Dealing with Newcomers

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The challenges of dealing with newcomers

In the face of inevitable turnover, every online community must incorporate successive generations of newcomers to survive. Without replacing the members who leave, a community will eventually wither away. However, incorporating newcomers into an existing community can be a difficult endeavor. Newcomers have not yet developed the commitment to the group felt by old-timers. As a result, they are more likely to leave in the face of even minor adversity. They have less motivation to be helpful to the group or to display good organizational citizenship characteristic of many old-timers (Organ & Ryan, 1995). In addition, for reasons of either ignorance or maliciousness, they may behave in ways that can be harmful to the group. They do not yet know the norms guiding behavior in the group and in their ignorance, may perform actions that offend other group members or otherwise undercut the smooth functioning of the group. For example, when participating in Wikipedia, the open source encyclopedia, new editors may fail to follow the policy of writing with a neutral point of view, or they may add content already determined to belong in another article by a consensus of more experienced editors. Because they lack experience, when newcomers try to participate, they imperil the work other community members have already performed. For example, they may introduce bugs in an open source development project, cause the (virtual) death of fellow guild members in an online role playing game, or ask redundant questions in disscussion groups.

When dealing with newcomers, online communities must solve five basic problems that are less important when dealing with established members.

1. **Recruitment:** First, communities need to advertise to and recruit members, to ensure a supply of newcomers in the first place. [Out of scope of chapter. See ??? chapter]

2. **Selection**: Second, among those members who do show up, communities need to decide which ones to select for membership so that the people who do join will ultimately be valuable to the community as a whole.

3. **Retention:** Third, both theory and experience suggest that newcomers' ties to the community are especially fragile. As a result, the community needs to engage in tactics that keep a potentially valuable newcomer around until they can develop more permanent bonds to the community or learn the way that the group operates.

4. **Protection**: Fourth, the group needs to protect itself from the potentially damaging effects of the actions of someone who either has little knowledge of appropriate group behavior or who has little motivation to behave appropriately.

5. **Socialization:** Finally, the group needs to socialize the newcomers, teaching them how to behave in ways appropriate to the group. [See Norms chapter.]

Problem 1: Recruiting newcomers

In the face of turnover in its membership, online communities will inevitably die without a constant supply of newcomers. Thus it is important to consider the processes by which online communities advertise their existence and recruit newcomers. These processes determine whether the community will have enough members to accomplish its goals. In addition, the processes of recruitment may have direct consequence for later problems that the community must solve, such as selection and retention. For example, both social networking sites, like Facebook, and smaller online groups, like the guilds in World of Warcraft, recruit new members though their connections with existing members. By exploiting their prior relationships, the groups are more likely to recruit new members who are knowledgeable about the community and fit with its mission. They are more likely to stick around than are members who are recruited by other methods. [Is discussion of recruiting out of scope?]

Problem 2: Selecting the right newcomers

Newcomers to a community differ in the potential value they could bring if they were to become full members. In an open source software development community, for example, some newcomers may be highly skilled software developers with deep knowledge of the application domain, some may be novice developers or ignorant of the domain, having little knowledge or skill to bring to the project, and others may have the malicious intent of introducing bugs or Trojan horses. Analogously, in an online support group for abused women, valuable members might be the survivors who have experience, wisdom, and support to offer to others or women who are themselves currently the victims of abuse. In contrast, spectators or stalking husbands are highly undesirable. How do existing community members distinguish the potential quality of newcomers from the limited information available when they first present themselves?

The problem of selecting applicants for membership is common to all groups, but may be especially problematic in online communities because of the relative anonymity of the interaction in them and the ease of creating new identities online. For example, one of Wikipedia's administrators who had presented himself as a professor with degrees in theology and canon law was forced to resign when a magazine revealed him to have no advanced degrees. He "used texts such as 'Catholicism for Dummies' to help him correct articles on the penitential rite or transubstantiation" [1]. In eBay, legitimate sellers would like to weed out scammers who sell used goods as new, or copies as originals, or those who collude to inflate bids [2,3].

[1] http://www.nysun.com/article/49955

[2] http://www.truetex.com/ebayfraud.htm

[3] http://reviews.ebay.com/Scam-Watch-The-Most-Popular-Scams-on-Ebay_W0QQugidZ10000000000025238

Problem 3: Keeping newcomers around

For newcomers to gain benefits from an online group and to eventually become committed members who take on core responsibilities, they must stick around long enough to learn the ropes, form relationships with

communities also shows that these groups experience a substantial amount of turnover and this turnover is especially high among newcomers. For example, 68% of newcomers to Usenet groups were never seen after their first post; in constrast, those who have participated even once in the past are much more likely to return (Arguello et al., 2006). Fifty-four percent of developers who registered to participate in the Perl open-source development project never returned after posting a single message (Ducheneaut, 2005). Forty-six percent of the members of guilds in the massive multiple-player game, World of Warcraft, leave their group within one month, generally migrating to other groups rather than abandoning the game itself (Ducheneaut et al., 2006).

What can a community designer do to keep newcomers around long enough for them to start to understand the benefits they could derive from group membership and start to learn how to behave appropriately in the group?

