

MOTIVATIONS FOR PARTICIPATING IN ONLINE INITIATIVES:  
EXPLORING MOTIVATIONS ACROSS INITIATIVE TYPES

by

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submitted by Sarah Ann Gilbert in partial fulfillment of the requirements for  
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## ABSTRACT

This dissertation explores motivation to participate in open, online initiatives. Using a multiple case study approach, results of in-depth interviews with members of two initiatives were analyzed to explore why people participate and the relationship between motivation to participate and initiative type. The term ‘online initiatives’ is used here to capture the new ways people working in distributed locations, and with varied skillsets, contribute to the completion of common goals. As such online collaborations become more pervasive, supporting knowledge building, information dissemination, and artistic and scientific projects, it is important to understand why people contribute to such endeavors, and thus how to design and support these efforts.

The study included in-depth interviews with two groups: 24 members of Twitter-based Healthcare Social Media Canada (#hcsmdca), a small community of practice that met weekly to discuss healthcare issues in Canada via ‘tweet-chats,’ a form of synchronous communication on Twitter; and 18 members of the Reddit-based r/AskHistorians, a large question and answer forum dedicated to providing high-quality historical information. Data from observation were used to extend and provide context to interview data.

Comparing initiatives showed that motivations described by participants in #hcsmdca and r/AskHistorians often overlapped. Common motivations in both initiatives included interest in and learning about the initiative topic, sharing expertise, and relationship development. Common patterns of participation were found for active participants (e.g., those who regularly contributed to discussions or took on leadership roles) and more passive participants (e.g., those who primarily read discussions). Results also suggested that participants with different areas and levels of expertise often satisfy each other’s motivations, e.g., that those who want to share expertise find those who want to hear from experts. Finally, the study revealed how characteristics of the platforms, such as technological features and constraints, and wider-social norms, affect and impact communication and community practice. Findings contribute to theory of motivation to participate in online initiatives, provide suggestions for researchers studying motivation in online spaces, and insights for initiative leaders.

## LAY SUMMARY

Increasingly, people are working from different locations and with varied skillsets to contribute to common goals, such as sharing news and information, and participating in hobbies. This study aimed to learn more about why people participate in such activities. The work entailed in-depth interviews with participants of two online communities: the small, Twitter-based community of practice Healthcare Social Media Canada, and the large Reddit-based, question and answer forum, r/AskHistorians.

Analysis showed common motivations across both communities around learning and sharing expertise about the topic, and developing relationships, as well as common patterns of participation by active discussion contributors, and passive participants who mainly read discussions. Findings also suggested that participants with different areas and levels of expertise often satisfy each other's motivations, e.g., those who want to share expertise find those who want to hear from experts. Differences between the two groups highlighted how technology and social norms affect participation.

## PREFACE

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## LIST OF ABBREVIATIONS

AH – r/AskHistorians

#hcsmta – Healthcare Social Media Canada

OP – Original Poster

PM – Private Message

SDT – Self Determination Theory

STEM – Science Technology Engineering, and Mathematics

U&G – Uses and Gratifications Theory

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# 1. INTRODUCTION

New forms of online organizing are emerging daily in the service of science, entrepreneurship, political movements, and more, from citizen science projects like GalaxyZoo to crowdsourcing stock photography at iStock, to raising money through GoFundMe. These increasingly popular and successful online initiatives are changing how work is organized, knowledge produced, and enterprises started. The term “online initiatives” is used here to capture the new ways people working in distributed locations and with varied skillsets contribute to the completion of common goals. The term encompasses a variety of contemporary initiatives that leverage human knowledge through collaborative systems. These initiatives go by several names: *online* or *virtual communities*, for systems that support people who interact socially around a shared purpose (Preece, 2000; Rheingold, 1993); *crowdsourcing* for systems that can be employed to draw on a distributed labour network to complete tasks (Howe, 2006), either paid as in crowdwork or unpaid as in citizen journalism or citizen science; and *peer production*, for systems that facilitate self-organizing groups to work collaboratively toward a common goal (Benkler, 2006; Quinn & Bederson, 2011).

Proponents of online initiatives highlight the advantages of these systems. For crowd-based initiatives such as peer production and crowdsourcing, opening up tasks for input from the crowd means that problems can be solved by a more diverse user-base who, with their varying interests and skill sets, may solve problems more efficiently and effectively than in centralized systems (Benkler, 2011). In addition to the achievement of tangible products and outcomes, such as the development of software systems, encyclopedias, and scientific data analysis, online initiatives may also be harnessed to provide their participants with social and emotional support and may serve the same functions as offline communities (Rheingold, 1993).

While there are many examples of highly successful online initiatives, such as Linux, Wikipedia, Mechanical Turk, and DeviantArt, there are also many unsuccessful initiatives, and initiatives that were once successful but have suffered a decrease in

popularity over time. In order to understand the dynamics of such initiatives, it is important to know the mechanisms of how they work and why some succeed while others fail. Measuring reasons for success and failure has been addressed in a variety of ways. For example, Bruckman and Jensen (2002) examined failure through the case of the online community MediaMOO; and Hinds and Lee (2008) examined success through examining social network structures in online communities. However, the most common approach to promoting success in online initiatives is to discover and satisfy the motivations of participants. Identifying participants' motivations through research is especially important as evidence suggests that their reasons for participating may not align with what initiative creators and leaders think the reasons are (Bellotti et al., 2015).

This research addresses what motivates distributed lay volunteers working towards a joint goal through participation in online initiatives by exploring motivation in two cases. Further, it seeks to understand how motivation relates to the types of participation, the roles individuals take within the initiatives, and the characteristics and affordances of the initiatives.

## 1.1 OVERVIEW OF LITERATURE AND THEORY

Studies on the extent of Internet use show it is nearly ubiquitous among American adults: for example, Rainie and Perrin (2016) report on a recent Pew survey which found that 97% of Millennials (ages 18-34), 92% of Generation Xers (ages 35-50), and 83% of younger Baby Boomers (ages 51-59) use the Internet.<sup>1</sup> High levels of Internet use leads to tangible contributions to online initiatives; for example, in the United States in 2011, 65% of people had posted written material on social networking sites, 55% had shared photos online, 37% had contributed rankings or reviews of products or services, 33% had created a tag, and 26% had posted a comment on a website or blog (Rainie & Wellman, 2012). As Internet use and contribution to online sites increases, so too has scholarly

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<sup>1</sup> Such high level of internet use is not global. According to the International Telecommunications Union (2017), only 15% of households in Least Developed Countries have access to the Internet compared to 43% of households in developing countries, and 84% in developed countries.



interest in what drives people to contribute and why they participate at varying levels and in different ways. Research on participation online is typically measured with the goal of increasing depth (i.e., the amount that one contributes) and sustaining participation. For example, Fischer (2011), Kraut and Resnick (2011) and Sun, Rau, and Ma (2014) provide suggestions for increasing participation; and Farzan, Dabbish, Kraut, and Postmes (2011), and Hara and Hew (2007) explore ways in which online participation can be sustained. While a single measure of participation has not been agreed upon, competing measures demonstrate the complexity of online participation and the need to explore motivation to participate within this multifaceted environment.

While characterizations of participation are most commonly drawn from empirical analyses of online initiatives, there are numerous extant theories of motivation from fields such as psychology, communications, and management that are relevant; for example, theories of motivation used in the study of online initiatives include Self-Determination Theory (SDT), Uses and Gratifications Theory (U&G), Organizational/Community Commitment, and the Functional Approach to Volunteerism. The two theories most commonly applied in the study of motivation to participate in online initiatives are SDT and U&G. SDT, developed by Ryan and Deci (2000), describes motivations as falling along a continuum from intrinsic motivations, where people are driven to take action because it is internally pleasing, to extrinsic motivations, where people are driven to take action because of the resultant outcome. U&G (Katz, Blumler & Gurevitch, 1973) describes how people use media to as a means of gratifying their communication needs. Both theories represent motivation as a multidimensional construct, shaped by different types of human needs that drive action.

A useful model for understanding participation in online initiatives is Haythornthwaite's (2009) light and heavyweight model of participation. At opposite ends of a continuum are two participation weights, light and heavy, where weight refers to the level of participant commitment to the joint enterprise. The model notes that through design, online initiatives support varying participation weights: lightweight participation is supported by crowd enterprises, such as crowdsourcing and human computation, and heavyweight

participation is supported in online communities. Similarly, in a review of literature identifying factors behind the lack of participation in online discussions, Amichai-Hamburger et al. (2016) found that the type of community (e.g., its topic, platform, goal, and culture) is likely to affect participation. Because the structure of different types of initiatives afford different kinds of participation, it is likely that they will attract participants with different motivations.

