.1. *Latent status builders groom their remaining audience*

Latent users who were status oriented selected the use of site features based on preserving their image and the impression other users have of them. They do not focus on posting, reading, or voting. However, their use of the site focuses on social status, including use of site features that enable social interaction, such as the chatbox. The interactions with others acquire meaning because other users recognize them and are aware of their reputation, providing positive feedback for their historical contributions to the site. The chatbox and private messages allow them to remain present in the memory of other users and gauge audience impressions of themselves.

Although they are not building new status on the site, late status builders do care about preserving the image they have already built. Oscar, for instance, confessed that he goes back to the site to check in because: ‘I was looking to see if I was missed’. With some frequency he checks to see what is going on in the site and if he has received any messages. He describes his feelings regarding the site as being similar to the ones of the main character in a movie in which that character: ‘... needs to keep going back and back just to check that he’s still accepted in that community.’ (Oscar).

### 4.4.2. *Latent social relationship builders maintain communication and post social content*

Latent users who are social relationship builders have preserved activities that allow them to maintain contact with other users. These users read Write-ups, socialize regularly with other users through the messaging system, and even contribute with Write-ups when they want to share something valuable with their online friends. As mentioned above, they often move their Everything2 relationships into other communication channels like chatrooms, phone calls or physical meetings.

However, since many of their online friends can only be reached through the site, there are times when posting Write-ups is appropriate and necessary for latent social relationship builders. When Alice’s father died, she found that

posting a Write-up was an effective way of sharing this experience with some friends she only had contact with through the site:

‘Most of my friends I got from [Everything2] are friends in real life, but there are certainly still people out there that I only see through the site [...] and it’s probably the only way I would have to connect with. [...] I’d written this thing and thought that maybe I should uh try it again, post it you know let some old friends know what’s going on.’ (Alice).

As described above, many of these users felt that the changes in the site that discouraged personal content in Write-ups marginalized the types of contributions they could make. They still will post socially oriented Write-ups in cases where that is appropriate in the context of current site norms and policies. Or, as Alice says, when something is ‘One node worthy’. In this sense, the current participation, in the form of messaging, online chatting, and eventually posting Write-ups would still revolve around the idea of maintaining existing social relationships on the site.

#### 4.4.3. *Latent community builders take on administrative roles*

Latent community builders express this stage by reading nodes, voting, providing feedback messages and occasionally posting. In this way, they can still express their interest in building something together with other users and feel that they are part of a larger community.

Some latent community builders, such as Patrick, decided to switch from being regular users to editors. This new role on the site is consistent with their initial interest. As stated by Patrick: ‘The style of writing that I was good at, was no longer the style we were focusing on. [I] started moving towards editing. I would help people improve their writing instead of trying to put up Write-ups of my own.’ (Patrick).

Just like latent users that are motivated by their personal relationships, community builders also contemplate the possibility of posting in situations that are worth it. However, their definition of situations worth writing about is different. Lisa, for example, stated that although she has mostly stopped posting, she would do it for the tenth anniversary of the site. They do not choose to publish to maintain personal relationships; rather, they focus on the meaning posting has for the community as a whole. The few activities these users perform allow them to feel they are still part of the community and that they are still helping to build something together with others.

#### 4.4.4. *Latent human capital builders focus on giving feedback to other writers*

Users that saw the site as a place to develop their expressive and writing skills, but have entered a state of latency also continue to satisfy their interests, even after they have stopped writing, by shifting their focus to improving the writing of other users. They focus mostly on reading, voting, and providing feedback to

## Latent Users in an Online User-Generated Content Community

other users through messages. They express that they take the feedback they found helpful in building their own writing skills and share that with new contributors on the site.

The way in which these users refer to what they like about others' writings shows that they recognize good writing skills and that it is precisely that what they look for in other users: 'I always go back to what they write. It really holds your attention, very interesting what they write, because their English is fantastic. You just really have to understand the rhythm.' (Bob).

