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Pepperdine University  
Graduate School of Education and Psychology

IN SEARCH OF A PRACTICE: LARGE-SCALE MODERATION IN A MASSIVE  
ONLINE COMMUNITY

A dissertation submitted in partial satisfaction  
of the requirements for the degree of  
Doctor of Education in Learning Technologies

by  
Sheila Saden Pisa  
August, 2013  
Linda Polin, Ph.D. – Dissertation Chairperson

This dissertation, written by

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## DEDICATION

This study is dedicated to the many people who have taught and inspired me in learning a craft that will be a lifelong love. These people include members of the Hemet Valley Knitting Guild, the Third Sunday Knitting, Spinning, Whatevers, and Ravelry members who share their knowledge so freely. Most important, I dedicate this study to my mother, Virginia Taylor Saden. She taught me knitting at a young age, encouraged me in every undertaking, and made me believe I could achieve anything I desired. Thanks Mom!

## ACKNOWLEDGMENTS

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## ABSTRACT

People are increasingly looking to online social communities as ways of communicating. However, even as participation in social networking is increasing, online communities often fail to coalesce. Noted success factors for online communities are linked to the community's purpose and culture. They are also related to structures that allow for increased volume of exchange and quality of conversation. Ravelry.com provides a case of a successful, large-scale, online community that has information exchange and conversation as its foci. These activities are supported through the work of thousands of volunteer moderators who sometimes manage groups with more than 3 million members. However, little is known about organizing and supporting volunteer groups to allow for such large-scale growth.

To find information on moderators' roles and tasks, and how they are supported in the Ravelry community, a study was conducted in 2 sequential phases. Phase I consisted of a survey of 73 moderators who led large, active groups. Phase II consisted of interviews with 8 moderators who led different types of groups within Ravelry, having purposes that range from purely social conversation to technical forums on craft-related work.

Findings indicated that the tasks moderators performed did not vary greatly, despite differences in their group's purpose and culture. Common among most moderators' duties were encouraging group participation through stimulating discussion or organizing craft-based activities, resolving conflict between group members, and maintaining their site through routine housekeeping tasks. Moderators are motivated to volunteer to do these tasks by love of their group members, and are united by a common

interest in their craft. Moderators are most often supported by informal networks of moderators in their own or in similar groups.

These findings give insight into how to structure large, asynchronous, online conversation-based groups, and how to define a role for people to manage them. It provides an understanding of the work that moderators do, and how their work allows a sense of place to be established for informal learning.

## **Chapter One: Scale and the Role of Moderators**

Since the mid-20th century, when Internet availability became relatively inexpensive and accessible to ordinary citizens, people have flocked to the Web to communicate with others. Often, people create materials, either Web sites or blogs, to communicate with like-minded individuals about topics of interest. Occasionally, so much material is available on individual sites about a particular topic, that it warrants attempts to organize that material into some type of centralized forum. Usually, these attempts are unsuccessful (Gartner Research, 2008). However, when the conditions are right, these efforts are so fruitful that they result in stunning growth. Such is the case with Ravelry.com, an online community begun as an experiment to provide a place for knitters, crocheters, and others interested in handmade textiles to share information about their crafts.

### **Background on Ravelry.com**

In 2007, Jessica Marshall Forbes and her husband, Casey Forbes, launched an online community for knitters and crocheters—Ravelry.com. The community was born out of Jessica's frustration with keeping track of her knitting projects and information that she found through other knitters' blogs. It was fortunate that her husband was a programmer with experience in social networks. In 5 years, the site Jessica and Casey created has grown from a surprising 3,000 members on its opening day to a membership of more than 3 million registered users. Ravelry has won at least one award for online community design, and has been featured on television and in magazine articles. Ravelry supports a user-generated project notebook with more than 4 million entries, more than 5,000 active social groups, and a huge database of pattern and yarn information. Not only

has membership grown, but the site has expanded its focus into commercial areas as well: downloadable pattern sales through the site and an in-store sales service for yarn shop owners are examples of how the site has managed to combine social and commercial interests.

Despite its ventures into capitalism, the site manages on a lean budget. Ravelry.com is not supported financially through any single business entity, keeps only 5% of the fees charged for pattern sales, and manages its active membership (more than 800,000 visits every month) with only five paid employees. The community is available for free to anyone who wishes to join, but recently Ravelry added an optional fee for members to access functions such as the ability to upload photos directly from mobile devices. Because of financial constraints, the site's size, and its complex array of services and information, it is necessary to engage thousands of volunteer workers to welcome members, edit databases, and moderate groups. There is an organized group to support moderators, the Mod Squad, with more than 3,800 members. There is also a small group of individuals that moderates the site's 3 million Ravelry members—known on Ravelry.com as the Main 6. The work that both groups do arguably plays a large role in the community's success.

### **Why Study Ravelry?**

In 2009, Forrester Research estimated that 55.4 million adults in the U.S. (one third of the population) used online social networking in some form (Ostrow, 2009). This number was nearly double the number of adults using social networking in 2007, and growth should continue. While Facebook, the world's largest site of this type, is purely social, many communities are being constructed based on interests. Besides Ravelry,

Flickr (photo sharing), Flixster (film community), Debian (open-source software), Company Command (U.S. Army commanders), and Newgroup (computer animation community) are examples of online sites where members gather to talk about common interests and pursuits. These sites, while enabling social interactions, have as their main focus the construction of community, primarily to provide information about common interests.

Even though participation in social networking is increasing (Ostrow, 2009), it is estimated that 70% of online communities fail to coalesce (Gartner Research, 2008). Noted success factors for online communities are linked to the community's purposes and culture. They are also related to needs for structures that allow activities specifically tailored to the community's practice, that increase volume of exchange, and that allow quality of membership exchange (Iribarri & Leroy, 2009; Ostrow, 2009).

**The issue of scale.** Surowiecki (2005) coined the phrase *Wisdom of Crowds* (p. xviii) to describe the process of aggregating the opinions of large groups of people to make good judgments. Relying on such wisdom is often more reliable than that of a single expert opinion. In communities, large groups that are not tightly connected are considered better able to produce such an aggregation of knowledge and generate better answers to problems (Shirky, 2008). In order to take advantage of the wisdom of crowds, it is necessary that a system have scalability (i.e., that it be designed to support large numbers [e.g. millions] of concurrent users while maintaining acceptable performance (Schank, Fenton, Schlager, & Fusco, 1999). Large peer-to-peer communities offer a distributed expertise model so that no one member is overly burdened with the responsibility of providing feedback and answering questions (Surowiecki, 2005). In

designing an interactive community, it is required that enough members are attracted to and use the media to prevent discontinuity and lack of reciprocity on a site (Wiley & Edwards, 2002). Markus (1987) referred to this sufficient number as a membership *critical mass* (p. 491). In open information communities such as Ravelry, where knowledge is shared without sense of property or contract, it is beneficial to reduce costs (not only monetary, but also of time and effort) to allow for flexibility in contribution amounts, and to enlist the cooperation of volunteers who work informally. The flexibility of contributions is key, since the members' critical mass must have both information and the personal characteristic of being sought after, traits that are most likely unevenly distributed in any population (Markus, 1987). It is, therefore, preferable to have a large number of members involved in contributing to a community to allow for sufficient offerings, with a few members contributing the majority and most of members contributing less or not at all (Oliver et al., as cited in Markus, 1987). This variability in providing information allows new community members the benefit of legitimate peripheral participation (Lave & Wenger, 1991), engaging in the practice to a limited degree without the pressure of having to make contributions immediately. Such patterns of activity are important elements in self-sustaining knowledge communities (Schank et al., 1999).

***Problems associated with large-scale communities.*** In a report that summarized the results of the first joint European Commission-National Science Foundation Strategy Group in 1999, it was emphasized that greater attention in online community research should be paid to scalability issues (Brown et al., 1999). This report stated that problems with large-scale community design lie in both the technical and social realm. The

technologies (hardware and software) must be able to support large volumes of network traffic, especially if media packets are used. This indicates servers need to be reliable at all levels, from core servers to those that connect to each participant's machine.

Another bottleneck that could limit scalability in a community is information management. Sheer volumes of information that surpass human perceptual and cognitive limits should be managed with flexible and dynamic schemes. The virtual environment, then, should be arranged so that participants are able to control the amount of information that they see and hear (Benford, Greenhalgh, Rodden, & Pycock, 2001).

How to guide social processes in very large communities is equally important. Conversation is a simple form of cooperation that can build a sense of community better than other methods of sharing (Shirky, 2008). However, social problems could arise in conversation threads in an online community because of a lack of real-world social cues, an ill-defined social order, and lack of apparent controls (Preece, 2000). These problems are compounded when the population is large and diverse, with dissimilar cultural norms and values.

***Structure for large-scale communities.*** One pattern for increased communication that works well in a large-scale environment is the Small World Network (Watts & Strogatz, as cited in Shirky, 2008). In this model, there are many small groups that are densely connected (i.e., all members are connected to each other) and all communicate directly with each other. Connecting small groups to other small groups by only one or two members forms large groups. These large groups then are sparsely connected, allowing information to flow throughout the entire network. The connecting members act as brokers between groups, carrying information efficiently throughout the community.

***The moderator's role in large-scale sociability.*** Sociability defines the social interaction in an online community, and good sociability results in people feeling comfortable within the space (Preece, 2000). Conversation, seen as a necessary element in community building, can cause problems when members go off topic (causing problems with management of information) or when they devolve into name-calling when there are disagreements. This is especially true in large online communities. Comfort can be established by designing policies that support communal standards and are understandable, acceptable, and practicable to the group (Kollock & Smith, 1994; Preece, 2000). However, once community standards are in place, there must be some mechanism of enforcement (Shirky, 2008).

One mechanism for keeping communication focused, civil, and filtered in many-to-many asynchronous dialogue is the role of moderator (Benford et al., 2001). The moderator role is seen as crucial to enabling democratic debate in order to “attain a minimum level of respect, civility, and goodwill” (Carter, as cited in Wright & Street, 2007, p. 857). The moderator is seen as an emerging democratic intermediary, and moderator style can be significant and positive in shaping the quality and usefulness of online debate (Wiley & Edwards, 2002). Ideally, a moderator strives to make members’ paths more satisfying and easier to travel by clarifying it and reducing obstructions. Moderators should perform these tasks by using a balance of reserved authority and delegation either to facilitate or hinder the direction of particular conversations (Hew & Hara, 2006). Monitoring of policies should use informal sanctions undertaken by community members to shape behavior, with moderators stepping in with a graduated system of consequences when guidelines are not followed. This is important not only as

punishment for rule breakers, but as an assurance to the whole community that resources are being used wisely (Kollock & Smith, 1994). Such interventions have been shown to increase overall levels of interest within communities (Markus, 1987).

It is of interest for those who wish to start online communities to be able to examine a successful community, such as Ravelry, that has managed to construct avenues for participation, to see how closely it mirrors those found in the traditional community, and to determine whether these factors can be applied in other situations. It is also of interest to see how the problems of large-scale conversation are handled so that a comfortable environment for a diverse group of participants can be attained. Ravelry.com, because of its success in gaining membership, its links to established organizations, its international population, and the visibility of member interactions within the community, is a case that will provide information.

Ravelry has managed to employ the wisdom of crowds in a small-world network by using small contributions from many members to organize large information databases for needle crafters. There are many groups within the community, each having a particular focus and its own set of policies and guidelines. In many cases, moderators of these small groups connect with other groups, especially the Mod Squad, to facilitate information sharing throughout the community.

In managing the social aspect of the community for a large, diverse membership, it appears that Ravelry uses a governance structure that is mostly decentralized, emergent (rather than planned), and has limited control. However, there is also another layer of governance within Ravelry.com that is more planned and deliberate, which has the responsibility of coordinating other coordinators. The emergent type of governance

allows a highly dynamic community with the ability to scale rapidly, but may have the negative side effect of subversiveness and instability (Parameswaran & Whinston, 2007). The more intentional, structured side of governance allows for a more stable cultural environment, but runs the risk of becoming rigid (Wenger, McDermott, & Snyder, 2002). Thus a blended system of governance similar to that in Ravelry, partly self-emergent and part intentionally managed might provide both scalability and the comfort of a secure social environment. Investigation of such a successful community having a blended governance model could be of interest in explaining the workings of communities and organizations both online and offline.

### **My Fiber Credentials**

I have been involved with the fiber arts for most of my life, knitting my first sweater when I was 9 years old. Like most knitters, close family members introduced me to the craft. My mother is a knitter and an accomplished seamstress who made most of the clothing that my five siblings and I wore. My paternal grandmother knitted, crocheted, and tatted (tatting is the art of making lace). As a child, I would read anything I could get my hands on, and needlework magazines to which both my mother and grandmother subscribed influenced me. I was also motivated by the prospect of making clothing for dolls, friends, and me. As a preteen, I began to attend evening knitting classes that were offered through community education and began to learn more advanced knitting techniques. I continued to knit throughout high school, college, and into young adulthood, often struggling financially to support my knitting habit.

As an adult, I slowly branched out to practice more of the fiber arts. When I was expecting my first child while living in Germany I taught myself to crochet using

American patterns, as I was unable to find knitting patterns for baby clothing that were written in English. While traveling to a job interview in Southern California in 1991, I happened to meet some women staying at my hotel who were attending a convention for spinners and weavers. As I examined the spinning wheels they were unloading from the backs of station wagons, I became intrigued by the possibility of making my own yarn. This idea stayed in the back of my mind for years until it came to the forefront in 2008. As part of my doctoral program, I enrolled in a class that required me to join a community of practice, learn something new, and document my progress. I found a local subgroup of a spinning and weaving guild where I found support and encouragement for learning the practice, and 6 months later purchased my first spinning wheel. At about the same time, I joined a local knitting guild and still participate regularly in a more casual subgroup of that guild that meets in a member's home twice monthly. Through the association with both guilds, I became more aware of the history of the fiber crafts and the organizations that support preserving and sharing techniques in the fiber arts. I am being introduced to the processes of preparing raw fleeces for spinning, and fiber dyeing—to be explored in depth upon completion of this dissertation.

I was introduced to Ravelry in 2007, while attending a meeting of the American Mathematical Association of Two-Year Colleges. In one of the workshops at this conference, I admired a handmade vest one attendee wore. We became friends, and over dinner she told me of this great new online community for knitters and crocheters that I should explore. As a casual reader of knitting blogs, I was excited about a site that would organize many online resources for needlework. I went back to my hotel room that night and applied to join Ravelry. I waited a month to receive my admittance into the

community and have been an avid participant since. In April, 2009 I was fortunate in being able to meet the site developers and have an in-depth conversation with them in their Cambridge, MA office. I worked for a short time in 2010 as a volunteer member of the Welcome Wagon for Ravelry, where I personally sent out welcomes to more than 3,000 new Ravelry members.

My involvement with casual, organized, traditional, and online associations in the fiber arts gives me a well-rounded perspective of the knitting community. As a practitioner in many of the fiber crafts, I have an understanding and appreciation of the work that is done by others in these communities. I speak their language and know their concerns. However, I am aware that because of my personal involvement, there is a potential for researcher bias. To overcome this bias and to ensure that a balanced perspective is presented, I used semi-structured interviews that allowed participants to present their experience as they saw them. Survey analysis was also used to provide an additional method of reporting moderator actions.

### **Areas of Interest for This Study**

This research is a mixed-methods study, using Ravelry.com as a case. The study focuses on volunteer moderators' work maintaining participation and governance structures. Of particular interest are the roles that volunteer moderators play in maintaining these structures as they support informal learning and socialization with crafting experience as a common bond. The functionality of this group of moderators is defined in terms of community of practice (CoP) theory and roles of participants in the philosophy of serious leisure. This information might be of use to those who would like to tailor online communities to the traditions of other practices, or to determine if there

are lessons to be learned from knowledge transfer in a community focused on leisure pursuits to professional learning communities. In addition, it is of interest to note the role that moderators play in allowing communities to grow rapidly and allow for sustained growth for large numbers of members.

### **Research Questions**

1. What role do moderators play in:
  - a. Maintaining participation?
  - b. Maintaining governance structures in a large-scale, complex, virtual community of practice, of which Ravelry is an essential case?
2. How do members come to be moderators?
  - a. What benefits accrue to them as a result of being moderators?
  - b. What is their relationship with/to other moderators?
3. Is there an emerging practice of large-scale moderation?

### **Framework for the Study**

Participants in the production of handmade textiles partake in a practice that is usually done outside of their work settings. Such activities, if they meet certain conditions, can be considered serious leisure pursuits. One of these conditions is the need to spend time acquiring new information and skills (Stebbins, 1982). Many times, participants seek out other practitioners for learning purposes. This search can be carried out through face-to-face interactions, through written media, or on the Internet. These socially constructed interactions with others cause CoPs to be formed (Wenger, 1999). Members of Ravelry in general will be considered within the framework of CoPs, with

some subgroups forming communities in their own right, with a distinct practice and culture.

Members of Ravelry will also be considered as hobbyists in their serious leisure pursuits. Those engaged in hobby activities that produce a finished object, as is the case with knitters and others who do handcrafts, are considered makers and tinkerers (Stebbins, 1982). Because of the Ravelry community's size, there is a need for members to assist voluntarily with community organization. Serious leisure theory encompasses volunteers of this nature and might provide insight into motivations that attract people to these roles (Stebbins, 1982; 1996). Thus, moderators within the Ravelry community are considered in the serious leisure framework and members of both the makers and tinkerers group, and volunteers.

These members contained in the intersection described above support both participation and governance structures within the CoP. Occasionally, the size and complexity of a community might require a core group that can assist in community coordination and cultivation efforts. The Mod Squad group and the team of moderators who manage the Main 6 groups could be considered members of such a core group within Ravelry.com. The structures that support leisure, learning, and community were explored in order to determine how hobbyists might participate in an online community that supports textile handcrafters, and from those roles determine what types of ways a core group might function to support them.

## **Chapter Two: Leisure, Learning, and Community**

“Leisure consists in all those virtuous activities by which a man grows morally, intellectually, and spiritually. It is that which makes life worth living.” (Cicero, in Loesch & Wheeler, 1982, p. 5)

“The growth of any craft depends on shared practice and honest dialogue among the people who do it. We grow by private trial and error, to be sure—but our willingness to try, and fail, as individuals is severely limited when we are not supported by a community that encourages such risks” (Palmer, 1998, p. 144).

### **Serious Leisure and Learning**

People have considerably more leisure time available to them than in the past. In a comprehensive study of time allocation data, total work time for both men and women in many postindustrial societies, including Japan, Norway, and the United States, declined substantially in the years from 1965 to 1985 (Juster & Stafford, 1991). This finding was echoed in the Americans’ Use of Time Project, which showed a decline of more than 6 hours per week in work hours (Florida, 2003). Reasons for this increase in leisure time may result from early retirement, longer lives, lengthy layoffs, and permanent part-time jobs (Stebbins, 2001b). To fill their non-work time, many resort to *casual leisure* (Stebbins, 2001a, p. 17) or *leisure as consumption* (Arai & Pedlar, 2003, p. 188) or activities that require minimal thought or skill and have little concern for social issues. Casual leisure activities include pastimes such as watching television or lunching with friends. While fun for a while, these types of activities can leave participants feeling less than satisfied. Alternatively, some participate in *serious leisure* (Stebbins, 2001b, p. 53) or *leisure as shared meaning* (Arai & Pedlar, 2003. p. 188) which are tasks that require

knowledge, skill, and oftentimes a social setting to share best practices. In the spectrum of activities, serious leisure falls somewhere between casual pursuits and work and is able to provide an outlet for those searching to express abilities, fulfill a potential, or establish an identity. Serious leisure is personally enriching, free from compulsion, and can be considered like a job with the least desirable elements of work removed (Gelber, 1991).

Stebbins (1992, pp. 6-8) identifies six characteristics that define whether a pursuit constitutes serious leisure. The first defining characteristic of serious leisure is the need to persevere through difficulties. The second is that practitioners adopt their activities as *careers* (p. 6) with turning points and achievements. The third characteristic is significant personal effort based on specially acquired knowledge, training, experience, or skill. Fourth, there are eight durable benefits for participating in a serious leisure activity: self-actualization, self-enrichment, self-expression, regeneration or renewal of self, feelings of accomplishment, enhancement of self-image, social interaction and belongingness, and lasting physical products of the activity. The fifth characteristic is a unique ethos or spirit of community among the group, and sixth is that participants identify strongly with their practice.

These characteristics can clearly be applied to those who practice handcrafts. In knitting or crochet, one must persevere through difficulties. It is interesting that knitters have an expression, *frogging*, for the process of tearing out their knitted work to start over. The name frogging comes from the phrase rip it, rip it, like the sound that a frog makes. A handcrafter who perseveres usually will spend time searching for information on new techniques, such as fair-isle knitting, the process of using different colors to produce patterns. Many who knit and crochet feel a sense of accomplishment as

expressed by Nikol Lohr, author of several knitting books: “When you fill...time learning or perfecting something that not everyone can do, instead of just trudging to work or watching TV, you start to accumulate creative superpowers” (as cited in Myzelev, 2009, p. 151). Thus, members of Ravelry, who have the common practice of handcrafting, fall within the description of practitioners of serious leisure.

Of the three types of serious leisure participants, amateurs, hobbyists, and volunteers, most members of Ravelry would be considered hobbyists. Amateurs have particular relationships with professionals in their area of interest. Often professionals in certain practices, such as golfers, start their careers as amateurs (Stebbins, 1982). Since the vast majority of members within Ravelry.com do not attach themselves to professionals in order to launch a career in the making of handcrafted textiles, they would not be considered amateurs. Volunteer moderators, especially those who will be shown to be a core group within the Ravelry community, will be considered as both hobbyists and volunteers. Their volunteer experience will be more closely examined later in this chapter. However, before that, the focus will center on members of the community analogous to hobbyists, and the participation and governance structures that enable them to pursue and learn more about their practice within Ravelry.

**Hobbyists as learners.** In the schema of serious leisure, modern-day practitioners of textile handwork are considered hobbyists—those who enjoy a specialized pursuit beyond their occupation and realize durable benefits. Textile hobbyists are also classified as makers and tinkerers within the hobbyist category. Makers’ and tinkerers’ activities are not only highly artistic, but practitioners achieve an end product as a result of their

work (Hartel, 2007). Achieving this end product might further enhance the durable benefit of “feeling of accomplishment” (Stebbins, 1992, p. 7).

While knitting might be considered a hobby and a serious leisure activity, knitters who gather in face-to-face meetings were shown to exhibit a combination of serious and casual leisure behaviors. In an ethnographic study of a knitting group that met in a Canadian public library, knitters displayed the serious side of their hobby through discussion of projects and techniques. However, this work was interspersed with chatting on off-topic subjects such as health, parenting, and funeral planning. Off-topic, casual conversations contribute to a sense of recreation or play for adults. In times when handcrafting of textiles was necessary, social groups that incorporated the crafts of knitting, crochet, spinning, weaving, and sewing were a way to combine work and play. Recent studies in women’s play suggest that women derive pleasure in life and freedom from gender restraints in talk and laughter (Green, 1998; Yarnal, Chick, & Kerstetter, 2008). The social structures, both historical (quilting bees) and modern (knitting guilds), formed around the making of textiles support that notion and indicate that modern women may not be much different than their feminine ancestors.

Another behavior that was found interwoven with the practice and social activities in a knitting group was that of information seeking (Prigoda & McKenzie, 2007). As with all makers and tinkerers, these handcrafters were engaged in activities that required substantial specialized skill and considerable background knowledge. Many practitioners engage in a quest for personal development and search for knowledge that is consistent with the concept of informal learning because of the large body of knowledge that has accumulated throughout the centuries on handcrafted textiles.

Definitions of informal learning vary, but most emphasize a lack of structure, an agenda that is tailored to individual needs, and an emphasis on social exchange (Conner, 2009; Cross, 2006). In learning, content and context are inseparable (Cross, 2007) and knowledge flow is better through networks of individuals who share the same interest in their work (Kimble & Bourdon, 2008). While prevalent in corporations—it is estimated that more than 75% of learning in organizations is informal (Conner, 2009)—informal learning can be found in varied settings from such disparate groups as the U.S. Army (Dixon, Allen, Burgess, Kilner, & Schweitzer, 2005) to home-brewers (Isenhour, 2000) and is discussed as a means of professional development for teachers (Schlager & Fusco, 2003). Learning informally has more lasting effects than traditional training or school learning because it combines learning a topic with the need to know and involves optimizing connections and adapting to one's ecosystem (Cross, 2007). The necessity of learning within a specific context is echoed in the statement “Learning methods that are embedded in authentic situations are not merely useful; they are essential”(Brown, Collins, & Duguid, 1989). Rather than being a commodity that is provided to a learner, informal learning is best understood as an interaction among practitioners (Wenger, as cited in Cross, 2007). Thus, informal learning is best accomplished through the learner's identification with a practice and through social interaction with others who are likewise engaged to co-construct knowledge in a CoP (Lave & Wenger, 1991).

### **Learning in CoPs**

When people join together in a shared activity and negotiate the meaning of the group by interacting with the present and the past to produce knowledge, a CoP is formed. Membership in the community is defined by mutual engagement and identity is

created within the membership by achieving certain milestones that the group defines (Lave & Wenger, 1991; Wenger, 1999). Wenger (1999) lists 14 characteristics that indicate the formation of a CoP:

1. Sustained mutual relationships—harmonious or conflicting.
2. Shared ways of engaging in doing things together.
3. The rapid flow of information and propagation of innovation.
4. Absence of introductory preambles, as if conversations and interactions were merely the continuation of an ongoing process.
5. Very quick setup of a problem to be discussed.
6. Substantial overlap in participants' descriptions of who belongs.
7. Knowing what others know, what they can do, and how they can contribute to an enterprise.
8. Mutually defining identities.
9. The ability to assess the appropriateness of action and products.
10. Specific tools, representations, and other artifacts.
11. Local lore, shared stories, inside jokes, knowing laughter.
12. Jargon and shortcuts to communication as well as the ease of producing new ones.
13. Certain styles recognized as displaying membership.
14. A shared discourse reflecting a certain perspective on the world. (pp. 125–126)

A practice is always social in nature and relies on negotiation between explicit and tacit elements to determine its meaning (Lave & Wenger, 1991; Wenger, 1999). The

explicit elements are reified knowledge or information that is concretized in some form and projected to the community. Participation is tacit; it is the source of the member's identity in the community, and is active or changeable (Wenger, 1999). History, in the context of CoPs, is more than a mere recording of past events. History is a fabric woven from members' participation with reified knowledge, connecting new practitioners with those from other generations. Knitting preserves techniques of the past while allowing objects to be made that are modified to be functional in a contemporary world (Patch, 2007). At the heart of this practice is history and learning, since "practices evolve as a shared history of learning" (Wenger, 1999, p. 87).

There is a continual process of reshaping, of both individuals and the community, caused by the negotiation of the group's history. Participation and reification are necessary and complementary, but there is tension between them: reification (a pattern for knitting a sweater) is solid and fixed, while participation (ensuring that a knitted a sweater fits correctly) is moving and fluid. Reification can give a procedure for a process, but may obscure the reason why the process is necessary and leave the practitioner stymied when obstacles are encountered. Practice and reified knowledge define boundaries for the community: what is or is not part of the practice and who are practitioners (Wenger, 1999).

As part of the process of belonging to a community, a member might negotiate through a learning trajectory from novice, one who has access to the community but might not fully participate, to one who is fully immersed in the practice. In the case of the novice, his or her level of interest is sufficient to contribute to his or her sense of identity, and his or her interaction with the community using authentic tools is called legitimate

peripheral participation. Legitimate peripheral participation describes the route that a newcomer takes in a community to become a veteran. Part of this process is that, even as newcomers, they have access to at least some authentic tools of the practice and interact with multiple generations of practitioners in the community to learn (Lave & Wenger, 1991).

**Research on CoPs.** Nine CoPs in seven major multinational corporations in Europe and the United States, created between 1997 and 2002, were investigated for emergent themes in membership participation (Borzillo, Aznar, & Schmitt, 2011). Employers sponsored some of these CoPs, but others simply arose based on interest in a topic. Using grounded theory to analyze these case studies, researchers uncovered a 5-phase process of membership integration that describes a member's path from legitimate peripheral practice to that of a fully integrated core member. The first phase was labeled *Awareness* (p. 32). During this stage, the new member is primarily concerned with personal benefits and observes more than participates. The second phase, *Allocation* (p. 32), marks an increase of activity by the member. During this period, the member returns to the community regularly, establishes a relationship with core members, and begins to make contributions. This stage is followed by the *Accountability* (p. 34) phase. Here members become part of the core membership, taking on some responsibility for the community by taking the lead in small areas and volunteering for activities. The fourth phase in membership integration is *Architectural* (p. 35). In this phase, members are thought of as facilitators. In sponsored groups, their sponsors often give facilitators extra support. Facilitators are usually responsible for starting their own subgroups within the larger community. The fifth and final stage is *Advertising* (p. 35). Advertisers are

considered leaders within the community and receive attention from the main CoP for the work done with their subgroup. In sponsored groups, the sponsors recognize leaders, and in emergent groups leaders are recognized by word-of-mouth through other CoP leaders.

While this study makes clear the process of becoming a community member, there are many differences between members in a business community and a hobby group. Some of these differences include motivations for joining. Organizations sometimes endorse communities and encourage participation through social pressures (Borzillo et al., 2011). For example, those in a business setting may feel it is necessary to join a CoP established in their workplace so that they are able keep up to date with new processes or products. In a competitive workplace, such knowledge would give employees a benefit. It might also be advantageous for an employee to join a community to make new contacts and establish a network of contacts outside of his or her usual workplace acquaintances. Such links could provide new resources to the worker, affording a competitive edge. Some in the workplace feel pressure from management to join a community to show that they are participating fully to make the company a success. In all of these cases, it might be considered that at least some of the motivation of employees is fear of losing a job if they do not participate. Hobbyists, on the other hand, cannot lose their jobs. Hobbies give their practitioners the “promise...of eternal work” (Gelber, 1991, p. 743). Despite the differences in motivation for workers and hobbyists for joining a CoP, striking similarities in participation progression in the workplace CoPs were found in a textile handcraft guild.

The process of legitimate peripheral participation in a textile handcraft guild was documented in a qualitative study that explored guild membership as a conduit for

successful aging (Schofield-Tomschin & Littrell, 2001). During the late-20th century, guilds were formed in the United States, Canada, and Europe to support a venue for learning about hand weaving, spinning, knitting, and crochet. Textile guilds are voluntary associations organized to promote skills in handcrafts and typically meet on a monthly basis. These guilds emphasize social means to preserve their traditions through the sponsorship of local groups, conventions, and workshops. The guilds emphasize standards in their craft, as evidenced by their Master Knitter and Master of Advanced Stitches and Techniques courses (Handweavers Guild of America, n.d.; The Knitting Guild Association, 2012; The Crochet Guild of America, 2012). Using grounded theory, Schofield-Tomschin and Littrell (2001) found two emergent themes in interviews with 30 textile guild participants: “Craft as I” (p. 45) and “Guild as We” (p. 47).

The Craft as I theme centered around data that dealt with the craft and the goals or roles that individuals sought for themselves as they practiced their craft. Subthemes in this category include the participant’s motives and benefits, such as establishing an identity, the process of being creative and of self-expression, and/or therapy and enjoyment. The Guild as We theme centered on the continual contact that the crafter had with others in the guild. This contact includes the process of learning from others, the validation from the group on the importance of their craft, and belonging to a community that, through sharing, benefited themselves and others (Schofield-Tomschin & Littrell, 2001).

Among the Craft as I findings was that a vast majority (83%) of the guild members interviewed found an identity in their craft. The identity of knitter was something that belonged to them because of what they did, and was apart from identities

that depended on how others saw them (e.g. wife or mother; Schofield-Tomschin & Littrell, 2001). Although this study's authors categorize a member's identity as something personal, it can be argued that the identity formed is not a completely individual creation. The formation of identity parallels that of practice, in that identity is a negotiated process of self, using the mechanisms of participation and reification. Identity is reified through social definitions and through self-discourse, but is also a lived experience through participation in a community. These personal experiences and social interactions are interwoven and layered in the creation of identity (Wenger, 1999). Even when guild members work in what they might consider isolation, they build their practice on the history of other practitioners. For example, they did not learn the simple stitches that are the basis of all knitted garments by creating the process. Although this knowledge may not have come directly through face-to-face interaction, what was learned resulted from the work and experience of others, possibly in the form of written instructions. This view of identity, as a construction of personal and societal interaction, allows a knitter to shift from an individualistic to a social emphasis in her craft, and provides a way to talk about each in terms of the other. This view, then, provides the basis for social groups centered about a practice and makes possible the Guild as We.

The Guild as We theme represents the continual contact with other practitioners of their craft in a social setting. In this theme, interviewees most frequently (93%) cited search for knowledge as a reason for becoming involved with the guild. Structured workshops are one avenue for acquiring new knowledge, but crafters learn from their peers as well. Through their identity as crafters, guild members are motivated to produce objects. Important for sharing knowledge, *Show and Tell* (Schofield-Tomschin & Littrell,

2001, p. 48). a regular activity in virtually all guild meetings, is a way for guild members to display their created objects. Through show and tell, members receive encouragement to share not only their products, but their experiences as well. This encouragement then fuels more guild participation, which in turn fuels more craft production (Schofield-Tomschin & Littrell, 2001).