Problem 4: Protecting the group from newcomers

Although newcomers are essential to the survival of online communities, they also pose real threats. Because newcomers have no history in the community, existing group members do not know how much to trust them. Those established community members need to ask whether to allow a new member of a guild in World of Warcraft participate in a high-stakes raid, to buy an expensive item from a new seller on eBay, or allow a new developer to commit code to the Apache server build. Empirical evidence suggests that established members indeed distrust newcomers. For example, Resnick et al (2006) showed experimentally that buyers paid less for comparable items on eBay when purchasing from newcomers (i.e., those with no prior transactions) than old-timers, distrusting them because of their lack of history. Because newcomers have not yet developed much commitment to the group and have not yet learned how the group operates, it is rational for established group members to actively distrust them. Because they don't yet identify with the group, they are less likely to have the best interests of the group at heart in deciding courses of action. In addition, because they are relatively unsophisticated in how the the group operates, they may not have the skill or knowledge to operate in the group's best interest, even if they cared to. For example, in Wikipedia, newcomers (including those who have not registered and those who have not yet edited extensively) are more likely to vandalize pages or or offer changes that other, more experienced Wikipedians will later delete (Adler, 2007). An influx of new members to social networking sites may change the culture for old-timers, such as when MySpace transitioned from a promotion platform for small bands to a crowded venue for any teenager to post mp3s. As a result of this lack of history and potential lack of goodwill and relevant skills, groups need to protect themselves against possible damage that newcomers can cause.

Problem 5: Teaching the newcomers the ropes

Different communities have standards and norms that shape and constrain the behavior of their members. Some of these norms are broad and open to different interpretations. In Wikipedia, for example, a series of guidelines and policies remind members to adopt a neutral point of view in the articles they write [1] and that they should not use their personal talkpages to discuss personal topics and promote relationships with other Wikipedians [2]. Others are more narrowly targeted, such as the Wikipedia copyright policy [3] or formatting guidelines [4]. Although many of the norms and behavioral standards are explicitly described in Wikipedia, in many other online communities norms that prescribe how members should behavior are implicit and must be learned by observation.

Violation of the behavioral norms can be harmful to existing groups for several reasons. First, norms are often set up because they are functional, helping the group to achieve desired goals or to efficient operations. Thus, the norm in Wikipedia of citing sources helps the group achieve its

projects to have all discussion via public distribution lists, helps the group capture its design rationale and supports coordination among a distributed workforce. Violating these norms interferes with valued group goals and smooth operation. Standards of behavior often form part of the identity of the group members. Thus, when people act in non-normative ways, the group may start to loose some of its defining features. Violations of norms may also drive away old-timers. [point to Norms chapter here]

[1] http://en.wikipedia.org/wiki/Wikipedia:Neutral_point_of_view
[2] http://en.wikipedia.org/wiki/Wikipedia:What_Wikipedia_is_not#Wikipedia_is_not_a_blog.2C_webspace_provider.2C_social_networking.2C_or_memorial_site
[3] http://en.wikipedia.org/wiki/Wikipedia:Copyrights
[4] http://en.wikipedia.org/wiki/Wikipedia:Manual_of_Style

Theories

Signaling and selection

In many real-life situations, individuals often have information relevant to a selection decision but fail to reveal this during the selection process. Job candidates may have poor work performance or criminal backgrounds which they wish to conceal from potential employers. This information asymmetry leads to what is known as 'adverse selection,' in both the insurance industry, where these types of problems were first identified, and in economics, where theories of adverse selection have been elaborated. If an insurance company sets a single premium for life insurance then smokers, intravenous drug users or others who have lifestyles leading to poor heath could differentially benefit from the insurance. People with these poor health risks are more likely to apply for the insurance than healthy consumers, and as a result, companies will end up disproportionately insuring them. As in the case of health risks, it is sometime in people's self-interest to withhold private information when an online group is making a decision about accepting them for membership. This phenomenon occurs in the online world of multi-players games. For example, in World of Warcraft, players may apply to become a member of a guild with the intention of staying only a short time, merely to 'level-up' (i.e., gain experience points) before moving to a superior guild (Ducheneau, et al., 2007). However, it is not in the guild's interest to recruit players who have intentions to leave as soon as they have accumulated the appropriate amount of experience.

In other cases, it is in the individual's interest to reveal private information about themselves, but the organization has difficulty distinguishing truthful from less truthful reports. In conventional work organizations, it would be beneficial for a strong applicants for a software engineering position to be able to demonstrate their work ethic and skill at software development to distinguish them from pretenders who are less dedicated or less able. The same dilemma occurs for applicants for admissions to many online groups. For example, applicants to an open-source software development site like Apache who are very skillful at software-relevant tasks or are have been conscientious in the past in turning in assignments on time would want to let the powerful people in the site know this. However, less skillful and conscientious applications would want to give off similar impressions. As a result, when experienced software engineers tell of their software experience in their day jobs, but the community tends to ignore these self

reports as merely "cheap talk" (Ducheneaut, 2005; Lakhani & Hippel, 2003). In World of Warcraft, many guilds seeking new players with a style of play and social relationships that fit with existing group members. New recruits may honestly describe themselves for example, saying they are extroverted and friendly and are seeking a relaxed style of play. However, guild masters or recruiters have little way to distinguish recruits who will be difficult to get along with or really be pleasant. Economists often refer to these cases as signaling problems, because one party is attempting to signal their true qualities to perceivers using imperfect signals.