Although there is evidence to suggest that motivations to participate will vary between initiatives, it has been difficult to test that because research on online initiatives typically uses a single case study approach in which motivations are explored within a single initiative or a single type of initiative, which does not support direct comparisons. For example; Brabham used case studies to explore motivation to participate in several crowdsourcing projects, such as iStock photo (2008b), Threadless T-shirt design (2010), and the Next Stop Design project (2012); Lakhani, Jeppesen, Lohse, and Panetta (2006) examined motivation to participate in the crowdsourced complex problem-solving platform, InnoCentive; and Raddick et al. (2013) examined motivations to participate in the citizen science project, Galaxy Zoo.

While light and heavyweight participation are afforded in the design of online initiatives, participation also varies within initiatives (Haythornthwaite, 2009). Active participation is a vital component in the success of an online initiative (Kraut & Resnick, 2011), and thus, research on participation often addresses why people participate at low levels, or not at all (commonly referred to as lurking), and how user motivations may be harnessed to drive active and/or sustained participation. For example, Preece, Nonnecke, and Andrews (2004) studied lurking behaviour in online discussion boards and provide recommendations for how developers may address each of the reasons identified for lurking. In their study on the motivations of Linux users and software developers, Hertel, Niedner, and Herrmann (2003) found that those who had higher levels of engagement often cited more motivations and higher levels of motivation. Eveleigh, Jennett, Blandford, Brohan, and Cox (2014) and Budhathoki and Haythornthwaite (2012) found a relationship between participants' motivations and their level of participation in a citizen

science and peer production initiative: those who contributed less were driven by extrinsic motivations while those who contributed more were driven by both extrinsic and intrinsic motivations. However, in her review of the literature on participation in online initiatives, Malinen (2015) found that despite its richness, research on participation is typically only studied in one dimension, and often using quantitative measures.

The current study explores motivation to participate across online initiatives by employing a multiple case study approach. Two cases were selected to explore how sociotechnical and organizational structures of online initiatives relate to motivation for participation. The first case study is Healthcare Social Media Canada (#hcsmdca), a small Twitter-based community of practice dedicated to discussing healthcare within a Canadian context; the second is r/AskHistorians, a large Reddit-based question and answer forum dedicated to discussing history. The initiatives selected for study differ in many ways, but they are similar in that they both serve primarily as forums for information sharing and learning.

Through participant interviews, motivations, including learning, as well as factors that affect motivation, such as facets of participation and roles within initiatives, were identified and explored in relation to motivation. Because Haythornthwaite's (2009) model of light and heavyweight participation is specific to online contexts and includes other dimensions, such as contribution type and organizational structure, it is an apt model for exploring motivation to participate in online initiatives; an exploratory qualitative approach is the first step in developing a theory based on this model.

In addition to taking the first steps in developing a theory of motivation specific to online environments, the results of this research contribute to an area of interest to academics seeking to understand the organization of contemporary work, initiative leaders seeking to engage participants and sustain contributions, and participants of online initiatives. This research will contribute to knowledge building for the organizers of the initiatives included in the study as well organizers of other online initiatives. Finally, participants are anticipated to benefit from the results of this research as results will increase the

chance that the needs they hope to meet are satisfied by the initiatives in which they participate.

## 1.2 OVERVIEW OF THE DISSERTATION

The dissertation is organized as follows:

- Chapter 2 Literature Review: defines online initiatives and provides an overview of research on participation in online initiatives, theories of motivation, and case studies on motivation to participate in online initiatives. The review of the literature lays the groundwork for the research questions.
- Chapter 3 Methods: provides an overview of the epistemological perspective that undergirds the methodological approach; an introduction to case study research and the two cases used in the study, Twitter-based Healthcare Social Media Canada (#hcsmdca) and Reddit-based r/AskHistorians; and the data collection and analysis methods. The chapter concludes with an overview of the participants included in the study.
- Chapters 4 and 5 present the results of each of the case studies. Chapter 4 presents results from #hcsmdca and Chapter 5 presents results from r/AskHistorians.
- Chapter 6 presents a comparison of the two cases.
- Chapter 7 concludes the research and includes limitations and future work.

## 2. LITERATURE REVIEW

To illustrate connections between online initiatives, motivations, and participation, this chapter reviews literature from four key areas. The first section defines types of online initiatives, how they are related, and what connections there may be between initiative type and motivation. The second section reviews literature on participation in online initiatives. The third section reviews theories of and approaches to studying motivation. The fourth section provides an overview of prior studies that have examined motivation for participating in various online initiatives.

### 2. 1 DEFINING ONLINE INITIATIVES

Online initiative is an umbrella term used here for collaborative activities undertaken online, such as peer production, human computation, citizen science, crowdsourcing, and online communities. Such activities share a common reliance on the collaborative efforts of individuals for their success but differ in their organizational structure and the levels of social interaction involved. Two overlapping models of online initiatives are crowds and communities (Haythornthwaite, 2009; 2015).

The term ‘crowd’ is used here to describe a type of production that draws on a large group of people who independently and with little coordination provide contributions that support the development of a product. Although the term is often associated with disorganization, that is not the feature of online crowds that is emphasized in this definition. Rather, the low threshold for participation is key. As the cost of entry and exit in crowds is low, participation is often based on one-time contributions or is short term (Haythornthwaite, 2009). Crowds may have different organizational structures and may center around different kinds of tasks than online communities. Crowd-based online initiatives may include crowdsourcing or peer production projects.

Crowdsourcing is a term first used by Howe (2006) to describe projects or tasks that would normally be completed by employees within an organization, which have been outsourced to the crowd to complete. However, Brabham’s (2013) definition: “an online, distributed problem-solving and production model that leverages the collective

intelligence of online communities *to serve specific organizational goals* [emphasis added]” (p. xix), highlights the aspect of crowdsourcing that distinguishes it from other crowd models: the source of the task or project, which is based in an organization. Crowdsourcing follows a traditional model of organizational activity: projects are organized and managed by a single entity with whom ownership of the intellectual property remains after the project is complete (Brabham, 2013). Despite its traditional organizational structure, crowdsourcing is innovative in that rather than hire employees who work for long periods of time and are given a set of responsibilities, the initiative asks members of the public to complete single specialized tasks. In this sense, creativity and production are controlled by the crowd, but managed by organizations (Brabham, 2013). Crowdsourced tasks range from simple to complex and from creative to rote. For example, organizations such as InnoCentive (Lakhani et al., 2006) have used crowdsourcing as a way to solve highly complex scientific and engineering problems; websites such as iStock (Brabham, 2008b) and Threadless Tees (Brabham, 2010) have used crowdsourcing to collect and sell creative outputs such as photography and graphic design; whereas sites like Mechanical Turk rely on highly regimented human computation tasks, in which humans conduct tasks that computers cannot (Quinn & Bederson, 2011).

Unlike crowdsourcing, which follows a traditional organizational model based on a hierarchy between project leaders and workers, peer production is an organizational innovation in which the leadership of a project is inverted (Benkler, 2016). The key difference between crowdsourcing and peer production is the locus of control: rather than follow a top-down model of organization where an individual or small group of people provide instruction and guidance to a larger group of subordinates to carry out the work, peer production projects are led by the same group of people who carry out the tasks needed to complete the project. The hierarchies in peer production projects are typically based on meritocracy, where contributors gain control over certain areas of production based on the quality of their contributions to that area; leadership is based on coordination rather than control; and decisions are transparent and made in consultation with other contributors. Therefore, peer production is linked with open initiatives, where

an individual person or organization does not hold intellectual property rights and where information and ideas are freely exchanged (Benkler, 2016; Willinsky, 2005).

At the other end of the overlapping spectrum of online initiatives are communities. As early as the 1990s, the formation of online communities was described as a common use of the Internet: “whenever CMC (computer mediated communication) technology becomes available to people anywhere, they inevitably build virtual communities with it, just as microorganisms inevitably create colonies” (Rheingold, 1993, p. 6). Within these communities, “people . . . do just about everything people do in real life, but we leave our bodies behind” (Rheingold, 1993, p. 3). The concept of online community is not well defined, resulting in confusion about what may or may not constitute an online community. For example, Brabham (2013) uses the phrase online community interchangeably with “crowd” in his definition of crowdsourcing: “online communities, also called crowds” (p. xix). In contrast, in his definition of community, Rheingold (1993) emphasizes characteristics associated with traditional offline communities: “[online communities are] social aggregations that emerge from the Net when enough people carry on those discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace” (p.5). Rainie and Wellman (2012), and Wellman and Gulia (1999) also emphasize the importance of interactions between people in online communities; from this perspective, the interactions in online communities are social network ties. These ties need not be strong, as suggested by Rheingold, but, like offline communities, may be a combination of weak ties that increase the size and diversity of one’s community and strong ties that provide support. According to Wellman and Gulia (1999) the advantage of online communities is that they are based on shared interests rather than shared social characteristics. When viewed as social networks, online communities are fluid personal networks (Rainie & Wellman, 2012).