Participation changes more than guild members' practices, it affects their motivations as well. While guild members may be initially moved for their own personal development, they begin to feel a responsibility to the community and the development of their peers in the practice because of the support that they have received (Schofield-Tomschin & Littrell, 2001). It could be of interest for those wanting to encourage learning in a particular field to know if it is possible to design an environment to stimulate the sharing of a practice and a sense of responsibility on the part of members.

Communities of practice are organic forms, since "learning cannot be designed" (Wenger, 1999, p. 225), but they can be cultivated and structured in a way that facilitates interaction among members (Wenger et al., 2002). Such interaction can take place in a particular geographic locale, or can be distributed over wide areas, as long as communications between members are possible. Historically, this type of communication occurred locally in face-to-face meetings or, when distance prevented it, through letters. With the invention of the computer and the discovery that computers could be networked, it brought new possibilities to the type of interaction necessary for distributed CoPs to form.

## **Online Communities**

As early as 1968, the potential for building communities of interest using networked computers emerged. This interest was based on a communications experiment using a typical project-meeting format. What provided the breakthrough with the computer, which until this time was primarily used for housekeeping tasks (asynchronous tasks such as computing payroll or tracking satellite orbits), was the use of graphical displays (TV monitors), mice, and computer programs that allowed an immediate exchange of ideas (Licklider & Taylor, 1968). Because of technical advances in hardware and software, and the widespread availability of the Internet, communication online is ubiquitous. However, it should be questioned whether such communication can allow the same types of communities as those found in the traditional CoPs or whether there are significant differences that are necessary for a virtual mode of existence.

**Online versus traditional participation.** To understand whether online communities have unique needs or practices that are different from traditional CoPs, it is necessary to examine dissimilarities in the environments. Such an examination should encompass whether online differences inhibit participation, and if so, what features can be put into place to minimize obstacles. Traditional communities are place-based—tied to a geographical location. Social meaning, rooted in the practices and understandings of communities, is derived from place. Places arise as practices begin and are transformed over time, and sometimes determine what is considered appropriate behavior (Harrison & Dourish, 1996). An example of place dictating behavior can be found in dress: it is acceptable to wear a sweatshirt to the gym, but not in the office. This type of influence might be a contributing factor in why group dynamics override individual expression in

face-to-face communities (Johnson, 2001). In a face-to-face setting, communication is instantaneous and allows for an immediate response and interaction. Communication can be accomplished through both verbal and nonverbal methods, such as gestures or body language. A geographical basis for a community requires that participants be physically present, meaning that they live nearby or can easily travel to the meeting location. Such restrictions can limit the number and diversity of participants.

Online communities, on the other hand, are not restricted by geographic location. The online environment can connect a wide variety of cooperative work among graphically dispersed individuals, but may not be conducive to social interaction. Another difference in online communities is that communication is often text-based and asynchronous (Wellman et al., 1996). For this reason, communications take longer than in face-to-face settings. This can cause content to become impersonal, short and superficial, or long and annoying (Johnson, 2001). Because individuals in online communities are not co-located and may not be subject to the normative influence of place, they have more freedom of expression and may become uninhibited and blunt (Wellman et al., 1996). However, asynchronous communication may have advantages. When they have more time to respond, introverts often feel more comfortable (Johnson, 2001), and individuals have a greater amount of control in their expressions (Wellman et al., 1996).

The noted differences in online communities mean that interface design needs to take into account spaces that allow for real-world behavior as well as tools that assist community members in communication that is asynchronous but feels immediate. The people involved in the community need to be given the tools with which they can interact

and make their own, since space can only be made a place by its occupants (Harrison & Dourish, 1996). In making a place in the online environment, appropriation and creation of technologies are intertwined with community to support a practice (Wenger, White, & Smith, 2009). An example of such collaboration is the community formed around the Apache HTTP server. It both “built the dominant software for an essential function that powers the web, but also...developed lasting partnerships between organizations and individuals” (p. 19). One role that emerges from the union of technology and community is a role that Wenger et al. (2009) label *technology stewardship* (p. 24).

Technology stewards do not need to be experts in technology, but should be practitioners who know enough about these tools to see the potential for new uses within the community. In addition, they can point out a need for a system or procedure that would be useful to the community in its practice. Technology stewards usually take on other prominent roles in the community, and their roles, as technology stewards may not be explicitly recognized. It is possible that when there are multiple technology stewards within a community, that they develop a practice and a language to discuss their responsibilities (Wenger et al., 2009). Technology stewards allow the community to have input into accomplishing methods of participation that best suit their needs, and help to create the sense of place necessary for group culture to be established.

This building of place and culture is occurring in the online environment. The notion of various online groups as CoPs has been documented, showing involvement patterns similar to those in traditional communities. Examples are *Company Command*, a community for U.S. Army commanders (Dixon et al., 2005), home brewers (Isenhour, 2000), open source software development (O’Mahony & Ferraro, 2007), animated story

building (Luther & Bruckman, 2008), and editors in Wikipedia (Bryant, Forte, & Bruckman, 2005).

In a study of Wikipedia, the progression of editors was examined to see how actions and views of identity changed through legitimate peripheral participation in community (Bryant et al., 2005). Wikipedia is an open-content, online encyclopedia in which content is user generated. The researchers found activity among Wikipedia editors that mirrors that of participants in the textile guilds. Active members who became editors lurked at first until they received encouragement to contribute. Initially, they tended to contribute by making corrections to articles on topics of personal interest. When they received either explicit or implicit accolades, they began to contribute more. Explicit accolades might be a public acknowledgment of a well-written article—such as having work selected as a featured article within the community. Implicit accolades for an editor might be something as simple as having another member add material to a submitted article. As they progressed in learning about the practice, editors began to take a more watchdog approach—monitoring the site in a more global manner for opportunities to help or to fix problems when they arose. Through their path within the community structure, the editors adopted new goals, took on new roles, and became more concerned about community goals than personal ones.

While practice defines the community, the types of activities that support the community determine its orientation. Wenger et al. (2009) discuss nine overlapping orientations for digital communities that support typical patterns of activity: (a) Meetings, (b) Open-ended conversations, (c) Projects, (d) Content, (e) Access to expertise, (f) Relationships, (g) Individual participation, (h) Community cultivation, and (i) Serving a

context. Each orientation has particular needs in terms of the types of activities that will contribute to their success. For example, in open-ended conversation oriented groups, “cleaning up is very important” (p. 77) so that old conversations are accessible, yet not distracting from current, active conversations. In a content-oriented community, centralized editorial control might allow for cleaner repositories of members’ work, and in community cultivation orientations, rewarding behavior that the community values is important. Each type of activity requires participation structures to support the activity and individuals who will be responsible for doing the work of maintaining them.

### **Participation Structures for Successful Online Communities**

In a setting, participatory structures deal with how members interact, how they share or contribute, how they interact with other members, how and whether they have access to resources, and whether they feel safe in the environment (Riel & Polin, 2004). Essential elements for computer-mediated communication—shared resources, common values, and reciprocal behavior (Hummel & Lechner, 2002)—are quite similar to the definition of participation structures. The success of an online CoP can be measured in terms of reciprocal behavior: by the amount of interaction within the community and the quality of exchanges that take place. To allow these interactions, there are different needs placed on the membership and on community structures that depend on the community’s growth stage and orientation (Iribarri & Leroy, 2009; Wenger et al., 2009).

**Structures for initial growth.** If an online community behaves as a traditional CoP, it would follow that in its initial stages, an online community will have a large number of newcomers who will not fully engage. New members will take time to observe what is being done before slowly beginning to take up the practices of more experienced

members and making major contributions. In CoPs, this gradual indoctrination into the community is called legitimate peripheral participation. In the virtual world, members of a community who observe without contributing are known as lurkers.

Almost all lurkers seek information, but might not post for a variety of reasons. From an online survey to 375 bulletin board (asynchronous chat) communities, 219 lurkers gave reasons why they chose to observe rather than participate. More than half of the respondents stated that they did not see a need to post, but others indicated that they were trying to determine whether the group was a good fit, and still others indicated that they did not feel they had enough expertise to contribute. Most of these reasons for nonparticipation are similar to those in traditional communities: novices in online communities are likely to be observers until they feel committed to the goals of the community and feel safe in the environment (Preece, Nonnecke, & Andrews, 2004).

Of those respondents in Preece's et al. (2004) survey of lurkers, only a small percentage (13%) intended to become lurkers from the outset. In attempting to increase interaction in a community, it is interesting to understand members' reasons for not contributing. Such understanding might allow new communities to see what structures can be put into place to move members to full participation. For example, finding that new members feel they lack enough expertise to post lends support to the theory to seed the site with a core community of participants who encourage others to join in (Preece, 2000). This is exactly what Jessica and Casey did in starting the Ravelry community. In a 2009 conversation with site developers, Casey and Jessica talked of how Casey built the site's technical features and did all the coding, and Jessica began building the databases. She invited friends she met from around the U.S. who were already involved in blogging

about knitting to join, to contribute to the database and test the site's features. Using feedback from users, Casey modified and added features to the site. Gradually, the bloggers who were trial members began to blog about this new resource and got their readers anticipating the public opening of the Ravelry site. This tactic was so successful that, on opening day in May 2007, Ravelry had a waiting list of 3,000 members who wanted in (S. Pisa, personal conversation, April 2, 2009).

**Structures that mimic traditional structures.** As noted earlier, design features in an online community should create elements of a real-world experience to create a sense of place (Harrison & Dourish, 1996). Elements that have been found to promote participation among such practitioners should be incorporated in order to make a place that works well for handcrafters in the online environment. In studies of the library knitters and guild members (Prigoda & McKenzie, 2007; Schofield-Tomschin & Littrell, 2001), there were three major activities involving participants: Show and tell, conversation (both serious and casual), and information seeking. The structures within the Ravelry community that support these activities were examined, as well as the community members who maintain them.

**Show and tell.** Show and tell (where crafters display their projects, tell about their experiences, and get encouragement and feedback from other members) primarily involves the content community orientation. Content orientation suggests activities such as uploading and sharing documents and files, commenting on and discussing content, rating contributions, and accessing internal and external content. It might also involve centralized editorial control and distributed editorial capabilities, but these activities are most likely not applicable to the show and tell activity of a knitting group. The activities

most likely to take place in show and tell should involve tools such as document repositories, discussion forums, wikis, tagging mechanisms, rating mechanisms, and search engines (Wenger et al., 2009)

In Ravelry.com, the Project Wiki is the online version of show and tell and uses visual media with the capability of adding project notes. A wiki is “a Web site that allows users to add and update content on the site using their own Web browser” (Wiki, n.d.). A wiki, such as Wikipedia—a highly visible example—is a collaborative effort of its visitors and has the ability to grow very quickly.

In searching for such capabilities for Ravelry members, Casey eschewed the big box premade software packages and decided to create his own system, using Ruby on Rails (S. Pisa, personal conversation, April 2, 2009). An in-depth discussion of Ruby on Rails is not within the scope of this research, but a short explanation is that Rails is an open source web application framework for the Ruby programming language. This customized system allowed show and tell to be created in a wiki format with visual (show), written (tell), and symbolic (encouragement) information to be recorded.

To make a contribution to the Project Wiki, a member first creates an entry. She may then upload photographs of work in progress and/or completed projects. Picture uploads can be done through photo-sharing sites, such as Flickr, or directly from a members’ computer or mobile device. The member also has opportunities to provide project notes that indicate what materials she used, what problems were encountered, and other pertinent information. Other tools that are incorporated into this entry that are recommended for content orientation communication are search tags, and internal links to information in the community’s pattern and yarn database (see Figure 1).

The screenshot shows a Ravelry project page for a 'Tribal baby carrier'. At the top, there's a navigation bar with links like 'sheknitter > notebook > projects > Tribal baby carrier'. Below the navigation is a 'Project info' section with fields for Name (Tribal baby carrier), Pattern (Tribal Baby Carrier by Lisa B. Evans), Craft (Knitting), and Tags (baby, carrier, intarsia). A blue box labeled 'Link to pattern database' has an arrow pointing to the pattern name. Another blue box labeled 'Search tags' has an arrow pointing to the 'carrier' tag. In the 'Needle and yarn' section, fields include Needle (US 8 - 5.0 mm), Yarn (Nashua Handknits Creative Focus Cotton), and Colorway (Various). A blue box labeled 'Link to yarn database' has an arrow pointing to the yarn name. The 'Notes' section contains a paragraph about the project being started for a first grandbaby. The 'Update July 13, 2010' section includes a note from the original poster about the project being used by Gabe and his mom, with a mention of a year later.

*Figure 1.* Example of a project wiki page. Adapted from *ravelry.com*, July 2010a. Copyright permission from permission holder.

Once the project entry is completed, the project is visible to everyone in the Ravelry community. This visibility allows for other members to comment on or to favorite the project, which bookmarks it in the member's notebook for future reference. Comments are given textually, while favoriting appears symbolically in the form of a heart icon. Both comments and favorites are visible to the contributor on the member's project notebook (see Figure 2). As was found in knitting groups and Wikipedia, these types of implicit and explicit means of communication most likely encourage members' participation and commitment to the Ravelry community (Bryant et. al, 2005; Schofield-Tomschin & Littrell, 2001).



*Figure 2.* Project with six comments, favorited 11 times. From *ravelry.com*, July 2010b. Copyright permission from permission holder.

***Conversations—serious and casual.*** It can be argued that in an online community, “conversation is the basic mechanism by which participants derive success” (Arguello et al., 2006). This would be particularly true in an online version of a traditional community where conversation plays a central role, such as the technical and off-topic chatter engaged in by textile handcrafters (Prigoda & McKenzie, 2007).

Activities that support open-ended conversation among online community members are one-topic-at-a-time conversations, multiple current conversations, key learning conversations, subgroup conversation, translation between languages, and archiving. Signs of success in an open-ended conversation-oriented community are a balance in topic variance (enough to be interesting, but limited to prevent subdivisions) and number of contributions (enough to feel active but not overwhelming) along with active participation by a representative segment of the community (not everyone, but a good cross-section of the population; Wenger et al., 2009).

Since conversation is so important in online communities, who participates in conversation and how likely members are to be engaged are of interest to community developers. How to encourage members' conversation was the topic for two studies of postings in newsgroups (Arguello et al., 2006; Burke, Kraut, & Joyce, 2010). A newsgroup is an Internet-based discussion group on a particular subject. Nearly all newsgroups are found on Usenet, which is a collection of servers around the world. To belong to a newsgroup, a member must subscribe and be granted admission (Usenet newsgroup, n.d.). In studying eight (two health-, three political-, and three sports-related) newsgroups, researchers analyzed archived threaded discussion forums to determine factors that affected individual-community interaction (Arguello et al., 2006). One area of interest in this study was new members' integration. Researchers felt that a new member was more likely to continue participating in a community if he or she received a response to an initial posting in a discussion thread. While the overall response rate to an initial posting in these newsgroups was almost 73%, newcomers were about 4% less likely to receive a response than individuals who had posted in the past. Lack of response to new members should be a cause for concern since, in another study of newcomer's messages in newsgroups, it was found that only about 17% of newcomers remained in the community if their initial posting was ignored (Burke et al., 2010).

Keeping members, both old and new, engaged in conversation is not always an easy task: Arguello et al. (2006) found that less than half (49%) of all posters return after their initial attempt. It was of interest then, for researchers to determine what kind of posts were likely to get a greater response rate. Text analysis was performed on 500 first-in-thread messages in about 100 online groups (health, technology, and hobby) to see

what kinds of messages received replies. Posts with group-oriented membership claims (e.g., I've been observing the group for a while and want to join in the discussion on X) received 38% more replies than those without. This lends support to the notion that lurking in online sites might be beneficial for new members. Identity-based membership claims (personal appeals, e.g., I have this problem, can anyone help?) increased the response rate by 36% overall, but in the technical group it reduced the response rate.

Rhetorical content of initial messages plays a role in response rates. Posts that included testimonials and posts that were linguistically simple were more likely to engage other members (Arguello et al., 2006). Directness in requests was also seen as a way to promote more responses, since members did not have to spend time and energy figuring out exactly what the poster needed. However, newcomers wanting to appear polite are usually more indirect in their posts (Burke et al., 2010). These findings might motivate community organizers to develop site guidelines, especially when starting a community that encourage members explicitly to notice newcomers.

Such structures are in place in the Ravelry community. The Welcome Wagon, a group that sends out a standard private message to each new member explaining the site, greets all new members. There are tools for private one-to-one messaging within the site as well as threaded discussion groups that allow multiple concurrent topics of conversation. Groups can be created at any time, on any topic within community guidelines, as long as a minimum of two members (a moderator and an administrator) commit to being involved. Once established, groups are rarely removed from the site, even if they are inactive for long periods. In a discussion group, all conversations are viewable to all Ravelry members, and there are no anonymous posts, since all posters are

identified by their Ravelry name—a pseudonym adopted upon membership. While there are more than 23,000 groups existing in Ravelry, site owners estimate that around 5,000 of them are active. Conversation topics in these groups revolve around serious issues (e.g., beginning spinning, knit tips and techniques, crochet shoulder wrappers) or casual topics (e.g., audiobook knitters, USC college football fans, parents of teens). To stimulate participation, under every forum post that members submit there is a button bar that allows readers to mark the post as educational, interesting, funny, agree, disagree, or love. This type of rating can serve as positive reinforcement or a type of community policing in the event of a large number of disagrees—possibly inhibiting a member from making similar future comments (see Figure 3).



*Figure 3.* Example of member posting. Adapted from *ravelry.com*, September 2011. Copyright permission from permission holder.

**Information search.** Prigoda and McKenzie (2007) found that members of a knitting circle engaged in many types of information seeking behavior, including active searches, browsing, incidental information acquisition, and networking. This type of behavior is often seen in those using the Web to find information, from casual users to research scientists (Marchionini, 2006). Fulton (2009) stated, in considering networking for leisure groups, “the potential for encountering unexpected information...increased the desire for Internet searching” (p. 762). While common search engines are useful for lookup types of search activity (e.g., fact retrieval, known item searches, specific

queries), exploratory searches (involving searches for learning and investigation) often require a combination of methods (Marchionini, 2006).

When the aim of the search is learning rather than specific inquiry, the process for finding information is persistent, iterative, and multifaceted (Chi, 2009). These facets take account of knowledge acquisition, comprehension and interpretation, and aggregation and integration of materials. Learning searches might begin with a general lookup strategy to locate the correct neighborhood for a more targeted type of search, but the lookup is just a starting point. The neighborhoods where more specific and useful information is located might include communities of interest or social networks (Marchionini, 2006).

In studying social interaction in the search for information, Chi (2009) conducted a 150-participant online survey to determine how (or if) people engaged socially before, during, and after information searches. Findings indicated that 43% of information seekers interacted socially before even beginning a search. This interaction was usually accomplished through e-mail on opinions or advice for recommended sites or search keywords. While conducting exploratory searches, the same type of information exchange continued to take place. Afterward, searchers often (60% of the time) distributed the results of their search to others in their social networks.

The emphasis on involving a social network in learning indicates a community with a relationship orientation (Wenger et al., 2009). Relationship orientations are successful when people build identities and get to know others' strengths. In such an environment, tools that allow community members to find each other and to establish credentials are critical. Directories that allow members to locate other members with a

particular expertise are important. However, these directories should also enable members to decide how much personal information they want to share, to provide a feeling of safety in the community. Knowing what a person can do and seeing what someone posts, either within the site or through a link to an external Web site or blog, will help others determine whether information is reliable. To support this kind of activity, conversations and other contributions should include either a member's picture or avatar. Links to members' external resources should be provided when appropriate, and in a way that does not distract other interaction on the site. By knowing who is on the site and what they can do, Ravelers can connect in their quest for information.

Searching out information is important in Ravelry. In a 2010 survey of members of one of the Main 6 forums, *For the Love of Ravelry* (Pisa, Sen, Noel, Polin, & Nardi, 2011), 91.4% of 1,861 respondents said they visit Ravelry to search for new project ideas or inspiration for new projects, and almost 78% want to learn more about their craft. Other responses reveal what types of tools are used in these searches: reviews are important (80.3%), as are pictures of projects or products (73.8%). Conversations were prominent, but most respondents said they socialized more about their craft (74.5%) than on non-yarn topics (48.8%). Findings also supported the notion of search as a multifaceted process rather than as a single query about a topic: When Ravelers were asked about search practices in learning about their craft, responses were fairly evenly distributed among asking other members, doing an information search within the site, and using other online sources, such as search engines or YouTube (see Table 1).

Table 1

*Where Do You Prefer to Turn to When You Want to Learn Something About Your Craft?*

Response	Percent
Other crafters in a face-to-face situation	9.0%
Other crafters on Ravelry (e.g., via asking a question in a forum)	23.3%
Information on Ravelry	25.3%
Other online sources (e.g., Google search, YouTube videos, blogs)	20.7%
Written sources (e.g., books, magazines)	12.3%
Other (please specify)	9.5%

In many cases, the method of search depended on a host of factors (e.g., what time of day the search took place, what information was needed, and whether they knew someone in real-life who could help with their problem). One respondent (Pisa et al., 2011) sums up the it depends attitude with respect to search by saying:

Depends what I want to know. I mostly taught myself to knit by watching videos on KnittingHelp.com but would have quit in frustration if my coworker weren't a knitter. She helped me in-person many times when I was starting out. I also use Knitty, books, knitting friends, etc. Ravelry is great because you can always find people who are knitting or knitted what you're working on. It also makes it easier to find errata or alternate techniques, which can save enormous amounts of time.

(p. 5)

Structures within Ravelry.com that support these types of information seeking are some that have already been discussed (e.g., number of favorites that a particular pattern or project has earned, and group discussions on technical topics). In addition to favoriting others' projects, users are able to assign an overall rating to a pattern or yarn in the database and are able to rate the difficulty of a particular pattern. Lookup searches are

possible in the pattern and yarn databases as well as in the Project Wiki. Members of Ravelry might order search results on name of the pattern, most popular, most favorited, and most queued, in an indirect attempt to get opinions from others within the site. Content in the databases are tagged and searches can be narrowed on design criteria and type and amount of yarn used. All submissions to Ravelry, with the exception of personal messaging, are public and linked to a member's profile page. From the profile page, anyone in the community can access a member's projects uploaded, posts made to discussion groups, and yarn stashed and vice versa (e.g., from an uploaded project, anyone can access the personal page of the contributor). There is the ability to share some personal details (including favorite swear word) and members are encouraged to upload a picture or create an avatar; however, members are not required to do so (see Figure 4).

The screenshot shows a Ravelry member profile for 'sheknitter'. The profile includes a photo of a person knitting in a forest, their first name (Sheila), the date they joined (November 1, 2007), and their last online activity (1 minute ago). It also lists their website (flickr.com), location (San Jacinto, CA), birthday (February 25), years knitting (45+), years crocheting (32), pets (2 kids, 2 dogs), favorite colors (green, pink), and a favorite curse word (Me? Curse?? LOL). The profile indicates the member is in 10 groups, including 'Android' and 'Audioobook Knitters'. A section titled 'About me' is present. To the right, there is a summary box showing project statistics: 24 projects, 2 queued, 58 faves, 35 friends, 7 stashed, 5 handspun, 7 library, and 128 posts. Below this is a 'featured finished objects' section displaying various knitted items like socks, a sweater, and a bag.

*Figure 4.* Ravelry member profile page. Adapted from *ravelry.com*, (n.d.a) Copyright permission from permission holder.

**Technological structures.** In establishing new communities, one barrier to participation unique to the online environment was members' trouble with technology in trying to post. It is important that designers understand their users' capabilities and make systems that are within members' limits (Marchionini, 2006). Other technical aspects of

online communities that allowed dependable interaction and, therefore, contribute to success were interface design, stability of the site, and reliability (Iribarri & Leroy, 2009). Stability and reliability were in the front of Casey's mind as he developed Ravelry.com. Although the community is open to all who apply, during the initial development of the site, people often had to wait up to a month to gain access. With 1,500 to 2,000 sign-ups per day, restricting access in this way ensured sufficient server space to accommodate site traffic and prevented the system from going down. Traffic was closely monitored and as new servers were introduced, more members were allowed access. Casey also realized that not all who came to the community were tech savvy and attempted to make the site as user-friendly as possible (S. Pisa, personal conversation, April 2, 2009).

By incorporating structures into the Ravelry community that support the types of activities fiber crafters have used for successful engagement for hundreds of years, members might feel supported and able to slip into activities relatively easily. By ensuring that the mostly unseen technical aspects of the site were working well and that features were easily accessed, even by those inexperienced with technology, Ravelry.com has made a safe and comfortable place for crafters to meet. In Ravelry, and in many types of online communities, community structures are maintained through the effort of volunteers (Dixon, 2007; Kim, 2000; Preece, 2000; Reagle, 2007; Wenger, 1999).

### **Volunteers and Roles in Communities**

Along with hobbyists, volunteers can be classified as those who participate in a type of serious leisure (Stebbins, 1982, 1996). According to Van Til (as cited in Stebbins, 1996):

Volunteering may be identified as a helping action of an individual that is valued by him or her, and yet is not aimed directly at material gain or mandated or coerced by others....It is thereby different in definition from work, slavery, or conscription. (p. 213)

As in all types of serious leisure, the act of volunteering is distinguished from that of work by the lack of compensation and coercion, and the positive attitude and attachment that the participant associates with the activity (Stebbins, 2001b).

Volunteers' helping action might be based on self-interest, but it also occurs for altruistic reasons. All serious leisure pursuits (amateur, hobby, and volunteer) bring the participant rewards, but volunteering is the only category of serious leisure for which altruism is often the main form of self-enrichment. This is not to say that benefits are the sole reason for volunteering as a leisure career: participants often experience costs in volunteering such as tensions among participants (often caused by perceived favoritism), challenges in applying their skill and knowledge (e.g., practicing to hone skills), and time commitments in doing their volunteer work. Paid staff members are usually responsible for assigning tasks to volunteers, sometimes causing strain in relationships between paid and unpaid workers. However, satisfaction that participants receive outweighs the costs of volunteering: rewards are often experienced at the end of an activity rather than during and include fulfillment of potential, development of identity, utilization of skills, and making new friends—as well as a sense of having done a good deed (Stebbins, 1996).

**Motivations for volunteering in an online community.** Knowledge sharing is essential in a CoP, not only in establishing baseline skill information, but also in interacting and keeping others within the community up to date on new trends (Wenger,

1999; Wenger et al., 2002). In examining the motives of volunteers in an online community, three Usenet groups (all having a technical focus) were studied to determine why people were moved to share knowledge (McLure Wasko & Faraj, 2000). Using the concept that knowledge is embedded within a community (rather than knowledge as object, or knowledge as something that resides in an individual), it was hypothesized that motivation for knowledge exchange is not self-interest, but care for the community.

Open-ended surveys were sent to 342 participants of the Usenet groups asking why they participated in the group and helped others. Content analysis of 531 comments was performed using predetermined categories: tangible returns, intangible returns, interaction with a community, and obstacles to participation. The majority of comments returned (42%) indicated a strong desire to be part of a community of practice. These respondents valued information exchange with like-minded individuals and liked contributing and comparing their contributions to others. They saw the interaction among members as not just a simple Q and A, but as an opportunity for multiple minds to come together and create a synergistic product—their exchange was improving the community. Although altruism was found to be a motivator for some of those who were interested in the community aspect of knowledge sharing, it was a smaller percentage (9.8%) than those motivated by more selfish reasons (e.g., reciprocity and the fun of working with a peer group—13.4% and 11.6%, respectively). Experience in the community and achieving a certain status was hinted at as a motivator for helping others: as noted in one respondent's comment, "It feels good to answer questions that are easy for me, because of experience, but are stumpers for beginners. The world is a better place when such questions are answered, and someone can make progress" (McLure Wasko, & Faraj,

2000, p. 168). In examining the roles of moderators within the Ravelry community, it is of interest to see whether the motives for volunteering are similar.

**Roles in supporting participation structures.** As was discussed previously, in the developmental cycle of CoPs, a community reaches maturity when it has a mix of experienced, active members, and beginners. Kim (2000) discusses five stages in the membership life cycle that classify a member's movement through the participation cycle: Visitor, Novice, Regular, Leader, and Elder. The Visitor is a lurker who arrives at the site and looks around to see if the community is a good fit. If it appears that it is, the Visitor will stay around and become a Novice, and start to learn how the community functions. If Novices begin to visit regularly, start to become marginally involved, and participate in small ways, they become Regulars. Regulars are "the mainstays of the community" (p. 119). If a Regular has more time to devote to the community, she may volunteer to take on a particular role and become a Leader. In the life cycle of legitimate peripheral participation, Leaders will eventually tire or burn out and become Elders. Elders are keepers of the group's history and culture—they are storytellers and the soul of the community. Wenger et al. (2002) imagine a similar community structure with the degrees of community participation as concentric circles: peripheral members on the outside, active members inside, and the core group in the middle. The core group is of particular interest to this study and is examined in detail in the discussion of governance structure that follows.

### **Governance Structures in Online Communities**

Once new members feel safe in the community environment and able to support communication on their own, they might take on roles that the core community

established or create new roles that fit with their identity. As the community matures, long-lasting relationships are formed and roles become more formalized. In addition, as the community grows and becomes more complex, there is a need for organization, coordination, and policies to guide members in achieving community objectives (Wenger et al., 2002). Such processes are components of a community's governance structure.

Governance structures sustain organized action and serve as incentive structures in institutions (Parameswaran & Whinston, 2007). They direct "what people can or should do and what they should not or cannot do" (Preece, as cited in De Moor & Wagenvoort, 2004, p. 2). Governance can be considered "reflexive reification" (Wenger, 1999, p. 243) with structures that could incorporate the following elements: policies (e.g., joining and leaving requirements, bylaws, codes of practice for communication, and rules for intellectual property protection), roles and job descriptions (including rules for moderation), histories and affiliations, issues of privacy and trust, and how to measure the reliability of information (Preece, 2000; Wenger, 1999). Such rules and policies serve as "explicit and implicit norms, regulations, and expectations that regulate the behavior of individuals and the interactions between them" (March, Schulz, & Zhou, as cited in in Butler, Joyce, & Pike, 2008, p. 1102).

Advantages of these types of reification are that they are more easily seen by the public and allow clear boundaries to be developed. However, there are costs: reification freezes things, provides limited ability to mobilize power of practice, engenders alienation by not allowing negotiations of meaning, and can become an instrument of domination. Institutionalized governance consumes energy, needs continual maintenance, and takes practice (Wenger, 1999). "Institutions and practice cannot merge because they

are different entities. The relation between them is not one of congruence, but one of negotiated alignment” (p. 243). In CoPs, hierarchical organization should be avoided, and instead, horizontal relationships should be fostered (Wenger et al., 2002). To retain the interest and commitment of member volunteers, governance structures should both simultaneously preserve democracy and accountability to its members (O’Mahony & Ferraro, 2007). Rather than focusing on conveying information to members, CoPs function best when the emphasis is placed on brokering relationships among members and across communities (Wenger et al., 2002).

In most cases, online communities rise from the grassroots without deliberately designed governance structures. Once formalized, governance structures are usually soft (i.e., lacking in enforcement powers) and emergent (Parameswaran & Whinston, 2007). The dichotomy between these perspectives of high flexibility and rigid control in governance, and its relationship to members’ engagement is captured in author Daniel Pink’s (2011) statement:

Human beings have an innate drive to be autonomous, self-determined and connected to one another. And when that drive is liberated, people achieve more and live richer lives. The opposite of autonomy is control. And since they sit at different poles of the behavioral compass, they point us to different destinations. Control leads to compliance; autonomy leads to engagement. (Chapter 3, paragraph 8).

How, then, does alignment of control and autonomy take place, and how is the tension between reification of policy and brokering of knowledge managed?

**Cultivation orientation and the core group.** The answer to this question varies; In fact, the governance structure of a community seems to be as unique as its purpose and membership. When a community wishes to have more direction than what can be accomplished through a completely self-organized structure, the community has a cultivation orientation, with a core group having the responsibility of cultivating (Wenger et al., 2009). The core group moves the community along its learning agenda and, as the community matures, becomes auxiliaries to community managers. The core group has the responsibility to “build a fire in the center of the community that will draw people to its heat” (p. 58)—the core has, as those who volunteer knowledge in Usenet groups, a strong desire to be a part of their CoP.

Depending on the type of community, cultivators might facilitate conversations; convene meetings; organize activities; collect, edit, or produce resources; connect members, or generally keep a pulse on the health of the community and encourage participation. Wenger et al. (2009) list four main variants in how cultivators achieve their roles: through a democratic process, a strong core group that is emergent, internal coordination managed by a small team, and external facilitation. The emergent, democratic, and internal coordination models are explored, as well as a fourth model sometimes found in online communities: the meritocracy. Each model is explained and the prominent roles in supporting these structures are examined.

**Emergent structure.** Stewart Brand and Larry Brilliant began the Whole Earth 'Lectronic Link, in what they hoped would be a vehicle for social change, as a bulletin board system with a microcomputer, modems, and 700 users. The Whole Earth 'Lectronic Link was intended to be a self-sustaining system that would emerge

spontaneously with low rules, high tone, and a community memory. Brand and Brilliant planned to design a free community that made a profit, one that was self-governing and self-designed, and one that would provide an open-minded universe for its participants. Despite that the Whole Earth 'Lectronic Link was intended to be self-governing; there emerged a group of managers (called hosts) who, with the community owners, formed a loose governing body. Hosts welcomed newcomers, cleaned up old discussions, and kept a degree of order when discussions became too heated. It was also determined through this social experiment that the membership sometimes determined that action needed to be taken against individuals—such as recall or impeachment. In these instances the governing body and structure was necessary in enforcing such action (Coate, 1992; Rheingold, 2000).