Activities as followers include reading and providing feedback, and expressing opinions about the writings in messages. Bob describes his current use in those terms: 'So you read some interesting article and you felt wow! So you give the authors some feedback email.' Thus, long-term users motivated by human capital building and that modified their activity moving towards latency manifest this stage as followers of active users that resemble the qualities they have or would like to have as Write-up contributors on this online community. It could be that editing or mentoring is another aspect of the writing skill they express by taking on this new type of participation.

### **5. Discussion and synthesis**

The reader-to-leader framework provides a model by which we can understand how users move from being aware of a site, to becoming leaders of the site. The model is clear in that not every user goes through all stages of this progression, and users can and do leave the site together at every stage of development. However this model does not attempt to describe decreasing participation of users as they move into, out of, and between each of these stages, and how this decreasing participation relates to users' motivations. Through the evidence provided by a set of interviews, we found that although their level of content contribution decreased, this participation was still consistent with their initial motivations. Indeed, all of our respondents were once heavy contributors to Everything2, but when new constraints forced them to change their behavior; they reduced the number of Write-ups they were contributing to the site and their general participation patterns. However, by becoming 'latent' users they still managed to keep using it in a way that enabled them to feel like members of the community.

Although these users, in terms of their previous behavior and their motivations could be considered as being in one of the stages described in the reader-to-leader framework; we characterized them as 'latent users'. We see the difference in that these users have all the skills and capabilities to contribute and do not have to face a learning curve before they can fulfill a given role, but are not currently fulfilling that role in terms of exemplar behaviors for that stage. In this sense, we propose this new category of users as complementing the reader-to-leader framework.

‘Latency’ is not a stage to which users arrive through a horizontal movement as the one described in the model by Preece and Shneiderman (2009) and that forms part of the progressive line followed by users according to this framework. On the contrary, users become latent through a vertical movement that breaks the progressive line of social participation. As illustrated in Figure 2, users cross the different stages in the reader-to-leader framework through a horizontal progression as they are socialized and their motivations are tuned-in to those that characterize that stage. ‘Latent’ users, on the contrary, transition to this stage through a lateral movement, and enter into latency from any of the stages that have content contribution as a form of participation.

In our analysis of the interviews we noticed that current participation by ‘latent users’ seemed to be consistent with their initial motivations to use the site. Although we do not have evidence that their motivations remained consistent during all phases of their transition in use, the ways in which they described their current use is consistent with the motivations they expressed as their reasons for joining the site in the first place. This might indicate an important difference when compared to the framework by Preece and Shneiderman (2009) and to other studies that have also proposed a consonance between changes in participation and changes in motivations. For example, Lampe et al. (2010) in their study about motivations to participate in online communities stated that one possible interpretation for their findings is that users change their motivations as they change their type of participation.

However, contrary to the interpretation by Lampe et al. (2010) and what the framework states, our interpretation of the interviews suggest that it is changes in constraints for using the site that fueled the change in behavior, and not necessarily changes in motivations. Getting married, having children, and getting a new job, as well as policy changes on the site, all led these users to change their

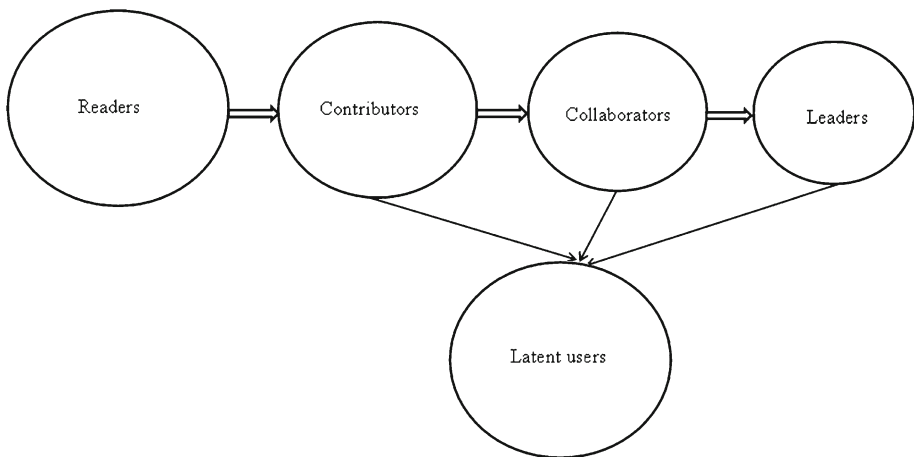


Figure 2. Horizontal movement between user stages and vertical movement towards latency.