The notion of online communities as social networks (Rainie & Wellman, 2012; Wellman & Gulia, 1999) is useful, but does not describe the activities carried out by them, why communities are formed, or how they operate. Preece’s (2000) definition of community helps to fill these gaps. According to Preece, online communities consist of:

*People*, who interact socially as they strive to satisfy their own needs or perform specific roles, such as leading or moderating.

A shared *purpose*, such as an interest, need, information exchange, or service that provides a reason for the community

*Policies*, in the form of tacit assumptions, rituals, protocols, rules, and laws that guide people's interactions.

*Computer systems*, to support and mediate social interaction and facilitate a sense of togetherness (p.10).

The commonality between each of the definitions cited above is the emphasis on interactions between community members. It is these interactions that support processes and production undertaken by communities. Haythornthwaite (2009) describes the relationship between social interactions and contributions to the initiative: in online communities, contributions are acknowledged by other members who determine the quality of the contribution. As contributions may take time to learn and perfect, long term membership is key to the success of the community. Engagement with others to meet project goals over long periods of time often results in the development of strong ties and trusting and supportive relationships between community members (Haythornthwaite, 2009).

### *2.1.1 THE RELATIONSHIPS BETWEEN ONLINE INITIATIVE TYPES*

Online crowds and communities are similar phenomena in that each consists of a group of people coming together to support a shared interest or activity. To highlight the differences between these overlapping models, Haythornthwaite (2009) identifies three dimensions: the types of contributions made by participants, the individual-to-group focus of the initiative, and the nature of the recognition and rewards received from participation.

Haythornthwaite (2009) suggests that in crowds, *contributions* are typically rule-based and repetitive. Human computation tasks exemplify this type of contribution. For



example, in the crowdsourced citizen science project Galaxy Zoo, participants classify galaxies from photographs based on a specific set of parameters. These tasks are also defined by an external authority, which in the case of Galaxy Zoo, is the research project's primary investigators. Finally, the product is based on the result of pooled independent work. In Galaxy Zoo participants work alone but class the same galaxies as others; the final class is decided upon based on the agreement between classifications. In contrast, Haythornthwaite describes the contributions to online communities as negotiated – they are defined and authenticated by group consensus and norms. Community members may provide a variety of different contributions; for example, one community member may take on the role of a moderator, while another may create content such as a blog post. Finally, in online communities the product is based on continued iterative contributions. In many cases, the product of communities is knowledge; in the process of developing knowledge, community members share information and will work with each other to continually build new knowledge and practices, which will then be shared and used by the community.

The second dimension highlighted by Haythornthwaite is the *individual to group focus*. Crowds are described as typically centered around the contributions of the individual. Submissions are often anonymous, discrete, and entering the project is easy. There is a two-tiered hierarchy: the project leaders and the project contributors. In online communities, contributions are often attributed, and members have a visible history of contribution. Joining the community may be easy, but the social overhead is high as community members invest time in learning community norms, must keep up to date with community knowledge and practice, and develop relationships with other members. In communities, the focus and dedication to the group is an essential aspect of its vitality. While crowds may be sustained by one-time contributions, communities rely on a critical mass of active and long-term members. In this way, communities operate on a multi-tiered hierarchy between novices and experts, new members and old, and passive and active participants.

The final dimension outlined by Haythornthwaite is the *recognition, reputation, and rewards* typically gained through participation in crowds and communities. In crowds, recognition is typically quantitative, such as a running count of contributions made. Reputation is based on the quantitative recognition; for example, reputation is earned upon reaching a particularly high count of contributions. While reputation may be a factor in crowds, it is often less important due to the individual focus of crowd initiatives. The quantitative recognition also factors into the reward. Typically, because recognition is quantitative, it is system-based and therefore only internally relevant (i.e., relevant only to other participants). While this is typical, in crowd initiatives that offer financial recompense, the reward is externally relevant. In communities, recognition is typically qualitative. It is often based on subjective feedback and who gives the feedback is important. In communities, reputation comes from the recognition bestowed by peers and may result in promotion within the community. In communities, recognition and reputation is the reward. In some types of communities, such as communities of practice, these rewards may have a positive impact on community members' careers and may be both internally and externally relevant.

While crowds and communities represent two models of organization, both may be supported within single medium (Haythornthwaite, 2009; 2015). As an example, Wikipedia supports both a crowd and multiple communities. The crowd writes, updates, and edits articles and the community engages in discussions and decision making. These different types of participation can be described as “lightweight” and “heavyweight” where weight refers to contributors' commitment to and engagement with the product and with each other. Participation weight and initiative type often overlap; lightweight participation is associated with crowd modes of production whereas heavyweight participation is associated with participation in online communities. Crowds require lightweight participation to be successful and communities cannot be supported without heavyweight participation. However, because individuals act within these models, lightweight participation can occur within communities, and heavyweight participation can occur in crowd initiatives, so long as the system supports sociability (Preece, 2000). For example, Mechanical Turk is a crowd initiative with no in-system opportunity for

community development; therefore, workers in Mechanical Turk use external platforms to form communities.

Haythornthwaite's (2009) model of light and heavyweight participation makes connections between features and objectives of online initiatives and the types of participation needed to support them. The next section provides an overview of how participation is typically addressed in the study of online initiatives and highlights varying facets of participation that have been explored. Case studies that use these approaches to study links between participation and motivation are reviewed in 2.4.1.1.

## 2.2 PARTICIPATION IN ONLINE CROWDS AND COMMUNITIES

Fischer (2011) describes online initiatives as part of a culture of participation in which these initiatives provide participants with the technological means to actively contribute to problem solving processes. Embedded in participatory culture, online initiatives rely on voluntary contributions for their survival. Yet, and even in successful initiatives, under participation is often a problem (Kraut & Resnick, 2011). For example, in highly successful peer production projects, such as Wikipedia and Linux, not all tasks and topics are equally appealing to volunteers; in the case of Linux, companies that rely on the operating system, such as IBM, pay their employees to complete tasks that volunteers have or will not (Kraut & Resnick, 2011). Because of the integral relationship between participation and the success and survival of online initiatives, aspects of participation are typically explored with the intent of identifying and harnessing motivations to drive participation. In addition to studies with the intent of driving participation, this subsection provides an introduction to participation in online initiatives and the multifaceted ways in which it has been explored.

In their literature review of online participation Lutz, Hoffman & Meckel (2014) define it as: "the creation and sharing of content on the Internet addressed at a specific audience and driven by a social purpose" (para 8). This definition broadly describes the activity and intent behind participating in online initiatives but does not address *how* participation is enacted online. There are many different ways to characterize online participation. For example, in their study exploring the relationship between demographic, social, and

cultural factors and online participation, Hargittai and Walejko (2008) differentiate between content creation and content sharing. In studying motivation to participate in Flickr, Nov, Naaman, and Ye (2010) characterize participation in two ways: information sharing, such as posting photos and assigning hashtags to photos, and social participation, such as making contacts with other users and joining groups hosted on the site. In writing about online initiatives as cultures of participation, Fischer (2011) describes the varying aspects of participation as ‘ecologies’ that are affected by different motivations. Lutz et al. (2014) identify three dimensions of participation: the creative dimension (i.e., adding and sharing content online), the social dimension (i.e., participation embedded in some form of group activity) and the motivational dimension (i.e., the purpose of participation). Preece and Shneiderman (2009) describe variations in participation depth in their Reader to Leader framework. While readers do not actively contribute content, they may regularly follow websites for years. Contributors participate by adding small contributions; while contributions are minimal, they work to increase social presence within a community. Collaborators engage more with others through their communication behaviours and develop mutual understanding, trust, and willingness to reciprocate. Leaders are most active and are responsible for the maintenance of the community. Typically, these levels of participation develop in a sequence, although for some, participation may terminate, plateau, or decrease (Preece & Shneiderman, 2009). As noted above, Haythornthwaite (2009) describes participation on a spectrum from light to heavyweight where weight describes contributors’ commitment to and engagement with the project and other contributors. These studies highlight the multitude of ways participation in online initiatives can be characterized; however, prior empirical research on participation in online initiatives typically focuses on one of two aspects of participation: depth and length.