Much as with self-governing policies in the Whole Earth 'Lectronic Link, the founding principle of Wikipedia, Ignore all Rules might be construed as an invitation to anarchy. However, “pursuing the ‘policyless’ ideal that [the Wikipedia model] presents is a pipedream” (Butler et. al., 2008, p. 1108); a descriptive study of Wikipedia’s policies and rules found that even though the founding principle was simple, it generated 248 page entries in Wikipedia Guidelines, and the page devoted to explaining the Ignore all Rules policy refers to at least seven other documents within the site. Rules and policies within Wikipedia (as cited in Butler et al., 2008) were found that relate to:

- organization and coordination of work,
- evolving, competing entities (rules are always in the process of negotiation, which creates membership attention and results in the creation of more rules),

- external signals [rules imposed from entities outside of the community such as copyright laws],
- internal signals [e.g., civility policy],
- negotiated settlements and trophies
- control mechanisms [giving certain individuals access to more community tools and/or resources than ordinary members. (p. 1102)

**Possible roles in an emergent governance structure.** In the Whole Earth 'Lectronic Link community, hosts were intended to be much like a host at a party. They concentrated on establishing a tone and handling their attitudes and others' behavior. "Hosts catalyze, facilitate, nurture—and get outta the way" (Rheingold, n.d., p. 1)

In Wikipedia, there are at least four types of roles: editors, administrators, bureaucrats, and developers. Any member of the Wikipedia community can make a contribution to a page, and anyone who contributes is known as an editor. (Wikipedia: user access levels, n.d.). As discussed earlier in this paper, in their early stages of membership, editors make simple changes. However, their behavior can become more complex as they gain experience and coordinate with other editors.

A study of editors' actions in Wikipedia demonstrates the importance of coordination among editors in producing content entries (Kittur & Kraut, 2008). Six Wikipedia articles were evaluated by collecting users' ratings to measure their quality. The number of editors involved and the type of coordination that they employed was considered to determine if larger numbers resulted in better articles. Explicit coordination is done on Wikipedia through planning specific tasks on discussion pages, where work is evenly divided, and negotiation of structure and standards for the article takes place. In

implicit coordination, a few individuals do most of the work, but many editors might make contributions. Findings showed that either type of coordination was especially important in an article's early life. Explicit coordination, requiring high synchronization, was found to work best with small groups of editors. The number of editors working on an article using implicit coordination during a 6 month period was positively associated with article quality, indicating that implicit coordination might scale better with size. This indicates that a small group does the heavy lifting, but it is important to have many people making small contributions.

While it is beneficial to engage many members in participation in an online community, as the number of editors within Wikipedia grew, so did editing wars and incidences of vandalism on the site. It became necessary to grant special privileges to certain volunteers in the community to monitor the site for abuse. Members who are granted this level of control are called administrators and are granted permission to use tools such as deleting entries, locking or preventing changes to pages that are frequently vandalized, moving pages when there are name conflicts, and editing the front page (Burke & Kraut, 2008). Gaining administrative status is not difficult (Bryant et al., 2005), but administrators go through a weeklong scrutiny whereby the community builds consensus about candidates' trustworthiness and experience (Burke & Kraut, 2008).

Bureaucrats, a third role in Wikipedia, are granted another privilege on top of those granted to administrators: They are able to appoint administrators and other bureaucrats within a specific project. A fourth role in Wikipedia is that of developer. Developers write the software and administer the servers for the community (Reagle, 2007). While it appears that there are many levels of control within Wikipedia, the intent

was not to create a hierarchical structure. All members, regardless of their role, are encouraged to keep a neutral point of view and to focus on increasing engagement and contributions from members in the community.

**Democratic structure.** Debian is an open source software development community of approximately 3,000 members. Debian's governance structure has emerged throughout a period of years, starting with no governance structure, moving from an autocracy to meritocracy, then to an organizational leadership that is determined by democratic vote. In a study that used ethnographic methods combined with 13 years of archival data to examine how a bureaucratic process can be introduced in a community setting, researchers found evidence that community members viewed a limited form of bureaucracy as enabling, rather than being coercive (O'Mahony & Ferraro, 2007). After going through several processes, the final stabilized governance form allows limited positional power (power lies with the position, not the individual) granted through democratic votes. In Debian, members in these positions have no power over content, but work to resolve ambiguous situations that arise. As Wenger et al. (2009) suggested, these leaders act as knowledge brokers—concentrating on consensus building rather than autocratic rule.

**Possible roles in a democratic structure.** Roles in Debian include the project leader, project secretary, software release coordinator, developer accounts manager, and technical committee members. The project leader's main role is to coordinate a project and to motivate the people working on it. The release coordinator shepherds the project to closure and releases the finished project. The developer accounts manager allocates the account rights to the project, and members of the technical committee resolve disputes in

the technical domain, such as what software and what standards are to be used (O'Mahony & Ferraro, 2007).

**Internal coordination.** Company Command is an online community formed in 2000 for company commanders in the U.S. Army and uses Wenger's (1999) concepts of CoPs as a framework (Dixon et al., 2005). In Company Command, topic leads are a core group that takes responsibility for particular topics and echoes the responsibilities of the community coordinator in Wenger's et al. (2009) model; its members create a purpose for the group and define its visions, values, and boundaries.

**Possible roles in an internal coordination model.** The core group consists of roles such as Contributor, Connector, Facilitator, Social Catalyst, and Steward. The contributor brings expertise gained through practice to the community. The Connector acts as a broker between communities, connecting people to people or people to resources and taking community needs to the site manager(s). The Facilitator stimulates conversation, sometimes by posting provocative comments. The Social Catalysts greet and introduce the site to new community members. Stewards act as quality control for the community. They monitor where there might be opportunities to develop relationships and improve access to resources. Because company commanders rotate out of their roles on a regular basis, they take on the responsibility of identifying and recruiting likely replacements—those who have technical knowledge, want to contribute to their profession, and care about the community. These members are volunteers, but they are selected intentionally for their role in the community (Dixon, 2007).

**Meritocratic structure.** Slashdot, a news and commentary site that focuses on technology, runs on a system of “distributed moderation” (Lampe & Resnick, 2004, p. 1)

in which moderators are chosen through a merit system. Distributed moderation is a method of regulating behavior in large-scale conversation through the addition or subtraction of rating points to member contributions. Thus, moderators have the ability to influence the discussion direction by choosing which topics to make visible. In a study that researched usage logs for a 2-month period on Slashdot, researchers found both advantages and disadvantages to this system of governance. While distributed moderation encouraged widespread participation, broad consensus, and offered information of potential value to members, it is a slow process, with moderators having limited timely impact on ratings. Mostly because of slowness and the limited number of editor actions in this system, moderators are not able to respond to many posts. The result is often uneven treatment of comments in the community (Lampe & Resnick, 2004).

**Possible roles in a meritocratic structure.** In Slashdot, paid editors post a summary for each of about two-dozen stories per day. Members are invited to leave comments, and other members rate these comments on a scale of 1 to 5. Moderators are able to add or subtract ratings points on various articles, but are limited to the number of ratings they can make. Not only do moderators rate others' contributions, they achieved their status by accumulating positive ratings of their own work—moderating comments, reading comments, and postings (Lampe & Resnick, 2004).

**Constellations of communities and the coordinating community.** A constellation is a set of multiple communities related by organization affiliation, subject matter, or application (Wenger et al., 2009). Constellations occur sometimes to keep groups at a manageable size, but also because of their focus. They are marked by common vocabulary, experiences, and style. Ravelry.com may be considered a

constellation, since many of the groups within Ravelry are communities in their own right. In particular, they speak their own language, have a predefined interest that allows quick discussion setup, and have shared stories and lore.

However, these common qualities that bind members of communities together can create boundaries that keep others out. Newcomers are essential elements in the cycle of community functioning, and boundaries make it difficult to allow new members to join (Dixon et al., 2005). Community coordinators can act as brokers to facilitate exchanges across such boundaries, and are usually emergent or selected from a group of well-respected members by the management team (Wenger et al., 2002; 2009). Because coordinators have the responsibility of caring for and tending the entire community, they might require support in the form of a coordinating community. The coordinating community helps to assess the health of the whole community, align systems, share ideas, and provide personal encouragement to coordinators and to the entire community (Dixon, 2007; Wenger et al., 2002). In Company Command, the coordinating community formalizes its support through yearly meetings where its members celebrate their successes and discuss community needs (Dixon, 2007).

### **Roles to Support Participation and Governance in Ravelry.com**

Within Ravelry.com, the participation structures include show and tell, conversation, and information search as well as a solid, well-functioning technological infrastructure. It is not surprising, then, that the majority of volunteers within the site play a role in making these arrangements work. Volunteer roles that are listed within the Ravelry site are Help Chat volunteers, Wiki Editors and Bug Trackers, Ravelry Editors, Local Yarn Shop Editors, Welcome Wagon volunteers, BobBoosters, This Week in

Ravelry volunteers, Design Donors, and Moderators. Potentially, any Ravelry member can volunteer in these positions, and the responsibilities of members in each of these groups are listed below:

1. Help Chat volunteers—these volunteers man a synchronous chat room and help members with technical issues on the site. They go through a step-by-step procedure with visitors and if they are unable to help resolve the problem, they refer them to others who have access to more advanced tools.
2. Wiki Editors and Bug Trackers—these volunteers edit the Ravelry Wiki and track bug reports. They also promote ideas for new technical features.
3. Editors (Yarn and Pattern databases)—Volunteer editors keep Ravelry's information complete, up-to-date, and clean. They work with community members to fix errors in pattern-yarn entries.
4. Local Yarn Shop Editors—Local Yarn Shop editors help with additions and corrections to yarn shops listed in the site's directory.
5. Welcome Wagon volunteers—each volunteer in the Welcome Wagon is responsible for greeting new members whose name begins with a specific letter of the alphabet. Welcome Wagon volunteers send out a template e-mail message to each new member through Ravelry's personal messaging system that describes the site's features and where to locate resources.
6. BobBoosters—a description of this group given on its Ravelry page states: Cheerleaders for Ravelry! Bob Supporters! Enthusiastic people who want to spread the Ravelry fun and goodness and huggnz. Bob the dog is the site owners' Boston Terrier and the Ravelry mascot.

7. This Week in Ravelry volunteers—These volunteers search Ravelry forums find funny posts, collect information from various groups, and locate craft news to be published in the community's weekly newsletter.
8. Design Donors—Volunteers donate their design skills to make badges or banners for various groups in Ravelry.
9. Moderators—There are more than 24,000 groups listed on the site, but Ravelry owners estimate that about 5,000 of these are active (the exact number of active groups is difficult to determine since inactive groups are rarely removed from the site). Each group must have at least one moderator. Moderators have access to tools within the site to manage their discussion groups. Examples of moderator actions are whooshing threads (moving posts to a forum that better fits the topic), editing thread titles and adding tags, adding thread summaries, keeping threads at the top of a forum, and locking threads to prevent further replies. Moderators can mark threads as heated, using a red, angry smiley emoticon 😡. Moderators can archive threads, and are able to edit individual posts to correct links or formatting, but are not to alter informational content of posts that are not theirs. Moderator guidelines in Ravelry.com are fairly minimal and emphasize politeness, impartial treatment of members, and being a good role model. (Contribute to Ravelry, n.d.)

Most volunteers who work to support participation within the Ravelry community make small contributions to the site. These volunteers are loosely organized, their main form of organization being through a unique group established for each volunteer category. In the group, they can discuss questions about technical features, deal with

various problems, or socialize with others who are in the same role. Each of these groups has its own team of moderators and administrators, ranging in number from three to 14. These moderators and administrators, because of their positions, are automatically members of the support group for moderators, the Mod Squad (Forum moderator and administrator tools and guidelines, 2013).

Governance within the Ravelry community seems to have a mixed structure. There are many aspects that appear completely self-organized, for which members are allowed to form groups and post projects with little interference. Each group, whether social or technical, is able to make its own set of rules as long as the group also conforms to the overall community rules. Groups are formed for discussion among members and can be created by anyone, as long as there are three or more members who have an interest, and at least one person who will act as an administrator and moderator (Starting and running your own group, 2012).

However, there are indications that the governance model for Ravelry has an internal coordination orientation as well. Large-scale discussion, as noted in Chapter One, must be supported by guidelines that are public, and then must have a mechanism in place to enforce these policies. While each group is able to make its own rules, the groups must conform to the overall community guidelines. The mechanism for enforcement is that of the group moderator(s). The community guidelines (APPENDIX A) are fairly general, and emphasize courtesy and the need to respect members' privacy, while group guidelines may be more restrictive (that is, no political discussions, no religious discussions, no sexually explicit topics). Although it is unclear whether the entire community was involved in the community guidelines negotiation, it is evident that the

policies were created by those who are familiar with the cultural values for a hobby group focused on needlework, and that community members would appreciate such policies. In a study of 12 discussion groups, 576 messages were analyzed to determine the effect of politeness or rudeness on conversation. In quilting hobby groups, a hobby interest that many members in Ravelry share, there was a very strong perception of politeness. Not only were messages found to be more polite than many of the other groups that were examined (only the math-help group were more polite), there was evidence that polite messages in quilting groups received more replies (Burke, 2008). Thus, in order for members to feel comfortable and engage with others in the Ravelry community, it is likely that politeness was stressed as a community goal and decided internally that it should be a foundational community value.

The governance structure, then, follows a pattern of local control, with the group moderator(s) being responsible for most actions. While smaller-group moderators might not yield much influence, there are larger groups that have the potential of impacting behavior of many thousands of members. Each group moderator is automatically a member of the Mod Squad, a group formed to provide support, encouragement, and guidelines in the performance of its duties. Because of their involvement in this group, members' interaction could have a normative effect on other moderators. The seven Mod Squad moderators consist of five long-time moderators of the Main 6 forums, one former moderator of the Main 6, along with one full-time staff member. The four newest Main 6 moderators, in their role only for a few months at this writing, do not yet help in moderating the Mod Squad (Mod Squad, n.d.)

Aside from the Main 6 forums, there are about 5,000 active groups within the Ravelry community, ranging in size from five to about 17,000 members. These collections have been formed for both social and technical purposes and people join voluntarily because of interest. However, the Main 6 forums are different from most groups within the community. All 3 million Ravelry members are members of the Main 6 and these discussion groups are the only ones that appear automatically on every member's forum page. During this study, there were nine individuals who shared the responsibility of coordinating all of the Main 6, which contain the following groups: (a) For the Love of Ravelry, a forum for bugs, feature suggestions, and questions about the site; (b) Patterns; (c) Techniques; (d) Yarn and Fiber; (e) Needlework News and Events; and (f) Tools and Equipment. These six groups share a set of rules that might be more stringent than those in other groups (e.g., no religious or political posts) and were negotiated by the Main 6 moderator group. These moderators might act as exemplars in the community in administration and moderation practices and in how Ravelry members are expected to behave, since these groups are usually a member's introduction to the group structure within Ravelry. Aside from moderating the Main 6, these same individuals participate at a high level of engagement, some moderating such groups as Help with Ravelry, WikiEditorsAndBugTrackers, and the Mod Squad (Help with Ravelry, n.d.; Wiki Editors and Bug Tracker, n.d.; Mod Squad, n.d.).

It is unclear how the original Main 6 moderators were chosen, but it was not through a democratic process. In a conversation with site founders, it was stated that they might have been chosen based on the site owners' trust in their abilities, "There are tiers...there are certain things that are sort of dangerous enough...that only certain people

can do” (C. Forbes, personal conversation, April 2, 2009). It was a process that was still evolving in 2009 when Casey stated, “We’re still deciding, what should only we [the owners] be able to do, what should 100 or 500 people be able to do, or what should everyone be able to do.” However, the process became more visible in November 2011, when four new moderators for the Main 6 were chosen. On one of the Main 6 forums, For the Love of Ravelry, an announcement was posted that the community was searching for new volunteers. In this discussion thread, some of the Main 6 moderators shared what they do as moderators and how much time they might be expected to devote to the job. People who were interested in becoming a Main 6 moderator were to signal their interest, and then new participants were chosen based on input from existing Main 6 moderators and the site owners. Although the announcement was open to everyone and more than 100 Ravelry members applied, the selection criteria were not shared, but were determined by processes that the existing Main 6 moderators controlled, as evidenced in a thread posting by site owner Casey: “The moderators are going to have a tough time narrowing down this list” (Forbes, 2011a).

The moderators of the Main 6 could be argued to be part of a coordinating community of moderators for many reasons: because of the trust that the site owners have in them; because as moderators of the site’s largest groups, they potentially wield broad influence in the community; because they seem engaged in activities that coordinate other coordinators; and because they form a social group. As such, this coordinating group would be expected to have a practice that establishes it as a community in its own right.

## **Summary**

Successful communities have participation structures that allow for large volumes of high quality exchange. In order to make participants feel secure in this type of exchange, it is important to have arrangements in place that give them the tools to facilitate exchanges. Ravelry.com has incorporated means of participation that have been shown throughout hundreds of generations to support textile handcrafters: show and tell, conversation, and information search, and the technical infrastructure to make resources available to even the most technically inexperienced user. The mechanisms in place in the Ravelry.com site allow a great deal of self-organization and give members a sense of control, allowing them to feel more a part of the community.

However, when communities get to a certain size, it is necessary to have a core group that oversees coordination and other policies. These governance structures in online communities work best when they have limited control and are decentralized. The advantages of this type of governance system are that it scales rapidly and is highly dynamic. Disadvantages are the possibilities that it becomes a breeding ground for subversiveness and instability. However, despite these disadvantages, the soft types of governance structures, those that are light on enforcement, often survive (Parameswaran & Whinston, 2007). The governance structure in Ravelry.com seems to be mostly that of decentralized control, but one that is managed by a core coordinating community that was selected by site managers because they trusted their abilities.

The moderators of large, active groups were examined in the CoP framework as a community within the larger Ravelry community. Their practice would encompass acting as brokers (i.e., sharing information across boundaries) and technology stewards

supporting and assessing the health of the community, soliciting and providing feedback to site managers, and suggesting new technologies and technological features. They would also be expected to have an influence in the community's core values, acting as auxiliaries to the paid staff and site owners.

## **Chapter Three: Research Design**

### **Overview**

This study examines moderation in massive online communities using Ravelry.com as an example. Ravelry is a site that was established in 2007 to provide knitters and crocheters information about their crafts. In a little more than 5 years, the site has grown to more than 3 million international users, is still growing at a phenomenal rate, and is ranked among the 2,500 most active sites in the United States by Quantcast.com (Quantcast.ravelry.com, 2013). Ravelry provides fiber-crafters with a user-contributed database of close to 8 million projects and more than 5,000 active discussion groups. Volunteers from the community moderate these groups, ranging in size from two members to 3 million members. Ravelry is, therefore, an ideal environment in which to study how volunteers organize, and how they work to provide a flexible structure for information sharing that allows for rapid growth.

In the previous section, the frameworks for CoPs and serious leisure were presented, along with a description of the Ravelry.com community and its various components. This section describes the research design for the study, its rationale, and how it was implemented. The study investigates volunteer moderators' roles in participation and governance structures in Ravelry.com that allow for sustained large-scale growth. In particular the following research questions were addressed:

1. How do members come to be moderators?
  - a. What benefits accrue to them as a result of being moderators?
  - b. What is their relationship with/to other moderators?

2. What role do moderators in large scale groups play in:
  - a. Maintaining participation?
  - b. Maintaining governance structures in a large-scale, complex, virtual CoP of which Ravelry is an essential case?
3. Is there an emerging practice of large-scale moderation?

## **Research Design**

The research design for this study is a mixed-methods case study. A case study involves detailed and intensive examination of a single person, event, organization, or place (Bryman & Bell, 2003), in this case the Ravelry.com community. Mixed-methods research uses both quantitative and qualitative methods, employing different strategies to crosscheck the results of each. In this study, the design employed both survey research, to gather a body of quantifiable data, and qualitative interviews, to obtain a more detailed picture of what volunteer moderators do and feel.

**Rationale for a mixed-methods case study.** Case study design is ideal for researching contemporary phenomena, such as successful large-scale conversation in online communities, and is useful in instances where there is a lack of control on the part of the researcher (Yin, 2002). A descriptive method, in this case interviews, allows participants to be studied in a natural setting with a holistic view that focuses on relationships and processes (Denscombe, 2010). The survey research, on the other hand, can provide a broad look at many participants and is intended to reveal larger patterns that might not be obtained from interviews (Bryman & Bell, 2003).

**Appropriateness of research methods for this study.** Knowledge of tasks that moderators perform and the perceived importance of these functions are necessary to

achieve a complete picture of the role of moderation in this really large self-organized community. In addition, in order to determine if large-scale moderation in the Ravelry community constitutes a practice, it is desirable to see if moderators of large groups within Ravelry meet Wenger's (1999) definition of a community of practice. In both instances, it is advantageous to obtain a rich data set to both explore and confirm observed patterns in moderators' roles. Such a data set can best be acquired through reaching out to a large audience and obtaining multiple perspectives to understand fully the broad activity of large-scale moderating. An online survey (see APPENDIX B) was used to allow access to a larger audience than interviews alone, and the use of a survey with a larger pool of participants guaranteed that respondents could remain completely anonymous, if they so chose.

It was also desirable to view the social world of Ravelry.com through the eyes of the moderators, who potentially manage more than 3 million community members. The study was designed to obtain a detailed account of the community from the moderators who are not seen on the surface. Such an orientation in research indicated a qualitative study, or one that places an emphasis on the analysis of words or visual data. The diverse research methods associated with qualitative studies are usually ethnography (participant observation), qualitative interviewing, focus groups, language-based approaches to the collection of qualitative data, and collection and analysis of texts (Denscombe, 2010). It was decided to use moderators' qualitative interviews in this study to explore themes in depth, and to allow individual moderators to tell their own story.

Thus, the use of mixed methods in this study resulted in the collection of both quantitative and qualitative data for analysis. In qualitative research, theory often drives

the formulation of study expectations. In this particular case, the literature on online moderating and CoPs guided the development of survey questions (see APPENDIX C) and a priori categories for interviews and open-ended survey responses (see APPENDIX D). However, adding a quantitative methodology to the study also served to aid the researcher in discerning if there were other, unexpected theories that might arise (Bryman & Bell, 2003). This led to the collection and analysis of data to be done sequentially, with preliminary analysis in Phase I to shape the areas of exploration for Phase II. Phase II results were then used to modify the coding schema for both Phase II interviews and Phase I open-ended responses.

### **Data Collection Phase I: Survey of Ravelry Moderators**

The first phase, that of collecting quantifiable data, was conducted through an online survey of Ravelry moderators who manage large, active groups. The survey was available to Ravelry moderators for a 2 week period beginning April 12, 2012. The groups that met the study's criteria were identified through a search function on the Ravelry site that returned a listing of groups, sorted in order of posts per day. Along with group names, the search returned a short description for each group; the number of registered members belonging to the group, and the date the group was established.

**Population.** In order to define the population of interest for this study, it is necessary to understand group organization within the community. Anyone may form a group within Ravelry; however, all 3 million Ravelers belong to a default set of forums, known within the community as the Main 6. The Main 6 groups are as follows: (a) For the Love of Ravelry, a forum for bugs, feature suggestions, and questions about the site; (b) Patterns; (c) Techniques; (d) Yarn and Fiber; (e) Needlework News and Events; and

(f) Tools and Equipment. Although casual conversation occurs in these main forums, their main purpose is craft related, or in the case of For the Love of Ravelry, Ravelry-community oriented. Other Ravelry groups are formed based on interest, some related to the fiber arts and some not. A wide range of group sizes within Ravelry exists; at the time the study was conducted, there were eight groups, aside from the Main 6, with more than 10,000 members. However, it is possible for groups to have as few as two members. Groups come and go; there are more than 26,000 registered groups, but the site owners estimate that only about 5,000 of them are active. Each group must designate at least one member as moderator and one as administrator, and many groups have more than one administrator and moderator. The moderators and administrators of all of these groups are automatically members of the Mod Squad, a group formed to support Ravelry moderators.

The Mod Squad is a group consisting of all Ravelry moderators and administrators, with more than 3,800 members at the time the study was conducted. The Mod Squad's purpose is to provide a place where moderators can come and ask for advice, offer an opinion, or just discuss the daily challenges of running a group that is both fair and fun for its members. The Mod Squad, in turn, has a set of seven moderators, forming a coordinating group for all site moderators. All of the Mod Squad moderators are or have been long-standing moderators of the Main 6 forums. Specifically, members of the Mod Squad that lead groups having more than 3,000 registered members, and were among the top 100 most active groups, were the target population for this study.

**Survey respondents.** A purposive sample of moderators for survey was sought through the personal messaging system on the Ravelry site. This nonrandom sampling technique was chosen because the researcher had prior knowledge of the workings of groups in the community, and it allowed the researcher to follow an emergent and sequential trail of information about moderators' experiences. To locate these moderators, a search function within the site was employed to locate the most active groups in terms of posts per day. The search returned a listing of groups, along with a brief description of the group; the number of members registered in the group, and the date the group was founded. From a list of 100 groups, 22 groups were selected that had more than 3,000 registered members and had been formed for at least 1 year. By going to the groups' pages, a list of moderators was obtained and personal messages were sent to 157 of these moderators, inviting them to take the survey. The message contained a link to the online survey, along with an introductory message explaining the scope and purpose of the study (see APPENDIX E). Administration of the survey through an online link makes sense, since Ravelry moderators are accustomed to using such links in their day-to-day business on the site. The responses were recorded on the survey site and later downloaded for analysis. The survey was conducted for a 2 week period from April 21 to May 5, 2012.

**Instrumentation.** The survey consisted of 29 questions, one of which was a consent to participate in the study, and one that solicited consent for an interview (see APPENDIX B). The remaining 27 questions were divided into three sections: The Role of the Moderator (five questions), Moderating as a Practice (15 questions), and Moderator Demographics (seven questions). There were a mixture of open-ended

questions, multiple-choice single-answer questions, multiple-choice multiple-answer questions, and ranking questions. Most of the data collected was categorical in nature. A comment box, allowing participants to elaborate on or clarify their choices, followed most multiple-choice questions.

Questions in the survey were developed using possible roles identified in the literature on online moderators and in identifying characteristics of communities of practice (see APPENDIX C). The first question explained the purpose of the study, reassured participants of confidentiality, and gave them the researcher's contact information. Participants were then asked if they agreed or disagreed with taking part in the study. Skip logic was used to direct those who disagreed to the end of the survey. Following this introductory question, participants were directed to two forced-answer questions, asking participants to identify their group name, and the number of group(s) that they moderate. Answers to these questions were required so that the researcher could verify group information on the Ravelry site, and to have information about the group that could serve as a filter for other responses. Moderators then answered questions regarding general demographic information indicating how long they have been moderators, how much time they spend per week moderating, and what benefits they gain by being a moderator.

In asking survey respondents how they came to be Ravelry moderators, the closed-ended response choices were formed by the models for emergent community leadership (Rheingold, 2000), for volunteering as a serious leisure pursuit (Stebbins, 1982; 1996; 2001b), and for online communities of practice (Wenger et al., 2009). In the Role of the Moderator section of the survey, choices for roles were formed by the

literature on online communities, such as Host, Editor, Facilitator, Social Catalyst, Connector, Explicit or Implicit Coordinator and Contributor (Butler et al., 2008; Dixon, 2007; Reagle, 2007; Rheingold, 2000; Wenger et al., 2009). Questions in the Moderating as a Practice section came from the literature on online CoPs and focused on communication and coordination between moderators, gaining experience in performing moderating tasks, and common tools and reified practices used in moderation (Burke, 2008; Butler et al., 2008; Dixon, 2007; Kim, 2000; Parameswaran & Whinston, 2007; Wenger et al., 2009).

### **Data Collection Phase II: Interviews**

The second phase of the study consisted of interviews with moderators who organize and lead different types of discussion groups on Ravelry. Because this study was concerned with obtaining a detailed picture of what it is like to be a moderator of a large online group, it was necessary to choose people who were knowledgeable about their group culture and who were willing and able to communicate their experiences. Such individuals are often identified as key informants (LeCompte & Schensul, 1999).

**Selection of key informants.** As previously noted, participants for interviews were sought through the final question in the moderator survey. A total of 37 moderators responded who said they would be willing to be interviewed. To ensure that key informants were obtained, it was desirable to choose moderators from various types of groups, and with a variety of experience. The types of groups from which the survey respondents came were classified into five categories: social, craft-centered, knit-alongs, fan-based groups, or life-styles

Of the 37 respondents, 10 were selected for an invitation to interview. These 10 moderators represented all five types of groups, and respondents' experience ranged from less than a year as a moderator to having been a moderator since Ravelry's inception. The selected moderators were sent a personal message through Ravelry explaining why they had been contacted, and the purpose of the interviews (see APPENDIX F). The message also included study details and assured moderators that they would remain anonymous. An online interviewing method was used because the moderators were geographically dispersed, located in areas across the United States and in two European countries. Most of the interviews lasted for approximately 1 hour. The shortest was 45 minutes, and the longest was 90 minutes.

Seven moderators replied to the invitation and were interviewed, and one moderator was chosen to be interviewed who did not participate in the initial survey. Her group had slightly fewer than 3,000 registered members, and was not targeted for interview recruitment. However, in the process of conducting interviews, her group was mentioned by two different moderators as an interesting case because they had staged an internal moderator coup. Moderator 2 agreed to introduce me to one of the moderators who had participated in the revolt, and, thus, Moderator 8 became the last interviewee.

Questions were invited from the moderators before the interviews began. All but one of the moderators had already participated in the online survey; therefore, most were familiar with the type of information being sought. All spoke English, although for at least one moderator, English was not her first language. In all cases except one, digital voice recordings were made. The one exception, at the interviewee's request, was done through interactive, online text-based chat. Mod 7 gave her reasons for text as follows:

It may sound a little silly but I find it rather difficult to collect my thoughts and get them across well when speaking—my brain stumbles a lot that way, but in text I have a few extra moments to think of the right word before I go and say something.

That the moderator was more comfortable with text chat than with voice is not surprising, since these women spend a good deal of time communicating with Ravelry members through text. The text chat allowed for the same strategies as the voice-recorded interviews, including prompts and follow-up questions. For example, in discussing typical tasks that Moderator 7 performed, there was this exchange:

Researcher: How would you describe to someone who didn't know Ravelry what you do as a moderator for [your group]?

Moderator 7: Heh, well, I don't think it's too different from moderating anywhere, as it's not really knitting-fiber craft related. It's mostly a lot of sitting at my PC sighing wearily and occasionally thumping people upside the head gently to get them back on track. A lot of use of diplomacy, trying to say things in a way that wronged parties (or grumpy ones) won't be upset and we can just get back to everyone being in a good mood. And I have a big-image macros folder that I use to post silly pictures, which tends to both bring more attention to moderator posts as well as get a better response from people to whatever I've had to say.

Researcher: So on a usual day, you read posts and watch for trouble?

The interviews were semi structured, so no question list was sent to the moderators who were interviewed. However, some of the moderators communicated via

Ravelry's personal messaging system to ask if they could have questions in advance to prepare better for the interview. In these cases, the moderators received the following:

Hi [Moderator Name]!

I'm doing semi-structured interviews, so I don't have really definite questions.

This allows the conversation to go in areas that you think are important. Having said that, I'm interested in knowing how and why community members become volunteer moderators, what types of work they do as moderators, and their relationships with other moderators. I'd like to know how your group functions and what you do to keep it active and flourishing. I specifically chose groups that have more than 3,000 registered members and are among the top 100 most active groups in Ravelry in terms of posts per day. I also chose to interview moderators from groups that had different purposes (e.g., groups that are purely social, groups that focus on knitting techniques, etc.) to see if moderators' jobs are different depending on the type of group they moderate.

All of the moderators who participated were open in sharing their experiences and agreed to make themselves available for follow-up questions, although no follow-ups were necessary.

**Instrumentation.** Interviews were semi-structured. Keeping structure to a minimum by asking fairly general questions enhanced the opportunity for genuinely revealing the perspectives of the people being studied (Kvale, 1996). To determine a focus for questions, various frameworks were used. For example, the framework of serious leisure (Stebbins, 1982; 1996; 2001b) was used to explore why moderators were motivated to volunteer for their tasks and what benefits they might receive. Prompts (see

APPENDIX G) were formed to explore how moderators communicate with other moderators and their group members through an examination of the literature on community orientations and roles in CoPs (Dixon, 2007; Kim, 2000; Wenger et al., 2002, 2009). These prompts also assisted in determining what types of activities moderators perform, and what types of work they do to improve the community.

In shaping general areas of inquiry about how moderators in Ravelry govern, various models were used. Such models include emergent governance models, with few clearly defined moderator functions (Rheingold, 2000), and a CoP orientation, where a core group looks after the health of the community (Wenger et al. 2009). Other examples of online governance were the Wikipedia model (Bryant et al., 2005; Kittur & Kraut, 2008; Reagle, 2007), where there exist several layers of authority each having different duties, and democratic (O'Mahony & Ferraro, 2007) and meritocratic (Lampe & Resnick, 2004) structures for selecting community leaders.

In conducting interviews, the basic prompts were designed using the literature as described above; however, preliminary data analysis from survey responses influenced the direction for follow-up questions to issues raised in interview conversation. The questions presented to each moderator covered roughly the same topics, but they were often given in a different order and, depending on the moderator's experience, given different emphasis. The classifications of tasks contained in the a priori categories came from the literature on the responsibilities of moderators, including the importance of maintaining order in online forums and communities (see APPENDIX D).