## Latent Users in an Online User-Generated Content Community

participation. The way in which these constraints affected the participation of each of the users varied depending on the original motivations to participate. However, despite the changes in participation, the current behavior seemed to remain consistent with the initial motivations to participate on the site.

This motivation consistency is concordant with other research in peer-production communities. For example, Welser et al. (2011) studied Wikipedia editors, and found that certain editors remained remarkably consistent over time. For example Vandal fighter almost always just fixed malicious edits to pages and did not do other types of editor contributions. The authors only had access to the behavioral data of edits, but argued that consistent motivations for editing might explain that pattern.

Panciera et al. (2010; Panciera 2011), in studies of the peer production community Cyclopath, have argued that users of that site start making contributions at the beginning of their participation on the site in very specific categories. For example, some start contributing map edits while others start annotating them, and these users do not tend to change their contribution types over time. Again, they argue that users of these sites come to them with consistent motivations that are expressed as roles and behaviors, and that these motivations do not change over time.

Our findings also add a more nuanced characterization of the different user stages in the reader-to-leader framework. For example, according to Preece and Shneiderman (2009) during the ‘contributor’ stage, users are interested in gaining a reputation through contributions, but without collaborating. This implies that they do not develop relationships with other users, since they do not tend to interact or connect with them. However, our findings showed that in the case of ‘status building’ users, although their motivations are similar to those of the ‘contributors’ and can be considered as such, they also have a clearly defined audience. Furthermore, their participation takes place in relation to that audience. Therefore, a relationship exists with a set of users and this relationship is essential for the participation of ‘status builders’.

Baumer et al. (2011) found similar evidence. Findings in this study suggested that there is a process of collaborative co-creation between bloggers and readers of blogs. As readers provided feedback about blog posts indicating possible errors, making suggestions, and providing feedback about the content; bloggers started to consider that audience for their subsequent posts. In this sense, although it is possible that a blogger might not have the motivation of establishing a relationship with users of the blog, a relationship develops between reader and blogger that starts to shape the contributions of the blogger. Something similar seems to happen in the case of ‘status builders’ in relation to their audience.

Other nuances are, for instance, the difference between what we identified as ‘personal relationship builders’ and ‘collaborators’. ‘Personal relationship builders’ cannot be considered only as ‘collaborators’ since their interaction with others is centered in developing inter-personal relationships and not in collaborating; despite that they constantly share content with other users. Additionally, ‘community builders’, although share some characteristics with ‘collaborators’, they also share

with ‘leaders’ a common vision about the meaning of feedback. For both, feedback is a way of communicating what the community values, its norms and standards of the contributions. And finally, while ‘human capital builders’ behave in a similar way as ‘contributors’; they do not have the reputation motivation that is so typical of ‘contributors’.

Findings in this study can also be related to previous research that has examined the motivations that individuals have to participate in other sites, such as Wikipedia. These studies have found that both pro-social and self-interest motivations play an important role for them (Antin 2011), as well as internal self-concept motivations (Yang and Lai 2010). This means that content contributors in Wikipedia participate on the site in order to help others and build something in common with other people, but also because of the personal benefits that participation brings to them. These categories of motivations coincide with the ones found in this study. Status, social relationship and human capital builders participate because of the outcomes that this participation brings, while community builders have a more pro-social attitude. The existence of latent users in this and other peer-production communities imposes a new challenge to designers and administrators as to how to identify and attract latent users to contribute again to these sites.