### *2.2.1 PARTICIPATION DEPTH*

Participation depth refers to the type and quantity of contributions made to an online initiative. In her literature review of 83 studies on participation in online communities, Malinen (2015) found participation depth, most commonly treated as an active/passive dichotomy, was the most common way to characterize participation. Typically, activity

was most commonly operationalized by quantity (i.e., how much content a user has produced, duration of membership, time spent online, number of visits, and density of social interaction with other community members) and quantity was used to measure success (Malinen, 2015). While Malinen suggests that the emphasis on quantity of contributions may be due to the financial value creative contributions bring to companies that maintain sites, it is more likely that the emphasis on quantity stems from the need for a critical mass of contribution (Haythornthwaite, 2009); for example, Bruckman and Jensen (2002) observed a marked decline in participation in the online community, MediaMOO, which ultimately led to what they described as the death of the community. Because of the critical role of active participation, researchers such as Kraut & Resnick (2011) have sought to identify reasons for active participation so that initiative leaders can harness these motivations and increase this behaviour.

The link between initiative success and active participation has also led researchers to explore passive participation, often with the same goal: why do lurkers (those who consume online content without producing it) lurk and how might they be encouraged to actively participate? It is thought that passive participation accounts for the vast majority of activity in online initiatives. The most commonly known breakdown of participation is the 90-9-1 rule, where 90% of participants are lurkers, 9% are intermittent contributors and 1% are active contributors (Nielsen, 2006). However, evidence suggests that rates of passive participation likely vary widely between online initiatives; for example, through collecting messages sent in email discussion lists and comparing membership size with messages, Nonnecke and Preece (2000) found that less than half of participants in health lists (46%) were lurkers, while 82% of participants in software support discussion lists were lurkers. Nielsen (2006) claims that 99% of Wikipedia users are lurkers, which is unsurprising given its popularity as a reference source. While it was hypothesized that larger communities would have higher numbers of lurkers because lurking would be easier in a larger group, Nonnecke and Preece found no relationship between lurking and discussion list size. Furthermore, despite suppositions that high traffic and information overload would increase lurking behaviour, Nonnecke and Preece found that discussion lists with higher traffic levels had lower levels of lurking.

In addition to exploring patterns of lurking behaviour, researchers have also attempted to identify causes for lurking. In their literature review of 71 studies on lurking in online communities, Sun et al. (2014) identified four categories of reasons why lurkers lurk. The first category was environmental factors, which included predominately design-based motivations for lurking such as difficult to use systems, but also included characteristics of the community, such as low response rates. The second category was personal reasons for lurking. Motivations for lurking in this category included lack of self-efficacy, introversion, and shyness. The third category was relationship reasons, which described lack of commitment and/or affection for the group. The final category was security reasons, which included privacy maintenance.

In their development of a theoretical model to explain lurking behavior, Amichai-Hamburger et al. (2016) identified three major factors that cause lurking: individual differences, social and group processes, and technological settings. *Individual differences* were broken down into four sub-categories. First, need gratification described the varying needs of users; second, personality described the tendency to participate at certain levels; third, time described limitations on ability to actively participate; and fourth, self-efficacy described the tendency of individuals with high levels of self-efficacy to perform tasks. The *social and group processes* factor was broken into five subcategories. First, socialization described the process of learning the norms that are required to assume a role in an online initiative; second, the type of community may impact participation as different communities have different functions; third, social loafing, described the phenomenon where people contribute less when working with others or if they do not see their contributions as affecting the group outcome; fourth, group responses to other delurkers (i.e., those who move from passive participation to active contribution), in which passive participants who see other delurkers treated poorly will opt not to contribute; and finally, quality of responses, where participants may not continue to actively contribute if their submissions receive little, no, or negative attention. The third major category, *technological setting*, referred to usability, privacy, and security. If participants were to contribute, it must be easy and straight forward for them to do so,

and they must be able to maintain the level of privacy they need and feel secure that their privacy will not be breached.

In sum, research on participation depth in online initiatives shows that it is complex: patterns of lurking behavior vary between initiatives, depth can be measured in a variety of ways, and people participate (or refrain) for a variety of reasons.

#### **2.2.1.1 Increasing participation**

Because online initiatives require a critical mass of active participation for their success (Fischer, 2011; Haythornthwaite, 2009), much emphasis has been placed on identifying strategies to increase participation. Fischer (2011) describes several ways that design can facilitate more active contribution: first, initiatives should have easy entry, allowing participants to start contributing to the initiative as soon as possible, and also task flexibility that allows experienced participants to contribute more broadly; second, initiatives should include mechanisms that allow participants to change the ways in which they participate; and third, they should provide opportunities and support for different levels of participation. Based on their survey of 1188 MSN bulletin board users, 219 of whom were lurkers, Preece et al. (2004) suggested several ways lurkers could be encouraged to post, such as issuing welcoming policy statements, encouragement from moderators, acknowledging new posters, and offering rewards for quality and quantity of contributions. Design may also be used to encourage participation. For example, reducing visual clutter may encourage those who believe that refraining from participation helps the community by not contributing to information overload, and usability testing can reduce lurking rates among those who find the software difficult to use. In their literature review, Sun et al. (2014) categorized three common solutions to promote active participation: offering external stimuli, such as rewards; improving the usability of the system; and providing encouragement. Kraut and Resnick (2011) use theories from psychology and economics to identify ways to increase participation, and suggest asking for design help, increasing benefits derived from participation (i.e., identification and satisfaction of participants' motivations), and to promote social norms of contribution.

Suggestions for increasing participation may be easier stated than implemented. For example, Zhao, Huang, Harper, Terveen, and Konstan (2016) studied the impact of asking for specific types of contributions as a way to increase participation in a movie recommender site. Their results suggested that asking for contributions had a mixed effect: while over time the amount of contributions increased, unprompted contributions decreased. The authors hypothesized that asking may decrease motivation among those who would have contributed anyway, or that not asking after having asked meant that participants believed that their contribution was no longer needed. Furthermore, their results suggest that the way in which users were asked to contribute had an impact. If reciprocity was highlighted when making the request, users were more likely to contribute tags.

Despite emphasis placed on increasing participation, passive participation in online initiatives has been found to have benefits, both for individual participants and for the initiatives themselves. For example, using a social network analysis approach, Soroka and Rafaeli (2006) explored the relationship between cultural capital and lurking behaviour. The authors defined virtual cultural capital as knowing the norms, etiquette, language, and regular users in an online community. Using three different online forums, the authors found that users who took time and read posts, and thus accrue cultural capital were more likely to become active participants. Gaining cultural capital through lurking behaviour is part of the process of what Lave and Wenger (1991) refer to as “legitimate peripheral participation.” Legitimate peripheral participation describes the process of newcomers observing experienced others and gaining understanding through this observation; over time, these newcomers will begin to participate. Legitimate peripheral participation in online initiatives is beneficial to both the group and the individual: the individual benefits as the process provides them with a safe forum in which to learn, and the group benefits from a collective that understands and follows the rules and norms of the initiative (Kollock & Smith, 1996). Indeed, Jackson et al. (2015) found that for the highly engaged Planet Hunters participants they interviewed, initial solitary participation was a core aspect of sustaining and increasing involvement in the project.



While accruing cultural capital through legitimate peripheral participation may lead to active participation, Soroka and Rafaeli (2006) found that after a certain amount of time spent lurking, the more likely it would be that participants would continue to participate passively and never move to active participation. Fischer (2011) notes that in cultures of participation, it is important that individuals have the opportunity to participate at the level they want to. While passive participation may be the learning phase of a movement towards active participation, it is also likely that a portion of lurkers prefer passive participation. Therefore, supporting varying levels of participation allows people to participate as consumers or contributors, depending on their wants and needs (Fischer, 2011).

### *2.2.2 PARTICIPATION LENGTH*

Active participation is an integral aspect of contributing to the vitality and sustainability of an online initiative; as a result, great effort has been expended to discover how to encourage active participation in members of online communities. Also vital, but less extensively studied is participation length, referring to persistent contribution over time. Farzan et al. (2011) explored the impact of social factors on commitment to online initiatives. By comparing four designs of a Facebook game, they found that interface design that increased the social presence of other players could foster increased commitment to the site.