Casual conversation related to question topics was allowed (Bryman & Bell, 2003). Room was allowed for moderators either to support or discount the standing

theories or to introduce topics that were not anticipated. Question characteristics were in line with the following nine types of questions: introducing, follow-up, probing, specifying, direct, indirect, structuring, silence, and interpreting.

### **Ethical Considerations**

There were minimal risks for human subjects in this study, the most likely being that of an imposition on participants' time. Survey participants were completely anonymous unless they consented to an interview. Interviewees were contacted through the Ravelry site's personal messaging systems and not through regular e-mail. Interviewees were initially identifiable only to the researcher by their Ravelry name, a pseudonym of their choice. However, through the course of interviews, many interviewees gave their real first names in their correspondence. Interviews were conducted using an online voice or text chat program and were recorded with the participants' permission. In reporting, all identifying marks were removed from the data and neither real names nor Ravelry names are used. To protect the moderators' anonymity, their group names are also kept confidential and the group purpose is only generally described. Those who were interviewed were presented with the risks and benefits associated with the study and asked for their consent for the researcher to use their responses. Any document analysis, such as an analysis of site pages that contain group rules and related discussion of these rules, was done through archival postings in threaded forums on a publicly available Web site.

### **Phase I Data Analysis: Close-Ended Survey Questions**

A total of 73 moderators responded to the survey link. Some moderators responded to certain questions and not others, so the total number of responses to each

question varied. Survey data was downloaded from the remote server and imported into spreadsheets. Descriptive statistics were generated for all variables. Such statistics include frequencies for nominal and ordinal data, mean, standard deviation, minimum, and maximum for quantitative data. Data tables and graphs were created.

**Validity check.** Subject matter experts in the field of online communities were asked to review the survey for congruity between the research goals and the survey questions. These experts were chosen based on the following criteria: (a) they possessed a terminal degree, (b) they had professional experience with online communities, and (c) they had a research background that encompassed survey methodology. In addition to matching research goals with survey items, the subject matter experts were asked to examine individual survey items for the following deficiencies: negative terms, broad or vague concepts, qualifying clauses at the end of questions, double-barreled questions, suggestive or leading questions, complex questions, and lengthy response categories. Feedback from the subject matter experts impacted the survey in various ways. For example, the experts suggested reordering some questions, collapsing the number of options for tasks performed, simplifying language by eliminating jargon, and simplifying questions that contained or statements with two simpler questions.

**Reliability.** The online survey was tested by a purposive sample of five Ravelry users across browser platforms. These users were e-mailed a link and asked to test the survey on their home computers, both Mac and Windows-based, and on various browsers such as Internet Explorer, Firefox, and Safari. Those who had mobile devices, such as Android phones, iPhones, and iPads were asked to test the survey on these machines as well. The testers were chosen from a local knitting group to which the researcher

belonged and were provided a 1 week window for responses. Testers provided feedback on clarity of questions and ease of use of the survey. There were minor changes to the wording of questions based on tester feedback, but no modifications were made to the delivery method of the survey.

## **Phase II Data Analysis: Open-Ended Survey Questions and Interviews**

In analyzing the free response questions and comments in the survey, the Interpretive Phenomenological Analysis approach, one that is considered especially helpful in studying CoPs, was employed (Guldberg & Mackness, 2009). This method was used in analyzing interview responses as well. Interpretive Phenomenological Analysis categorizes responses into certain themes. Open-ended survey responses and interviews were coded using the a priori categories identified through the literature on moderator behavior, but the researcher allowed for other, emergent themes. The categories created in advance were based on the research questions and on the frameworks of volunteering in serious leisure activities and CoPs. The emergent themes arose through preliminary analysis of survey data and spontaneously from the interviews.

After each interview was concluded, notes and/or transcripts were compiled and topics were matched to a priori categories and other emergent themes. Interesting quotes that exemplified these categories and themes were noted. At the end of the interview process, the initial coding list grew to 33 categories. A tally sheet was made that tracked topics that moderators mentioned according to the a priori categories and emergent themes. As these tallies were compiled, it became apparent that responses to some of the categories were sparse. This unevenness of responses prompted a collapse of the categories into five major themes with representative examples that define the themes.

The five major themes, along with examples, are listed below:

1. Motivation
  - a. Personal
  - b. Altruistic
2. Encouraging Participation
  - a. Coordinating events
  - b. Reading or replying to threads to stimulate discussion
  - c. Establishing a group culture
3. Housekeeping
4. Governance
  - a. Creating group rules
  - b. Policing and resolving conflicts
  - c. Communicating or coordinating with other moderators
5. Changes in Moderating
  - a. Changes as a result of group growth
  - b. Moderating intensity waxes and wanes

With the new coding schema, the moderator notes were then rescored with the new codes and retallied. The resulting major codes were then well represented in interviewees' responses (see Table 2). This coding schema was then used to refine survey results through its application to comments left on open-ended survey questions.

Table 2

*Major Coding Themes by Interviewed Moderator*

Themes	Mod 1	Mod 2	Mod 3	Mod 4	Mod 5	Mod 6	Mod 7	Mod 8	Total
Motivation	X	X	X	X	X	X	X	X	8
Encouraging Participation	X	X	X	X	X	X	X	X	8
Housekeeping			X	X		X			3
Governance	X	X	X	X	X	X	X	X	8
Changes in Moderating		X	X	X	X	X	X	X	7

**Validity and reliability.** It was important that the interviews used to obtain qualitative information not be too structured to avoid introducing the researcher's bias and to reflect a phenomenological philosophy. Phenomenology requires that the researcher act as a detached observer, suspending or neutralizing all intentionalities so that she may distinguish between a thing and its appearances (Sokolowski, 2000). Such practice is called a phenomenological reduction, which can be pictured as a bracketing. Bracketing is an attempt to place any foreknowledge or assumptions about the phenomenon in question aside to obtain an unprejudiced picture (LeCompte & Schensul, 1999). As stated previously, keeping structure to a minimum, using follow-up questions, and allowing moderators to engage in casual conversation minimized researcher bias. Gathering data on the same topic from different sources can help establish the study's credibility or internal validity (Bryman & Bell, 2003; LeCompte & Schensul, 1999). Therefore, collecting information from both surveys and interviews was merited. External validity, or generalizability of the findings, might not be completely possible since this is an example of a specific group of people on one site. However, through a detailed description of the culture being studied, others might be able to make a judgment

on whether the findings from the interviews have any possibility of transfer. Records of interviews, transcripts, and all analysis decisions have been kept to achieve reliability in analysis of the interviews. These records ensure that peers could access this material for assurance that proper procedures have been followed (Bryman & Bell, 2003).

For category reliability in interview content analysis, objectivity was obtained by creating strict definition of categories. These definitions allow two separated individuals using them to obtain roughly the same results. This type of objectivity would aid greatly in replicating the study. By making rules about what content to include and exclude, and applying these rules consistently, systematic content analysis is achieved. Such systematic approaches are also intended to reduce bias by not allowing a researcher to choose only those topics that support her hypotheses. Expert analysis and usability testing, as discussed earlier, guaranteed content and construct validity for the online survey.

**Changes to the original study.** The original plan for this research was a phenomenological study of nine moderators of the Main 6 forums within Ravelry using interviews and forum content analysis. These nine individuals moderate the largest groups, are extremely active, and highly visible. However, this type of study was not possible, as none of the nine moderators consented to participate. The reasons for their unwillingness to be part of the study are not entirely clear, but the researcher has speculated that their hesitancy might have to do with the nature of their group: because there were only nine very visible people, it would be difficult for these moderators to be considered anonymous. One respondent was also concerned about the level of scrutiny to which she would be subjected in forum content analysis.

Fortunately, there are many groups that are quite large within the Ravelry community and multiple moderators organize them, so the study was restructured to broaden the pool of participants and to use information gathering that is more anonymous and less intrusive than forum content analysis. The re-structuring, as stated in the beginning of this section, used a mixed-methods approach to describe what moderators do, using an online survey to gather information as well as to solicit volunteer participants for interviews.

## **Chapter Four: Findings**

This study examines how a very large online community, with a wide range of cultural perspectives, manages to provide resources and a sense of kinship to its members. The focus of the community is a shared practice of fiber crafting, and as such provides an enormous database of member-contributed material. However, the site is more than a compilation of knitting and crocheting resources. The glue that holds members together are the community forums, which often have diverse purposes. As Mod 8 explained:

[Ravelry] is not just a wonderful resource for knitting, although it is...plenty of people may use the site [and probably do] as a resource, and never go near the forums...but the forums ARE the community

Ravelry's *Forum Moderator and Administrator Guidelines* provide generic information on expected moderator behavior. However, these guidelines cannot be expected to deliver specifics on how to organize and maintain groups with thousands of members, many of whom might not even share a native language. In addition, moderator actions and attitudes are often not explicit. As mentioned in the previous chapter, to understand motives and actions better, a survey was administered to attempt to obtain preliminary information from moderators on what they do, how they accomplish their tasks, and what inspires them to spend countless hours on these endeavors. Interviews were then conducted to crosscheck the survey findings and to explore better moderators' attitudes and behavior. Moderators' motivations and actions are many and varied, and are summarized in the following sections.

## **Survey Results**

The online survey consisted of 29 questions, the first being a consent to participate in the study and the last an agreement to be contacted for an interview (see APPENDIX B). Some were multiple-choice, single-answer questions, some were multiple-choice, multiple-answer questions, and many of these questions provided space for moderators to write in comments or other information that provided a better answer to the question than the forced-answer choices. In addition, there were three open-ended questions that asked moderators to explain what they do in their own words, and two ranking questions in which moderators were asked to rank the activities they performed in terms of time spent and again in terms of how important they were to the community. While 73 moderators agreed to take the survey, not all moderators answered all questions. The highest number of responses for any single question was 69, and the lowest was 52. The moderators who responded to the survey came from 22 groups having more than 3,000 members, so there were often several moderators from one group responding. The information obtained in this survey provided a broad look at moderators from different types of groups and allowed the researcher to identify preliminary patterns in moderator behavior.

**Question 1.** Survey question 1 was a consent to survey, which explained the purposes of the survey, a statement of confidentiality, and contact information for the researcher. All 73 respondents agreed to participate.

**Question 2.** Question 2 asked: How many groups do you currently moderate? Of the 73 respondents who agreed to the survey, 69 indicated the number of groups that they

moderate (see Table 3). There was a range in responses from one to more than six groups, with the mean number of groups moderated being more than 2.4.

Table 3

*How Many Groups Do You Currently Moderate?*

Answer Options	Response Percent	Response Count
1	40.6%	28
2	24.6%	17
3	14.5%	10
4	7.2%	5
5	1.4%	1
6 or more	11.6%	8
Total	99.9%	69
Missing data		4

*Note. n = 69.*

**Question 3.** Question 3 asked: If you moderate a single group, what is its name? If you moderate multiple groups, name the one that you believe provides the most challenges as a moderator. Of the 73 survey respondents, 67 specified their group name, representing 22 distinct groups having more than 3,000 members. From those names, it was determined that moderators spent most of their time leading groups that fell within five categories: life-style themed groups (18 respondents), fans of products or designers (16 respondents), casual conversation groups with a social emphasis (13 respondents), technical groups that help members improve their craft skills (10 respondents), and knit-alongs (10 respondents); All are groups in which the members knit projects together, much like virtual quilting bees.

**Question 4.** Question 4 asked: How long have you been a Ravelry moderator? Because the Ravelry community is only slightly more than 5 years old, it is not surprising that most of the moderators who responded to the survey had been moderating for a short

time: the most common level of experience was from 1 to 2 years, with a median of 2 to 3 years. However, there was an array of moderating experience represented, ranging from the very beginning of the Ravelry community (a little more than 5 years at the time of the survey) to less than 6 months (see Table 4).

Table 4

*How Long Have You Been a Ravelry Moderator?*

Answer Options	Response Percent	Response Count
Less than 6 months	7.4%	5
6 months to 1 year	16.2%	11
1 to 2 years	22.1%	15
2 to 3 years	19.1%	13
3 to 4 years	17.6%	12
4 to 5 years	13.2%	9
Since the beginning of Ravelry	4.4%	3
Total	100.0%	68
Missing data		5

Note. n = 68.

**Question 5.** Question 5 asked: How long have you been a moderator of the group you named in question 3? Answers to this question were similar to those in question 4, but there was a significant increase in the number of moderators who have been leading their large group for less than 6 months (see Table 5).

Table 5

*How long have you been a moderator of the group you named in question 4?*

Answer Options	Response Percent	Response Count
Less than 6 months	18.8%	13
6 months to 1 year	15.9%	11
1 to 2 years	20.3%	14
2 to 3 years	21.7%	15
3 to 4 years	14.5%	10
4 to 5 years	4.3%	3
Since the beginning of Ravelry	4.3%	3

(continued)

Answer Options	Response Percent	Response Count
Total	99.8%	69
Missing data		4

*Note.*  $n = 69$ .

**Question 6.** Question 6 asked: Moderators seem to have gotten their position because they were known by the group or by at least one moderator of the group. More than half of the moderators were asked to become moderators of their group by another moderator and another 32% became moderators after belonging to the group for a period of time. Only about 13% of respondents formed the groups themselves (see Table 6). Seven respondents left comments on this question, giving details on how they happened to become moderators. Five indicated that they were asked by other moderators or group founders, one volunteered when the group was first formed, and one volunteered for other organizational tasks with the group before taking a moderator position.

Table 6

*How Did You Become a Moderator-Administrator for the Group You Named in Question 4?*

Answer Options	Response Percent	Response Count
Formed the group, self-appointed	12.7%	8
Volunteered services as a moderator after belonging to the group for a period of time	31.7%	20
Was asked to become a moderator for a group by another moderator	58.7%	37
Was asked to become a moderator for a group by Ravelry owners	0.0%	0
Was asked to moderate the group by group members	0.0%	0
Other (please explain)		7
Total	103.1%*	65*
Missing data		10

*Note.*  $n = 63$ .

\*Percentages total more than 100% and responses are greater than  $n$  because respondents chose more than one answer.

**Question 7.** Question 7 asked: How much time per week (in hours) do you spend moderating your group(s)? Sixty-five moderators replied to this question, with a wide variation in answers. The average time spent was about 9.2 hours, with a standard deviation of 9 hours. The responses ranged from 0 to 45 hours per week.

**Question 8.** Question 8 asked: What personal benefits do you realize as volunteer moderator? Almost all survey respondents indicated that they volunteer as Ravelry moderators for altruistic reasons (see Table 7). Such reasons include helping Ravelry members learn new things, and promoting knowledge within their craft(s). In comments, respondents elaborated on some of these motives and gave additional reasons for moderating. Fourteen respondents indicated that they were motivated because they wanted to keep their groups going, 10 indicated that they moderated because it gave them opportunities to socialize with friends, one liked the opportunity to organize events, and seven were motivated by governance matters. These governance issues included steering the group's direction, keeping the peace, and team building within the group. One respondent, who is an employee of a business that sponsors a Ravelry group, was asked to moderate so that an in store person was on the moderating team.

Table 7

*What Personal Benefits Do You Realize as a Volunteer Moderator? Check All That Apply*

Answer Options	Response Percent	Response Count
I like to help other people learn new things.	96.2%	50
I like to promote and preserve knowledge in my craft.	73.1%	38
I learn new things in my craft by volunteering as a moderator.	50.0%	26
I am hoping to learn more about Ravelry by being a moderator.	19.2%	10

*(continued)*

Answer Options	Response Percent	Response Count
I am hoping that someday this will lead to a paid position on Ravelry.	5.8%	3
I am hoping that the skills I learn on Ravelry will lead to another type of paid position.	5.8%	3
I am hoping that my exposure on Ravelry will lead to sales of patterns or other fiber-related materials.	21.2%	11
Total	265.5%*	141*
Other (please specify)		33
Missing data		21

*Note.*  $n = 52$ .

\*Percentages total more than 100% and responses are greater than  $n$  because respondents chose more than one answer.

**Question 9.** Question 9 asked: What tasks do you perform as a moderator?

Almost all moderators responded that they communicate with other moderators, and a majority of moderators indicated that they resolved conflict, connected members to resources, edited posts, encouraged participation, and shared expertise in crafting (see Table 8). Relatively few moderators said that they shared expertise in moderating or provided suggestions on how to improve Ravelry.

Table 8

*What Tasks Do You Perform as a Moderator? Check All That Apply*

Answer Options	Response Percent	Response Count
Communicate with other moderators	96.7%	58
Conflict resolution	75.0%	45
Connect members to resources (resources could include other members who have specific knowledge)	78.3%	47
Editing posts	70.0%	42
Encouraging member participation	73.3%	44
Housekeeping (whooshing threads to a more appropriate forum, other cleanup)	75.0%	45
Policing (issuing warnings, locking threads, etc.)	68.3%	41

*(continued)*

Answer Options	Response Percent	Response Count
Providing suggestions on how to improve Ravelry	16.7%	10
Share expertise in moderating to other moderators	35.0%	21
Share expertise in your practice of crafting to other crafters	51.7%	31
Total ()	640%*	384*
Other (please specify)		18
Missing data		13

*Note.*  $n = 60$ .

\* Percentages total more than 100% and responses are greater than  $n$  because respondents chose more than one answer.

**Question 10.** Fifty-eight moderators ranked the tasks that they perform in terms of the amount of time they spent doing them (see Table 9). The type of task that was ranked highest most frequently was that of encouraging group members to participate in activities. These activities could be as diverse as taking part in knit-alongs or challenges, or simply being involved in group discussions. Communicating with other moderators was the task that was ranked most frequently, and received the highest number of second-place rankings. Similar in the number of times that they were ranked were conflict resolution, connecting members to resources, and housekeeping. The tasks ranked least frequently were suggesting improvements to Ravelry and sharing their expertise in moderating.

Table 9

*Using the Task List From Question 9, Please List the Top Five Tasks in Order of How Much Time You Spend on Them, With the Tasks That Take the Most Amount of Time First*

Tasks	Number of Times Ranked					Total times ranked
	First	Second	Third	Fourth	Fifth	
Communicate with other mods	7	15	8	7	6	43
Conflict resolution	2	6	8	8	8	32

(continued)

Tasks	Number of Times Ranked					Total times ranked
	First	Second	Third	Fourth	Fifth	
Connect members to resources	5	5	7	8	5	30
Editing posts	0	3	4	8	7	22
Encouraging member participation	21	3	2	5	3	34
Housekeeping	5	2	7	10	11	35
Policing	8	7	5	2	2	24
Suggesting improvements to Ravelry	0	0	2	0	0	2
Share expertise in moderating	1	0	0	0	1	2
Share expertise in crafting	2	9	7	3	2	23
Other	6	4	1	2	2	15

Note.  $n = 58$ .

**Question 11.** When moderators were asked to rank the tasks that they perform in terms of importance, there were some similarities to the rankings in terms of time spent, but also some differences (see Table 10). For instance, the highest number of first-place rankings was still in the encouraging participation category, but communicating with other moderators seemed to drop in terms of importance. Connecting members to resources received a fairly high number of first- and second-place rankings and this category and the conflict resolution category was similar in the total number of rankings that they received. In terms of importance, it seems that sharing expertise in moderating gained ground when compared to rankings in terms of time that moderators spend.

Table 10

*Using the Task List From Question 9, Please List the Top Five Tasks in Order of How Much Time You Spend on Them, With the Tasks That Take the Most Amount of Time First*

Tasks	Number of Times Ranked					Total times ranked
	First	Second	Third	Fourth	Fifth	
Communicate with other mods	7	15	8	7	6	43

(continued)

Tasks	Number of Times Ranked					Total times ranked
	First	Second	Third	Fourth	Fifth	
Conflict resolution	2	6	8	8	8	32
Connect members to resources	5	5	7	8	5	30
Editing posts	0	3	4	8	7	22
Encouraging member participation	21	3	2	5	3	34
Housekeeping	5	2	7	10	11	35
Policing	8	7	5	2	2	24
Suggesting improvements to Ravelry	0	0	2	0	0	2
Share expertise in moderating	1	0	0	0	1	2
Share expertise in crafting	2	9	7	3	2	23
Other	6	4	1	2	2	15

*Note.*  $n = 58$ .

**Question 12.** Question 12 asked: How would you describe your job of moderator to someone who asks what you do in this role? Fifty-seven moderators responded to this open-ended question. Some comments indicated more than one task-role. Moderators' responses were coded using the a priori categories that were created based on roles found in the literature (see APPENDIX D). The most frequently mentioned task was policing, with 37 responses. Specifically, moderators said that they police by enforcing policies, resolving conflicts, and generally keeping an eye on discussions to be sure that rules are being followed. With 29 responses, the second-highest activity fell into the Facilitator category. Facilitators are often given charge of groups and are responsible for stimulating discussion and encouraging participation (Borzillo et al., 2011; Dixon, 2007). This category also included responses related to coordination of knit-along activities. Ten moderators responded that they participated in Housekeeping activities by organizing materials, cleaning up threads, and formatting posts. Two moderators said they acted as Connectors by helping members locate resources, two replied that they served as Hosts in

their groups, one commented that she was a Contributor of expertise in her craft, and one was a Social Catalyst who welcomed new members to the group.

**Question 13.** Question 13 asked: What tips would you give to a new moderator? Fifty-seven moderators responded to this open-ended question. Some comments were complex and were coded to more than one category. The a priori categories used for Question 12 were not a good fit for most of these comments, but those formed at the conclusion of interviews worked better for this material. The majority of the replies to this question were related to advice on governing the group, with 47 comments coded to this category. Twenty responses were placed in the Encouraging Participation category. Three responses encouraged moderators to be motivated by having fun with their group. Two responses fell into the Changes in Moderating category by reminding moderators to avoid burnout and to not take on more work than they could handle.

**Question 14.** Question 14 asked: In your experience, do moderators communicate much with each other? Sixty respondents answered this question, with 85% indicating that yes, moderators do communicate with each other often. Twenty-two moderators left comments on to this question, 18 of which indicated that communication was usually related to group governance. Three stated that they communicate more in a social manner than in a business sense, and one moderator indicated that she felt that communication was more difficult in larger or contentious groups. Six other moderators echoed this sentiment by mentioning that the amount of communication varied from group to group, depending on size, activity, and group culture.

**Question 15.** Question 15 asked: If you contact another moderator for help, how do you usually initiate the conversation? Check those that are most common. Almost all

of the 53 respondents to this question said that they initiated conversations with other moderators through Ravelry's personal messaging system (see Table 11). Twenty-nine moderators left comments in the other category, sometimes listing more than one conversation strategy. Twenty-five other responses were related to the use of flags through Ravelry's Report Pages (see Figures 5 and 6).

Table 11

*Using the Task List From Question 9, Please List the Top Five Tasks in Order of Importance, With the Tasks That Are the Most Important First*

Tasks	Number of Times Ranked					Total times ranked
	First	Second	Third	Fourth	Fifth	
Communicate with other mods	2	7	6	6	8	29
Conflict resolution	10	4	6	7	6	33
Connect members to resources	10	11	7	3	3	34
Editing posts	0	1	3	4	5	13
Encouraging member participation	21	6	6	5	0	38
Housekeeping	1	4	5	10	8	28
Policing	4	5	7	3	4	23
Suggesting improvements to Ravelry	0	1	1	2	3	7
Share expertise in moderating	0	2	1	5	4	12
Share expertise in crafting	4	10	6	4	3	27
Other	3	1	2	1	1	8

*Note.* n = 56.

The screenshot shows the Ravelry website's report page. At the top, there is a navigation bar with links for 'my notebook', 'patterns', 'yarns', 'people', 'forums', 'groups', 'shop', and search functions. A message 'hiya, 6 new messages' is displayed. Below the navigation bar, there is a button 'join the flock'. A search bar with placeholder 'Reported user' and a 'Search' button is present. A note states: 'The following forum posts have been reported by Ravelers who have used the "report this post" button that appears in every thread. There are 5 open reports from the last 30 days.' Below this, a table lists 102 flagged posts. The columns include Report ID, Forum, Topic, Post, Author, Last flagged, Agree, Dis., Flags, and Closed status. The data is as follows:

Report	Forum	Topic	Post	Author	Last flagged	Agree	Dis.	Flags	Closed
107899		FULL - KNIT: Queen of Heart...	1		March 24 5:32 PM			1	✓
109416		FULL - KNIT: Hand Paint Hat	1		March 24 5:15 PM			1	✓
110707		CLOSED - KNIT: Evelyn Cable...	33		March 24 2:57 PM			1	✓
110705		CLOSED - KNIT: Puppy Newbor...	34		March 24 2:25 PM			1	✓
110701		FULL - KNIT: TF Mystery Socks	1		March 24 1:47 PM			1	✓
110699		FULL - KNIT: TF Mystery Socks	24		March 24 1:46 PM			1	✓
110676		FULL - KNIT: Paragon Lace S...	1		March 24 7:31 AM			1	✓
110672		CLOSED - KNIT: Beach Ball S...	267		March 24 6:06 AM			1	✓
110670		CLOSED - KNIT: Sunray Shawl	157		March 24 5:40 AM			1	✓
110669		FULL - KNIT: Rasta Velvet C...	1		March 24 3:24 AM			1	✓
110667		FULL - KNIT: Kendra Throw B...	1		March 24 2:39 AM	1	1	1	✓
110666		FULL - KNIT: Tartanya Blanket	1		March 24 2:39 AM			1	✓
110664		CLOSED - KNIT: Number 13 In...	127		March 24 2:31 AM			1	✓
110661		CLOSED - KNIT: Commuter Cowl	114		March 24 12:29 AM			1	✓

Figure 5. View of report page. From *ravelry.com*, (n.d.b). Copyright permission from permission holder.

The screenshot shows a detailed view of a closed report for post #110707. The top navigation bar and search bar are visible. The URL indicates the report has been closed. The report details section shows the post was reported by 'perfectdisplay' on March 25, 2014, at 2:57 PM for 'Group rule violation'. The comments section shows a message from 'perfectdisplay' stating 'yes, i would like to close the test.' The reported forum post is shown below, containing the same message. A link 'jump to this post' is at the bottom of the report area.

Figure 6. Closed report in report pages. From *ravelry.com*, (n.d.c). Copyright permission from permission holder.

When a member flags a post for rule violations, a personal message is sent to all group moderators, and then the moderators check the report pages to see the offending post. The report pages are only visible to moderators, and not to the general membership.

Many of those responding to use of Ravelry personal messaging for conversation might have been indicating messages that they receive through the report pages. Five other comments to this question were related to asynchronous methods outside of Ravelry, such as regular e-mail, Facebook, GoogleDocs, and Dropbox. Three comments indicated that moderators sometimes use synchronous methods such as text and telephone for conversation.

**Question 16.** Question 16 asked: If you interact with other moderator(s), how would you describe a typical interaction? Fifty-seven moderators responded to this question, with most indicating their conversations are brief. Of these, 54% specified that they communicate briefly about an issue using shorthand and jargon, while nearly 58% said they use a short series of running conversations in talking with each other (see Table 12). Fourteen moderators left comments on their communication style, 11 of them dealing with governance issues. Many of these comments were related to use of Ravelry's report pages. Two moderators stated that they communicate for fun or as friends. One moderator said that moderators in her group communicate about how they will share tasks, especially if a moderator needs to take time off.

Table 12

*If You Contact Another Moderator for Help, How Do You Usually Initiate The Conversation? Check Those That Are Most Common*

Answer Options	Response Percent	Response Count
E-mail outside of Ravelry	32.1%	17
Mod Squad discussion thread	9.4%	5
Discussion thread in a forum other than the Mod Squad	18.9%	10
Ravelry personal messaging	92.5%	49
Instant messaging outside of Ravelry	7.5%	4
Skype or other audio chat	1.9%	1

*(continued)*

Answer Options	Response Percent	Response Count
Telephone	7.5%	4
I don't contact other moderators	3.8%	2
Total	173.6%*	121*
Other (please specify)		29
Missing data		20

*Note.*  $n = 53$

\* Percentages total more than 100% and responses are greater than  $n$  because respondents chose more than one answer.

**Question 17.** Question 17 asked: If there is more than one moderator in your group, do moderators divide time-tasks that need to be done? Fifty-nine moderators responded to this question, with 64% affirming that they divide either time or tasks that need to be done (see Table 13). Only one moderator who responded was the sole moderator for her group. Sixteen comments left on this question indicated that in some groups, there is a specific delineation of tasks, sometimes depending on ability or skill. In two comments, group moderators indicated they are on duty at hours assigned, according to the time zone in which they live. In seven cases, moderators just jump in when they see an issue that needs to be addressed and the first moderator who sees something that needs to be done takes responsibility for it.

Table 13

*If You Interact With Other Moderator(s), How Would You Describe a Typical Interaction? Check All That Apply*

Answer Options	Response Percent	Response Count
A lengthy, detailed explanation of an issue with back-and-forth communication.	31.6%	18
A brief summary of a situation, using a lot of shorthand and terminology that the other moderator will understand	54.4%	31
A formal introduction of yourself and the problem-issue at hand	8.8%	5

*(continued)*

Answer Options	Response Percent	Response Count
A series of short conversations that seem to pick up as if there were no break in communications	57.9%	33
I don't normally interact with other moderators	5.3%	3
Total	158%*	104*
Other (please specify)		14
Missing data		16

*Note. n = 57.*

\* Percentages total more than 100% and responses are greater than *n* because respondents chose more than one answer.

**Question 18.** Question 18 asked: In your experience, do you find that most moderators agree on appropriate moderator actions? Sixty moderators replied to this question, with 95% answering yes and the other 5% saying they were not sure. Comments left on this question indicated that while moderators might not initially agree on an action, they confer and come to an agreement before action is taken. One comment indicated that they might not always agree on the action that is taken, but they always agree that action should be taken.

**Question 19.** Question 19 asked: In your experience, have the rules for moderating changed over time? Sixty moderators responded to this question, with 23% saying yes, 42% saying no, and 35% saying that they were not sure. Fourteen moderators replied with examples of changes and 12 of these had to do with governance issues. Of these 12 examples, all but one indicated that changes were a response to problems that arose in the group. Two responses indicated that moderating had changed as a result of growth of membership in the group.

**Question 20.** Question 20 asked: If you have other moderators in your group, do you all moderate in the same way? Sixty moderators answered this question, with 45% saying yes, 35% saying no, 18% saying they were not sure, and 2% (one respondent)

saying that she was the only moderator. In comments left by moderators to explain how moderators are different, all mentioned, that while they usually agree on actions, they do things differently either based on their personality or skills that they possess.

**Question 21.** Question 21 asked: Do you think that the way you moderate has changed over time? Fifty-nine moderators responded to this question, with 41% saying yes, the way they moderate has changed, and 48% saying that their moderating has not changed. Another 12% were not sure. In giving examples of how their moderating style has changed, eight moderators said that they are more comfortable making decisions than when they first started. Four moderators said that they spend less time, sometimes because they can copy answers to frequently asked questions. Four moderators said they were more flexible, while three moderators said they had become stricter. One said she was less patient, one responded that changes in culture caused her moderating style to change, and one said that changes from activity-based to discussion-based work caused her to change the way she moderates.

**Question 22.** Question 22 asks: In your experience, is moderating the same from group to group? Fifty-nine moderators responded to this question, with 9% saying yes, 80% saying no, and 12% were not sure. In comments to this question, 12 indicated differences were to the result of group culture, while eight attributed the difference to the group's purpose. Five moderators indicated that the group rules played a part in moderating differences, and four said that group size contributed to difference in styles.

**Question 23.** Question 23 asked: Have you ever formally taken on the task of training a new moderator? Sixty moderators responded to this question, with 87% saying no, they had not formally trained new moderators. Another 12% said yes, and one

moderator was not sure. In comments, one moderator indicated that training has taken a tremendous amount of her time, but most comments indicated that moderators didn't see formal training as necessary, or that they didn't see formal training as an ongoing task. Two moderators said that they are the go-to person if moderators have questions about their moderating job.

**Question 24.** Question 24 asked: Have you ever informally acted as a mentor for a new moderator by answering his or her questions? Fifty-nine moderators responded to this question, with the majority (54%) saying no, they have not been informally involved in mentoring a new moderator. Another 36% said yes, three times the percentage of those who mentor moderators formally (see Question 23). Of the respondents, 10% were not sure whether they informally mentored other moderators. In comments left regarding this question, three moderators indicated that they act as a steam vent or as support to moderators when they encounter problems. Two moderators replied that new moderators often learn their job by observing discussion threads or flagged posts on the report pages. One moderator indicated that she helped train new moderators in technical skills, such as *swooshing* threads (moving threads to a more appropriate discussion thread).

**Question 25.** Question 25 asked: When you became a moderator, were you mentored in this role? Sixty moderators answered this question. The answers mirrored those found in Questions 23 and 24, in that most moderators said they received no mentoring (see Table 14).

Table 14

*If There Is More Than One Moderator in Your Group, Do Moderators Divide Time-Tasks That Need to Be Done?*

Answer Options	Response Percent	Response Count
Yes	64.4%	38
No	32.2%	19
Not sure	1.7%	1
I'm the only moderator	1.7%	1
Total	100.0%	59
If you answered yes, please give example(s) of the task(s) and how you worked together.		25
Missing data		14

*Note. n = 59.*

Comments left for this question were also similar to those in Questions 23 and 24.

Three replied that they looked to their group's behavior for cues, and two responded that they seek out help from other moderators, either in their own group or through the Mod Squad. Two moderators mentioned formal moderator training, one indicated that she had experience moderating a Usenet group that helped her in the Ravelry job, and Survey Respondent 18 mentioned a unique strategy:

Our group likes to surprise new moderators :) [by] making them a mod, then flagging something they posted and “throwing a party.” Confuses the heck out of them, but it’s part of our group mentality.