### 5.1. Limitations

While we described many different motivations and types of contributors to online communities, this list is not intended to be comprehensive. Our sample is not representative of the Everything2 population, nor of the larger population of online communities’ users.

Moreover, our findings seem to suggest that the difference between user stages based on changes in user motivations is somewhat problematic. The fact that many of the participants expressed having more than one motivation to participate on the site, might indicate that in some cases the differentiation of user stages is not clear cut. It might be that the transition from one to the other is more fluid than first thought, or that sub-stages might form as motivations interact with each other. This needs further exploration as this study used for its analysis only participants’ main motivation as expressed by them. It might be the case that users enter the sites with an initial motivation, but as time passes and they participate more, other motivations emerge based on their experiences, adding more complexity to the model. On the other hand, it is also possible that a framework centered on motivations might have as one of its boundaries the emergence of other factors, such as habitual use (Wohn et al. 2012), which might start to influence and affect participation more as participation itself becomes routinary.

Another limitation of this study that grants further exploration is that the results are based on the perceptions and experiences of our interviewees, and there may be other forces and motivations governing user-behavior that were not or are not

## Latent Users in an Online User-Generated Content Community

salient to our participants. Additionally, users were being interviewed about activities that had occurred, in some cases, many years ago; their answers may be colored based on their current perceptions of the site or limitations of human memory.

There is also much room for understanding the prevalence of each of these types of motivations in online communities. We cannot know if the motivations of our interviewees are common among online community members. That was not our goal; rather, we sought to richly describe the motivations of these users and the context surrounding their use. We believe that the detail provided by our participants will help further existing theories by providing grounded, real-world examples.

### 6. Conclusion

User-generated content communities have been an important and increasingly prevalent form of online interaction. This study looked at how long-term users of Everything2 changed their participation over time due to new constraints on the site. Some of these constraints were connected with changes in the policies of the site. Administrators and designers should take into account how the implementation of changes on a site may affect the levels of user participation and interrupt their habits of use (LaRose 2010).

Despite that a variety of factors contributed to a change in participation, the users engaged in new behaviors that allowed them to get from the site what they were interested in receiving from it, seeming to remain consistent with their original motivations. These users became 'latent' users; they retained skills and understanding of norms that gave them the potential to participate on the site even when their behavior had changed.

It is possible that this type of user might be present in other sites and online communities. A possible course of action for site administrators is the identification of latent users and of mechanisms to attract again their participation depending on the motivation that characterized their participation. User profiles can be built based on usage patterns and infer from these user motivations. In this way, for example, it might be more effective to provide feedback mechanisms that make the effect of a users' contribution transparent and clear to the contributor, thus encouraging the user by fulfilling his or her own motivations. Prior work, such as that by Cheshire and Antin (2008) has investigated different effects of feedback systems on intention to contribute, such as comparing the contributor versus other users or expressing gratitude for the contribution. Gratitude feedback mechanisms may be a better fit for community builders, who have more pro-social attitudes. Competitive feedback mechanisms that rank a user in terms of number of contributions accepted may be better suited to be displayed to status builders.

Another alternative to attract latent users back could be through the creation of mentoring programs that take advantage of the previous experience and motivations of users. Human capital and community builders could, for example, collaborate with newcomers making sure they have positive experiences on the site, as first

experiences are so important for newcomers' continued use (Lampe and Johnston 2005; Singh 2012). In general, site administrators and designers would benefit from finding ways to motivate latent users by highlighting alternatives of participation on the site that will allow them to get the outcomes they were interested in getting, and identifying mechanisms to attract their participation again.

## Acknowledgments

We would like to thank members of the BIT Lab at Michigan State University for their feedback on this manuscript. We would also like to thank the members of Everything2 for supporting research in online community participation. This work was supported by NSF grant IIS-HCC-0812429. We would also like to thank Chandan Sarkar and Chris Hamrick for their help and feedback.