In their study of an online community of practice Hara and Hew (2007) explored sustaining knowledge sharing in the community. Through interviews with 27 community members, the authors identified six factors that supported sustaining contribution: first, self-selection played a role as it reduced feelings of pressure to contribute – those who contributed, did so willingly; second, validation of practice helped community members who were often isolated in their roles get feedback and confirmation of their practice; third, gaining understanding of the field allowed members to build knowledge; fourth, a non-competitive environment provided a friendly atmosphere in which community members felt comfortable sharing their experiences and perspectives; fifth, the asynchronicity allowed for flexibility in offering responses; and finally, the moderator's

role sending welcoming messages to new users and providing practical and technical support for all members.

Eveleigh et al. (2014) sought to understand why participants dropped out of the citizen science project, Old Weather. They concluded that while dropping out is often portrayed as cause for concern, that in citizen science projects which rely on lightweight contributions from many contributors, high turnover rates could actually be beneficial. New participants would be less fatigued, and thus may provide higher quality contributions with fewer errors. An influx of new participants may also increase the number and diversity of perspectives on a particular task; thereby, improving the effect of ‘wisdom of the crowd.’ This supposition is supported by Ransbotham and Kane (2011), who studied the impact of participant turnover in Wikipedia by examining rates of turnover among collaborators of featured articles. As was suggested by Eveleigh et al., Ransbotham and Kane found that moderate levels of turnover were beneficial in Wikipedia because new members brought new information and skillsets to the community without compromising quality information that had already been generated. Conclusions drawn by Eveleigh et al. and Ransbotham and Kane are supported by Granovetter’s (1973) strength of weak ties theory. Tie strength is measured as a combination of the amount of time, intensity, intimacy, and reciprocal services shared between two people. Weak ties, such as those found in networks with many newcomers, infuse novel information into the group and prevent homogeny.

Participation is an important aspect of online initiative success, and therefore has been studied extensively. Prior research places emphasis on increasing participation depth and sustaining participation, despite evidence suggesting that some participants may prefer to participate at lower levels (Fischer, 2011; Soroka & Rafaeli, 2006). Participation is also multifaceted, as members of online initiatives participate at varying depths, for varying durations, and at varying frequencies. The desire to understand why people participate in different ways has led to research examining why people are motivated to participate. Results from these studies will be reviewed in detail in Section. 2.4.1. Prior to that, Section 2.3 provides an overview of theories of motivation that have been applied in

online contexts.

## 2.3 THEORIES OF MOTIVATION

Research on participation in online initiatives suggests that not only are there multiple facets of participation, such as depth and tenure, but also that many factors drive participation. Ryan and Deci (2000) define motivation as a state of being moved to do something. People are driven by different types of motivations (Benkler, 2011; Fischer, 2011; Ryan & Deci, 2000), and different contexts may give rise to different motivations (Haythornthwaite, 2009; Houle, Sagarin, & Kaplin, 2005; Malinen, 2015; O'Brien, 2016). While motivations may be purposeful and goal driven (Katz et al., 1973), people are not always aware of why they are driven to perform a certain action (Benkler, 2011; Ruggiero, 2000). Investigating motivation for participating in online initiatives is of particular interest to many scholars due, in large part, to the voluntary nature of participation. In his work on peer production, Benkler (2011) emphasizes that the primary reason for contributing to peer production, and other user-generated content enterprises, is because humans are largely selfless; arguing that while self-interest is a factor, humans' drive to engage in social activities and collaborate is the driving force behind contribution to online projects. Similarly, Fischer (2011) notes that active participation and contribution in online initiatives allows people to feel more satisfied with the end goal or product, as people are more likely to be happy with and feel a sense ownership of a solution if they are involved with the process.

Several theoretical constructs have been employed in studying motivation for participating in online communities, including economic models of motivation (e.g., offering incentives for participation); behavioural economic models of motivation (e.g., gamification); and motivational theories from psychology (Vassileva, 2013). Two of the most commonly used theories of motivation when exploring drivers of participation in online initiatives are Uses and Gratifications, and Self-Determination Theories.

### 2.3.1 *USES AND GRATIFICATIONS THEORY*

Uses and Gratifications Theory (U&G) was developed in the mid-half of the twentieth

century as a way of understanding media communication (Ruggiero, 2000). The intent of U&G is to explain the ways individuals use media to satisfy needs and meet goals. These goals can be met via media through three sources: the content of the media, exposure to the media itself, and the typical social context in which the media is consumed (Katz et al., 1973).

In their overview of U&G, Katz et al. outline five assumptions of the original U&G model:

1. the audience is active, meaning that media use is goal directed.
2. the choice of media when linking the need and the gratification lies with the audience
3. media competes with other sources of need satisfaction
4. people can report their motivations for use
5. the cultural significance of mass communications should be suspended while audience orientation is explored on its own

In his literature review on the development of U&G theory, Ruggiero (2000) notes that later U&G theorists questioned the first and fifth assumptions of this model. The first assumption that users are necessarily active is based on the premise that users are hyper-rational at all times, while in reality, they may not knowingly choose media with the intent of meeting specific goals. Ruggiero proposes that rather than a constant, activity is more likely a variable and that researchers employing U&G need to account for different types and degrees of activities that can change over the course of media consumption. While the fifth assumption maintains that cultural significance should be suspended, Ruggiero notes that later theorists account for external factors that may affect users' needs; for example, motivations that may arise from external interests and constraints. Through a review of U&G literature, O'Brien, Freund, & Westman (2014) identified five motivations: entertainment, habit, personal identity, social utility, and surveillance. Entertainment included sub-motivations such as fun, relaxation, diversion, and arousal; habit described the act of consuming media at a particular time of day or through a preferred source; personal identity described media use as a way of gaining insight into

oneself and/or reinforcing personal beliefs; social utility included sub-motivations such as empathy, connecting with others, and help carrying out social and professional roles; and surveillance described the act of consuming media to learn about events and others in the world.

While U&G is flexible and can therefore be applied to the use of any media, the theory has been met with considerable critique. First, by focusing on consumption, U&G is individualistic and therefore findings cannot be applied beyond the particular sample studied. Second, the reliance on questionnaires and self-reported data means that perceptions of use are studied rather than actual behaviour. Third, because studies have produced separate typologies of motivations, results between studies and between media are difficult to compare (Ruggiero, 2000). The third critique was also noted by Katz et al. (1973) who found that typologies can be generally grouped into uses by content (e.g., fantasist-escapist or informational-educational) or the timing of gratifications (i.e., immediate/deferred), and do not account for the social connections audiences wish to gratify through media consumption. However, Ruggiero argues that despite these critiques, the development of new media means that as people have even more media choices, motivation and satisfaction are even more crucial in the analysis of media use, particularly due to innovations in new media, such as interactivity, demassification (in the sense that traditional news outlets constitute ‘mass media’), and asynchronicity.

Although originally developed to study traditional media, such as radio, television, and newspapers, U&G has been used in the study of motivation to participate in a variety of online media. For example, Shao (2009) used U&G as a theoretical model to understand the appeal of user-generated media; Lampe, Wash, Velasquez and Ozkaya (2010) used U&G as part of their framework for studying motivation to participate in the Wikipedia-like site, Everything2; Quan-Haase and Young (2010) used U&G to explore how two different social media applications, Facebook and Instant Messaging, fulfill different needs; Whiting and Williams (2013) used U&G to identify motivations for using social media; Choi, Kitzie, and Shah (2014) used U&G as a framework to study motivations in the online question and answer (Q&A) platform, Yahoo! Answers; Lev-On (2015) used

U&G as a framework when identifying motivations for participating in a community of practice; Quan-Haase, Martin, and McCay- Peet (2015) used U&G in their exploration of scholars' use of Twitter; Gruzdz, Haythornthwaite, Paulin, Gilbert, and Esteve de Valle (2016) used U&G as a framework in their study of instructors' use of social media for teaching; and Moore and Chuang (2017) used U&G in their study of motivation to participate on Reddit.

The underlying assumption of U&G that media are capable of serving a multiplicity of needs and functions, and because U&G accounts for variations and changes in participation (Katz et al., 1973) means that it is a compelling framework when exploring motivations in this study.