**Question 26.** Question 236 asked: Where do you get help if you have a question about your role as moderator? Fifty-five moderators responded to this question, with top answers fairly evenly split among three answers: asking questions of moderators who have expertise in an area, finding examples of how moderators work in forum threads, and consultation of Moderator Guidelines in Ravelry (see Table 15). Surprisingly, fewer

moderators choose asking questions in the Mod Squad, the group that was designed specifically for that purpose.

Table 15

*When You Became a Moderator, Were You Mentored in This Role?*

Answer Options	Response Percent	Response Count
Yes, I was formally trained by another moderator(s)	5.0%	3
Yes, I was informally trained by receiving advice from one or more moderators	28.3%	17
No, I received no mentoring	65.0%	39
Not sure	1.7%	1
Totals	100.0%	60
Comments		9
Missing data		13

*Note.* n = 60.

In comments, 12 of 13 moderators indicated that they seek help from moderators within their group. They do this in various ways: by watching threads, using report pages, and by personal messaging. One moderator said that she has used Ravelry administration for help, but only in extreme circumstances.

**Question 27.** Question 27 asked: Do you have specific tools or documentation that you use in moderating that are not used by Ravelers in general? Sixty moderators responded to this question, with almost 67% saying no, they do not use specific tools that are unavailable to general Ravelry members. Almost 27% said that they did have special tools, and in comments they specified what tools they use. Five moderators cited group rules, five mentioned report pages, and five said that they used tools outside of Ravelry, like Excel sheets, a mod-Wiki, task organizers, personal to-do lists, and GoogleDocs.

One moderator mentioned that special technical features that are available within Ravelry, such as the ability to block users, whoosh threads, and edit posts.

**Question 28.** Question 28 asked: In your experience, do you find that moderators have special language or special terms when communicating with each other? Sixty moderators responded to this question, with almost 62% saying no, they do not use special terms when communicating with each other. Almost 22% answered yes, and the remaining respondents were not sure. In comments that moderators left, five felt that the lexicon was more group-specific rather than related to moderating. Two moderators said that they used Ravelry community jargon, and two used terms that are common among Internet users.

**Question 29.** Question 29 asked for a consent for an interview. The last question on the survey asked moderators if they would be interested in being interviewed for the study. Sixty moderators responded, with 37 consenting. These 37 were sorted by group type and amount of experience so that there was a variety of cultures and experience represented. Of these, 10 moderators were sent a personal message through Ravelry inviting them to schedule an interview. Of these 10, seven consented to be interviewed, with another moderator being added as a result of material that came up in interviews.

**Additional analysis based on survey responses.** Four additional questions were formulated for quantitative analysis based on survey responses:

1. Are the average hours per week spent moderating the same for all types of groups?
2. Is the average number of hours per week spent moderating different depending on how long a member has been a moderator?

3. Are the tasks that moderators perform independent from the type of group moderated?
4. Is there a relationship between the size of the group and the number of hours per week spent moderating?

For the first two questions, one-way ANOVA tests were performed that showed there was no difference in the average time spent moderating according to group type, and there was no difference in the average time spent moderating and the length of time the member had been a moderator. For the third question, a chi-square independence of variables test showed that tasks moderators performed were independent of the type of group moderated. The fourth question yielded a significant (*p*-value of 0.0085), weak, positive ( $R = 0.3262$ ) relationship between the size of the group and the time spent moderating (see APPENDIX H).

## **Interviews**

All eight interviewees were female, which is not surprising since Quantcast.com (Quantcast:ravelry.com, 2013) estimates that 66% of visitors to the Ravelry site are female. Even this figure might be misleading, though, as evidenced by a post in 2011 by Ravelry founder and system administrator Casey, “Speaking of Quantcast: the demographic information is kind of funny...I highly doubt that [even] twenty-six percent of visitors are male” (Forbes, 2011b). Those interviewed, aside from Moderator 8, were chosen based on two criteria: experience and group type. The final group of interviewees had been moderators for an average of close to 3 years. The group selection was done based on six categories that were expected to be found: casual conversation, technical craft skills, fan (enthusiast), life style, and knit-alongs. However, in talking with several

of the moderators, the researcher became aware that the original group classifications were a bit narrow: most of their groups had more than one focus. The moderators, their group type(s), level of experience, and number of registered group members appear in Table 16.

Table 16

*Where Do You Get Help If You Have a Question About Your Role as Moderator? Check All That Apply*

Answer Options	Response Percent	Response Count
I always ask the same person for help	7.3%	4
I know certain people who have expertise in an area and I ask questions that match their areas of expertise	38.2%	21
I ask a question in the Mod Squad forum	29.1%	16
I read forum threads to find examples of how other moderators work	40.0%	22
I consult the “Forum Moderator and Administrator Tools and Guidelines” in Ravelry	40.0%	22
I’ve never had to ask anyone for help	23.6%	13
Totals	178.2%*	98*
Other (please specify)		13
Missing data		18

*Note. n = 55.*

\* Percentages total more than 100% and responses are greater than *n* because respondents chose more than one answer.

Interviews were conducted using an online communication tool, recorded, and transcribed. As discussed in Chapter Three, interviews were then coded according to five major themes: motivation, encouraging participation, housekeeping, governance, and changes in moderating. These results, along with survey question responses were then used to answer the three research questions the researcher proposed:

1. How do members come to be moderators?

a. What benefits accrue to them as a result of being moderators?

- b. What is their relationship with-to other moderators?
2. What role do moderators in large scale groups play in:
    - a. Maintaining participation?
    - b. Maintaining governance structures in a large scale, complex, virtual community of practice, of which Ravelry is an essential case?
  3. Is there an emerging practice of large-scale moderation?

The eight moderators who were interviewed, their group type and size, their years of experience, and number of group moderators are summarized in Table 17.

Table 17

*Interviewed Moderators by Group Type, Years Moderating, Number of Members, and Number of Moderators-Administrators*

	Group Type	Years moderating	Number of Registered Group Members	Number of Group Moderators-Administrators
Mod 1	Social, Life Style	6 mos–1 yr	7,732	11 mods-4 admins
Mod 2	Craft, Social	2–3 yrs	11,242	4 mods-4 admins
Mod 3	Craft, Knit-Along	5–6 yrs	14,775	8 mods-3 admins
Mod 4	Social	2–3 yrs	4,272	6 mods-6 admins
Mod 5	Social (group) Knit-along (team)	3–4 yrs	819 group 4,015 team	5 mods-4 admins (group) 6 mods-4 admins (team)
Mod 6	Fan	2–3 yrs	3,469	4 mods-3 admins
Mod 7	Social	1–2 yrs	5,802	5 mods-3 admins
Mod 8	Social, Life Style	1–2 yrs	2,963	7 mods-2 admins

### How Do Members Come to Be Moderators?

Most Ravelry members come to be moderators for one of two reasons: either they were known by a moderator of the group and were asked to volunteer, or because they

had been part of the group for a period of time and volunteered when a call for moderators was posted (see Table 6). However, responding to this responsibility might require significant commitments, especially in terms of time (see Question 7). In looking at moderators' motivations, survey respondents and interviewees addressed various benefits they realize as leaders of Ravelry groups.

**What benefits accrue to moderators?** Most Ravelry moderators volunteer for altruistic reasons. In response to the survey question—What personal benefits do you realize as a volunteer moderator?—most indicated that they volunteer for selfless motives. Among the respondents, 96% said they like to help other people learn new things, and 73% were motivated to promote and preserve knowledge in their craft (see Table 7). This is in line with Stebbins's (1996) position that volunteers receive a sense of satisfaction often from simply doing a good deed.

Fourteen respondents to this question also added comments to the survey that support the altruistic motive of giving back to the community by keeping their group alive and active. Survey Respondent 19, who is active in a group that was originally one of the Main 6 forums, expressed her feelings:

When the main-six board [Group A] was shut down, many people were saddened and upset by the loss of the site's only official general chat board. There were existing general chat groups, but none had the large membership numbers and broad range of personalities and life experience that could be found in [Group A]...I thought I could provide that, so I formed the group.

Another reason for deciding to devote many hours per week to moderating is pure love. According to Survey Respondent 42:

Make sure that you love not just the forum, but the people in it before agreeing to mod” was one moderator’s advice.

Altruistic motives were prominent during interviews as well. Mod 2 moderates more than one group, but her interview centered mostly on a group that has more than 11,000 registered members and is craft and task oriented. Her job is to connect group members in a nonprofit exchange of goods for services, and describes how and why she became a moderator:

I began moderating that group about 2½ years ago. I was a member of the group and the moderator said that the group was growing, her life was picking up, and it would be great if she could get some people to help her out...I was interested in [moderating my group] because I really enjoyed the group and it was helpful to me, and I thought if I had other people helping me out how much time could it be? The whole giving back thing seemed important...because the focus of the group improves the whole community. It's adding to the wealth of patterns, and to the quality of the designs, and it's adding to the growth of the knitters and crocheters.

Mod 8, who is a moderator of a group of slightly less than 3,000 members who are passionate about public discourse on a variety of topics, explained, “If I can mod my group just a little bit, it’s the least I can do to give back to the community.” However, she feels that her group will continue, regardless of whether she is its moderator. “It’s beyond me. I feel more responsibility for keeping a smaller group that I moderate going.”

The responsibility to keep their groups alive was also expressed by other moderators. Mod 4 stated that she moderates a group of more than 4,000 members that

thrives on reporting conflict within and without the community to “make light of the human condition”. Although her group doesn’t have the largest number of registered users, “I think we have one of the largest group of lurkers, or nonmember lurkers.” She explains her motivation for volunteering to moderate this group:

I think the first round of moderators got kind of tired. They had been fighting a lot—with people, with Ravelry sometimes, you know, just kind of fatigued. It’s a fairly large group, but in the beginning we didn’t have some of the rules we have now that were intended to protect the group, by having the group behave well. So that’s why I decided to join, when I was asked, because I really liked participating and I didn’t want to see the group go away.

Mod 7 moderates a group that was originally one of the Main 6 forums, and as such, was a forum in which the whole Ravelry community participated. It was removed from the Main 6, because as site owner Casey posted in January 2011:

We felt that we were asking far, far too much of [the Main 6 moderators]....The amount of work including all of the behind the scenes stuff is insane and it rivals a full-time job for each mod. [This group] grows quickly and constantly and there is absolutely no way that it could grow indefinitely and still work. It’s very sad but this day was coming and there was no stopping it (Forbes, 2011c).

Even though the group was closed, there was still a strong connection between many of its members. They didn’t want the group to go away, and so restructured with a new name and a new moderating team apart from the Main 6 moderators. Mod 7 explains why she became involved:

I noticed that sometimes [the new group mods] would have issues with “bad” threads that needed moderator attention...when it was in the middle of the night in the U.S./Canada (where the other mods are from). So I offered to keep an eye on things during Europe time. I...[sent a message to] one of the mods, can’t remember which, and asked, they discussed it amongst themselves, and then they added me....I just wanted to help out.

In addition to the joy of serving and the feeling of responsibility to the community, Ravelry moderators realize personal benefits from their positions. Such benefits include hanging out with friends and family, and either gaining new skills or putting to use skills that they already possessed. These new skills could be craft-oriented, but might also have broader applications.

Half of the survey respondents indicated that they learn new things in their craft by volunteering, and the development and/or honing of interpersonal skills was an additional bonus for six respondents. Survey Respondent 34 commented:

I am skilled in mediation and am happy to give of that skill in order to preserve a group, which allows for many varied conversations between widely differing personalities without watching conversations turn into flame wars.

The prospect of financial benefits were also significant: almost 33% of the selected responses in the survey signaled a hope that the exposure received as a Ravelry moderator will lead to sales of patterns or other fiber-related materials, or some type of paid position (see Table 6).

Another personal benefit, the fun of working with a peer group, was found in survey responses. This motive, consistent with McLure Wasko and Faraj’s (2000) work,

was indicated as a factor in becoming a moderator by nine respondents. Survey

Respondent 15 commented:

I've made lots of friends through Ravelry, particularly within the groups I moderate.

These friendly attachments are sometimes deep. According to Survey Respondent 33:

I love the people I've met in my group. I think that being a moderator has prompted me to make many more contacts with group members than I may have pursued otherwise.

In response to the question: What tips would you give to a new moderator?, A sense of play was evidenced by the following comment from Survey Respondent 33:

Have fun. You joined the group because you loved something about it, right?  
Hold on to that, and help others to love your group, too.

A sense of having fun and wanting to hang out with their group was a motivation for interviewed moderators as well. Mod 3, who moderates a group of more than 14,000 registered members, and who has done so since the inception of Ravelry, often mentioned the personal connections that she's formed as a Ravelry moderator:

The group members have dubbed me MoM, which stands for Mightiest of Moderators. I would say I am mom to 14,000+ knitters in every sense of the word—even though I don't have kids, never wanted kids, and have no clue how I ended up with 14K of them!...[My group] has brought me some amazing things, friends that I hope will be part of my life until the day I die.

Mod 5, who worked as a moderator in Ravelry's Ravellympics in 2010, a community-wide knit-along that will be discussed in greater detail later in this chapter, also discussed personal relationships with members. Mod 5 had this to say:

Our group started as a Ravellympics team in 2008 and they had so much fun, they decided to stay together as a group. I started being a mod because I LOVE [my group].

Mod 6, who manages a fan-group of for a podcasting duo, has not only a connection to friends, but also to family. She said:

I became a moderator for my group when my sister, who is one of the podcasters, asked me to help out.

Some moderators seek challenges, both intellectual and those involving crafting skills. Mod 8 reported that she likes being with her group because they are a,

...good group, smart people...People in the group are much smarter than people I deal with [at work] and this keeps me challenged intellectually. They keep me on my toes.

Mod 1, who had only been a moderator for her group of more than 7,000 members for less than a year at the time of her interview, said that because of the social orientation of that group, she doesn't share her expertise in crafting often. However, in a smaller group that she moderates, she feels that her contributions in this area are very important and desired. She said:

Whether or not crafting experience is shared really depends on the focus of the group.

Mod 3, whose group has a craft-oriented focus, also spoke of creative challenges:

You know, this group is about the challenge. We are always, always, looking to challenge ourselves. We are looking to grow as knitters, to stretch our muscles. Making use of skills that were acquired in the workplace or elsewhere, and that were not craft-related, were mentioned as motivators by four of the eight moderators interviewed. Mod 3 said:

I think the skills I learned as a cancer nurse have helped me in leadership roles....The ability to assess a situation and know when to step-in have come from my professional background.

Mod 4, because of her background as an attorney, was considered an asset to her group.

She explains:

I think what they had me come in to do was to deal in a professional manner with Ravelry, and deal in a professional manner in writing a very clear set of rules, and still trying to be friendly and fun about it.

Mod 8 said:

I am good at argument because of my work, but the participation in the group keeps my skills honed.

Mod 7 described her experience as an online moderator in another community and how it helped in Ravelry:

I'm used to my own methods from the site I run with my husband....It's helped immensely—I've been running that site with him for years now, and it's helped a lot with learning diplomacy and how to handle grumpy people in a way that doesn't just make the problem stop, but makes them understand why there was a

problem in the first place (most of the time). I think it probably affected my decision to contact [my group's] moderators and ask to join them too—I was used to being “in charge” in a busy, chaotic environment and felt that experience would be a benefit in moderating [my group] too.

Three interviewed moderators also mentioned that they unexpectedly learned skills that had applications outside of Ravelry. Mod 6 felt that she has honed her social skills from being a moderator and has become less sarcastic with people in general. Mod 4 stated that while she didn't take on the moderating job intentionally to gain expertise for her work,

I think I'm picking up things that are both career and life skills. I am more pleasant to be around...to be able to handle things with humor has actually helped me when I'm dealing with someone [at work] on something with which we might disagree.

Mod 2 shared how her moderating experience could, surprisingly, be used to help her in a job interview:

[Moderating has] improved my communication skills, and a job I got a couple of months ago is in project management...you know at first I was a bit reluctant to talk about...this kind of goofy online moderator job, and I was afraid that my employer would kind of take it strangely that I'm talking about this online knitting group—why is she talking about this online knitting group? But I was able to rush through that sentence and talk about what this group does: that there is a barter structure in place between designers and testers, there is a rule structure involved, and my job is to make sure that people are following the rules. I'm

mediating disagreements, making sure that...and you know, once I explain what's going on I think it gives both Ravelry and the group a little more credibility and it explains to them what skills I bring to the table, with whatever job I'm interested in.

### **What relationships do moderators have with other moderators?**

Communication with other moderators is important to most of those governing Ravelry groups, in terms of tasks performed and time spent. When surveyed moderators were asked which tasks they performed, virtually all of them replied that they communicate with other moderators (see Table 8). Also, when they were asked: In your experience, do moderators communicate much with each other? Among the participants, 85% said yes (see Question 14). Communicating with other moderators is a task that respondents indicated they spent a significant amount of time doing. When moderators were asked to rank tasks in terms of time spent, communicating with other moderators was the task most frequently ranked (see Table 9). The amount of communication can vary depending on the type of group that is being moderated. As Survey Respondent 34 put it:

It really depends upon group culture how much communication there will be. In a small special interest group, the other mod and I have barely had need to speak to each other; in another rather large group, there are huge committee-meetings over every small decision; in my main group there is a brief message left to communicate what decision was made about an actionable post, but little follow-up discussion.

Surveyed moderators left many comments on how and why they communicate with other moderators within and outside of their group. The surveyed moderators, on

average, work in a crew of seven members. Although some moderators indicated they communicate only when needed, being part of a team is important to others. Survey Respondent 8's advice was:

Keep a cool head, don't think that every question needs an answer within an hour, and get help from others.

Survey Respondent 30's comment was:

Don't be afraid to ask for help from other moderators.

Survey Respondent 19 made yet another statement attesting to the importance of being a moderating team:

In [Group C], the moderators are constantly communicating with each other. We all have a similar view as to how the group should be moderated, so we don't necessarily discuss every decision we make, but we do communicate to let the other moderators know what we've done and why. We do make group decisions on more serious issues though, like banning someone from the group.

One obvious reason why such teams might communicate is to coordinate and share tasks; in fact, more than 64% of moderators answered yes to the survey question: If there is more than one moderator in your group, do moderators divide time-tasks that need to be done? (see Table 13). On this topic Survey Respondent 55 said:

I...have an excellent group of mods who [each] take care of certain threads. No thread is unsupervised.

Survey Respondent 2 commented:

[I] talk with other moderators about how much time and what sorts of things each of [them] can contribute; share responsibilities so that nobody gets overwhelmed

or fed up; communicate about problems; make sure to let people know if you're unavailable for a time.

In interviews, moderators were able to explain in greater detail how they coordinate tasks in their large groups. Often, there is a casual delineation of responsibilities as Mod 4 expressed:

So we don't really kind of say "hey, you take that"—but we do sometimes do that. I refuse to take a political thread, so if one comes on the board, we have one moderator who will take everything political and kind of shove it into one thread, and she manages it because she's willing to do it. But most of the time, whoever happens to be there or who happens to see the flag, or has an issue will take care of it.

Mod 7 echoed the informal nature of sharing tasks in her group:

Usually, whatever needs attention just sort of falls to whoever happens to be online at the time. We don't really work in shifts or anything. We're very, very casual as far as who does what, but it seems to work for us as, despite being a fairly active group, we don't really have THAT much that needs doing.

It is interesting to note that both of these moderators led groups that are social in nature. In groups that have a more technical focus, there does seem to be a more structured approach to assigning tasks to moderators. Ravelympics (the name of which was changed to Ravellenics in 2012 because of United States Olympic Committee complaints) were community-wide knit-alongs that coincided with the Olympic games. First started in 2008 during the Beijing Olympics, Ravelympics-Ravellenics consisted of various teams the members of which would all begin projects at the start of the games

and would post their finished objects throughout the Olympic Games' duration. At the conclusion of the games, members who crossed the finish line would be recognized. The games expanded in popularity, growing from 1,800 members in 2008 to 9,266 members in 2012. Mod 5, who helped moderate Ravelympics 2010, spoke of the extensive coordination that was necessary in this endeavor:

During Ravelympics, we had to assign tasks because the workload was so great. Tasks were divided on a volunteer basis, depending on desire and skill. Most did the menial tasks, like sorting through mail and other manual labor. More experienced mods did the communications with team members. Excel spreadsheets were used to keep track of projects, so people with that expertise were needed. Ravelympics [also] required a lot more communication and coordination [see Figures 7 and 8].

The screenshot shows a screenshot of a Ravelry group page for 'ravellenic games 2012'. At the top, there's a navigation bar with links for 'groups > ravellenic games 2012', 'overview', 'discussion', '15 pages' (which is highlighted in green), 'members', 'teams', 'events', 'finish line', 'live coverage!', 'activity', 'neighbors', and 'projects-yarns'. Below the navigation, there's a large badge with the year '2012' and some decorative patterns. To the right of the badge, the text '15 pages' is displayed, followed by the subtext 'Pages are a group's shared documents.' Below this, there's a table listing 15 shared documents, each with a title, description, last editor, and edit timestamp. The table has columns for 'Title', 'Description', 'Last edited by', and 'Edited'. The titles include 'EVENTS 2012', 'FAQs: Event Related Questions', 'FAQs: Project questions', 'FAQs: Special Events', 'TAG TOOL TUTORIAL 2012 - Projects', 'TAG TOOL TUTORIAL 2012 - Yarn and Fibre', 'TEAM DIRECTORY: 1-9, ", and A-B', 'TEAM DIRECTORY: C-E', 'TEAM DIRECTORY: F-I', 'TEAM DIRECTORY: J-L', 'TEAM DIRECTORY: M - O', 'TEAM DIRECTORY: P-R', 'TEAM DIRECTORY: S', 'TEAM DIRECTORY: T-Z', and 'The Basic RULES'. The descriptions provide details about each document's purpose, such as launching the events list or being a master team list.

Title	Description	Last edited by	Edited
EVENTS 2012	Official 2012 Events List Launched!	paksenarrion	7 months ago
FAQs: Event Related Questions	Event Questions, by event.	Selvedge	8 months ago
FAQs: Project questions	FAQ's restrictions, etc, etc.	rchrissy	8 months ago
FAQs: Special Events	Descriptions of those troublesome Special Events.	Selvedge	8 months ago
TAG TOOL TUTORIAL 2012 - Projects	Awesome step by step guide	Selvedge	8 months ago
TAG TOOL TUTORIAL 2012 - Yarn and Fibre	Awesome step-by-step guide	Selvedge	8 months ago
TEAM DIRECTORY: 1-9, ", and A-B	Master Team List of all teams participating, one of eight	Selvedge	8 months ago
TEAM DIRECTORY: C-E	Master Team List of all teams participating, two of eight	Selvedge	8 months ago
TEAM DIRECTORY: F-I	Master Team List of all teams participating, three of eight	Selvedge	8 months ago
TEAM DIRECTORY: J-L	Master Team List of all teams participating, four of eight	Selvedge	8 months ago
TEAM DIRECTORY: M - O	Master Team List of all teams participating, five of eight	Selvedge	8 months ago
TEAM DIRECTORY: P-R	Master Team List of all teams participating, six of eight	Selvedge	8 months ago
TEAM DIRECTORY: S	Master Team List of all teams participating, seven of eight	Selvedge	9 months ago
TEAM DIRECTORY: T-Z	Master Team List of all teams participating, eight of eight	Selvedge	8 months ago
The Basic RULES	*Pertinent bits of info as collated by the International Ravellenic Games Committee*	Dragon	7 months ago

*Figure 7. Ravellenic Games 2012 team page. Badge designed by Guin Thompson. From ravelry.com, 2013a. Copyright permission from permission holder.*

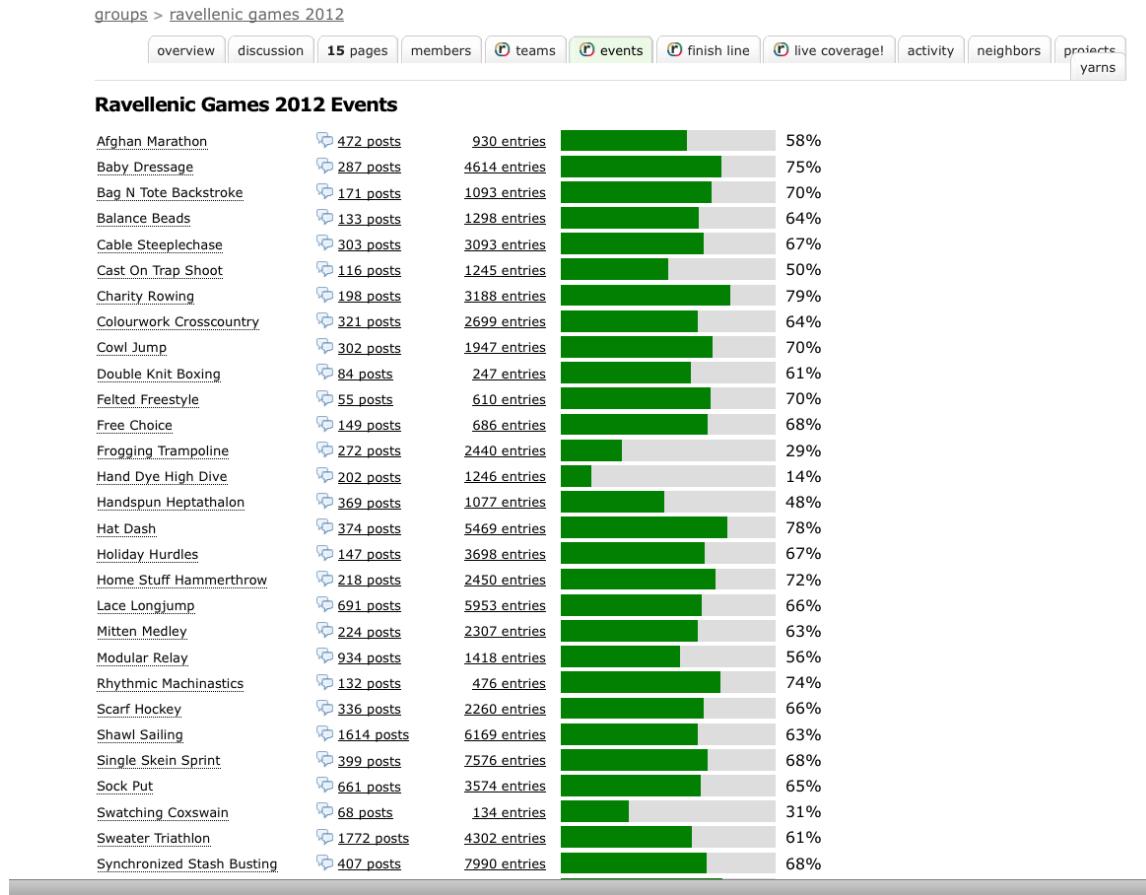


Figure 8. Ravellenics 2012 events and progress. From *ravelry.com*. 2013b. Copyright permission from permission holder.

In some groups, there is a mixture of assigned tasks and responsibilities that are developed dynamically. Mod 3 talked of this type of approach to moderating using these words:

[Moderators in my group are] pretty autonomous. I'm actually the administrator. I'm sort of differentiated as the last word. The other mods are—there's one that handles the prizes every month—and all of them will step in if somebody had a question and I'm not around, or there is a question about the rules, or if somebody breaks a rule...all of the mods will step in that case.

Another reason that moderators communicate is to get consensus on actions.

Survey Respondent 7's comment to the survey question—What tips would you give is to a new moderator?—was:

Communicate with the other mods. If you're the first to spot a potential flaming post, flag it and get other mods involved in the discussion. Each group has its own flavor, and some will let some topics pass, while others keep tighter control.

Survey Respondent 29 addressed the importance of having input from others:

Don't act in haste. If the board has other moderators, get their input. If you're the only one, consult the Mod Squad board or at least sleep on it. Know all the tools at your disposal, and learn to write diplomatic but firm personal messages.

In discussing how moderators in her group achieve consensus on rules and other decisions, Mod 4 had this to say:

So I guess we have rules that we wrote together and then when things happen we can talk about them. And we try to handle things at some level of consistency, but we might say: Hey, last time we handled this like this, do we want to do that again? No we don't want to do this again because of XYZ. So then we say [okay], I think this will work. And we try to have some respect for what other people have done.

Mod 8 was particularly emphatic about moderator consensus on actions. This is understandable, since her group staged a coup and overthrew their group of moderators for heavy-handedness and lack of transparency in their decision making. She had this to say about working as a team to moderate:

Unless an action is completely egregious, don't act without discussion among mods. [Our] rule is that two or three mods have to agree if action, like an edit, is going to happen. [We] also agree to mark threads as heated discussion. The heated discussion is not edited, but a warning to others joining. Mods [in our group] feel more comfortable with this [warning] action than with doing an edit.

I don't think mods should [personal message] each other about decisions in moderating. It should be out in the open, in the flag reports. It shouldn't be an exclusive conversation—then you don't have to get others up to speed at a later time.

Another advantage to having a team approach to moderating is that it allows moderators to be relieved of the feeling that they have to be omnipresent and gives them a sense that they don't have to shoulder responsibilities on their own. Survey Respondent 9 made comments that addressed this issue:

Get help. You don't need to moderate on your own, and you need a backup person or two for when you are unavailable and to discuss ideas/solutions, etc.

With regard to sharing problems on the site, Mod 4 discussed how the moderators in her group distribute the burden:

We have a code—this person is my...[whatever it is] and then you know I can't deal with that person and it's just a personality conflict and somebody else can deal with that person and keep things more friendly and nicer. In a lot of ways, maybe I'm totally wrong, but we try to keep it lighthearted, we try to keep it within the rules, so it's not a free for all and we're all being jerks and being nasty.

Although only 35% of surveyed moderators responded that they spent time on

mentoring other moderators (see Question 24), it is a topic upon which one moderator felt was important enough to comment. Survey Respondent 23 wrote:

Orientation of new mods has taken a lot of my time as I have expanded the mod team... I have created an off-Rav Wiki for moderators to discuss issues, for help with orientation for new mods.

Although many moderators might not perceive that they are being mentored, there is help available through reified practices. Survey Respondent 10's advice to new moderators is to "Read the community guidelines and group rules", and Survey Respondent 52 echoed these thoughts in her comment:

Read and review the Forum Moderator and Administrator Tool and Guidelines .

Through the survey, moderators shared how they manage to keep in touch with their fellow moderators (see Table 11). Most moderators indicated that they use personal messaging within Ravelry as a communication method. However, Mod 8 vehemently disagreed with the use of Ravelry's personal messaging system for communicating on moderating issues, and had this to say:

I don't think mods should [personal message] each other about decisions in moderating. It should be out in the open, in the flag reports. It shouldn't be an exclusive conversation—then you don't have to get others up to speed at a later time.

Although not listed as a choice in the survey, flag reports were mentioned frequently both in survey comments and in interviews. Some of the survey responses that indicated the use of personal messages for communication might have referred to messages they receive because of the report pages. Report pages is a feature that is only

available to Ravelry moderators, and according to Mod 1, the system works as follows: all members have the ability to flag a post if they feel that group or community rules are being violated. Once a post is flagged, a message about the post is sent to all group moderators through Ravelry's personal messaging system. Moderators are then able to access each other's comments about the post on a report page that is not seen by non-moderator group members.

Several moderators support Mod 8's practice of using the report pages not only to flag errant posts, but also as a discussion tool. The following comment, left by Survey Respondent 36, explains how this is done:

In [Group B], we usually [flag] a post, either related to the thing we're wanting to discuss, or just a random one, and use the report system to ask each other what we think about something. It's the easiest way to make sure that all the group moderators can chime in, and so that there's a record of what was said, other than in an individual's personal message box.

In her interview, Mod 7 explained how her group uses the report pages in a similar fashion:

We communicate with each other quite a lot—usually using the flags system, either in reply to member flags or, if we have an issue we want to talk about, we'll flag a random post and just put moderator discussion in the notes and talk about it that way. It can be anything—from how do we want to handle issues like this to personal stuff like letting each other know we'll be out of town for a while, or just silly stuff. We also share when someone has contacted one of us individually with questions or concerns, so everyone is on the same page and knows what someone

has been told. Communication is pretty key to what we do—especially with the slow evolution of our moderation style and trying to make sure we're all in agreement as to how things should be done.

Some moderators find the report pages somewhat confining and have other off-site methods of communication. Survey Respondent 33 commented:

The mods and admins in my group get along very well. The one problem we have is that Ravelry doesn't allow for mod-only threads or multiple addressees for private messages. This makes it more difficult to communicate within the framework of Ravelry.

To address these problems, offsite communication methods include texting, phoning, and asynchronous chat or sharing of files in GoogleDocs or Dropbox. Mod 4 discussed the limitations of the report pages and the desire for privacy as reasons moderators in her group use different methods to communicate:

We have each other's e-mail addresses and we have a board where we can talk that the Ravelry people can't see because in some ways the early conflict [between our group and Ravelry] was with the site....When we had a technical problem, some people were coming in just to cause problems....They sent me back some nasty messages and it [the off-site board] gave me a place to go post things so that if another mod came upon a problem with them...they could go over and find out [I] wasn't a jerk to them, here, I can see the e-mails from the private message string back and forth between them and me....Sometimes we even vent there because it helps us be more pleasant when we're dealing with people more publicly.

[The board is utilized for] long rules discussions, the report pages aren't a good way to do it. The way it works is that everything is in a fairly small column off to the right-hand side so you have to read many, many lines, whereas if you have a wider screen, discussion is easier.