## Notes

1 <http://h2g2.com/>

2 <http://en.wikipedia.org/wiki/Interpedia>

3 All names are pseudonyms assigned to our respondents to protect their privacy

## References

- Antin, J. (2011): My Kind of People?: Perceptions About Wikipedia Contributors and their Motivations. In *CHI' 11. Proceedings of the Conference on Human factors in Computing System, Vancouver, Canada, May 7–12, 2011*. New York, N.Y.: ACM Press, pp. 3411–3420.
- Baumer, E.P.S., M. Sueyoshi, and B. Tomlinson (2011): Bloggers and readers blogging together: Collaborative co-creation of political blogs *Computer Supported Cooperative Work (CSCW): An International Journal*, vol. 20, nos. 1–2, April 2011, pp. 1–36.
- Bryant, S.L., A. Forte, and A. Bruckman (2005): Becoming Wikipedian: Transformation of Participation in a Collaborative Online Encyclopedia. In *GROUP'05. Proceedings of the International ACM SIGGROUP Conference on Supporting Group Work, Sanibel Island, FL, USA, October 6–9, 2005*. New York: ACM Press, pp. 1–10.
- Burke, M., C. Marlow, and T. Lento (2009): Feed me: Motivating Newcomer Contribution in Social Network Sites. In *CHI'09. Proceedings of the International Conference on Human factors in Computing Systems, Boston, MA., USA, April 4–9, 2009*. New York, NY: ACM Press, pp. 945–954.
- Cheshire, C. and J. Antin (2008): The social psychological effects of feedback on the production of internet information pools. *Journal of Computer-Mediated Communication*, vol. 13, no. 3, pp. 705–727.
- Dholakia, U.M., R.P. Bagozzi, and L.K. Pearo (2004): A social influence model of consumer participation in network- and small-group-based virtual communities. *International Journal of Research in Marketing*, vol. 21, no. 3, pp. 241–263.
- Heckathorn, D.D. (1997): Respondent-driven sampling: A new approach to the study of hidden populations. *Social Problems*, vol. 44, no. 2, pp. 174–199.
- Joinson, A.N. (2008): Looking at, Looking up or Keeping up with People?: Motives and Use of Facebook. In *CHI'08. Proceedings of the International Conference on Human Factors in Computing Systems, Florence, Italy, April 5–10, 2008*. New York, N.Y.: ACM Press, pp. 1027–1036.