In the case of selection, decision-makers are looking for visible signals that are correlated with the attribute they desire and which would be difficult for people without that attribute to fake. In trying to select quality childcare for their children, parents should not pay much attention to the cleanness of the reception area, which is an attribute which is easy to fake and is often associated with lower child care quality, but should pay attention to whether the center is for profit (often associated with poorer quality), whether it is part of a national chain (often associated with high quality) or is regulated by the government (often associated with higher quality) (Mocan, 2001). In open-source software development projects, the community seems to rely more upon participation in technical discussions and contributions of bug patches and software enhancements to judge. Communities that provide free email accounts or server space also operate on the same principles of selection when they use CAPTCHAs to prevent bots from automatically creating hundreds of accounts. A CAPTCHA (an acronym of "Completely Automated Public Turing test to tell Computers and Humans Apart) is an automated test, such as the challenge to recognize a distorted word presented against a cluttered background, to differentiate people from computerized agents attempting to exploit Internet services. These tests are difficult for machines to accomplish but easy for humans, and therefore many Internet companies, including Yahoo, MSN and eBay use this mechanism to identify whether the an agent applying for an Internet service is a human or a machine.

In the case of signals, similar principles apply, although one generally assumes that the candidates for selection have the ability to invest in acquiring visible features that reliably signal quality. Then organizations and other decision-makers can select among candidates who have previously invested in resources that they cannot change during the period of selection. For example, job candidates might invest in completing four years of college at a good school to show their intelligence and their conscientiousness, even if the education itself will not provide them skills that help them perform the job. Analogously, players in online game World of Warcraft, for example, can invest hours in playing the game to acquire weapons and the steeds they use for transportation. In turn, guild masters and others recruiting players for guilds can use a candidates' level, the weapons they have already acquired, or their steeds to choose among candidates, because the factors are reliable signals of past performance as well as being tools which the candidate can use to carry out quests, if they become members.

Socialization to small groups

Levine and Moreland's socialization theory (cite), emphasizes separable phases of in their relationship with a group through which an individual can pass (investigation, socialization, maintenance, resocialization, and remembrance) These phases are separated by four role transitions (entry, acceptance, divergence, and exit). In dealing understanding how to bring newcomers on board, the first two of these phases -- investigation and socialization -- are most important. In this section we concentrate on the investigatory phase, in which newcomers and the groups they may ultimately join assess each other. If successful, the investigatory phase

groups and organizations, the distinction between outsider and group member is clear. Thus, an applicant can become a member of a fraternity, enlist in the military, be admitted to a university, or be hired by a company. All of these organizations have formal points at which the member joined.

However, even in conventional groups and organizations, the distinction is sometimes an ambiguous one and entry into the group or organization can be a matter of degree, rather an a discrete event. When groups have little structure and diffuse boundaries (or low "entitivity" in the jargon of social psychology), whether one is a member is a matter of degree. Thus, ones centrality to friendship cliques or even project groups at work can be a matter of degree (network reference). In academia, for example, joint appointments and courtesy appointments in an academic department are often seen as less legitimate members than those whose whole salary is paid by the department in question and who have voting rights there. The same variability of in the degree to which boundaries are well defined exists in online communities. For example, membership in a Usenet group may consist simply of reading occasionally, membership in a World of Warcraft guild involves applying to and being accepted by the guild master and existing guild members, and membership in Wikipedia projects is somewhere in between [1].

During an investigatory phase, newcomers actively investigate their fit to the group and the benefits they are likely to receive from participation. Investigation is a major reason that newcomers silently read posts (i.e., “lurk”) before posting (Preece et al., 2004). At the same time, the group is evaluating whether the newcomer would be a good fit, so the group needs the newcomer to do more than simply lurk. Both the group and the individual require information exchange in order to estimate the benefits they will bring to each other. This investigatory phase is an especially fragile one for newcomers. During this early period, when they first encounter a group, they have little commitment to it and often little data to make judgments about whether to invest effort in finding out more or to explore alternatives. As a result, small amounts of either positive or negative evidence about how the group behaves and how it treats members may have an especially large impact on whether they leave for good or return again. Similarly, small amounts of either positive or negative evidence that the prospective member has desirable attributes will impact how the group responds.

[1] http://en.wikipedia.org/wiki/Wikipedia:WikiProject

Socialization to organizations

Like Moreland and Levine, van Maanen and Schein (1979) also developed a time-based theory of newcomers' socializations to organization. According to van Maanen and Schein, organizational socialization is the process by which members acquire the knowledge, skills, and beliefs that allow them to successfully assume an organizational role. It is the process by which newcomers learn the ropes. Because their theory concerns the relationship between individuals and organizations with sharper boundaries than the groups described by Moreland and Levine, they theory is meant to explain behavior after a member joins the organization. Like Moreland and Levine, their theory focuses on information-seeking that newcomers do to reduce their uncertainty in dealing with the organization. In addition, they identify six dimensions that differentiate the techniques that organizations use to help newcomers get adjusted to the organization and learn their place in it. Jones (1986) created a self-report scale measuring these tactics, which has been

of newcomers in organizations. Table N provides an overview of the socialization tactics that van Maanen and Schein identified and samples of the self-report questions used to measure them.