Asynchronous methods are favored especially when moderators live in different time zones, which is often the case with moderators in large groups. Mod 3 sums up the various methods the moderators in her group use to communicate with each other:

If there's something that either I think needs to be changed, or they think something needs to be changed, we have a separate Yahoo group that's offline that we can go to whenever we need to discuss something that's private—we all have each other's phone numbers and we talk on the phone, so that if there's something urgent we can reach each other, but overall we're pretty autonomous. [One] mod is in Japan, another in Germany, another in Virginia, the fourth mod is in California, and then in Maine. Our time zones are completely different, so it's very rare that we can all be together at the same time....We leave messages for each other, we [personal message], we leave messages in our group, we can leave messages in Skype, we can leave a voice mail. [But] do we do a lot of real time talking like you and I are doing? No.

Most discussion on moderator action is brief, as evidenced in Table 12. This is usually the case because as Survey Respondent 29 commented:

Explanations don't usually have to be lengthy because of the flagging-report system. All of us see the problem first-hand, and usually reach a consensus quickly.

Survey Respondent 1 indicated that while,

...initial conversations tend to be longer and more chatty, follow-up or subsequent similar issues are resolved more succinctly.

While it might be expected that most of the communication between moderators is work-related, this is not always the case; some moderators form bonds with their fellow group leaders that go beyond a mere working relationship. Several interviewed moderators explained that while they communicated with each other to perform their Ravelry tasks, they stay in touch and correspond more often as friends. Mod 4 indicated that the moderators in her group communicate mostly for social reasons, unless they have some sort of problem. Mod 6 indicated that the only time all four moderators in her group get together synchronously about moderating is when someone has to go out of town or if there is some special event taking place. However, they do communicate often socially, usually in Google Chat. Mod 2 explained the friendships she shares with her moderators and how this relationship enhances their work:

[I] communicate socially, especially with [one moderator], because she was a friend of mine before she became a co-mod. I've known her for several years. [The other moderator] I knew through [our group] first, but we've been becoming friends because we're moderators together and so through that we communicate socially more. It's one of the perks of being a mod. I like that it helps me gauge stuff that's going on in their lives and lets me know if I need to take something off their plate.

This sense of camaraderie among moderators might be fundamental in setting their group's tone and signaling to potential members what type of space they have

created. This sense of space was one theme that arose often in moderators' comments and is undoubtedly key in encouraging members to join and stay in the group. The next section explores sense of group culture, along with other key activities that are intended to encourage members' participation.

### **What Roles Do Ravelry Moderators Play in Large-Scale Groups?**

In examining the literature regarding moderators in online communities, there were specific activities that were identified in maintaining participation, particularly in structuring conversation and allowing for pursuits that mimic those found in real-world communities. In terms of governance, several models were explored, including emergent, democratic, and meritocratic styles. Possible roles in digital CoPs were considered as well. A picture of activities emerged that provided answers to questions on the roles that exist by using survey and interview results of moderators who lead large active groups in Ravelry. These roles and moderator styles allow for successful interactions and the flexibility necessary to enable continued growth within the Ravelry community.

**Roles in maintaining participation.** Most of the moderators surveyed said that encouraging members' participation is a task in which they are involved (see Table 8), and it is the task that moderators ranked first both in terms of time spent and in terms of importance (see Tables 9 and 10). This is not surprising, since community cannot exist without participation. According to Wenger (1999), community memory is constructed through participation with its reified knowledge. Members grow into their community identities through the process of participation with the authentic tools belonging to the community and social interaction. Wenger et al. (2009) indicated that one way to increase participation in the online environment is by creating a sense of place and a group

culture. Another method to increase participation is to provide accolades for members (Bryant et al., 2005). Preece (2000) posited that seeding the community with core members to spur conversation is a way to encourage lurkers to come forward and participate in discussions. Ravelry moderators indicated, through comments, that these types of activities were ones that they engaged in often.

***Establishing a group culture.*** Culture can be defined as “the rituals and norms that come to be associated with a site and its functioning” (Renninger & Shumar, 2002, p. 181). Culture provides homogeneity and boundaries for its members, and can indicate whose voices define the group. These boundaries define acceptable behavior and help develop trust between group members. The shared goals and values that are the result of a community culture facilitate the development of bonding social capital—the glue that holds community members together (Preece, 2004).

Many of the moderators reported activities that contribute to group culture and this sense of belonging. In her interview, Mod 5 indicated that she felt strongly that the personality of the moderators attracts like-minded members. She said that in the group she moderates, members have not met in real life, may be different ages, and may have differing political views, but they all have the same slightly odd point of view:

We all try to keep the twinkle in the eye....We cut through the crap and love jumping in the deep end creatively. We've fallen in love with our craft and the sheer joy of what we do shines through.

In describing her role as a moderator, Survey Respondent 22 commented:

[I'm] sort of like a village elder, whose task it is to make sure all are happy in the village.

Many moderators spoke about keeping their members happy. What pleases members might be different, depending on the group in which they participate. About 80% of surveyed moderators agreed that moderating is not the same from group to group, indicating differences because of a group's purpose or culture (see Question 22). In comparing two groups that she moderates, Survey Respondent 30 commented on the differences caused by her groups' purposes:

It's completely different in my two groups. [My technical group] is a very structured group, so things are by the book and we use templates and such for much of what we do. [Another group that I moderate] is much more about being social and chatting and keeping people happy and having fun, since it's a game instead of providing a service.

Mod 2, who connects members together in exchanges of goods and services, indicated that because of her group's purpose, she exerts influence in her moderator role by discouraging cliquishness:

[Some other groups'] mods don't do anything to try to dissuade that [cliquish] atmosphere, which I think is too bad....I don't want people who are new to the group to come in and say "Well, I shouldn't even bother to volunteer for this test," or something like that.

In discussing group culture, Survey Respondent 59 speculated on the differences between groups and why moderating is not the same in all groups:

Some groups are very highly charged and seem to thrive on conflict. I suspect they would be difficult to moderate and require a stronger tone than the group I'm with. Also if there were a problem with trolls, that would require a stricter tone.

Groups on Ravelry serve many different purposes—some start off as support groups, others start off as something different but have a strong supportive element (like mine). Other groups are debate led and political. No matter what the subject of the group is, the membership will create the ambience, and that can shift according to who joins/who leaves.

Mod 5 reinforced the notion that the membership defines the group, crediting her group's stability to its core membership:

Because the core group has been together for a while, it makes things stable. Even with members coming and going, the social dynamic is stable. If you visualize sort of a gob, it's the viscosity—it keeps it together. You don't pull large chunks off or put large chunks in to be incorporated—it's a smooth transition.

The core group theme was repeated in many survey responses. Survey Respondent 2 wrote:

We have several active members who...uphold the “group spirit” so we need very few explicitly stated rules and very little enforcing them.

Core moderator values that other listed that are intended to establish a group-trust include  
be honest, be kind (Survey Respondent 31),

and

[make sure that] everyone feels included (Survey Respondent 33).

Maintaining membership involves setting a tone of support by running threads that “encourage others, so it's a fun online place to be.” Survey Respondent 1 commented that advice to new moderators would include the following:

Every single group on Ravelry has its own microculture. Listen, ask, but remember, especially for a large group, that your role is to moderate participation within the context of that microculture.

Mod 5 felt that stability in group culture is probably easier to achieve the longer the group has been in existence:

New groups who are trying to establish their identity may not be so smooth.

Smoothness, caused by establishing the culture and achieving a group identity, keeps the groups' social machinery running with less effort".

To be able to maintain group identity, many moderators emphasized that they should be active members in their community rather than just the moderator. This activity allows other group members to get to know them and helps moderators to maintain their influence on their group's culture. As Mod 5 stated:

It's easier to be engaged if the mods are present and approachable, through participation in discussion. It's what makes a community".

However, moderators' participation in discussion is not encouraged in all groups. Mod 8 explained that when she acts as a moderator for one of her groups, she is expressly forbidden by her group's rules to participate in discussions. The rules also forbid her from participating in any thread that she moderated even after she rotates out of her moderating role. In Mod 8's group, where heated, opinion-based debate often takes place, this rule allows members to understand that when a moderator posts, it is an official communication, not just an expression of a moderator's opinion on a matter. However, in groups where it is allowed, moderators often play a key role in either starting or prolonging discussion on various topics to keep members' interest.

***Stimulating discussion.*** Discussion is the lifeblood for Ravelry groups. In some groups, it appears to happen effortlessly, but in others, moderators cultivate discussion by reading and replying to members' posts and by seeding discussion threads to spur conversation. As Arguello et al. (2006) found, new members are more likely to continue in a group if they receive a reply to an initial post. Such reading and responding can take a great deal of time, especially in large groups. Monitoring the group to notice when member(s) need assistance appears to be a common theme. Survey Respondent 38 commented:

...most of my time is spent on keeping conversations going, encouraging quieter members to join in more.

Survey Respondent 63 reported:

I read the challenge threads (and other threads if needed) and respond to questions if I can. I participate in challenge threads to define what will or won't count, and add resources-links.

Yet another, Survey Respondent 3, said that she helps establish the group culture by welcoming new members, and by:

...being very active in discussions [without being] a know-it-all, even if [I] really do”.

Mod 1 explained that while one group that she moderates needs little help in stimulating discussion, another group uses various methods encourage lurkers to participate. Some of these methods include seeding discussion topics, and the creation of a thread called Shoutout. In this thread, moderators look for members who have posted project pictures, but are not active in discussions. Mod 1 explains the process:

If we see something we like, we do a shoutout to the group and earburn [create a link to the project that sends its creator a personal message] the person to recognize their work. They feel good, we're reminding them that they're part of our group, that we're nice people, and they become more active. It's nice to get some acknowledgement, especially from people who understand the time and effort you put into [creating a project].

Five of the eight interviewed moderators also spoke of the need for moderators to read and reply to their members' posts, even though it is sometimes a daunting task. Mod 3, who moderates a group with more than 14,000 registered members stated:

I read every post that gets posted. That's sometimes hundreds of posts in the night, but I do read every single post.

While much of the reading involves discussion, a great many postings ask for help in locating information on a specific topic. It is important, therefore, for moderators to know about resources and help members in finding them.

***Connecting members to resources.*** In Wenger's et al. (2009) model, a moderator might act as a community coordinator, connecting people to resources that help them complete a task or to learn more about a specific topic. In survey responses related to tasks that moderators perform, 78% specify activities that connect members to resources (see Table 8) and it was ranked as one of the top five moderator tasks in terms of importance more often than any other task except for encouraging participation (see Table 10). In an online group, this type of connection can be made through links provided to members to materials on or off site. Survey Respondent 44 reported:

I am a point person for offering assistance to members, be it in answering questions about the group itself, [commercial products], or advice on how to utilize the group and/or Ravelry.

Another moderator responded that it is her job “to know where craft-related problems can be solved” (Survey Respondent 22). In her interview, Mod 6 stated that she often answers technical questions about the podcasts that her group members follow. In her real life, Mod 6 works at a school that is famous for its history in textile production, so is aware of many resources for printed information on textiles, and can provide book referrals to members who have questions about knitting, spinning, or the social aspects of knitting. When she cannot answer a member’s question, she will find someone who does know the answer, or Google it, and either connect people directly or relay the information back to the group member.

***Coordinating events.*** There were many moderator comments indicating that they spent a great deal of time organizing online, and sometimes, offline events. Much like the behavior that was found in Canadian knitting groups (Prigoda & McKenzie, 2007), and historically in the practice of handcrafted textiles (Macdonald, 1988), practitioners incorporate play with their work.

As stated in Chapter Two, McLure Wasko and Faraj (2000) found that members in a usenet group liked sharing information with those interested in the same topics, and that they enjoyed contributing and comparing their work with group members. This is consistent with knit-alongs, the most mentioned type of activity Ravelry moderators organize. When a knit-along is formed, all participants knit the same pattern or the same type of project. They are able to post their progress, including pictures of the yarn that is

being used, and pictures of works in progress. Members of the group talk with each other about their work and modifications that they make to patterns. They can ask questions if they are curious or need help, and pictures of finished projects are usually posted to the site. Some sites have contests and award prizes for especially well-done finished objects. Comments that surveyed moderators made about knit-alongs include: “We have challenges every month where people can participate and win prizes. These challenges need to be organized, entries checked and lists of participants and their entries need to be kept” (Survey Respondent 37), “I set up monthly voting threads for knit-alongs and keep an eye on them” (Survey Respondent 4) and “As moderator, I lead a variety of challenges-knit-alongs -team events for our group members” (Survey Respondent 38). Ravelympics/Ravellenics is the largest example of a community knit-along, and as discussed previously, requires an enormous amount of time and energy in organization and maintenance.

Other types of events that moderators coordinate are mystery challenges (where members are only given part of a pattern a week at a time, and do not know what the finished object is supposed to look like) and swaps. In swaps, members exchange things within specified parameters, such as amounts of materials and timelines. Swaps can be for yarn, for fiber used to spin yarn, for finished objects of some kind, or even for non-fiber related things.

Survey Respondent 62 mentioned organizing an online knitting retreat, and Mod 6 discussed how she helped in arranging a real-life knitting retreat for members of her group. Survey Respondent 38 summed up the value of providing these types of events, and the work involved:

Setting challenges and group knitting projects can really pull your group together, but it is up to you to keep returning to that challenge to check in with your crafters, to keep levels of engagement and interest up, otherwise they go elsewhere.

Mod 3, whose very large group is involved in multiple activities, describes the types of activities, the incentives for participating, and moderators' duties in keeping these activities organized through her group pages:

We have our schedule for every year that is five pages long....We have what's coming up this Saturday, we have a scavenger hunt every year for world-wide knits-in-progress day. We put that as a page so that people can look back at previous years and see the pictures and links and so on. We have a mystery sock every other month—six per year—since we've been doing that for 5 years, we have 30 pages for that, we have had famous designers, like Cookie A and Nancy Bush all sorts of very famous designers have agreed to design mystery socks for us for free.

Members make donations and that's how we can do things. For the Ravelympics, we will be giving a \$100 prize, four \$25 prizes for knitters who medal in the Ravelympics; for the scavenger hunt on Saturday the first prize is \$100 cash, the second prize is \$50 cash.

Mod 6, whose sister is one-half of a podcasting duo that group members follow, spoke of raffles that are held frequently on her group site. Such activities used to require that she write letters to designers or people with Etsy sites for donations. However, the podcasts have become so popular that for the past 2 years, designers donate without

solicitation, and group members contribute their surplus as well. When there is a lull in group-participation, she tries to come up activities, such as snowflake swaps, a Love Train (where everyone in the group gifts a pattern to another member), or some type of knit-along to spur member involvement. Her group was unique among those surveyed and/or interviewed in mentioning a real-life event that members suggested and group moderators coordinated. Their inaugural retreat was held in Nashville, Tennessee in summer 2012, so that group members could take classes and just knit together. People at the retreat spontaneously broke into groups and shared their expertise in various crafts. Although the workings might have appeared spontaneous to members, the group moderators were heavily involved in very detailed planning, going so far as to prearrange groups to go to dinner together, so that no member was left to dine alone.

While creating and moderating events requires time and commitment, these types of tasks might be viewed as fun. However, other types of work that moderators perform involve more routine tasks, such as tidying up their group space.

**Housekeeping.** Coate (1992) indicated that it is important for online communities to have hosts who keep conversations on track and perform basic housekeeping so that there is not too much clutter or confusion. This was confirmed by 75% of surveyed Ravelry moderators, who indicate that they spend time doing basic housekeeping and site cleanup (see Table 8). This task received the second highest number of rankings in terms of time spent by moderators, but dropped to the fifth place in number of rankings in terms of importance (see Tables 9 and 10). Moderators' comments indicated that housekeeping chores include: "linking finished objects to a challenge thread" and "editing posts about challenges" (Survey Respondent 63), "bringing topics into prominence by stickying

topics” [fixing them in place at the beginning of a thread] (Survey Respondent 1), “keeping discussions on topic” (Survey Respondent 7), and to “tidy up threads where only pictures should be included and to close threads that are out of date” (Survey Respondent 59). Moderators also may whoosh threads to different topics for a better fit.

Only two of the eight interviewed moderators discussed housekeeping chores as tasks that they routinely perform. Mod 3 mentioned that she frequently fixes the formatting of pictures in her group, so that the threads are more easily read. She said:

[Group members] don’t realize that they’ve ruined the format so their picture is hanging off the page, the whole threads go crazy...so I spend an awful lot of time fixing format in posts.

Mod 6 indicated that she does a,

...fair amount of housekeeping by moving posts to more appropriate threads.

This type of activity usually happens when her group is holding a contest and people start responding to posted pictures. The comments can be distracting, so they are moved to a “more chatty thread.” When posts are moved, the member gets a personal message from the moderator to let them know where they can find their post.

The rankings assigned to tasks in Tables 9 and 10 support the notion that housekeeping activities might be considered more routine than some of the other moderator responsibilities, and there is some evidence that they might be assigned to new moderators to help them in learning the ropes. As Survey Respondent 40 explained:

I am a relatively new mod, and I take a sort of “background” role—I do a lot of housekeeping tasks for the community and generally keep an eye on things, pointing out issues to the other, more experienced mods.

Such assignments are signs of legitimate peripheral participation, where newcomers to the moderating role perform real jobs, but in a minor role. Such participation might allow a new moderator to observe more experienced moderators' behavior, particularly when it comes to potentially volatile governance issues.

**Roles in group governance.** Groups, especially as they become larger and more complex, need more formal organization and policies to keep community members aligned with goals (Wenger et al., 2002). Making the norms and rules visible allow members to know what actions and behaviors are acceptable within the group and help in establishing a sense of trust (Preece, 2000). Although such norms and policies can arise through the grassroots, often a community has a small team that is charged with the effectiveness and health of the community (Wenger et al., 2009). Moderators serve as such teams in many of the groups, developing group rules and often acting on input from their group members to assess the effectiveness of them.

**Group rules.** Ravelry has a set of 15 firm rules within its Community Guidelines (see APPENDIX A). Regarding these rules and guidelines, Ravelry has this statement posted on its Community Guidelines page:

By using Ravelry, you agree to follow these rules and guidelines. Group Moderators, Ravelry Moderators, and Ravelry will enforce these rules. Ravelry is at its best when people are civil and respectful toward one another and these rules are meant to help our community grow and stay healthy. Repeated or egregious violations of Ravelry rules will lead to being blocked from the forums, having messaging privileges revoked, or being banned from Ravelry.

All groups within Ravelry are allowed to have their own rules, but those rules

must fit within the Community Guidelines. There were a total of 23 distinct groups having more than 2,500 members represented in the survey and interviews, and of these 23 groups, 17 groups have explicitly stated rules or guidelines. These rules usually appear on the group's homepage, but sometimes are found in the group pages. Often, there are additional rules for events, such as knit-alongs, that are listed in the threads for those activities. Surveyed moderators were not explicitly asked if they felt that their rules were important, but rules were mentioned 39 times in comments that surveyed moderators left in response to other questions. Four of the eight interviewed moderators felt strongly that their group rules were very important, and talked of why they were created. Mod 1 mentioned that her group rules center mostly on copyright violations and the hot-linking of pictures from other sites. Mod 2, who works with designers and testers, has strict rules about timelines and fulfillment of responsibilities. For example, one rule is that test knitters must check in every week with the designers who give them a free pattern in exchange for their work. She talked in detail about how she handles situations where this group rule is broken:

We operate on a three strikes and you're out system—it's a little different than other groups, but because the group operates on goodwill, and because designers are giving out their work for free, based on the premise that people will do this work for them in return, we really want to make sure that we're doing what we can to ensure that testers are returning that good faith. If we have testers that serially take the free pattern and run, we want to weed them out. Sometimes we realize that people will get a strike because they're new and don't know the rules, so we have a process where people can get strikes removed from their record.

Mod 4, who moderates a group that has the potential for a great deal of conflict, explained that rules were extremely important for her group. She was brought in as a moderator specifically to help write well-defined membership behavior guidelines that are intended to protect the group by having people behave well:

We actually have very strict rules....I just happen to be an attorney and I think what [the group] had me come in to do was to deal in a professional manner with Ravelry and deal in a professional manner in writing a very clear set of rules, trying to be friendly and fun about it....We ask people to sign in to show that they've read the rules.

Mod 3 said this of the guidelines for her group:

This is a very strictly regimented group, as it was set up in the beginning....There are a lot of rules; if you're not a rules person then you're not going to be happy here.

She mentioned that the group's founder created the original set of rules, and stated:

It's not my job to change them.

However, she did have this to say about the group rules:

If they [rules] are broken, I did fix them....I've tweaked them because they weren't working, but they have essentially remained the same.

Periodically tweaking or making major revisions to rules was a theme found in both survey comments and in interviews. Survey respondents indicated that some rules change as a result of problems that arise. Survey Respondent 23 commented:

Since I came on as mod, we have redefined and clarified the rules for the group.

We revisit them as new issues appear and modify the rules as necessary.

Survey Respondent 36 said:

The rules for our group have evolved as we've seen new issues come up and things that need addressing in the rules.

Survey Respondent 3 stated:

The one group I moderate has recently had a falling out with some members and our community rules, as well as mod rules, have changed as a result.

As the previous comment indicates, in addition to group rules, rules for moderators are important for some groups. According to Survey Respondent 30:

Just as issues have come up, roles have changed to meet those changes, and that has often meant changing the rules under which we operate as moderators. This has been particularly true in [Group D], when people have stepped on other toes or have failed at their responsibilities, others have had to step up, and we've had to develop a code of conduct for moderators, and now we're starting for the first time in over a year to discuss consequences if that code isn't met.

Mod 8 spoke extensively of new rules that were established to avoid behavior that resulted in a moderator coup in her group. One of the rules is that moderators rotate out periodically so that power stays flat. She stated: "People become very controlling when they're in that position of power sometimes....If you really WANT power over a group, then you probably shouldn't be the one with power over that group".

Some moderators cited rapid growth and changes in membership as the cause for members both to reevaluate and refine their rules. In certain cases, these changes caused the rules to become more structured, as Survey Respondent 18's comment shows:

Our group has grown and changed, lots of turnover, so that we've learned to be a little more strict at the front. The group dynamic is a little less family now, but change over seems to be part of the regular progression, so we're more firm on our basic rules.

In other instances, the larger number of group members and influx of new people has brought about a more relaxed atmosphere, as noted in Survey Respondent 28's comment:

Rules have become much more flexible since the founding member of the group stepped down. More practical now, group is 5,000 plus.

This statement hints at how one or more core members can impact the feel and behavior in groups, and was echoed in Mod 5's interview when she said:

Some rules are stated and some are not. Members can follow threads to see how to behave.

While this rather hands-off approach might be the ideal, as in all communities, it is the case that occasionally group members behave badly. When inappropriate behavior occurs, moderators are the first line of authority in enforcing rules and settling conflicts. How moderating teams govern their groups, and how they share this authority is examined in the next section.

**Governance structure.** Each Ravelry group has such a team for internal group coordination, consisting of at least one moderator and administrator. Within the Ravelry community guidelines, there are two types of authority for groups: the administrator and the moderator. Administrators fill an organizational role; they have the ability to add and edit group pages. Although some groups have no pages, others, for various reasons, have

up to 50. Pages are used to organize activities, to explain group rules, to answer frequently asked questions, or to list resources for its members.

Moderators serve to aid in discussion and serve as hosts for the group. Ravelry, in its guidelines for moderators, advises moderators to be gracious and active hosts, to set clear guidelines for their groups, to set good examples for group members, and to work together to solve problems. Moderators are given tools to accomplish their work: they can whoosh (move) threads, edit posts for format (but are advised not to change content that is not theirs), to mark threads as heated, to archive threads, to give members a timeout for bad behavior, and in extreme cases, to block users permanently from the group. As discussed earlier, there appears to be a significant amount of communication between moderators: almost 97% of survey respondents listed communicate with moderators as an activity that they perform (see Table 8).

In virtually all groups, administrators are moderators, and in many groups all moderators are administrators. The number of moderators-administrators for groups represented in the survey ranged from two to 24, with an average of about seven moderators per group. Respondents indicated that they participated in governance activities such as communicating and coordinating with other moderators in their group, in resolving conflict, and in policing their site (see Table 8).

In some groups, there is a structured hierarchy of moderating, with a main moderator and other moderators who help out. For example, in Mod 2's group, she said she is viewed as the "captain of the ship." All of the moderators in this group weigh-in on decisions, but the final say rests with her. A similar arrangement was explained in Mod 3's group where she said she is differentiated as "the last word" on issues. It is interesting

to note that these two groups had the largest number of registered users in the study, both having more than 12,000 registered users.

However, in many groups, moderating is more flexible in its organization. Mod 7 said:

We're all on pretty even footing in terms of our daily moderation duties though—we don't really have a hierarchy where someone is the "boss" and the rest of us are "underlings".

In this group, Mod 7 said tasks fall to "whatever moderator...happens to be online" when action needs to be taken. According to Mod 1, moderators in her group choose how active they want to be, and whether they want to be involved in enforcing policies or just want to help encourage participation. Specific moderators in her group may, for example, take on swaps for a certain month. Choosing a task might depend on the moderator's level of comfort in doing it. As stated previously, Mod 4 will not moderate on political issues in her group and leaves that task to another moderator who feels comfortable with that job. Mod 6 commented that she tackles issues that might be considered undesirable, so that the podcasters for her group are not perceived negatively by their fans, in kind of a good cop-bad cop style. Of all the tasks that might be perceived by group members in a potentially negative fashion, the one that stands out is that of policing group rules and guidelines.

***Policing and conflict resolution.*** Not all moderators actively participate in policing and conflict resolution, but the majority of group leaders do. Among the moderators surveyed, 75% indicated that conflict resolution is a task that they perform, and 68% of those surveyed indicated that they engaged in policing (see Table 8). Those

who do not find these activities necessary made these types of comments. Survey Respondent 4 said:

Very rarely do I have to resolve any issues as the board pretty much runs itself as the members are very good at policing themselves and are respectful towards other members.

Survey Respondent 38 commented:

I am aware that mods in other groups do a lot more locking, blocking, censoring, and policing than we do; our group is very gentle and peaceable and I have never seen a moderator need to intervene into a difficult or challenging situation.

Sometimes maintaining a presence and acting as a role model to influence the group's attitude are the only policing activities needed. Survey Respondent 33 advised:

Be a good role model. Mods have the ability to set the tone. Being a mod isn't the same as being a regular member. Your words have more weight.

Survey Respondent 38 commented:

Lead your group, and do it by example, not by instruction. I try to be the best sort of person, to always be positive, supportive, encouraging, I really believe that one of the reasons that our group is so positive is that the moderators drive the group in that direction.

Survey Respondent 58, in this statement, explained the importance of presence:

Participate in your group. The only real authority you have is that people want to cooperate and are more willing to help you out if you have a positive relationship.

However, in some groups, more concrete actions need to be taken to keep the peace. Keeping current with what is going on in discussion threads is very important in these groups. Survey Respondent 19, responding in a comment about her actions, said:

I spend that time reading the boards, identifying potential issues, and watching those issues so that if they do escalate, I am able to step in and moderate them quickly and fairly, with a good understanding of the events leading up to them. I also keep track of members who frequently cause problems, in order to determine when and if more serious measures must be taken to deal with the individual.

Survey Respondent 15 had similar comments:

Being a mod means spending the time on the board understanding who all the members are, reading all of the threads, remembering the history of past issues and conflicts on the forums, reading all of the complaint flags, and putting them into the context of all that history if necessary, conferring with other mods, weighing moderation decisions, carrying out moderations decisions, responding to [personal messages] from board members.

Moderators who do police tend to spend a great deal of time performing this activity; in terms of time spent, policing was second in frequency as the number one and number two ranked tasks (see Table 9). Many moderators indicated that they acted as peacekeepers. Survey Respondent 3 stated:

I'm a police officer—my presence helps remind people to be excellent to each other.

Survey Respondent 17 said:

I help keep the peace and provide a helpful atmosphere.

However, in interviews, moderators were able to be more specific about particular violations of group rules and how they handle them.

One method that is effective in dealing with policy violations is for the moderator (Mod 7) to put her “moderating hat on” and make a public announcement to the group. When a moderator makes a post to a thread in her group, a sheep icon with the word moderator appears under her name (see Figure 9). Mod 1 said that this is one method that she uses in her job as moderator. For rule violations such as hot-linking pictures or giving out copyrighted patterns, Mod 1 addresses violations by editing posts and then sending offending members a private message through Ravelry. While it is important to correct such violations, she feels that it is rarely necessary to call out bad behavior in public. Mod 3 also spoke of editing posts, but indicated that it is only done in extreme cases, such as an incident where a member posted a comment that contained a racial slur.



Figure 9. Sheep icon indicating a moderator is commenting. From *ravelry.com*, 2012. Copyright permission from permission holder.

Mod 4, whose group has the potential for a great deal of controversy, talked of her strategy in dealing with violations:

As a moderator...all I can do is make fun of them, or be nice, or you know what I mean, it's only words on a computer screen. But I can get people to do what I want them to do. My personal opinion is, start out nice. Assume people aren't trying to be jerks, unless they obviously are.... You know when I say make fun, I don't mean in the mean sense, most of the time what we do is think that

somebody's funny and we run with it...but have fun with it is what you try to do.

So if somebody is doing something you don't want them to do and they start getting a little upset, you try to look at the humor first and you know, joke about it.

Mod 4 also talked about stronger methods that Ravelry has put into place more recently to help moderators deal with members who will not conform to the group rules:

Now it's time out and blocking. We actually have a few more tools to keep the drama off our board. I was gonna say for a group that's pretty big and pretty active and pretty controversial on Ravelry, we have only two people blocked.

Another strategy that Mod 4 uses that was unique among the moderators interviewed is to make use of a sign-in thread. Her group requires that new members go to the sign-in thread and post that they have read the group rules and agree to abide by them. When members repeatedly break rules, she sends them back to the sign-in thread and has them repost their agreement.

Mod 5, who was one of many moderators for the 2010 Ravelympics, spoke about the challenges that she experienced during that time:

In those teams, very different people from groups with different cultures come together—Ravelympics is like a meta-group. In the meta-group, there tends to be more tasks and more conflict. It's important to check-in on them all the time.

However, in the small group that she now moderates, there is very little policing that needs to be done. One method that she has used to bring people back in line when they step out of bounds is earburning (creating a link to the offending post that sends a message to the writer). She said:

I had only once to delete a post for violations,....

...but she keeps an eye on discussion, especially in her group's main discussion thread.

Her comment was:

When big events are happening, it's important to watch. Nothing usually happens, but it's just good governance to keep an eye on things.

Mod 7's group is unique among groups, as it was originally one of the Main 6 forums. As discussed in previous sections, the Main 6 forums contain all Ravelry members and are moderated by the same team of moderators. The group was disbanded because it required prohibitive time demands on the Main 6 moderators, but it re-formed as an independent group having a similar name. Her comments provided a contrast between moderating styles in the Main 6 forums and other types of groups:

We have a little more leeway with our moderation as we're not "Ravelry approved" like a big six board would be, and not quite as active as [the original group] was. We can moderate with cat macros and jokes and don't have to be quite as "professional," so it helps us blow off a bit of steam, and [in my opinion] works a little better than putting DBAJ on posts [DBAJ =Don't be a Jerk—a common comment on greyed-out posts in Main 6 forums].

The use of cat macros and diplomacy are important, as is vigilance in patrolling Mod 7's site. She indicates that she, "plinks around as anyone (non-moderator) might do," but pays special attention to threads that she thinks "might become unpleasant." She summed up her approach toward moderating:

It's mostly a lot of sitting at my PC sighing wearily and occasionally thumping people upside the head gently to get them back on track.

As was the case with Mod 3, the use of editing or deleting posts is available, but used very sparingly. Mod 7 also uses public announcements, such as those Mod 1 used, to the group calling attention to rule violation. For example: “Please remember that religious and political discussions are not permitted in [our group]” is one such announcement that Mod 7 has used. Additional tools that can be used are time-outs, so individual posters cannot post for X number of hours, and banning from the group. She said:

Bans are almost always given only after discussion amongst ourselves.

As noted earlier, agreement among moderators is the standard, but can present challenges when not achieved. Aside from the conflict experienced between group members, there can be significant conflict among group moderators. Mod 8 moderates a group that has notoriety within the Ravelry community for a coup staged by group members to overthrow the group’s moderators. Her story is one of a poor fit between the group’s purpose and moderating styles, and is a reminder to moderators that fairness and flexibility go a long way in keeping group members happy.

***When moderating goes wrong.*** As cited previously, two other moderators brought up the subject of a moderator coup in one of Ravelry’s groups. This group, which has a long history with Ravelry, was formed so that topics that were not allowed in the Main 6 forums (e.g., religion, politics, adult-themed conversation) could be openly discussed. Mod 8, a moderator in the newly restructured group had these things to say about her group:

This group is contentious. Groups that discuss different types of yarn might have disagreements but usually don't become inflammatory. This group is different, it was designed to bring up controversial discussion and create antagonism.

However, in keeping within the Ravelry rules, it is imperative that these discussions not devolve into personal attacks. In such a group as hers, Mod 8 feels that transparency in moderator actions should be the goal, and that former moderators were not allowing this moderating style. The group, she felt, was being run in a tight-fisted manner: moderators would redact any posting that questioned moderator decisions and assumed an attitude that if members were unhappy with moderating actions they could go form another group. This type of leadership, in a group that was intended to provide an environment for free debate, left members feeling unable to express themselves or to challenge anything, and caused membership to decline. To address the situation, several members who had become somewhat inactive but still in touch with the group, banded together and put pressure on the moderators to stand down from their leadership roles. In this process, new moderators and a new system of moderation were put into place.