## Latent Users in an Online User-Generated Content Community

- King, Nigel and Christine Horrocks. (2010): *Interviews in Qualitative Research*. Los Angeles, C.A.: Sage.
- Kollock, P. (1999): The economies of online cooperation. In M.A. Smith and P. Kollock (eds): *Communities in cyberspace*. New York, N.Y.: Routledge, pp. 220–239.
- Kuzel, A.J. (1999): Sampling in qualitative inquiry. In B.F. Crabtree and W.L. Miller (eds): *Doing qualitative research*. Thousand Oaks, CA.: SAGE, pp. 33–46.
- Lakhani, K.R. and R.G. Wolf (2005): Why hackers do what they do: Understanding motivation and effort in free/open source software projects. In J. Feller, B. Fitzgerald, S. Hissam and K.R. Lakhani (eds): *Perspectives on free and open source software*. Cambridge, MA.: MIT Press, pp. 3–22.
- Lampe, C., N. Ellison, and C. Steinfield (2006): A Face(book) in the Crowd: Social Searching vs. Social Browsing. In *CSCW'06. Proceedings of the Conference on Computer Supported Cooperative Work, Banff, Alberta, Canada, November 4–8, 2006*. New York, NY: ACM Press, pp. 167–170.
- Lampe, C. and E. Johnston (2005): Follow the (Slash) Dot: Effects of Feedback on New Members in an Online Community. In *GROUP'05. Proceedings of the International ACM SIGGROUP Conference on Supporting Group Work, Sanibel Island, FL., USA, November 6–9, 2005*. New York, N.Y.: ACM Press, pp. 11–20.
- Lampe, C., R. Wash, A. Velasquez, and E. Ozkaya (2010): Motivations to Contribute to Online Communities. In *CHI'10. Proceedings of the International Conference on Human Factors in Computing Systems, Atlanta, GA. USA, April 10–15, 2010*. New York, N.Y.: ACM Press, pp. 1927–1936.
- LaRose, R. (2010): The problem of media habits. *Communication Theory*, vol. 20, no. 2, pp. 194–222.
- McCully, W., C. Lampe, C. Sarkar, A. Velasquez, and A. Sreenivasan (2011): Online and Offline Interactions in Online Communities. In *WikiSym'11. Proceedings of the International Symposium on Wikis and Open Collaboration, Mountain View, CA, October 3–6, 2011*. New York, N.Y.: ACM Press, pp. 39–48.
- Miles, M.B. and M.A. Huberman (1994): *Qualitative data analysis: An expanded sourcebook*. Beverly Hills, C.A.: Sage Publications.
- Nonnecke, B. and J. Preece (2000): Lurker Demographics: Counting the Silent. In *CHI'00. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, The Hague, Amsterdam, Netherlands, April 1–6, 2000*. New York, N.Y.: ACM Press pp. 73–80.
- Nov, Oded (2007): What motivates wikipedians? *Communications of the ACM*, vol. 50, no. 11, November 2007, pp. 60–64.
- Onwuegbuzie, A.J. and N.L. Leech (2007): Validity and qualitative research: An oxymoron? *Quality and quantity*, vol. 41, no. 2, pp. 13–32.
- Panciera, K. (2011): User Lifecycles in Cyclopath: A Survey of Users. In *iConference'11. Proceedings of the ACM iConference, Seattle, Washington, February 8–11, 2011*. New York, N.Y.: ACM Press, pp. 741–742.
- Panciera, K., R. Priedhorsky, T. Erickson, and L. Terveen (2010): Lurking? Cyclopaths?: A Quantitative Lifecycle Analysis of User Behavior in a Geowiki. In *CHI'10. Proceedings of the International Conference on Human Factors in Computing Systems, Atlanta, Georgia, USA, April 10–15, 2010*. New York, N.Y.: ACM Press, pp. 1917–1926.
- Preece, J. and D. Maloney-Krichmar (2005): Online Communities: Design, Theory and Practice. *Journal of Computer-Mediated Communication*, vol. 10, no. 1.
- Preece, J. and B. Shneiderman (2009): The reader-to-leader framework: motivating technology-mediated social participation. *AIS Transactions on Human-Computer Interaction*, vol. 1, no. 1, pp. 13–32.
- Singh, V. (2012): Newcomer Integration and Learning in Technical Support Communities for Open Source Software. In *GROUP'12. Proceedings of the ACM International Conference on Supporting Group Work, Sanibel Island, FL. October 27–31, 2012*. New York, N.Y.: ACM Press, pp. 65–74.

- Yang, H.-L. and C.-Y. Lai (2010): Motivations of Wikipedia content contributors. *Computers in Human Behavior*, vol. 26, no. 6, pp. 1377–1383.
- Welser, H. T., D. Cosley, G. Kossinets, A. Lin, F. Dokshin, G. Gay, and M. Smith (2011): Finding Social Roles in Wikipedia. In *iConference'11. Proceedings of the 2011 iConference, Seattle, Washington, February 8–11, 2011*. New York, N.Y.: ACM Press, pp. 122–129.
- Wilkinson, D.M. (2008): Strong Regularities in Online Peer Production. In *EC' 08. Proceedings of the ACM conference on Electronic Commerce, Chicago, Illinois, USA, July 8–12, 2008*. New York, NY: ACM Press Chicago, IL, USA, pp. 302–309.
- Wohn, D.Y., A.V. Tor Bjornrud, and C. Lampe (2012): Habit as an Explanation of Participation in an Online Peer-Production Community. In *CHI'12. Proceedings of the International Conference on Human Factors in Computing Systems, Austin TX, USA, May 5–10, 2012*. New York, N.Y.: ACM Press, pp. 2905–2914.