### *2.3.2 SELF-DETERMINATION THEORY*

In identifying the needs and goals of media consumers, U&G is a useful framework for broadly identifying motivations for media consumption. Self-determination Theory (SDT), developed by Ryan and Deci (2000) delves deeper into motivations by addressing the source of underlying needs that give rise to activity, including autonomy (i.e., sense of volition), competence (i.e., perception of ability) and relatedness (i.e., sense of belonging). Motivations fall along a spectrum from intrinsic to extrinsic (Ryan & Deci, 2000). Intrinsic motivations are inherently pleasing (such as having fun and enjoyment) while extrinsic motivations lead to an external reward (such as enhanced reputation and financial gain). According to Ryan and Deci, experiences and actions differ depending on whether a person is driven by intrinsic or extrinsic motivations.

#### **2.3.2.1 Intrinsic motivations**

Intrinsic motivations are those that exist within individuals as well as motivations that exist in the relation between individuals and activities (Ryan & Deci, 2000). Through their study of intrinsic motivations, Ryan and Deci developed Cognitive Evaluation Theory (CET) as a sub-theory of SDT. In CET self-efficacy is a key driver of intrinsic motivation as people have a desire to feel competent and a need to feel a sense of autonomy (i.e., self-determination) if intrinsic motivation is to be maintained or

enhanced.

Because of their internal source, it is commonly thought that to truly motivate people to an action, they must be intrinsically motivated. For example, Benkler (2011) emphasizes the importance of appealing to intrinsic motivations in the design and implementation of online initiatives and Ryan and Deci (2000) note that harnessing potential intrinsic motivators when designing a task can lead to improved task design and increased motivation. However, designing tasks and applications that appeal to intrinsic motivations is difficult as people are motivated for some activities and not others, and not all individuals will be motivated by the same activity (Benkler, 2011; Ryan & Deci, 2000). Rather, to satisfy intrinsic motivations, designers must identify activities that are on average considered to be intrinsically motivating.

#### **2.3.2.2 Extrinsic motivations**

Traditionally, extrinsic motivations were considered to be impoverished as people conducting activities for extrinsic purposes would be resentful or uninterested (Ryan & Deci, 2000). However, as noted above, not all tasks are equally intrinsically motivating to all people, and not all tasks are self-selected, particularly among adults; thus, it is important to appeal to extrinsic motivations as well. A key component of SDT is that not all extrinsic motivators are the same: while some could lead to resentment, others are positively motivating and can drive people to perform tasks willingly and enthusiastically, so long as these extrinsic motivators are self-enforced and autonomous; for example, conducting an activity because it may help advance one's career.

To identify self-enforced extrinsic motivators, Ryan and Deci (2000) describe another sub-theory of SDT, Organismic Integration Theory (OIT). OIT outlines four types of extrinsic motivators on a continuum from amotivation to intrinsic motivation. These types of extrinsic motivation have varying degrees of internalization and integration, where internalization refers to the process of taking a value as one's own, and integration refers to the process by which individuals come to think of an externally motivated task as self-enforced. The six types of motivations are:

1. *Amotivation*, which describes lacking intention to act, not feeling competent, and believing that acting will not yield the desired outcome.
2. *External regulation*, which describes actions performed to satisfy a demand or externally imposed reward.
3. *Introjected regulation*, which describes actions performed due to pressure, to avoid guilt, or to enhance ego, self-esteem, and/or self-worth.
4. *Identification*, in which the goal is of personal importance, so activities conducted are accepted as one's own.
5. *Integrated regulation*, in which activities are fully assimilated to the self. These motivations share qualities with intrinsic motivation but are extrinsic because they are still conducted for an outcome that is separate from the behaviour, even though it is valued by the self.
6. *Intrinsic motivation*.

Individual motivations can move through the continuum in no required sequence, but as motivations are internalized, they move upwards in the continuum towards intrinsic motivation. Ryan and Deci (2000) recommend a number of ways to facilitate internalization and integration. First, as self-efficacy and autonomy are key aspects of intrinsic motivation, it is important that these elements are encouraged and supported. Second, as extrinsic motivations are often driven by other people, there is a social component that can be harnessed. Enhancing a sense of belonging and relatedness can help increase the process of internalization of extrinsic motivators. In theorizing about motivations for participating in crowds and communities, Haythornthwaite (2009) notes that extrinsic motivations among crowd and lightweight participants will likely be co-oriented towards the goal of the initiative, while social extrinsic motivations will be more pertinent to participants in online communities.

As participation in any given activity is likely to be driven by a combination of intrinsic and extrinsic motivators, it is important to consider any possible interactions between the two. Through a meta-analysis, Ryan and Deci (2000) found that tangible rewards that are made contingent on performance and threats of punishment undermine intrinsic



motivation because people experience them as controllers of their behaviour, thereby decreasing autonomy. Benkler (2011) characterizes this effect as a problem of framing. People associate certain actions with certain results; therefore, when rewards and incentives are offered people begin to think of the activity as a business transaction rather than an intrinsically motivated and willingly volunteered contribution. Because offering rewards and incentives can actually decrease motivation, appealing to externally regulated motivations means that offering rewards for contribution are not guaranteed to increase a desired behaviour (Benkler, 2011).

### **2.3.2.3 Self-Determination Theory in online environments**

Recent work by Peters, Calvo, and Ryan (2018) used SDT to create a model that applies the theory to technology use. The Motivation, Engagement, and Thriving in User Experience (METUX) model provides a framework to show how technologies meet or undermine the three underlying psychological needs posited in SDT: autonomy, competence, and relatedness. The model is based on six spheres that can be influenced by technology: adoption, interface, task, behaviour, life, and society. *Adoption* describes the decision-making process between learning of a new technology and deciding to use it. According to Peters et al., important factors include the extent to which adoption is autonomously motivated and the extent to which a user thinks they will be competent to use it. *Interface* describes the experience of interacting with the technology, and to what extent the technology supports need satisfaction. *Task* is the experience of engaging in the technology-specific activity. *Behaviour* is similar to task but refers to the experience of engaging in the behaviour the task is designed to support. For example, texting is the task while chatting with friends is the behaviour. *Life* describes experience beyond the technology and is measured by determining to what extent the technology supports need satisfaction in a user's life overall. *Society* is similar to life, but includes all members of society, beyond particular users of the technology.

While METUX is a recent development, Self-Determination Theory, or the characterization of motivators as intrinsic and extrinsic, is one of the most commonly used frameworks in studies on motivation for participating in online initiatives. For

example, SDT has been used as the framework to study motivation in crowdsourced projects (Lakhani et al., 2006; Zheng, Li, Hou, 2011); crowdwork (Kaufmann, Schulze & Veit, 2011; Kobayashi, Arita, Itoko, Saito & Takagi, 2015); citizen science (Curtis, 2015; Eveleigh et al., 2014) peer production (Benkler, 2011; Budhathoki & Haythornthwaite, 2012); Question and Answer sites (Lee, Kim, Yi, Sung, Gerla, 2013); and in social media sites (Nov et al., 2009).

Considering the source of motivations is a key element of understanding participation. However, because the source of the motivation may vary by individual (i.e., individuals may have internalized the same motivation at different levels), this theory is difficult to test quantitatively through surveys or questionnaires. However, because of its applicability to online initiatives, as described by Haythornthwaite (2009) and Benkler (2011) the current study will draw upon SDT when considering individuals' responses to interview questions.

### *2.3.3 OTHER MOTIVATIONAL THEORIES*

Uses and Gratifications and Self-Determination Theory are the two most common theoretical frameworks used for studying motivation in online initiatives; however, other theories have also explained motivation in both online and offline contexts. Overviews of two theories are included in this subsection: Organizational and Community Commitment and Functional Approach.

*Organizational and community commitment* theories predict that when people have a strong attitude towards a particular organization or community, they will contribute to it more willingly (Wellman, Quan-Haase, Witte & Hampton, 2001). Bateman, Gray and Butler (2011) describes this commitment as a psychological bond that characterizes an individual's relationship with an organization. When applying organizational commitment to an online community setting, Bateman et al. and found that it could predict varying levels of participation in an online forum where those who had a strong desire to continue participation in the community were likely to read posts and those with a strong emotional attachment to the community were likely to respond to posts.

Although Bateman et al. (2001) found that organizational commitment theory could predict varying levels of participation in an online forum, organizational commitment may not explain broader or more diverse contexts of online communication. Using community commitment theory, Wellman et al. surveyed 39, 211 North American Internet users and found strong negative associations between the extent of internet use and three measures of commitment to online communities: sense of community with family online, general sense of online community, and sense of alienation online. The authors posited that the negative relationship between internet use and community commitment measures was caused by unpleasant exposure. Since larger online networks result in more weak-tie heterogeneous connections, people are exposed to greater numbers of people they find disagreeable. As a network becomes too large, fewer members are directly connected and community norms and values are more difficult to establish and enforce (Wellman et al., 2001).