One key element in the new moderating system for Mod 8's group is a discussion thread called Ask the Mods. This thread was created so that group members could publicly discuss and/or question moderating actions in a way that would not detract from the debates taking place in other threads. Another decision was to enlist a crew of moderators who would rotate for a 3-month tour of duty. This rotation was designed to keep the power structure flat. Mod 8 said:

You can't have one or two mods for such a huge group control everything over time. It's just guaranteed to let that power hungry dynamic crawl in.

Instead, she feels that moderators should see moderating as a service to the community.

In the new system, there is also a rule that prevents moderators from participating in discussions while they are serving in a moderator position, and even when they are finished with their rotation, they may not post in any thread that they moderated. This policy was put into place so that members could distinguish when a moderator was taking an official action, as opposed to expressing their opinion on the topic being discussed. Another rule that was put into place was that moderators not take action alone. Mod 8 said:

We're sort of a Supreme Court. There is a lag time in decision making—unless something is completely egregious, we discuss a situation before taking any action—at least two or three moderators have to agree to edit or request a member to edit a post.

There are some actions that they may make alone, such as marking a discussion as heated, so that members who want to avoid aggressiveness are warned. In this group, they have also made two sets of rules for threads called Order and Mayhem. When members start a thread, they may label it according to which set of rules they would like to abide by in their discussions. These changes appear to be working, as the group is growing and boasts more than 2,800 members.

In this group, as in most of the groups that were involved in this study, the personality of the group, its culture, and purpose fit together with the moderating style. It is hard to imagine that there would be a one size fits all approach to moderating these groups. The question that lingers, then, is whether there are specific practices that can

always be put into place in large-scale moderation to ensure that there is enough participation to make the community successful.

### **Is There an Emerging Practice of Large Scale Moderation?**

According to Wenger (1999), practice is “a way of talking about the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action” (p. 5). Learning about the practice takes place when there is a collective body of information on the action and the social relations involved in the practice. When a group takes ownership of the practices and seeks to sustain them, a CoP is formed. As mentioned in Chapter Two, there are 14 indicators that a community of practice has been formed:

1. Sustained mutual relationships—harmonious or conflicting.
2. Shared ways of engaging in doing things together.
3. The rapid flow of information and propagation of innovation.
4. Absence of introductory preambles, as if conversations and interactions were merely the continuation of an ongoing process.
5. Very quick setup of a problem to be discussed.
6. Substantial overlap in participants’ descriptions of who belongs.
7. Knowing what others know, what they can do, and how they can contribute to an enterprise.
8. Mutually defining identities.
9. The ability to assess the appropriateness of action and products.
10. Specific tools, representations, and other artifacts.
11. Local lore, shared stories, inside jokes, knowing laughter.

12. Jargon and shortcuts to communication as well as the ease of producing new ones.

13. Certain styles recognized as displaying membership

14. A shared discourse reflecting a certain perspective on the world (Wenger, 1999, pp. 125–126)

Do moderators of large groups in Ravelry, as a collective, exhibit these indicators? As shown, Ravelry moderators have signaled that within their own groups, they have relationships that are usually friendly and that have been sustained over time. Moderators communicate often with their co-moderators (see Tables 8, 9, 10), sometimes about tasks that need to be performed, or at other times, in a more social manner. They are involved often in conversations and interactions that need little setup and are usually brief (see Table 12). However, moderators spoke of these communications often in terms of their own groups and did not strongly indicate that these types of relationships are maintained among moderators of different groups.

Moderators share a common communication tool, the report pages, but this tool is only used among moderators of the same group, and not used between moderators of different groups. To enable conversation among moderators from all groups, the Mod Squad was formed. The Mod Squad has more than 3,800 registered members, all of whom are or were either group moderators or administrators. Here moderators can go to ask any questions they have about administering their site. The Mod Squad is moderated by one of the site's paid staff along with a subset of the Main 6 moderators. All of these moderators have a long history with Ravelry.

However, in survey responses, only 29% of moderators indicated that they ask questions in the Mod Squad forum (see Table 15). This might be because in most groups, moderators work within their own team first, only approaching the Mod Squad with problems than are not able to handle on their own. Mod 1, a new moderator with less than a year's experience, indicated that she consults the more experienced moderators in her group first. If they are not able to solve a problem, the group administrator posts to the Mod Squad and then relays whatever information she learns. Four other interviewed moderators echoed that they worked within their own group first, with one moderator saying that she uses the Mod Squad more as a reference, particularly when new technical features appear on the Ravelry site. The Main 6 forums were also cited as references for new features and/or technical bugs and fixes. However, when they have a question about moderating, moderators indicated that they use artifacts such as the forum threads and the Moderator Guidelines and Group Rules, in addition to advice from other moderators (see Table 15).

Although only 22% of moderators felt that they had jargon that was used when communicating with other moderators (see Table 12), there was evidence in comments that there is a specialized vocabulary, but it is not unique to moderators. Survey Respondent 29 commented:

I'd say it's [use of jargon] is more board-specific than mod-specific.

Survey Respondent 33 echoed this comment:

I think that more than mods having special terms, the groups have special terms. It's only natural for mods to communicate in the vernacular of the group they're moderating.

On Ravelry's Frequently Asked Questions page there is a link to Lingo/Glossary: Ravelry and the Internet, indicating a specific vocabulary that is related to craft and to common Internet functions. Moderators also indicated that the lexicon for moderators is one shared by the Ravelry community, giving all a common basis for communicating. As an example, the phrase be excellent to each other, one of Ravelry's main principles, was often repeated in comments and in interviews.

In interviews, there were many indications of shared stories and inside jokes, but within groups, not necessarily among moderators. Mod 4's group, for example, uses the phrase give me back my crochet hook to point out what they perceive as ridiculous behavior within the community or on the Internet. The crochet-hook phrase originated from an argument on another site, Mod 4 said, and is used as,

...a way to watch hidden behavior when people are doing things that are funny.

Because [whether] you're fighting over a \$2 crochet hook or you're fighting over a debate board on the Internet—it's often the same.

Two moderators brought up a story of a woman who faked her death on Ravelry, and three of the eight moderators interviewed talked of the moderator coup in Mod 8's group. All interviewed moderators spoke of groups other than their own, indicating an awareness of what is happening in other groups. This awareness points to weak, sustained relationships among moderators.

It appears, according to the indicators that Wenger (1999) presents, that there are signs that there is a weakly linked community of large-group moderators within Ravelry. This community, along with all of the communities formed by individual groups within the site, meets Wenger's et al.(2009) definition of a constellation of communities. Most

community groups within the Ravelry constellation appear to have a cultivation orientation (*ibid*), with moderators taking the responsibilities for facilitating conversations, organizing activities, and generally keep a pulse on the health of the community. These moderators have assumed the role of cultivator through emergence, rather than democratically or through a formal merit structure. However, the community of moderators does not appear to have such a strong cultivation orientation. It does appear to have an orientation that Wenger et al. refer to as *Individual Participation* (pp. 89-93). In this type of group, members are free to participate in varying degrees, from light participation to heavily involved leadership; the community helps individuals develop their own learning trajectories, and stresses belonging to multiple communities and managing participation across them.

### **Summary**

Groups within the Ravelry community are diverse in purpose and culture, so it should come as no surprise that its group moderators are just as diverse in terms of moderating style. Some groups are very highly structured, while others are free-flowing; some groups are a pure lovefest among members and their craft, while others are contentious and delight in snarky conversation. However, in their roles as Ravelry moderators, group leaders' tasks seem to center around those that either encourage group participation or relate to group governance. It is interesting to note the dynamic between these two emphases, participation and governance, and how each affects the other.

In maintaining participation in their groups, moderators often are instrumental in establishing their group's culture, stimulating discussion, coordinating events, connecting members to resources, and in performing routine housekeeping tasks to keep the site

organized and easy to use. Discussion seems to be a constant in most groups, while organized activities take on more or less importance depending on the group's purpose. Housekeeping tasks are also important in varying degrees according to the type of material that is posted within the group. There is evidence that high levels of participation both in terms of numbers of participants and their activity can impact the interaction between members and cause changes in group's rules.

In governing the groups, moderators' actions focus on ensuring that members adhere to group rules. These rules are very different from group to group, but are focused on community guidelines of respectful behavior to all members. Some groups see no need to have additional guidelines beyond those of the Ravelry community, while others have very specific rules. It seems that the level of detail in these guidelines rises when there are certain activities within their groups. Such activities include group challenges, exchanges of goods and services, or discussion on controversial topics. Moderators construct group rules and modified them in reaction to problems that arise within the group. These rules and the methods that moderators use to enforce them play a large role in developing and maintaining the culture of their respective groups, thus affecting participation within the group.

Despite the differences in groups, Ravelry moderators have a common purpose in wanting to serve their communities and to promote knowledge in their craft. They volunteer their time, sometimes in hours that rival a full-time job, because they like their group members and want to contribute. They usually work closely in a team of moderators that strives to be fair and in consensus on the actions that its members take.

There is a feeling that the work that they do is for love, love of craft and the community.

As Mod 8 stated:

There is such painstaking care taken to widen the audience in Ravelry, to make it accessible, to make it better, it's a real project of love on everyone's part who makes it run.

## **Chapter Five: Moderating for Scalability**

The purpose of this study was to determine the role of volunteer moderators in facilitating participation in an online group that is experiencing rapid growth and is focused on informal learning. Ravelry.com, a community for handcrafters, is such a group; it provides a huge database of member-contributed technical information to assist its members in learning about their crafts, and has experienced explosive membership expansion, growing to more than 3 million registered users in a little more than 5 years. Ravelry has only five paid employees: a husband and wife team who began the community on a server in their living room, their sister-in-law, a community member who was originally hired to answer the volumes of e-mail that is received, and, most recently, a second software developer. The rest of the work in monitoring and maintaining Ravelry.com is done by thousands of volunteers within the site. The discussion groups that are arguably the heart of the community are led by moderators and administrators who donate their time and expertise to provide forums on a wide range of topics, from craft-based exchanges to debates on thorny political topics.

Achievements of phenomenal growth and activity in online community building are rare, but noted success factors include structures that allow activities that are tailored to the community's practice and quality of membership exchange (Iribarri & Leroy, 2009; Ostrow, 2009). Issues that present challenges in scalability are management of information, so that members can easily locate what they need, and guidance in social processes (Benford et al., 2001). By exploring the activities and attitudes of moderators who lead groups with thousands of members within the Ravelry community, and by allowing moderators to tell their story in their own words, a pattern of behavior emerges

that gives insight into a structure that enables rapid, large-scale growth, and its maintenance.

### **Summary of the Study**

This case study-focused on volunteer moderators who manage large, active, established groups within the Ravelry.com community. A survey, followed by interviews, allowed for both a broad view from many moderators about their work as well as a detailed, intimate look at their lived experiences. The study was conducted in two sequential phases: Phase I, consisting of a survey, to which 73 moderators responded; and Phase II, online interviews of eight moderators. The study focused on three research questions:

1. How do members come to be moderators?
  - a. What benefits accrue to them as a result of being moderators?
  - b. What is their relationship with-to other moderators?
2. What role do moderators in large scale groups play in:
  - a. Maintaining participation?
  - b. Maintaining governance structures
3. Is there an emerging practice of large-scale moderation?

The framing of the sample for the survey consisted of moderators who had the following characteristics at the time of the study: (a) they organized one of the 100 most active groups (in terms of posts per day), (b) their group had more than 3,000 members, and (c) the group had been in existence for at least 1 year. All moderators belong to the Ravelry group called the Mod Squad, which was designed to support moderators in performing their tasks. From the group of more than 3,800 Mod Squad members, 157

moderators met the criteria listed (including moderators of the Main 6 forums, which are default forums to which all Ravelry members belong) and were sent survey requests through Ravelry's personal messaging system.

Of the 73 moderators who responded to the online survey, 37 moderators agreed to take part in interviews. Ten moderators were then selected for semi-structured interviews and were sent a request to arrange a date and time through Ravelry's personal messaging system. These 10 moderators were chosen because they represented different types of groups within Ravelry (e.g., groups that are craft-oriented, social groups, knit-alongs, fan-based groups, or groups that were concerned with specific life-style issues). Moderators were also selected to represent varying amounts of service in their positions, from less than 1 year up to 5 years—when Ravelry was first formed. Eight moderators were interviewed, seven moderators who responded to the survey request, and one moderator who was interviewed but was not part of the original sample.

Interviews were conducted, in all cases but one, using a voice over Internet protocol, recorded, and transcribed. One interviewee requested that the interview be conducted through interactive text-based chat, which allowed for the same types of questions, follow-ups, and prompts that occurred in voice chats. The transcripts were then coded using a priori categories determined by the literature as well as emergent categories that arose from open-ended survey responses and through the interviews. At the conclusion of the interviews, codes were reexamined and condensed into five major themes: Motivation, Encouraging Participation, Governance, Housekeeping, and Changes in Moderating.

## **Characteristics and Skills of Moderators in Massive Online Groups**

This study examined Ravelry moderators in the context of their work with individuals who are involved in the hobby of textile making. Textile making encompasses a significant knowledge domain, supported by a multigenerational community of practitioners of varying expertise and involvement (Lave & Wenger, 1991; Wenger, 1999). A second frame for analysis drew from work on serious leisure, in which volunteers are considered practitioners, and where motivations and rewards to attract these participants are examined (Hartel, 2007; Stebbins, 1982, 1996, 2001). These two frameworks provided avenues to explore how volunteer moderators can successfully coordinate their groups to allow for exchanges of information among thousands of members. The explorations in this study yielded information about the personal characteristics of moderators, key elements of the moderating job, and how successful large-group moderators acquire skills and support within Ravelry.

**Personal characteristics of moderators.** Personal characteristics that make successful moderators include a love of their community, the chance to utilize skills that they possess, and the opportunity to be challenged. Active members within Ravelry groups often form close bonds with their community, even though they might never have met each other in a face-to-face setting, and do not expect to in the future. In accordance with findings in UseNet groups (McLure Wasko & Faraj, 2000), care for their group, and the relationships formed within it, often motivated members to volunteer their services as Ravelry moderators. Moderators often volunteered after having been a group member for a period of time. Through their participation in the group, volunteers observed a need that they were able to fill through knowledge or expertise that they possessed. Sometimes the

invitation to moderate was extended by one or more group moderators specifically asking for help because they recognize a member's skills and abilities. Many moderators stay with their group because they find the challenges to which they are exposed stimulating, and for personal growth in both craft and intellectual areas. The personal characteristics that are needed vary, depending on the type of group, but there are many similarities in the types of tasks in which moderators engage.

**Key elements of the moderating job.** Large-group moderators within Ravelry are continuously involved in a dynamic process with group members to create an environment that is comfortable. Even when the technology that is used by each group is the same, as it is within Ravelry, resultant behavior can be quite different, depending on the group. Such indicators are consistent with Relph's (2007) *sense of place* (paragraph 8). Moderators produce a sense of place within Ravelry groups through performance of specific tasks. Most notably, these tasks involve creating their group's purpose and culture, stimulating participation through discussion or activities, helping members locate information, and resolving conflicts among members.

**Creating a group purpose and culture.** Place is a cultural phenomenon (Harrison & Dourish, 1996), and a group's culture and purpose helps members know whether they belong. Moderators establish a purpose for their group through a statement or description on their homepage. Purposes of groups may be classified into different categories, the researcher used five: craft-related, social, fan-based, life-style, or knit-alongs. Each of these categories has discussion as a common component.

Moderators heavily influence their group's culture, primarily through a history of constant interaction in the group's activities. They often lead the group by their example,

displaying to other members, through their posts, what type of behavior is expected of participants. To achieve some level of influence, moderators must spend time reading posts, posting to discussion threads, and being aware of what the community is doing. This information allows them to know better their members' concerns. Reading posts and following discussions also allow the moderators to spot areas of potential trouble so that they can attempt to minimize drama in the group.

Drama can sometimes be minimized by group rules as well. Ravelry community guidelines stress civil and respectful behavior toward all members, which is consistent with attitudes in traditional handcrafting communities (Burke, 2008). However, in some groups, moderators see the need for additional rules. Rules and culture become interwoven, each being influenced by the other. Rules are created through moderator discussion, and displayed on group pages to shape the group's culture and give members an initial impression of whether they fit within the group. However, the culture shapes rules as well; a group's level of contentiousness and the elaborateness of its activities often affect its rule structure.

***Stimulating participation through discussion and activities.*** Participation can be encouraged through various types of activities that are tailored to the needs of the group and, in Ravelry, often mimic the activities of show and tell and casual (non-craft related) conversation that are prevalent in traditional face-to-face crafting groups (Schofield-Tomschin & Littrell, 2001). Show and tell activities were found in many groups, especially those groups the purpose of which is to host craft-based discussions and knit-along events. In knit-alongs, members work on similar types of projects and post pictures of their results in threads created specifically for that purpose. Many of these activities

require a highly structured organization, especially those that involve exchanges of materials or prizes. In groups that have these types of events, at least some moderators need experience with technical tools such as Ravelry pages, Excel spreadsheets, online to-do lists, and Google Docs to organize their activities.

Conversation is lifeblood of all Ravelry groups, but casual conversation is essential in Ravelry groups that have a purely social intent. In an effort to promote social exchanges, moderators sometimes stimulate casual conversation by seeding discussion threads with provoking topics. Such conversation topics depend on the group's norms and interests, ranging from relatively mild discussions on pets' health to heated debates on topics such as circumcision. This wide range of interests can lead to confusion on appropriate subjects for discussion, the lexicon that is used in a particular group, and the proper way to respond to a member's postings. Misunderstandings can lead to conflict that derails discussion. Thus, enforcement of group rules, especially those that address the underlying Ravelry principle of respect to members, is important in maintaining participation in a needlework group (Burke, 2008). It is not surprising, then, to find that resolving conflict is an important element in Ravelry moderators' duties.

***Conflict resolution.*** As found in the early online social experiment, the Whole Earth 'Lectronic Link (Rheingold, 2000), even peaceful Ravelry groups sometimes need to take action against members or visitors who do not follow group rules. The first line in responsibility of enforcement of these rules lies with the group moderators. Ravelry moderators use many different strategies to enforce rules and to resolve conflict, but most prefer a strategy that helps members avoid such issues.

The majority of Ravelry moderators actively engage in policing their group and resolving conflicts between members (see Table 6). The methods by which moderators keep the peace are varied, and range from simply maintaining an active presence in discussion threads to locking, blocking, and censoring. As Parameswaran and Whinston (2007) noted, governance structures that are light on enforcement often survive, and this was borne out in several moderator comments. Even in groups that are considered especially volatile, humor is an effective tool in getting members to follow the rules. Joking with members about their comments and using cat macros are examples of how moderators rule with a light hand. A posting by Mod 7 displays a sense of humor as well as firmness about how members should comply with group norms. Her post displays a picture of a dog trying to drink from a high-pressure lawn sprinkler. Underneath the photo she writes:

**MOD PANTS ON:** No more bickering over the OP's dog training methods. She came here to vent about her neighbors feeding her dog without asking, and I am getting real freakin' sick of the whole nitpick-and-pile-on that seems to be happening on just about every thread lately. Further bickering will be dealt with by means of negative reinforcement, i.e. shock collars and smacks with a rolled up newspaper.

When stricter actions are needed, techniques such as sending a personal message to the guilty member or earburning members (creating a link to the offending post that sends a message to the writer) are used. The Main 6 moderators, who are responsible for rule enforcement in the groups that contain all 3 million Ravelry members, have the ability to dim posts and often do so with a notice attached explaining their action. There

are various notes that are standard for specific rule violations, but one that is used frequently is Moderators' note: DBAJ/derailing. The DBAJ rule is one that the Main 6 have adopted, and is explained as follows:

Don't be a Jerk (DBAJ): Don't be a jerk. For example: a reply that reads "Get a life!" is clearly not a personal attack, but it is a jerky post. Jerky posts will be dimmed and repeated bad behavior will result in being blocked from a thread. (Ravelry's main discussion boards, n.d., section 3).

Such moderator actions, while intended to be a quick way to deal with bad behavior, might result in more work for moderators. Mod 7, who leads a group that was originally one of the Main 6 forums, but which was disbanded because it caused too much work for the Main 6 moderators, expressed this opinion:

IMO [cat macros and jokes] work a little better than putting "DBAJ" on posts.

Other extreme measures moderators take include editing or removing posts, and blocking members from participating in discussions. Heavy-handedness in governance can backfire, though, particularly if the group's purpose is to provide open discussion. Such a situation occurred in one group the purpose of which is to hold public discourse on contentious issues. A tight-fisted moderating style, that included redacting questionable posts, was at odds with the group's purpose. Group members were unhappy with the inability to question moderators' actions and the moderators were eventually asked to stand down because of his or her methods for enforcing policies. This revolt, while eventually resulting in a successful group with a growing membership, caused a huge upheaval in practice that resounded throughout the Ravelry community.

***Helping members locate information.*** Moderators encourage participation in their group by answering members' questions and by helping them to locate resources they might need to complete projects or to participate better in the group. Such members are sometimes referred to as community coordinators (Wenger et al., 2009). Ravelry has many members who might not understand technology, and so being able to answer questions on performing searches on yarns, patterns, or crafting techniques is important. Being able to upload picture files and create links are other technical issues that moderators address. Often, helping members find community resources requires a familiarity with the Ravelry site, the workings of other groups, or key individuals within the group or the Ravelry community.

***Housekeeping.*** Another aspect of the moderating job in Ravelry that requires technical skills is that of housekeeping. In terms of time spent on tasks, housekeeping was second in the number of times it was ranked among the top five tasks that moderators performed, only surpassed by encouraging member participation. Housekeeping activities organize materials, allowing members to locate more easily information (Coate 1992), and are theorized as a key factor in scalability (Benford et al., 2001).

Housekeeping tasks that Ravelry moderators perform are somewhat mechanical in nature and involve reformatting posts, moving posts to more appropriate discussion threads, and linking objects to threads. Moderators also sticky important threads so that they remain at the top of their discussion list, guaranteeing that they are visible and likely to attract group members' attention. While survey respondents ranked housekeeping frequently among the top five tasks moderators performed in terms of time spent, they ranked it less often in terms of importance (see Tables 7 and 8). There was some

evidence that housekeeping might be a task assigned to newer moderators, giving them a background role until they have gained more experience, following the pattern of legitimate peripheral participation (Lave & Wenger, 1991).

**How do moderators acquire skills?** Even though many received no formal or informal mentoring as moderators (see Table 14), moderators' histories with their groups suggests that moderators have served an informal sort of apprenticeship, either within their group or the Ravelry community. This type of enculturation corresponds to Lave and Wenger's (1991) notion that learning is revealed in the increasingly central participation that practitioners display as they acquire expertise. Indeed, many Ravelry moderators indicated that they learned how to moderate by reading through other posts to see how problems were handled. Moderators realize that they are a good fit for the group through such participation, guaranteeing their knowledge of its culture and purpose. The trajectory of involvement signifies that a level of trust in moderator abilities has been established with other moderators and the group members. Large-group moderators within Ravelry almost always work in teams and communicate often with co-moderators in their groups. In doing so, moderators often take on the role of cultivators, a strong core that nurtures their group. Backchannel communication allows the core group to have open discussion outside the view of the general membership. It is important for cultivators to have tools for back-channel communication to aid in conflict resolution, and to provide each other with private encouragement (Wenger et al., 2009). Moderators within Ravelry make use of such tools, especially the Ravelry report pages, to flag posts so that the co-moderators can easily see things that they perceive to be problems, and also to discuss generally what is happening in their groups. This open communication among

moderators guarantees consensus, if not total agreement, in moderator actions.

Moderators expressed some dissatisfaction on the limitations of the report pages and so other online tools such as GoogleDocs and wikis are employed to aid moderators' sharing within their team.

**Tensions in moderating.** As Stebbins (1996) noted, along with the positive benefits that members accrue, moderators acknowledged that their jobs could present problems. Survey Respondent 19 commented on the moderating experience:

It's essentially just community maintenance. It can get dirty at times.

The tensions of finding the right fit for the group and for moderating style were also mentioned. Survey Respondent 58 wrote:

In the beginning [our group] was constantly dealing with Casey and other groups who didn't think our group fit the community guidelines.

Another tension that could arise is disagreement among the moderating team. In responding to a question on moderators' agreements on actions, Survey Respondent 30 said

Most moderators [agree], but when someone doesn't, conflict resolution is very, very challenging.

There is also a tension in maintaining a balance between work and play in the community, as Survey Respondent 53 noticed:

If most of your group activity is responding to flagged posts and/or problems, you will get burned out very quickly. Work with your other moderators and get to know them, which will make working as a team and dividing work much easier.

I've also found it helpful to have another group as a "homebase"—somewhere I participate and have fun but don't have to do any of the work.

Burnout can result when moderators fail to achieve this balance, and Mod 3 summed up her frustration with her 40-plus hours per week moderator commitment when she said:

Personally, I'm at a point where I just want to be a member and I just want to knit.

Another moderator expressed that moderators in her group sometime just get tired and need to be relieved. Survey Respondent 5 said:

You get tired of butting your head against the wall with the same people about the same issue every day.

In some groups, the time-offs are planned, as in the group where moderators serve for a 3-month period and then rotate off. Even when a moderator has committed to taking on a task, Survey Respondent 30's advice was not to "be afraid to step up and say, 'sorry, this is more than I can handle' and step down." Mod 2 echoed that sentiment when she said:

I tell them that if they feel like they're doing too much for [Group X], that you tell me, I'd much rather have you say something about backing off for a bit rather than bail—maybe like I need to take a month off or something so we need to shift things around.

**Unexpected results.** Even though the researcher had been a member of the Ravelry community for several years before conducting the study, there were two rather unexpected findings in this study of moderators. The first had to do with the role of the Mod Squad, the group that contains more than 3,800 moderators within the Ravelry

community, and the second had to do with some Ravelry moderators' false sense of privacy regarding their moderating activities.

***The Mod Squad as a coordinating community.*** As noted in Chapter Two, the Small World Network (Watts & Strogatz, as cited in Shirky, 2008), where densely connected groups have loose connections between other groups, has been offered as structure that will allow increased communication in a large-scale environment. These loose ties allow information to flow throughout the community more efficiently, to avoid overburdening all members.

Wenger et al. (2009) define constellations of communities that are similar to Small World Networks. In the constellation, the small groups are communities in their own right with a unique culture and practice. While these commonalities can create a sense of closeness among members, they can also result in the creation of boundaries that might discourage new members from joining. To breach these barriers, Wenger et al. posit that it is often essential to have community coordinators to act as brokers to facilitate exchanges across groups. Thus, not only do coordinators bring information to the group that helps in understanding others' perspectives, but in the small world network, they aid in diffusing information throughout the entire Ravelry community. These coordinators might benefit from their own support group, the coordinating community, which aligns systems and provides personal encouragement to other coordinators.

Within Ravelry, most groups appear to be densely connected, each forming their own CoP with a core group of moderators that is responsible for its care. The presence of a core group indicates that most Ravelry groups have a cultivation orientation (Wenger et

al., 2009), with moderators acting as loose ties between groups. Although there are no apparent assignments for moderators to act as brokers between groups, moderators of large groups seem to be aware of other large groups' activities, as indicated in shared Ravelry stories and by knowledge shared by moderators about groups other than their own. What was somewhat surprising, though, is a lack of a strong coordinating community for moderators.

From an outsider's perspective, the Mod Squad appeared to be the coordinating community, specifically designed to be a place where moderators "can come and ask for advice, offer [an] opinion and just discuss the daily challenges of running a fair and fun group" (Mod squad, n.d., paragraph 1). All moderators are technically members of the Mod Squad, but in reality, few moderators use the group for advice or support in moderating (see Tables 11 and 15). Instead, because each group is unique in its culture and problem sets, moderators tend to seek advice from moderators they know, from the Ravelry Moderator Guidelines, or from observing other moderators' threads. Many moderators might choose not to ask questions in the Mod Squad because of privacy concerns. All posts to the Mod Squad are visible to all Ravelry members, and moderators are cautioned not to use the forum to discuss particular members, and to couch their issues in generic or hypothetical terms. Moderators, especially those new to the job, might not be able or willing to express their concerns in this open forum for fear of exacerbating already difficult situations. The Mod Squad seems different than most large groups within Ravelry in that it is very loosely connected to its membership. While the Mod Squad is not the coordinating community that the researcher expected to find, it does appear that there is a sort of practice of large-scale moderation with an individual

participation orientation (Wenger et al., 2009). Such an orientation indicates that members participate to varying degrees in helping their fellow moderators progress on their own learning trajectory.

***False sense of privacy within Ravelry.*** The second unexpected result occurred in the process of designing the original study. The first study intended to look specifically at the Main 6 moderators, those who moderate forums to which all 3 million Ravelry members belong. The original research methodology was intended to be a qualitative study, examining forum postings and interviews. When this small group of nine moderators was approached, none consented to be part of the study. Two moderators did explain that they did not want their actions scrutinized and made available for public inspection. This is understandable, since the group of Main 6 moderators is quite small and their identities could be guessed. However, the moderators' forum posts are hardly hidden. One can obtain a complete listing of all posts made by any Ravelry member simply by going to the member's page and clicking on the posts link. As in any online setting, even Ravelry moderators might experience what Mod 8 called,

...a false sense of privacy in Ravelry, given that...everything you've ever written in Ravelry is public...and people can poke through anything I've written on the site since the beginning of time, if they have that agenda.

### **Strengths and Limitations**

The use of survey and interview methodology in this study created a rich data set that is both broad and deep. The survey allowed for many moderators' responses and pointed to topics for further exploration. Because the survey responses for multiple-choice questions were predetermined by the literature and the researcher's experience in

the Ravelry site, in some cases, choices were limited to preconceived notions on what moderating entails. Comments and open-ended responses that many moderators left helped to remove those limitations. Semi-structured interviews that were conducted after preliminary survey analysis provided the opportunity for moderators to tell about their experiences in their own words, and allowed the researcher to follow-up on topics when answers were not clear. The willingness of moderators to provide thoughtful comments to survey questions and in interviews provided, in some cases, extremely detailed accounts of what moderators do and how they feel about the Ravelry community and their role in its success.

While it is expected that this research will contribute to the knowledge base on coordinating CoPs in online communities, it is a study of one specific community and results might not be generalizable to many online communities. This is especially true in generalizing the results to more formal community types, such as those found in the workplace or for more formal learning. Participants in Ravelry groups do so because they possess a passion for their craft as well as their groups. Participants in work or educational online communities might lack such passion.

It is possible that key informants for interviews, those who provided much of the in-depth understanding in answering the research questions, were missed. This would indicate that the interviews conducted did not fully represent the full range of moderators' experiences. While it cannot be known for certain, it does not appear that any of the Main 6 moderators participated in the survey: none of the Main 6 forum names were given in response to the question that asked for the name of the largest group that was moderated. No Main 6 moderators were interviewed. Lack of input from the

moderators of the Main 6 forums was keenly felt, since these moderators led the largest groups within Ravelry and arguably exert more influence in the community than other groups.

### **Implications of This Research for Other Online Communities**

This study gathered information about moderator's roles in Ravelry that help to engage members and encourage their participation in a massive online community. It provides a set of features that might be of use in the design of other large-scale CoPs. Especially in education, the online CoP concept is one that has been gathering attention, both in terms of professional development for teachers (Feature, 2012); Schlager & Fusco, 2003) and as an alternative to traditional student instruction.

Synchronous online exchange for teacher professional development has been available since 1997 through the Tapped-In community (Farooq, Schank, Harris, Fusco, & Schlager, 2007; Schlager & Fusco, 2003) and this CoP approach was identified as a focus of study for teacher professional development by the United States Department of Education in its 2010 National Education Technology Plan (U.S. Department of Education, 2010). In its 2011 report, titled "Connect and Inspire," the U.S. Department of Education outlined best practices for management of these types of communities (U.S. Department of Education, 2011). CoPs for teachers is a continued focus of the U.S. Department of Education, as evidenced in a feature written in 2012 (Feature, 2012), where further ideas for refining tools and structures for professional CoPs were explored. A prominent assertion of this report is that simply building a site does not guarantee people will use it. Multiple methods of participation that can be integrated into the users' routines are necessary. Such methods go beyond synchronous online chat, and include the

use of mobile applications such as Twitter for synchronous exchange, and forum postings on professional or other social sites for asynchronous discussions.

The use of multiple options for engaging students in the Massive Open Online Course, Connectivism and Connective Knowledge, has also been explored (Mak, Williams, & Mackness, 2010). Massive Open Online Courses were designed as a constructivist network, one that is consistent with the CoP concept. In such communities, knowledge is constructed through a process of collaboration, interaction, and communication among learners in a social setting (de Waard et al., 2011). In such a setting, learner autonomy is becoming increasingly important in promoting the ability to share information freely (Mackness, Mak, & Williams, 2010).

To address the issue of learner autonomy, participants in Connectivism and Connective Knowledge 08 had a range of communication choices that included engaging with blogs and forums. Each of these forms of communication has its advantages; blogs allow a safe space for more personal reflection, and forums provide fast-paced challenging interaction, as well as more openness and a more comprehensive view of topics (Mak et al., 2010). However, such an open environment can cause participants to be uncomfortable. In a study of Connectivism and Connective Knowledge 08, although 84% of survey respondents indicated they posted to forums, 51% ceased participating for part or the entire course, many because of lack of forum facilitation or unacceptable behavior by other participants in the forums. Thus, being able to handle such types of conflict to make participants feel safer in their environment is an important mechanism in providing learning opportunities in a CoP. The moderating structure in the Ravelry community provides a model for forum management in a CoP, and this research study

outlines specific skills that should be emphasized for moderators in implementing such a structure.