Technique (van Maanen & Schien)	**Description**	**Sample of measurement items (from Jones, 1986)**
Collective versus individual	Newcomers go through a common set of experience s designed to produce standardized responses to situations. vs. Each newcomer receives unique training in isolation from others.	C13 This organization puts all newcomers through the same set of learning experiences. C14 Most of my training has been carried out apart from other newcomers. (R)
Formal vs. informal	Newcomers are segregated from other organizational members as they learn their jobs, versus, newcomers receive on-the-job training.	FIl I have been through a set of training experiences which are specifically designed to give newcomers a thorough knowledge of job related skills. F14 Much of my job knowledge has been acquired informally on e trial and error basis. (R)
Serial versus disjunctive	With serial tactics, observation of experienced role models and training offered by them give newcomers an clear view of the experiences they will encounter in the organization, while with disjunctive tactics newcomers do not have more senior people to observe	SD2 I am gaining a clear understanding of my role in this organization from observing my senior colleagues. SD3 I have received little guidance from experienced organizational members as to how I should perform my job. (R)
Fixed versus variable:	With fixed tactics, newcomers are given a fixed time-table how how to progress in the organization, while with variable tactics,	FV1 I can predict my future career path in this organization by observing other people's experiences. FV4 I have little idea when to expect a new job assignment or training exercise in this organization. (R)
Sequential versus random:	With sequential socialization tactics, newcomers are given a clear sequence of steps liking to their ultimate role, while with random socialization. the sequence of stages isn't known in	SRI There is a clear pattern in the way one role leads to another or one job assignment leads to another. SR4 This organization does not put newcomers through an identifiable sequence of learning experiences. (R]

	advance.	
Investiture versus divestiture:	With investiture socialization tactics, the organization confirms the newcomers' prior identity, while with divestiture tactics the organization tries to strip this prior identity away.	ID1 I have been made to feel that my skills and abilities are very important in this organization. ID3 I have had to change my attitudes and values to be accepted in this organization. (R)

Table N. Six organizational socialization tactics.

Van Maanen and Schein hypothesized that these tactics would be used in very different contexts (e.g., that collective socialization would be used in jobs where newcomers needed to learn technique skills, while individual socialization would be used where already existing organizational members are being prepared for promotions), and would have different consequences (e.g., collective socialization would constrain innovation, while individualistic socialization allows for role innovation). However, most subsequent research has not examined these boundary conditions. Instead, it has developed a simpler picture of the effects of using these socialization tactics. Bauer et al's meta-analysis of 70 samples of newcomer socialization to organizations , the vast majority of them examining the newcomers from a week or two after they became organizational members for four months or more.

The literature reviewed by Bauer et al shows that both active information-seeking by newcomers and the use of a more institutional style of socialization, involving collective, formal, serial, fixed, sequential and investiture socialization tactics leads newcomers to become more committed to the organization, have a greater intention of remaining in the organization and having less turnover. [Discuss the mediating processes -- good person/organization fit, in which newcomer knows what to do, feels confident in being able to do the work, and feeling accepted by the organization] .

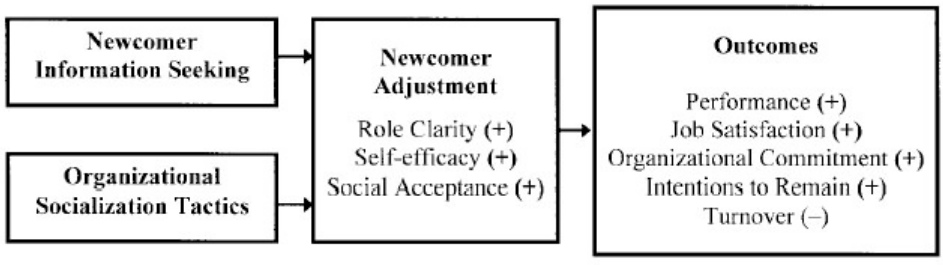

Figure N. Antecedents and outcomes of newcomer adjustment during organizational socialization. From Bauer et al (2007).

Cognitive dissonance

Festinger's theory of cognitive dissonance holds that if a person has two ideas that are psychologically inconsistent, he experiences the negative drive state of cognitive dissonance, and tries to find a way to reconcile the ideas, generally by changing one or both to make them consonant (Festinger, 1957). This theory explains why we tend to change our attitudes to be consistent with our behavior (e.g., Festinger & Carlsmith,1959) or why we like people to view us as we see ourselves (e.g., Swann & Read, 1981). The theory has also been used to explain people's initial feelings of connection to the groups they join. In particular, experimental research by Aronson and Mills (1959) demonstrated that people like groups more if they have to endure a severe initiation process to join them than if they undergo a milder initiation (see also Gerard & Mathewson, 1966; Schopler & Bateson, 1962). According to Aronson, people come to like things for which they suffered, because this is the only way they can reconcile their views of themselves as intelligent people with the actions they have performed (Aronson, 1996). Although social psychologists have used this phenomenon to explain the effects of hazing in the military and in fraterneties, there is controversy about the strength of these results (see Lodewijkx & Syroit, 1997 & 2001for correlational studies that have failed to replicate the severity of initiation and linking link).