Because participation in online initiatives is typically optional, theories that explore motivation for volunteering in offline contexts, such as the *functional approach to volunteerism* may also be relevant. Houle et al. (2005) examined the link between volunteers' motivations and the tasks they chose to complete. While people may conduct the same activity, it is possible to be doing it for different reasons; in other words, the same action may have different functions for different individuals. The authors extended this premise to volunteering by citing six potential functions: values (e.g., concern for others), understanding (e.g., opportunity to learn and practice skills), career (e.g., future job prospects, social (e.g., social norms and pressures), protection (e.g. feelings of guilt or social responsibility), and esteem (e.g., self-improvement). These functions were not mutually exclusive and were independent of activity.

Since matching benefits of volunteering with motivations was associated with greater satisfaction with volunteering experiences, Houle et al. (2005) sought to determine if certain motivations were associated with certain tasks, if those motivations were perceived by volunteers before conducting the task, and if those perceptions influenced the tasks participants chose to conduct. A survey was distributed to 112 participants who

were then presented with descriptions of eight volunteer tasks and asked to rank them. They were then presented with the six functions and asked to evaluate the extent to which each task would satisfy each function. Findings indicated that tasks could be characterized by the motives they satisfy. Participants differed in terms of the tasks they identified as most important to them and differed according to their which tasks would satisfy their motivations. However, participants generally preferred tasks that they predicted would satisfy their personal motivations and did not randomly select tasks.

## 2.4 MOTIVATIONS FOR PARTICIPATING IN ONLINE INITIATIVES

The preceding sections have provided definitions of different types of online initiatives, presented models and approaches to studying online participation, and have provided an overview of theories of motivation used in the study of online participation. This section reviews a series of case studies addressing motivation to participate in a variety of online initiatives and identifies potential patterns of motivation and factors that may impact motivation to participate.

The most common way of exploring motivations for participating in online initiatives is to conduct case studies. Table 1 includes a selection of case studies that address questions regarding motivations for participating in a variety of online initiatives. The cases were identified using a combination of search terms, such as “crowdsourcing” AND “motivations,” as well as “online communities” AND “motivations.” Other cases were found via citation chaining. This list is illustrative, not exhaustive. Cases included in Table 1 are limited to those that examine motivation. Table 2 lists cases that explore the relationship between motivation and participation; results from these studies are addressed in subsection 2.4.1. The first column of Table 1 lists the name of the case studied and the authors. One platform, Mechanical Turk, was used as a case study twice. The second column lists the initiative type. For all but two of the cases, the initiative type reflects the designation given to it by the author. The third column includes information regarding theories and methods; in some cases, a theoretical framework was not used and is therefore not included in the table. Studies that classed motivations as either intrinsic or extrinsic were considered to have used Self Determination Theory, even in cases where

the theory was not directly cited. The fourth column presents the results by listing the all or the most influential motivators found.

**Table 1: Case studies on motivation for participating in online initiatives**

<b>Case/platform</b>	<b>Initiative type</b>	<b>Theory &amp; Method</b>	<b>Results</b>
<b>Knowledge Network</b> (Ardichvili, Page, & Wentling., 2003)	Online community of practice	– Interviews	– Moral obligation to the community – Recognition – Reciprocity – Ability to problem solve – Staying informed – Integration with others in the organization – Efficient
<b>InnoCentive</b> Lakhani et al. (2006)	Crowdsourcing	– Survey – Self-Determination Theory (SDT)	– Money – Enjoy problem solving – Intellectual challenge
<b>Email lists</b> Hew & Hara (2007)	Online communities of practice	– Observation – Interviews	– Reciprocity – Collectivism – Personal gain – Respectful environment – Altruism – Technology
<b>iStock Photo</b> (Brabham, 2008b)	Crowdsourcing	– Survey	– Money – Develop skills – Creative Outlet – Fun
<b>Threadless T-Shirt Design</b> (Brabham, 2010)	Crowdsourcing & Online community	– Interviews	– Money – Develop & improve skills – Advance design career – Love of community – Addiction to interaction on the site/with the community

<b>Mechanical Turk</b> (Kaufmann et al., 2011)	Crowdsourcing & Human computation	– Survey – SDT – Work motivation theory	– Task autonomy – Skill variety – Task identity – Human capital advancement
(Jiang, Wagner & Nardi, 2015)		– Open ended survey	– Money – Knowledge and skills – Effective use of time
<b>Taskcn</b> (Zheng et al., 2011)	Crowdsourcing	– Survey – SDT – Theory of Planned Behaviour	– Intrinsic motivations were more important for inducing participation – Recognition was the most important extrinsic motivation
<b>Next Stop Design Project</b> (Brabham, 2012)	Crowdsourcing	– Interviews – SDT – Uses & Gratifications (U&G)	– Career advancement – Peer recognition – Contribution to collaborative effort – Self expression – Fun – Learning – Easy
<b>Jisiklog</b> (Lee et al., 2013)	Crowdsourcing	– Survey – SDT	– Money – Learning – Fun
<b>Yahoo! Answers</b> (Choi et al., 2015)	Crowdsourcing	– Survey – U&G	– Learning – Having fun – Seeking Advice – Finding relevant information
<b>FoldIt</b> (Curtis, 2015)	Citizen Science & Gamification & Online community	– Survey, Interviews, Observation & participation	– Contribute to science – Interest in science – Challenge – Interaction with others – Sense of community

Of the 11 cases, four are online communities and seven are crowdsourcing (including one study as an example of an online community that formed within a crowdsourced project).

Of the crowdsourcing initiatives, one is an example of human computation (Mechanical Turk) and five offered financial incentives (InnoCentive, iStock, Threadless, Mechanical Turk, and Jisiklog). The studies employed a variety of methods to explore motivations. Eight studies used surveys to test hypotheses derived from theories of motivation. Of the theories used, Self-Determination (SDT) was the most common – five of the studies used SDT, with four studies using SDT in combination with another theory, such as work motivation theory (Kaufmann et al., 2011) or theory of planned behaviour (Zheng et al., 2011). The next most common theory tested was Uses and Gratification theory (U&G), which was used in two of the studies. Six of the studies employed qualitative methods, primarily relying on interviews with participants, or a combination of interviews and observation.

Differing research questions, methodologies, and theoretical frameworks means that direct comparison between study results is problematic. For example, the intent of Brabham's (2008b, 2010, 2012) studies was to identify motivations for participating in a series of crowdsourcing initiatives while Zheng (2011) tested the impact of various motivations on intent to participate in crowdsourced projects. Similarly, since motivations were identified by participants through interviews (e.g., Ardichvili et al. 2003; Brabham, 2010; Hew & Hara, 2007), or by referencing prior research or theories of motivation (e.g. Kaufmann et al., 2011; Lakhani et al., 2006; Zheng et al., 2011), the motivations identified by varying studies are explored at varying degrees of specificity. For example, Zheng et al. (2011) primarily discuss motivations at the intrinsic/extrinsic level while Hew and Hara (2007) group three individual motivators, emotional support, professional reputation, and understanding a project under the single motivator, personal gain. Others emphasize a particular subset of motivations, for example Kaufmann et al. (2010) focus on the role of the task in motivation.

While the differences between study goals, theories, and methods mean that definitive comparisons cannot be made by comparing the results of prior research, identifying broad motivational themes can help inform next steps. Thus, similar motivations identified in the 11 cases included in Table 1 were grouped, forming six general types of motivations:

*information related motivators*, such as information acquisition and learning; *technology related motivators*, such as ease of use; *moral and ethical motivators*, such as reciprocity and altruism; *social motivators*, such as interaction with others and love of community; *task related motivators*, in which aspects of the activity itself are drivers of participation; and *financial and career motivators*, such as professional recognition and reputation, money, and skill development.

Of these general motivations, *financial and career* motivations as well as *task related* motivations were found in the most studies with nine cases citing finding at least one example of each. In the cases that found participants were driven by financial and career motivators, money was a motivator in initiatives that offered guaranteed or potential financial rewards for participating (Brabham, 2008b and 2010; Jiang et al., 2015; Lakhani et al., 2006; and Lee et al., 2013). Professional recognition and reputation building were also common drivers of participation (Ardichvili et al., 2003; Brabham, 2012; Hew & Hara, 2007; and Zheng et al., 2011) as was skill development (Brabham, 2008b and 2010; Jiang et al., 2015; and Kaufmann et al., 2011).