### **Recommendations for Further Study**

Because this study was limited to a single case, and because studies of moderation in online hobby groups are rare, this study can provide a basis for comparison to other studies of moderation in massive content-producing communities such as Wikipedia. It would also be interesting to compare moderating strategies found in Ravelry to corporate or other professional CoPs. For future study of moderation within the Ravelry community, it would be useful to examine non-moderator members' opinions about moderating styles and the effects they have on member participation. The commercial aspect of Ravelry, including how volunteers support a business model built on micro-transactions, could be another extension of this study. A third study of Ravelry that would be fascinating would be one that entailed social network analysis of the moderators in large groups. Such an analysis could help in predicting patterns of exchange among those in the Ravelry community and could identify key connectors that would assist in distributing information throughout the system.

### **Concluding Remarks**

The key factor that allows for rapid growth within Ravelry is the ability for members to self-organize. In this autonomous self-organized structure, moderators are instrumental in constructing a welcoming and comfortable place for their members. Mod 7 summed up the freedom that she experiences:

It really seems to be as long as nobody's violating the Ravelry guidelines, we're left to our own devices and to create our own rules and culture. Weird but rather nice and interesting too.

This freedom extends to moderators being able to select their own moderating team. In choosing a co-moderator, the selection process should entail the qualities of long-standing interaction with group members, a passion for the group's purpose, and a love of its members. Before they agree to take on the position of moderator, group members should be aware that to do their job well, it would be necessary to read members' posts, and to communicate with other moderators and with group members on a regular basis.

Moderators can expect to participate in some type of conflict resolution and rule enforcement, but should perform these tasks with a light hand. Most often, enforcement strategies should make use of humor, fairness, and openness. In most cases, members intend to follow along with group guidelines, and conflicts result from misunderstandings or misinterpretations of social cues. However, in rare cases, there are deliberate, repeated violations of group rules and more stringent actions need to be taken. Rule enforcement and conflict resolution should always be conducted with an eye toward what is best for the community, and it is best if moderators can agree on these actions.

Moderators of large groups need to have support, but, especially when groups have distinct cultures and diverse purposes, it might not be possible to design a one-size-fits-all support group that meets the needs of all moderators. In such cases, moderators will most likely prefer to receive advice and support from their own group leaders, so site designers should carefully construct technologies that allow back-channel communication and other types of cooperative work for moderators within the same group. If a main

coordinating group for moderators were to be constructed, it would be desirable to construct something like the report pages for moderators across different groups to use. This type of communication system would allow moderators to see specific situations without making problems known to the entire Ravelry community.

Women derive pleasure in life and freedom from gender restraints in talk and laughter (Green, 1998; Yarnal et al., 2008). Moderators within the Ravelry community understand that this playful nature draws members in; they make possible activities such as the Ravelympics-Ravellenics craft-alongs, the Tour de Fleece spin-along, and various other contests and challenges on the site. They also allow casual conversation to flow in the groups that abound throughout the community. Ravelry moderators, through their volunteer activities, provide a great gift to their members. As Mod 8 put it, the work that is done through everyone who contributes to the site is “a real project of love.”

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## APPENDIX A

### Ravelry Community Guidelines

Updated March 9th, 2009

Items marked with **rule** are firm policies. By using Ravelry, you agree to follow these rules and guidelines. Group Moderators, Ravelry Moderators, and Ravelry will enforce these rules. Ravelry is at its best when people are civil and respectful toward one another and these rules are meant to help our community grow and stay healthy.

Repeated or egregious violations of Ravelry rules will lead to being blocked from the forums, having messaging privileges revoked, or being banned from Ravelry. Also, note that these rules are not a replacement for our Terms of Use.

Respect people's personal space. If you have negative comments about someone's personal projects, handspun, designs, yarns, etc., keep them to yourself.

**rule** Personal attacks, harassment, and personal threats are not allowed on Ravelry. Attacking or harassing any person through the posting of off-site links are also not permitted. (show our definition of personal attacks and harassment)

**rule** Hate speech and hateful imagery is not permitted on Ravelry. (show our definition of hate speech and hateful imagery)

**rule** Respect the privacy of others. Do not post the contents of private messages or personal information about other Ravelry members that cannot be found on their profiles without permission. You may not link to off-site privacy violations.

**rule** We at Ravelry are people, too. Jess, Casey, Mary-Heather, and Sarah work hard to keep improving the site and love getting helpful ideas and feedback from our members. When problems arise, we do our best to be fair and nice people. We require that community members interact with us in a respectful manner, and while we understand that people get upset, we will not take abuse (our call) and we reserve the right to deny you access to the site at any time.

There will be Ravelry Groups with opinions that oppose yours. Do not use groups as a way to troll and harass individuals. See the rules about personal attacks and harassment above.

**rule** All group moderators are required to uphold these guidelines to the best of their abilities and contact Ravelry if they need assistance. Failure to do so will affect a moderator's position with the group.

**rule** Groups may create their own sets of rules as long as they do not interfere with these Ravelry-wide policies. Guests and group members must adhere to these group-specific rules. Note that the Main 6 boards have their own rules too.

Many small business owners (LYSOs, designers, yarnies, etc) enjoy Ravelry. They are your neighbors too - treat them with respect.

Ravelry is not customer service! If you have negative feedback about a business to share, share it with the owner first. When posting reviews that contain negative feedback, remember that you are talking about somebody's livelihood.

**rule** Libelous comments are not permitted. Back up your claims with facts.

**rule** There is no place for vendettas on Ravelry. If we suspect that your goal is to cause harm to a business or person that you feel has wronged you, your posts will be

deleted and your posting privileges may be affected.

Refrain from adult language on the Main Six boards (For the Love or Ravelry, Yarn, Patterns, Techniques, Needlework on the Net, and Remnants). Also note that some of the 6000+ other group boards have their own rules about using adult language.

**rule** No adult language in avatars or usernames.

**rule** Nudity in avatars or other photos is not permitted.

There is sharing and then there is spamming. Think about the place, context, and time when you post something that is self-promotional.

**rule** Posting the same message to more than 2 boards without permission from the group owner/moderators is not permitted. Unreasonable crossposting is considered spam!

**rule** Unsolicited promotional private messages are considered spam. You will be warned if we receive complaints about spammy private messages.

**rule** “Sock puppet” accounts are not permitted. A sock puppet is an additional Ravelry account that is used in a deceptive fashion. (show more information about sock puppets)

**rule** You may not use Ravelry to request copies of copyrighted materials from people who do not have permission to distribute them. You may not post or share copyrighted materials on Ravelry without permission from the copyright holder.

**rule** “Personal” fundraising posts (fundraising for individuals in need) are not permitted on the Main Six boards. Additionally, group moderators and administrators may not solicit personal donations from their group members.

## APPENDIX B

### Moderator Survey

#### Ravelry Moderator Survey

##### Survey Consent

###### \* 1. 1. Information

**This study is focused on the role of moderators in large-scale online communities. The survey will inquire about what kinds of activities you perform, how you coordinate with other moderators and site owners, and how you work to organize the site.**

**Ravelry LLC has given permission for me to approach moderators for the purpose of my research study, and the survey results will be used in my dissertation at Pepperdine University. My work is being supervised by Dr. Linda Polin, chair for the Learning Technologies program at the university.**

**The survey consists of 29 questions, will take about 15 minutes, and will be open for two weeks. Your responses will be confidential and I will not collect identifying information such as your name, email address or IP address unless you provide contact information for a follow-up interview. Participation in the study is strictly voluntary.**

###### Confidentiality

**All information provided will be kept confidential. All data is stored in a password protected electronic format. To help protect your confidentiality, the surveys will not contain information that will personally identify you. The results of this study will be used for scholarly purposes only.**

###### Risks/Benefits

**The only foreseeable risk associated with this study is the imposition on your time. The study will be beneficial in that it will help researchers understand what makes strong online communities and how to organize key volunteers for community success. A summary of our findings will be made available to Ravelry, so there will be potential benefit to the knitting and crocheting community to gain understanding in how moderators work, what types of activities they manage, and what they see as important in carrying out their responsibilities.**

###### Contact

**If you have questions at any time about the study or the procedures that are being used, you may contact me, Sheila Pisa, at [Sheila.pisa@pepperdine.edu](mailto:Sheila.pisa@pepperdine.edu), through Ravelry PM (Ravelry name sheknitter) or by telephone at 951-571-6146. My dissertation advisor, Dr. Linda Polin, can be reached at [Linda.polin@pepperdine.edu](mailto:Linda.polin@pepperdine.edu).**

## Ravelry Moderator Survey

**This research has been reviewed according to Pepperdine University IRB procedures for research involving human subjects.**

**ELECTRONIC CONSENT: Please select your choice below. Clicking on the "agree" button below indicates that:** • you have read the above information • you voluntarily agree to participate • you are at least 18 years of age. If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

I agree

I disagree (end survey)

## Ravelry Moderator Survey

### Moderator Demographics

These questions deal with basic information about you as a moderator and the group(s) which you moderate.

**\*2. How many groups do you currently moderate?**

- 1
- 2
- 3
- 4
- 5
- 6 or more

**\*3. If you moderate a single group, what is its name? If you moderate multiple groups, name the one that you believe provides the most challenges as a moderator.**

**4. How long have you been a Ravelry moderator?**

- Less than 6 months
- 6 months to 1 year
- 1 to 2 years
- 2 to 3 years
- 3 to 4 years
- 4 to 5 years
- Since the beginning of Ravelry

**5. How long have you been a moderator of the group you named in question 3?**

- Less than 6 months
- 6 months to 1 year
- 1 to 2 years
- 2 to 3 years
- 3 to 4 years
- 4 to 5 years
- Since the beginning of Ravelry

## Ravelry Moderator Survey

### 6. How did you become a moderator/administrator for the group you named in Question 3?

- Formed the group, self-appointed
- Volunteered services as a moderator after belonging to the group for a period of time
- Was asked to become a moderator for a group by another moderator
- Was asked to become a moderator for a group by Ravelry owners
- Was asked to moderate the group by group members

Other (please explain)

### 7. How much time per week (in hours) do you spend moderating your group(s)?

### 8. What personal benefits do you realize as a volunteer moderator? Check all that apply.

- I like to help other people learn new things.
- I like to promote and preserve knowledge in my craft.
- I learn new things in my craft by volunteering as a moderator.
- I am hoping to learn more about Ravelry by being a moderator.
- I am hoping that someday this will lead to a paid position on Ravelry.
- I am hoping that the skills I learn on Ravelry will lead to another type of paid position.
- I am hoping that my exposure on Ravelry will lead to sales of patterns or other fiber-related materials.

Other (please specify)

## Ravelry Moderator Survey

### The Role of the Moderator

**9. What tasks do you perform as a moderator? Check all that apply.**

- Communicate with other moderators
- Conflict resolution
- Connect members to resources (resources could include other members who have specific knowledge)
- Editing posts
- Encouraging member participation
- Housekeeping (choosing threads to a more appropriate forum, other cleanup)
- Policing (issuing warnings, locking threads, etc.)
- Providing suggestions on how to improve Ravelry
- Share expertise in moderating to other moderators
- Share expertise in your practice of crafting to other crafters

Other (please specify)

**10. Using the task list from Question 9, please list the top five tasks in order of how much time you spend on them, with the tasks that take the most amount of time first.**

**11. Using the task list from Question 9, please list the top five tasks in order of how much value you believe they add to the Ravelry community, with the tasks that take the most amount of time first..**

**12. How would you describe your job of moderator to someone who asks what you do in this role?**

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## Ravelry Moderator Survey

**13. What tips would you give to a new moderator?**

## Ravelry Moderator Survey

### Moderating as a Practice

**14. In your experience, do moderators communicate much with each other?**

Yes

No

Not sure

Comments

**15. If you contact another moderator for help, how do you usually initiate the conversation? Check those that are most common**

Email outside of Ravelry

Mod Squad discussion thread

Discussion thread in a forum other than the Mod Squad

Ravelry PM

Instant messaging outside of Ravelry

Skype or other audio chat

Telephone

I don't contact other moderators

Other (please specify)

## Ravelry Moderator Survey

### 16. If you interact with other moderator(s), how would you describe a typical interaction?

Check all that apply.

- A lengthy, detailed explanation of an issue with back and forth communication.
- A brief summary of a situation, using a lot of shorthand and terminology that the other moderator will understand
- A formal introduction of yourself and the problem/issue at hand
- A series of short conversations that seem to pick up as if there were no break in communications
- I don't normally interact with other moderators

Other (please specify)

### 17. If there is more than one moderator in your group, do moderators divide time/tasks that need to be done?

- Yes
- No
- Not sure
- I'm the only moderator

If you answered "yes" please give example(s) of the task(s) and how you worked together.

### 18. In your experience, do you find that most moderators agree on appropriate moderator actions?

- Yes
- No
- Not sure

Comments

## Ravelry Moderator Survey

### 19. In your experience, have the rules for moderating changed over time?

Yes

No

Not sure

If you answered "yes" please give example(s).

### 20. If you have other moderators in your group, do you all moderate in the same way?

Yes

No

Not sure

I'm the only moderator

If you answered "no", how are moderators different?

### 21. Do you think that the way you moderate has changed over time?

Yes

No

Not sure

If you answered "yes" can you give an example of how you've changed?

### 22. In your experience, is moderating the same from group to group?

Yes

No

Not sure

Comments

## Ravelry Moderator Survey

### 23. Have you ever formally taken on the task of "training" a new moderator?

- Yes
- No
- Not sure

Comments

### 24. Have you ever informally acted as a mentor for a new moderator by answering his/her questions?

- Yes
- No
- Not sure

Comments

### 25. When you became a moderator, were you mentored in this role?

- Yes, I was formally trained by another moderator(s)
- Yes, I was informally trained by receiving advice from one or more moderators
- No, I received no mentoring
- Not sure

Comments

## Ravelry Moderator Survey

### 26. Where do you get help if you have a question about your role as moderator? Check all that apply

- I always ask the same person for help
- I know certain people who have expertise in an area and I ask questions that match their areas of expertise
- I ask a question in the Mod Squad forum
- I read forum threads to find examples of how other moderators work
- I consult the "Forum Moderator and Administrator Tools and Guidelines" in Ravelry
- I've never had to ask anyone for help

Other (please specify)

### 27. Do you have specific tools or documentation that you use in moderating that are not used by Ravelers in general?

- Yes
- No
- Not Sure

If you answered "yes" please give example(s) of such tool(s).

### 28. In your experience, do you find that moderators have "special language" or "special terms" when communicating with each other?

- Yes
- No
- Not Sure

Comments

## Ravelry Moderator Survey

### Consent to be Contacted for Interview

**29. Would you be willing to be contacted for an interview on your role as a Ravelry moderator?**

**As a Raveler (Ravelry name sheknitter), I believe that the community's success is due in large part to the dedication of its volunteer moderators. I would love to hear stories from all moderators, but I am looking specifically for between 5 and 10 moderators of large, active groups (over 3000 registered members with a history of active postings). Interviews will be conducted within a period of two months, including June and July 2012. If you consent and are a good fit for the study, you will be contacted via the Ravelry personal messaging system to set up a time for an interview. The interview should take between 60 and 90 minutes, with the possibility of follow-up in case I need clarification on specific issue(s). Interviews will be conducted over the phone or online and recorded for further analysis.**

**Interviews will be protected by the researcher to allow for anonymity of participants. Interview responses in the study will be combined, so that no particular moderator is highlighted. If quotes are used, the moderator will not be identified.**

- yes  
 no

If yes, please leave your Ravelry name.

## Ravelry Moderator Survey

### Thank You!

Thanks for participating in this survey.

## APPENDIX C

### Chart Relating Survey to Literature

Question	Topic	Literature source	Research Question (RQ)
2	Demographic		
3	Demographic		
4	Demographic		
5	Demographic		
6	Ways of becoming a moderator	Wenger, et al, 2009, Dixon, 2007; Kim, 2000	RQ 1
7	Demographic		
8	Benefits of volunteering as a moderator	Stebbins (1982; 1996; 2001)	RQ 1a
9	Communicate with other mods	Butler, et al, 2008; Wenger, et al., 2009	RQ 1b
	Conflict resolution	Rheingold, 2000; Burke & Kraut, 2008	RQ 2b
	Connect members to resources (including other members)	Wenger, et al., 2009; Dixon, 2007	RQ 2a
	Editing posts	Rheingold, 2000; Butler et al., 2008	RQ 2a
	Encouraging participation	Preece, 2000; Wenger et al., 2009	RQ 2a
	Housekeeping	Coate, 1992; Rheingold, 2000; Wenger et al., 2009	RQ 2a
	Policing	Burke & Kraut, 2008	RQ 2b
	Providing suggestions on how to improve Ravelry	Wenger, et al., 2009	RQ 3
	Share expertise in moderating to other moderators	Dixon, 2007	RQ 3
	Share expertise in crafting to other crafters	Wenger et al., 2009	RQ 3
10	Rank tasks in terms of time spent	Moderators' experience	RQ 2a and b
11	Rank tasks in terms of importance	Moderators' experience	RQ 2a and b
12	Describe moderator job	Moderators' experience	RQ 2a and b
13	Tips for new moderators?	Moderators' experience	RQ 2a and b
<i>(continued)</i>			

Question	Topic	Literature source	Research Question (RQ)
14	Moderators' communication	Butler, et al, 2008	RQ 3
15	Moderators' methods for communicating	Ravelry site information, Wenger et al., 2009	RQ 3
16	Interaction between moderators	Wenger, et al., 2009	RQ 3
17	Division of tasks, explicit or implicit?	Butler, et al., 2008	RQ 3
18	Do moderators agree?		RQ 3
19	Change over time?	Kim, 2000; Wenger, McDermott, and Snyder (2002)	RQ 3
20	Do all moderators moderate the same way?	Bryant et al, 2005; Kittur & Kraut, 2008; Reagle, 2007	RQ 3
21	Has the way you moderate changed over time?	Kim 2000; Wenger, 1991	RQ 3
22	Is moderating the same from group to group?	Wenger, et al., 2009	RQ 3
23 – 26	Mentoring and moderation	Dixon, 2007; Wenger 1991	RQ 3
27, 28	Moderating tools, language,	Wenger 1991	RQ 3

## APPENDIX D

### A Priori Categories for Tasks/Moderator Roles

1. Housekeeping – moving threads, other types of clean-up (Rheingold, 2000,; n.d., Wenger, et al, 2009)
2. Policing – issuing warnings, locking threads, policy enforcement and conflict resolution (Rheingold, Wenger, et al., 2009)
3. Facilitator - encouraging member participation (Preece, 2000)
4. Technology Steward - Reflecting on how to improve the community, especially in terms of technology (Wenger, et al, 2009)
5. Connector - connecting members with other members or resources (Wenger, et al, 2009)
6. Contributor –Bring expertise in your practice of moderating to other moderators, sharing knowledge about crafting with other crafters. (Dixon, 2007, Wenger et al., 2009)
7. Host (Rheingold, 2000)
8. Editor (Reagle, 2007)
9. Coordinator – Coordinate with other coordinators (Wenger, White, & Smith, 1992; Dixon, 2007)
10. Social Catalyst – Dixon, 2007

## APPENDIX E

### Request for Participation in Research Study

Sent at 12:44 PM April 21, 2012

Dear [Ravelry Name],

I am a doctoral student at Pepperdine University (in California, USA) studying the roles of volunteer workers in forming core community groups to assist in online membership participation and governance. I am conducting this study in partial fulfillment of the requirements for dissertation under the guidance of my dissertation chair, Dr. Linda Polin. I have received Ravelry's permission to approach moderators for the study and have been given permission from Pepperdine University's Internal Review Board to gather data.

I am contacting you because you moderate a large, active group within the Ravelry community. Ravelry, how thriving and vibrant it is, is truly a testament to the strength of its volunteers and I would like to have your input on what you do in your role as moderator. In order to gather information anonymously, I have constructed a twenty-nine question survey that can be reached through this link:

<https://www.surveymonkey.com/s/RavModerators>. The survey will take about 15 minutes and the link will remain active for a period of two weeks. The survey is being sent to over 120 moderators of groups having over 3000 members, and which are in the top 100 groups in terms of activity (posts per day). Your responses will be confidential and we do not collect identifying information such as your name, email address or IP address unless you provide your contact information for a follow-up interview. Participation in the study is strictly voluntary.

If you would like to tell your story in your own words, you may choose to leave your Ravelry name so that I can contact you for an interview. If you agree to participate, you will be contacted via the Ravelry personal messaging system to set up a time for an interview. The interview will consist of a short set of semi-structured questions that will allow you to describe your experiences in working in Ravelry.com. The interview should take between 60 and 90 minutes. Interviews will be conducted using Skype (I can use Skype to call your telephone if you do not have Skype installed on your computer) and recorded for further analysis. I am looking for between five and ten moderators to interview and will be looking for those with more than six months experience as a moderator and will also be looking for moderators from different kinds of groups (for example, general groups, groups that are fans of something, groups that encourage lively debate, etc.). All interviews will be recorded on computer and saved as part of a password-protected database accessible only to the researcher. No identification will be asked for, and interviewees will be identifiable only to the interviewer by their Ravelry alias. In reporting, all identifying marks will be removed from the data and, if names are used, they will be pseudonyms different than Ravelry names, e.g., Moderator 1, Moderator 2.

Participants' status within the Ravelry.com community or elsewhere will not be affected in any way as a result of this study. Participants are not compelled to answer every question and participation in the study is strictly voluntary. The only foreseeable risk associated with this study is the imposition on the participants' time. The study will be beneficial in that it will help researchers understand what makes strong online communities.

If you have questions at any time about the study or the procedures that are being used, you may contact the lead researcher, Sheila Pisa, by email at [sheila.pisa@pepperdine.edu](mailto:sheila.pisa@pepperdine.edu), through Ravelry personal messaging (Ravelry name sheknitter) or, if you prefer, by telephone in the United States at 951-505-1352.

Respectfully,  
Sheila Saden Pisa  
Doctoral Student, Pepperdine University, Graduate School of Education and Psychology

## APPENDIX F

### Message to Schedule Interview

Dear Moderator,

Thank you for consenting to be interviewed for my study on volunteer moderators in Ravelry. The following paragraphs outline the terms of our agreement. If, after reading them, you consent to be interviewed, simply reply "I agree" to this personal message. After I receive this message I will contact you to arrange a day and time for the interview. If you have questions at any time about the study or the procedures that are being used, you may contact me, Sheila Pisa, by telephone at 951-505-1352, Ravelry personal message as "sheknitter", or email at [sheila.pisa@pepperdine.edu](mailto:sheila.pisa@pepperdine.edu).

#### Agreement

I authorize Sheila Pisa, a doctoral student under the supervision of Dr. Linda Polin, in the Graduate School of Education and Psychology at Pepperdine University to include me in the research project entitled "In Search of a Practice: Large Scale Moderation in a Massive Online Community ". I understand my participation in this study is strictly voluntary.

I have been asked to participate in a research project which is designed to study the roles of volunteer moderators in maintaining successful online communities. The study will require a personal interview that should take between 30 to 60 minutes, with the possibility of a short follow-up interview(s) to clarify any questions on the part of the researcher. I have been asked to participate in this study because I play an important role within the Ravelry community as part of its core governance structure. I understand that I will be audiotaped if I decide to participate in this study. The recordings will be used for research purposes only.

I understand that if the findings of the study are published or presented to a professional audience, no personally identifying information will be released. No identification will be asked for, and I will be identifiable only to the interviewer by my Ravelry alias. In reporting, all identifying marks will be removed from the data and, if names are used, they will be pseudonyms different than Ravelry names, e.g., moderator 1, moderator 2. All interactions will be recorded on a password-protected personal storage device accessible only to the researcher. These files will be kept in a locked file drawer and will be destroyed five years after the commencement of the study. The study will be beneficial in that it will help researchers understand what makes strong online communities.

Participation is voluntary; refusal to participate will involve no penalty or loss of benefits to which I am otherwise entitled. I understand that I may discontinue participation at any time without penalty. I will be mailed a copy of this agreement through Ravelry mail before participation.

Thank you!

Sheila Pisa

## APPENDIX G

### Interview Questions and Prompts

Motivations for being a Ravelry Moderator (**Stebbins, 1982; 1996; 2001**)

1. Please tell me how came to be a moderator for Ravelry.

Activities Performed (Dixon, 2007; Kim, 2000; Wenger, et al, 2002, Wenger et al., 2009)

2. What types of activities do you engage in as a moderator and how would you rate them in terms of importance to you? to the community?

Prompts

- a. Can you give me an example of what kind of activities you coordinate?
  - b. Can you give me an example of how you communicate with Ravelry members?
  - c. Can you give me an example of how you enforce Ravelry policies?
3. Do you initiate communication with other Ravelry staff members about your moderating practices? When or why? Do other moderators or staff communicate with you about moderating forums? When or why?
  4. Are there others that you communicate with on a regular basis in Ravelry? Who are they? If so, for what reason?

Governance Model – (Bryant et al, 2005; Kittur & Kraut, 2008; O’Mahoney & Ferraro, 2007; Reagle, 2007; Rheingold, 2000; Wenger, et al. 2009)

5. Do all moderators function the same way? Have the same tasks and privileges?
6. What sorts of decisions can and do moderators make?
7. What sort of authority do you have? individually or as a group?
8. Do you have a relationship with other moderators in the Mod Squad? How often

do you consult the group? How does this affect your moderating role?

## APPENDIX H

### Quantitative Analysis From Survey Results

Question 1: Are the average hours per week spent moderating the same for all types of groups?

#### **Analysis of Variance results:**

Responses stored in HOURS PER WEEK.

Factors stored in TYPE OF GROUP.

#### **Factor means**

TYPE OF GROUP	n	Mean hours per week	Std. Dev.	Std. Error
Social	19	8.368421	6.9379034	1.5916642
Fan	17	11.470589	10.100233	2.4496663
Knit-along	14	9.642858	10.951693	2.9269629
Life Style	11	4.6363635	3.7221694	1.1222763
Technical	3	18	15.394804	8.888194

#### **ANOVA table**

Source	df	SS	MS	F-Stat	P-value
Treatments	4	564.5214	141.13036	1.7828585	0.1443
Error	59	4670.416	79.15959		
Total	63	5234.9375			

$H_0: \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$  (the mean hours per week for each category are equal)

$$H_a: \mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4 \neq \mu_5$$

The p-value of .1443 >.1, so the evidence is not strong enough to reject the null hypothesis.

Thus, the average number of hours per week spent moderating is not significantly different for different types of groups.

**Question 2:** Is the average number of hours per week spent moderating different depending on how long a member has been a moderator?

#### **Analysis of Variance results:**

Responses stored in Hours per week.

Factors stored in How long moderating.

#### **Factor means**

How long moderating?	n	Mean Hours per week	Std. Dev.	Std. Error
Less than 6 months	8	6.875	4.421942	1.5633926
6 months – 1 year	9	5.3333335	4.9497476	1.6499158
1 – 2 years	14	14.071428	9.848578	2.6321435
2 – 3 years	13	8.230769	8.936385	2.4785073
3 – 4 years	10	7.2	3.8239014	1.2092239
4 – 5 years	8	9	9.242758	3.2678084
Since the beginning of Ravelry	3	15.666667	25.423086	14.678026

### ANOVA table

Source	df	SS	MS	F-Stat	P-value
Treatments	6	688.0221	114.67034	1.453942	0.2102
Error	58	4574.378	78.86858		
Total	64	5262.4			

$$H_0: \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6 = \mu_7$$

$$H_a: \mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4 \neq \mu_5 \neq \mu_6 \neq \mu_7$$

The p-value of  $.2102 > .1$ , so the evidence is not strong enough to reject the null hypothesis. Therefore the time spent in hours per week is not significantly different depending on how long the member has been a moderator.

**Question 3:** Are the tasks that moderators perform independent from the type of group moderated?

### Contingency table results:

Rows: TYPE OF GROUP

Columns: TASK

	CM	CR	CRS	ED	EP	HK	PO	SEC	SEM	SUG	Total
Social	17 16.82	16 12.85	9 14.37	14 12.2	11 13.7	13 13.7	17 12.5	7 9.17	7 6.42	4 3.059	115

Fan	14 13.31	8 10.16	15 11.37	9 9.68	13 10.8	11 10.8	7 9.92	8 7.26	3 5.08	3 2.42	91
Knit-along	12 13.02	7 9.941	12 11.12	11 9.46	14 10.6	11 10.6	8 9.70	9 7.10	3 4.97	2 2.367	89
Life Style	9 7.606	8 5.809	7 6.5	2 5.53	4 6.22	6 6.22	7 5.67	4 4.14	5 2.90	0 1.383	52
Technical	3 4.242	3 3.239	4 3.625	4 3.08	3 3.47	4 3.47	2 3.16	2 2.31	3 1.62	1 0.771	29
Total	55	42	47	40	45	45	41	30	21	10	376

Statistic	DF	Value	P-value
Chi-square	36	24.03638	0.9363

$H_0$  : Type of group and Tasks performed are independent

$H_a$  : Type of group and Tasks performed are dependent

The p-value of .9363 >.1, so there is insufficient evidence to reject the null hypothesis.

Thus the tasks performed by moderators are independent of the type of group they moderate.

**Question 4:** Is there a relationship between the size of the group and the number of hours per week spent moderating?

Simple linear regression results:

Dependent Variable: HOURS PER WEEK

Independent Variable: Number of members

HOURS PER WEEK = 4.0514884 + 7.444633E-4 Number of members

Sample size: 64

R (correlation coefficient) = 0.3262

R-sq = 0.10642699

Estimate of error standard deviation: 8.686102

## APPENDIX I

### Permissions From Copyright Holders

**From:** [redacted] 

**replied** March 24, 2013 10:40 AM    read



re: Hi! Can you help me out one more time?  
Sent at 10:32 AM March 24, 2013 

Hi Sheila,

I'd be happy to provide you with screenshots.

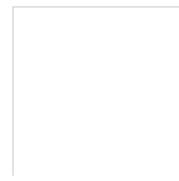
Is there anything in particular you have in mind? There's the overall general page, and then I can go into an actual report, as well.

I know that sometimes you don't know what you want until you see it, too, so I can get you a screenshot of the general page and we can go from there, too. :)

---

**From:** [redacted] 

**replied** March 25, 2013 10:24 PM    read



re: Use of screen shots for Ravellenic Games 2012  
Sent at 5:01 PM March 24, 2013 

Hi,

I'm fine with you using the images, screenshots etc. Just include a note about where it came from is the usual protocol.

The badge was designed by octagonfudge (ravelry name). You can check with her if you want to use the badge images. But for screenshots just note they're from Ravelry. One of the mods, Jenny designed the group banner (zzwhitejd) and I'm sure she'll be fine with you using it.

Good luck and congrats on getting oh so near the end of your dissertation! Well done.

X

**From:** octagonfudge

**replied**

March 26, 2013  
2:42 PM

**re: May I use a screenshot of your badge?**  
Sent at 2:28 PM March 26, 2013

reply

save

read

trash

Dear Sheila,

Sure, that would be fine with me. My full name is Guin Thompson, so as long as it's credited then no problem! Good luck with the dissertation.

Best,  
Guin

**From:** sheknitter

**May I use a screenshot of your badge?**  
Sent at 10:44 PM March 25, 2013

Dear Octagonfudge,

I've been in contact with [redacted] about using a screenshot of the Ravellenics pages to be included in my dissertation on Ravelry moderators. She told me that you were responsible for the badges and I wondered if you'd give me permission to include the badge in the photo? I will definitely credit you for the badge design.

Sincerely,

Sheila Pisa  
Doctoral candidate, Pepperdine University, CA, USA

X

**From:**

**replied**

March 25, 2013  
10:25 PM



**re: Request for Interview**

Sent at 12:18 AM March 25, 2013

reply

save

read

trash

Sure, go for it. I'd love to see it when it's all done - I was just wondering the other day how you'd been getting on with it. Glad to hear the end is in sight! If ya want to email anything, I usually check daily. :)

Cheerily,

**From:** sheknitter

**re: Request for Interview**  
Sent at 3:58 PM March 24, 2013

Dear [redacted]

I can't believe that it's been almost a year since we've interviewed. I am just finishing my final draft of the dissertation and my committee would like some screenshots. I wanted to use one or two of yours that illustrate the use of humor to get people to stop being naughty in threads. I will not show your Ravelry name or your group name in the picture. I can email the shots that I have if you'd like to see them - one is the dog training post where you use a picture of a dog drinking from a high-powered sprinkler and the other is the one with the banana.

I am so glad to be near the end of this project and am pretty happy with the overall results. I will definitely make a copy of the study (or at least the survey and interview results with summary) available to participating moderators if they're interested. I appreciate so much your participation - your generosity in terms of time and insight meant a lot.

Thanks,  
Sheila



Sheila Pisa <sheila.pisa@gmail.com>

**RE: other: Permission from Ravelry to interview for research {300593}**

Sarah (Ravelry Help) <contact-us@ravelry.com>  
To: sheila.pisa@gmail.com

Mon, Nov 28, 2011 at 6:29 AM

## Reply ABOVE THIS LINE to add a note to this request ##

Hi Sheila,  
Sorry again for my delayed response. You have our permission to contact the moderators regarding this study. We are not sure that they will want to participate and have not asked them about it. Regarding the content on the site, we cannot endorse your project (as we don't generally endorse them) but the content is there and can be used as long as you comply with the Terms of Use on the site. I hope this helps!  
Sarah