Trust

Trust is often conceptualized as the willingness to be vulnerable (Rouseau et al, 1998), to allow others to influence one's future welfare (Porter et al, 1975). A common theme in the research on trust is that both cognitive and affective processes are important in the development of trust (Morrow et al, 2004; McAllister, 1995). The cognitive component consists of the rational processes by which one person comes to believe others are both willing and able to behave in ways that that do not put them at risk. People use prior history of trustworthy behavior as evidence that others will behave well. In eBay, for example, buyers use the explicit reputation that a seller has earned in earlier transactions to infer whether they can trust the seller. Resnick and Zeckhauser (2006) have shown experimentally that sellers who do not have a history of prior transactions are punished and offered lower prices than sellers with established histories. In many open source software development communities, newcomers are not trusted to make changes to the code base unless they have proven their competence by contributing to the technical discussion and posting small bug fixes that have been approved by a more senior community member (Duchneaut, 2005; Krogh et al, 2003). While some communities may use evidence of prior behavior as evidence about whether a newcomer is trustworthy, credentials and other signals referred to in the section on signaling theory may also be used as indirect evidence of a newcomer’s trustworthiness. Beliefs about trust are also influenced by the affect that people feel toward each other, without an evidentiary base. This is a natural reaction when one considers the affective component of trust — the belief that the other will act in ways that are consistent with one’s self-interest. For example, we tend to trust people we like, perhaps because of reciprocity. We think we would look out for the welfare of people we like, and therefore think they will look out for our welfare as well. Surprising, feelings also influence our judgments of another’s competence and our belief that they are capable of performing acts that will be consistent with one’s welfare. Thus people think that others whom they like are smarter and more competent than those they like less, and many of the factors such as attractiveness or height, which influence liking, also influence judgments of competence.

[Theories of trust explain why we trust people more if they show commitment to the group, but not clear if they have design implications.]

Theories of rewards and deterrence

(See norms chapter)

Design options

Barriers to entry

To help select good community members, signaling theory suggests that designers of online communities create entry barriers, diagnostic tasks that would be easy for desirable members but difficult for undesirable ones. In many open source software (OSS) development projects, for example, potential members must first demonstrate their competence and commitment to the group by offering bug fixes or small enhancements before they are given "committer" status, permission to commit (save) their own changes to the software database (Krogh et al., 2003; Ducheneaut, 2005). In the FreeNet project, only 8.4% of individuals who participated in the technical discussions were ever given committer status and considered developers in the project (Krogh et al., 2003). Without committer status, programmers must pass their modifications to more senior members of the group who then vet the software and decide whether to merge it with the existing code base. Mere talk without code, such as describing one's offline technical accomplishments, asking for tasks to work on, or proposing modifications did not lead to committer status; potential members had to pass substantive contribution barriers to become full members.

Another barrier is the credential check: Sermo.com, a discussion forum for physicians to discuss medical decisions, asks potential members for their names and the zip code of their primary practice, which it then cross-checks against a national physician database, to ensure that its membership only includes physicians. Craigslist requires posters of classified ads to enter their email address and then respond to an invitation sent to that address before their ad goes public. The goal is similar to the goal for CAPTCHAs, to screen bots and other software agents from gaining membership in the community. Pornographic websites that ask prospective members to provide a credit card number or license do so to try to differentiate adults from minors (or give the illusion of doing so), because adults are more likely to have a credit car or driver's license than minors. To weed out spectators, established members of one online depression forum have an unspoken practice of engaging newcomers in discussion about their symptoms and treatment (Fussell, personal communication). Producing these medical terms is likelier to be easier for people who are clinically depressed than for those who aren't, although obviously this is not a failsafe system, because anyone could potentially conduct an online search to discover the names of anti-depressants.

On the flip side, the designers of Wikipedia intentionally minimized entry barriers, allowing anyone to make immediate changes to almost any article, without even registering, much less demonstrating competence or legitimacy. We speculate that the reason for the low barriers in Wikipedia is due to the relatively low interdependence between contributions to a Wikipedia article, reducing the risk that one newcomer's change will cause system-wide problems. It is also easy to revert to a prior version of an article using MediaWiki's history mechanism. Compare this to OSS development, with relatively high interdependence between contributions, and somewhat more difficult reversion process through typical version control systems. More importantly, there is simply less interdependence among the elements in a natural language article than in a software program. Readers can interpret around a misspelling introduced into a encyclopedia article, while the compiler cannot do this to a misspelled variable name in a program. Thus, even the fraud perpetrated by

had little consequences for the content of the articles he edited and was easily fixed.

According to cognitive dissonance theory, difficult barriers have the added effect of increasing commitment among members who have completed them: causing newcomers to suffer a little before joining a group should increase their eventual commitment. However, given the ease with which people can leave an online community (as opposed to a military academy), severe initiations may drive away potentially valuable contributors. Therefore online community designers should not instigate these types of initiations unless there is a surplus of prospective members. However, the newcomers who survive the initiation should have stronger loyalties than those who are invited in without initiation. First, as selection theory predicts, the severe initiation acts as a filter, preventing new recruits without the appropriate desire from joining. Second, as dissonance theory predicts, these initations should increase the commitment of those subjected to them.

Initiation rituals imposed by online communication can range from non-existent to quite severe. At one extreme, Usenet discussion groups impose no initiation at all. Newcomers can read and post without any formal barrier. Wikipedia explicitly encourages gentle treatment of new editors, with its "Don't bite the newcomer" policy [1]. At the other extreme are game-playing groups like World of Warcraft and OSS projects, that require newcomers to go through a long period of initiation before they can become members. Some guilds, for example, require the newcomer to play with the group for a month or longer before the newcomer is allowed to become a regular member. In open source software projects, it is common practice for newcomers to offer "gifts" of code before they are granted membership (von Krogh et al, 2003). While both of these activities provide data by which existing group members can evaluate the newcomers and may weed out the least motivated, the activities are also effortful actions that probably increase the newcomers' loyalty to the group.

Small-group socialization theory suggests that these barriers be low, so that the exchange of information that allows the group and newcomer to evaluate each other begins early. Thus, barriers that prevent prospective members from investigating the group reduces the likelihood that they will ever attempt to join. For example, in the online cancer support group ACOR.org, readers cannot search or browse archived messages without a subscription. Though subscribing is free, prospective subscribers are vetted by the list owners, which delays the newcomer's opportunity to evaluate the group and his or her expected fit. Furthermore, the archives are hidden from search engines. Though this protects the privacy of existing members, it also reduces the likelihood that desirable members will find the group.

While signaling theory and dissonance theory are unidirectional, with signaling theory emphasizing the information that a test provides to the group about a prospective member and dissonance theory emphasizing changes in motivations of the prospective member toward the group, small-group socialization theory is bi-directional, simultaneously considering the effects of barriers on choices that both the group and the individual make. Barriers should be valuable only to the extent that they provide the group information with which to realistically assess a prospective member (akin to signaling theory) and for prospective members to realistically assess benefits they might receive from the group if they were to become members. Thus, while signaling theory would recommend that groups impose tests on prospective members that only desirable members can easily pass, socialization theory would recommend that these test be conducted in the context of realistic job previews, so potential members could select to join only communities where they perceived a good fit with their interests, values and skills. [Add example from Bo's research about matches between guilds and individuals on social/task-focus]

[1] http://en.wikipedia.org/wiki/Wikipedia:Please_do_not_bite_the_newcomers

Initial contact

Once newcomers overcome initial barriers, how much access should they have to group resources? In this case, resources include both people--other members' attention and support--and any artifacts the group

annoying other members and damaging community artifacts, or should they be allowed to ask questions, scribble on others' walls, delete code, and join raiding parties right away? Not only is the community susceptible to newcomers' misbehavior, newcomers are vulnerable to trolls, newbie harrassers, and simple information overload.

To retain and socialize new members, both small-group socialization theory and organizational-socialization suggest that newcomers should interact directly with experienced members right away. The goal of the first contact should be to encourage initial positive interactions as the newcomer is exploring the community and deciding whether to join or not. Rather than isolating newcomers in a private sandbox or preventing them from posting messages to a discussion group, they should be allowed to make themselves known and interact with other community members.

One way to accomplish an initial positive interaction is to assign welcoming responsibilities to old-timers. For example, Wikipedia has a “Welcoming Committee,” [1] whose main activity is to greet "red" users, those newly registered users who have not yet made a personal page for themselves (and thus their username appears in red). Welcoming committee members skim Wikipedia's account creation log and lists of contributions by newcomers, select friendly text from a set of welcoming templates, and post the text to the user's talk page, creating the page if necessary. Welcoming committee members encourage anonymous contributors--identified by their IP addresses--to register, post links to tutorials, and offer to answer questions.

For example, the following is a standard welcoming template in Wikipedia:

> "Welcome!
>
> Hello, and welcome to Wikipedia! Thank you for your contributions. I hope you like the place and decide to stay. Here are some pages that you might find helpful:
>
> Introduction
> The five pillars of Wikipedia
> How to edit a page
> Help pages
> How to write a great article
> Manual of Style
>
> I hope you enjoy editing here and being a Wikipedian! Please sign your name on talk pages using four tildes (~~~~); this will automatically produce your name and the date.
>
> If you need help, check out Wikipedia:Questions, ask me on my talk page, or place `{{helpme}}` on your talk page and ask your question there. Again, welcome!"

As the following excerpt from The WELL’s (Whole Earth 'Lectronic Link) Hosts’ Manual explains, moderators are responsible for welcoming newcomers (Hoag, 1996):

> "Learning to welcome, inspire and incorporate new visitors into the conversation is perhaps the most important talent a host can acquire. … There's one thing a host can be fairly sure of, however. Nobody likes to go into a conference for the first time, post a response, then have it sit there without ever being acknowledged. … At the very least, as host, you will want to keep an eye out for postings by folks who have never responded in your conference before, and acknowledge their participation. Even a simple 'Hello! Could you tell us more about your experiences with...' can mean the difference between someone feeling snubbed, and feeling like a welcomed participant in the conference." [2]

Initial positive interactions work to retain new members. Newcomers to Usenet groups are more likely to come back for subsequent visits if others reply to them (Arguello et al, 2006). Cosley (personal communication) found a similar phenomenon in Wikipedia, where newcomers who received a welcome on their talk pages were about 50% more likely to subsequently edit at least one page than people who created an account at about the same time, but who did not receive a welcoming message. Lampe and Johnston (2005) found that new Slashdot members whose first comment received a rating from other members posted a second comment in half the time of those new members whose comments weren't rated. They also found that newcomers who received negative ratings on their first comments came back even faster; they hypothesized that these newcomers returned quickly to improve their records, or that they intentionally wrote inflammatory content which they post more often.

The previous examples from Wikipedia and The Well are prescriptive in a positive way, assigning some people the responsibilities for welcoming newcomers and giving the welcomers some tools to make the task easier. Another way to encourage newcomers is to discourage the hostility that is often the result of the interactions between oldtimer members of a group and newcomers (cf [3]). For example, policies for experienced users answering questions in the forum for Ubuntu, a graphical user interface for the Linux operating system, discourage experienced user to be rude to newcomers. "If the users' question has been covered in one of the community documents, please give them a description and the links. … If you wish to remind a user to use search tools or other resources when they have asked a question you feel is basic or common, please be very polite. Any replies for help that contain language disrespectful towards the user asking the question, i.e. "STFU" [Shut the fuck up] or "RTFM" [Read the fucking manual] are unacceptable and will not be tolerated." Wikipedia's DBTN (Don't Bite the Newcomer) policy cautions old-timers that "New contributors are prospective 'members' and are therefore our most valuable resource. We must treat newcomers with kindness and patience — **nothing scares potentially valuable contributors away faster than hostility or elitism**." (emphasis in the original)

Discussion forums often include an "Introduction" thread, in which newcomers are encouraged (or required) to post brief biographies. Newcomers to PGHDance.com, a forum for Pittsburgh swing dancers, go to the "Hi, I'm ..." thread to describe their level of dance experience, day job, and other cities where they've danced. The forum is a hybrid community, in which many members socialize in person at local dances, but that socialization is often hindered by loud music and a norm of not talking while dancing. Thus, PGHDance allows members to get to know each other off the dance floor, and provides a more neutral platform where dance skill is less salient. Veteran forum members greet the newcomers and offer to dance with them at local events.

This is not to say that newcomers should receive *carte blanche* access to a group and its resources. Many communities include protection mechanisms to prevent potential damage or annoyance by newbies. Major blog platforms, including Blogger and WordPress, while allowing newcomers to post comments (subject to the blog owner's preferences), automatically include the "rel=nofollow" attribute in links embedded in comments. This mechanism directs search engines not to trust these links, preventing spam links from receiving PageRank, and thus discouraging spammers from disguising links to their products within blog comments. Slashdot also uses the nofollow attribute in some potentially misbehaving users' comments, using heuristics based on the age of the user's account and the user's karma. [4]

Another mechanism for allowing newcomers to experiment and develop skills is to provide a safe, isolated area for exploration. While this may contradict small-groups socialization theory by delaying information exchange between newcomers and the group, it offers a measure of protection for both parties. One common approach in wikis is the sandbox: a page allowing editors to experiment with wiki syntax without having consequences on the rest of the site. All Wikipedia editors have a personal sandbox by default, as well as access to communal sandboxes [5]. Typical policies, such as formatting guidelines or notifying other users before making large changes, do not apply to the sandbox, although civility and copyright policies still apply. Sandbox content is automatically cleaned every 12 hours, although other users tend to overwrite content much faster. Multiplayer online games frequently contain "newbie gardens," safe spaces where new players practice skills, thwarting players who intentionally harass or kill unskilled avatars.

[1] http://en.wikipedia.org/wiki/Wikipedia:Welcoming_committee
[2] http://www.well.com/~confteam/hostmanual

[3] http://www.libervis.com/blogs/15/Jastiv/eric_raymond_and_the_rtfm_jerks

[4] http://en.wikipedia.org/wiki/Spam_in_blogs

[5] http://en.wikipedia.org/wiki/Wikipedia:Sandbox

Mentoring and training

Beyond welcoming committees and introduction threads, early interactions between newcomers and the community should allow the newcomers to learn group etiquette, norms, and requisite skills, and provide a basis for future commitment. While many online communities have developed Frequently Asked Question (FAQ) pages, self-guided tutorials, or monthly etiquette emails to provide this information, far fewer have formal mentoring or person-to-person training procedures. Organization socialization theory suggests that an institutional style of socialization--collective, formal, serial, fixed, sequential and with investiture--leads to the most commitment from newcomers. Few online communities use these tactics, in which newcomers are exposed to a formal and collective training experience, with a road map providing clear and explicit information about roles and sequence of responsibility, and a mentor to provide guidance. Instead, socialization processes in most online communities are informal and individualistic. For example, in Usenet groups, newcomers are allowed to view the group ("lurk") without making themselves visible to the group as a whole. During these sessions, there is no opportunity for the group to socialize newcomers, except by exposing them examples of how the group behaves. These informal socializations processes are not limited to amorphous discussion forums like Usenet. For example, consider Ducheneaut's description of the socialization of newcomers to the Python open-source software development community (2004). Even in this production-oriented environment, with defined workflows and sharp distinctions among the social roles participating in the project, socialization is still informal, based on trial and error. For example, although there is a progression of of participation in this community, with newcomers first participating in technical discussion and then submitting bug fixes before obtaining committer status, this progression of roles is not documented. When one new developer who was slowly making his way toward the core of the community attempted to introduce a new module to the standard library used in this project, he did not know the organizational routines he needed to engage in order to make his contribution. A core member of the community eventually stepped in to offer advice (i.e., provided mentorship), but mentoring was not a regular socialization tactic in this community.

However, some communities have successfully deployed mentorship practices, both formal and informal. Wikipedia's Adopt-a-User program [1] matches inexperienced editors with more senior editors, with the aim of reducing vandalism and test edits. More experienced editors are discouraged from requesting adoption; instead they submit specific work for editor assistance or review. Newcomers seeking adoption add the

{{subst:dated adoptme}} tag to their userpage, which adds them to a list checked by adopters. New sellers at eBay benefit from Trading Assistants, experienced and active eBay sellers with at least 97% positive feedback. Trading Assistants assess whether an item is saleable, plan starting prices and shipping methods for items, and communicate directly with bidders. Newcomers benefit from the Trading Assistants' high reputation scores, proficiency with seller tools, and familiarity with listing policies and best practices. Newcomers search a directory for assistants who are geographically close and have expertise in particular areas, such as estate liquidation or motor vehicles. Trading Assistants themselves have training tutorials, guides to best practices and promotion, and a discussion board. Help from Trading Assistants is not limited to newcomers; any busy seller can outsource items to others in this way. However, unlike voluntary mentorship in other communities, eBay's Trading Assistants negotiate fees with new sellers for their services [2].

[1] http://en.wikipedia.org/wiki/WP:ADOPT
[2] http://pages.ebay.com/tahub/index.html

[check open source communities to see if there's some semi-formal mentoring of new developers going on; the more formal the better; John]

[how guilds help people get higher levels; emphasize teaching/mentorship; John]

Punishment:

While Wikipedia's "Don't bite the newcomer" policy poses a forgiving stance toward newcomers' foibles, other communities show less leniency, warning or punishing newcomers early to prevent future misbehavior. At JoBlo's Movie Emporium (check this) newcomers who post links to other communities in their first posts are treated with a barrage of angry messages to their personal email accounts. Vandals in Wikipedia are treated to a series of increasingly assertive warnings, ranging from a polite notice:

> Welcome to Wikipedia. Although everyone is welcome to make constructive contributions to Wikipedia, at least one of your recent edits, such as the one you made to Article, did not appear to be constructive and has been reverted or removed. Please use the sandbox for any test edits you would like to make, and take a look at the welcome page to learn more about contributing to this encyclopedia. Thank you.

to a threat of blocking:

> This is the **only warning** you will receive for your disruptive edits.
> If you vandalize Wikipedia again, as you did to Article, you **will** be blocked from editing.

[need more examples of punishment directed at newcomers and what theory says about this, or else refer readers to another chapter]

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Fodder:

Theories	Design goals S: Selection	C: Commitment	B: Behavior	Protection
1. Signaling Theory	Contact Barriers	(Theory doesn't address)	(Theory doesn't address)	Use signals to show who to trust
2. DissonanceTheory	(Theory doesn't address)	Barriers	(Theory doesn't address)	(Theory doesn't address)
3. Group socialization Theory (M&L)	Contact Barriers	Contact Welcoming FAQs	(Theory doesn't address, but might be side effects.)	
4. Organizational socialization Tactics Theory (van Maanen & Schein)	NA: Theory assume members already selected	Contact Welcoming FAQs	(Explicit training, FAQs & mentorship increase likelihood of newcomer learning how to behave appropriately)	Provide training to show show newcomers how to behave
5. Rewards & deterrence	?	?	(Theory should address this)	Impose penalities
6. Theories of trust				Keep out those you don't trust

Key: Pink=Moira, Blue=John, Yellow=Bob
(Remove this key and colors before sharing with C-Lab)

Design mechanisms:
We chose four design mechanisms (things community designers can manipulate): Contact, Barriers, Welcoming Process, and FAQs (described below). The subset of mechanisms relevant within each cell are then discussed in that nugget.

- **Contact:** How much contact should newcomers have with old-timers? Are newcomers isolated to prevent damage/annoyance to community, or do they interact with members/materials right away? This is a dimension, ranging form no content until full membership (minimum is registration) to read-only content (e.g., lurking) to full interaction immediately.

- **Barriers:** How stringent should the barriers be that newcomers must overcome to become members? Ranges from nothing (Usenet groups; Wikipedia) to registration (Many health support

groups) to substantial hurdles (e.g., minimum level in many WoW guilds) to contribution (e.g., code contributions in OSS systems). Any mechanism that moderates the influx of new members (e.g. registration, skill tests).

- **Welcoming process:** How are newcomers initially greeted, e.g. by a welcoming committee? Do they go though a formal initiation process?

- **FAQs:** Do they include only FAQs about topical content or do they include policies/norms?

- **Punishment:**

[Idea: perhaps delay taking action on consistency theory for now, since it doesn't seem to be used widely.]

[Sara's stuff on ML barriers to entry is a great fit here, tho]

Socialization theory suggests that designers of online communities can manipulate two mechanisms in order to select the right newcomers: (1) The amount and quality of contact between newcomers and existing members and (2) the barriers faced by newcomers.

[Note: barriers to entry will drive people out of your group; maybe therefore people don't use it in these voluntary types of organizations; perhaps the theory applies most to highly desirable things; is it possible that the lack of physical colocation makes it more difficult to trigger this theory]

CHESS cancer group, moderator welcomes newbies. Acts more like a mentor

Barriers: [do MMOs make you do stupid things before you're accepted; find guilds that haze?]

[hurdles in open source; perhaps groups are not relying on consistency theory]

Contact with the group and its artifacts is a dimension, ranging form no content until full membership (minimum is registration) to read-only content (e.g., lurking) to full interaction immediately.

[mentorship: social networking sites, like MySpace, where teens show each other how to create profiles or other ways of participating in the community. See danah boyd's paper You youth (heart) social networks sites.] - mb note: I don't see anything about informal mentoring in this talk, unfortunately.