In the cases that found participants were driven by *task related motivators*, many described the main activity conducted within the initiative as fun (Brabham, 2008b; 2012; Choi et al., 2015; Lee et al., 2013) or intellectually stimulating (Curtis, 2015; Lakhani et al., 2006). Kaufmann et al., (2011) found that task-related motivators were very important to Mechanical Turk workers (also known as Turkers). After money, which the authors dismissed due to findings by Antin and Shaw (2012), who found that Mechanical Turk participants likely cited money as a motivator due to social desirability bias, the ability to be creative while completing tasks (task autonomy) was the most important motivator, followed by finding tasks that match their skillset (skill variety), and completing tasks that have tangible results (task identity). The ability to express oneself creatively was also a motivator for contributors to iStock (Brabham, 2008b) and the Next Stop Design project (Brabham, 2010). Participants in only two cases cited practical outcomes from task completion: Jiang et al., found that Turkers described conducting tasks as an effective use of their time and Ardichvili et al. (2003) found that discussions



in a workplace online community of practice provided participants with the opportunity to problem solve.

*Information related motivations* were the next most commonly found group of motivators and were identified in half of the online initiatives. Participants in these cases cited finding information and staying informed (Ardichvili et al., 2003; Choi et al., 2015), understanding, knowledge, and skill development (Hew & Hara, 2007; Jiang et al., 2015; Kaufmann et al., 2011), and learning (Brabham, 2012; Choi et al., 2015; Lee et al., 2013) as important motivations for participating. *Social motivators* were found to be drivers of participation in four cases. Interaction with others was a driver in the workplace online community of practice, Knowledge Network (Ardichvili et al., 2003) and the citizen science community, FoldIt (Curtis, 2015). Sense of community and community ethos were important social motivators in email lists (Hew & Hara, 2007), Threadless (Brabham, 2010), and FoldIt (Curtis, 2015). Participants of three online initiatives cited *moral and ethical motivators* for participation. Community members of Knowledge Network (Ardichvili et al., 2003) and in email lists (Hew & Hara, 2007) described contributing due to feelings of reciprocity; since they had benefited from contributions to the initiatives, participants felt obligated to contribute. Contributors to the email lists also described altruism as an important motivator; they felt empathetic towards others who may be struggling and wanted to help. Finally, participants of FoldIt (Curtis, 2015) described wanting to contribute to science as a key motivator for participating in an online citizen science game. FoldIt is designed to harness the problem-solving abilities of the crowd in order to identify protein structures; while some participants contributed because scientific discovery was an important value to them, others knew people who were affected by diseases caused by protein mis-folding and hoped that their participation would help contribute to an eventual cure.

Although participation in each initiative is conducted online, *technology related motivators* were noted in only three cases. Participants in Knowledge Network (Ardichvili et al., 2003) found that the online community was efficient; participants of the Next Stop Design (Brabham, 2012) project described participation as easy; and

participants in three email lists (Hew & Hara, 2007) found that the technology was easy to use and liked the pseudo-anonymity it afforded. While technology related motivators are only identified in three cases, this may not be indicative of the role of technology as it relates to motivation. The relative lack of technology motivators is most likely because questions regarding technology were not included in survey instruments (e.g., Brabham, 2008b; Choi et al., 2015; Kaufmann et al., 2012; Lakhani et al., 2006; and Zheng et al., 2011). Only one study (Lee et al., 2013) included an aspect of technology as a factor of motivation (the ability to unlock additional functionality within the initiative) and found that it was not a significant motivator.

When examining motivations across initiative types, patterns emerge that suggest type may affect motivations for participation. For example, social as well as moral and ethical motivators were only cited as key motivators in online community cases. The pattern of social motivations among members of online communities is unsurprising given that contributions to online communities are often made in collaboration with, or receive input from other initiative participants, while contributions to online crowds are typically independent (Haythornthwaite, 2009). However, because Haythornthwaite (2009) cites co-orientation to the ideals of crowd enterprises as a likely motivation for participating, it is interesting that moral and ethical motivators were not found in any of the nine crowd cases discussed here. This may be because the selection of crowd cases are predominantly examples of crowdsourcing rather than peer production; because crowdsourcing is often associated with monetary recompense and is always organized from the top down by a single organization or person, participants of these initiatives may feel more like employees than volunteers and thus less motivated by altruistic sentiments.

Despite theoretical and comparative research that suggests a need for exploration of motivations for participation across initiative types (Amichai-Hamburger et al., 2016; Boudreau & Lakhani, 2009; Haythornthwaite, 2009; Malinen, 2015), to my knowledge, no empirical research has been conducted exploring or testing this potential relationship. This gap in the literature leads to the first research question:

RQ1. How does the type of initiative relate to motivation to participate in open online collective initiatives?

#### *2.4.1 RELATIONSHIPS BETWEEN PARTICIPATION, ROLE, AND MOTIVATION*

As noted in Section 2.2, participation is a key aspect of the success of online initiatives (Kraut & Resnick, 2011). Therefore, the relationship between varying types and degrees of participation has been extensively explored. As with studies designed to identify motivations, research conducted to identify the relationship between participation, roles, and motivations for participating in online initiatives also typically takes a case study approach, a selection of which are presented in Table 2. Cases in Table 2 were identified by using a combination of search and citation chaining. The search terms used were those listed above (e.g., “online communities” AND “motivations”) as well as the additional search terms “Participation,” “Peer production,” “Open source,” particular initiative names, AND “motivation.” As with Table 1, Table 2 does not present an exhaustive list. The first, second, and fourth columns serve the same function as the columns of the same name in Table 1. As with Table 1., designations of initiative type were made by the authors of each study. The third column, participation measurement, provides an overview of the way in which the level of participation and/or role participants had within the initiative was measured in each case study.

**Table 2: Studies exploring relationships between participation and motivation**

<b>Case/platform</b>	<b>Initiative type</b>	<b>Participation measurement</b>	<b>Theory &amp; Method</b>
<b>Linux</b> (Hertel et al., 2003)	Peer production	Interested users and Developers  Engagement level (hours per week, willingness to be involved in further development)	– Survey – Research on participation in Open Source Software, social movements, teamwork
<b>Bulletin Boards</b> Preece et al., (2004)	Online community	Posters and lurkers	– Survey

Ridings, Gefen & Arinze (2006)		Lurkers, infrequent posters, and active posters	– Survey – Social exchange theory
<b>Wikipedia</b> (Nov, 2007)	Peer production	Contribution level (hours per week)	– Survey – Volunteerism
<b>Everything2</b> (Lampe et al., 2010)	Peer production	Account holders and Anonymous users	– Survey – U&G – Organizational Commitment
(Velasquez, Wash, Lampe & Bjornrud, 2014)		Contribution level over time	– Interviews
<b>Flickr</b> (Nov et al., 2010)	Online Community	Type of contribution and tenure	– Survey – SDT
<b>OpenStreetMap</b> (Budhathoki & Haythornthwaite, 2012)	Peer production	Serious and Casual mappers	– Survey – SDT – Volunteerism
<b>Galaxy Zoo</b> (Raddick et al., 2013)	Citizen Science & Crowdsourcing & Human computation	General population and Forum users	– Survey – Prior interviews
<b>Old Weather</b> (Eveleigh et al., 2014)	Citizen Science & Crowdsourcing & Human computation	Contribution level (number of contributions and contribution over time)	– Survey & interviews – SDT
<b>Crowd funding</b> (Gerber & Hui, 2014)	Online Community	Project creators vs Funders	– Interviews
<b>Planet Hunters</b> (Jackson, Østerlund, DeVries Hassman, and Crowston, 2015)	Citizen Science	Contribution level over time	– Interviews – Trace data
<b>Reddit</b> (Moore & Chaung, 2017)	Content aggregator	Contribution type (reading, voting, posting comments,	– Survey – U&G

		posting content) and frequency of participation	
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Of the 10 cases, four are peer production initiatives, four are online communities, two are citizen science projects, which is a type of crowdsourcing, and one is a content aggregation site. Two studies explored participation and motivation within online bulletin boards and Everything2. Of these cases, only one (crowd funding) offers potential financial incentives. Studies in this selection of cases most commonly use surveys: eight studies employed surveys as their sole data collection method and one used a combination of a survey and interviews. Two studies used interviews alone. The theories used in these studies were more varied than those included in Table 1. As in Table 1, SDT was the most commonly used theory; however, only three studies employed it to examine the relationship between motivation and aspects of participation. Other theories include Social Exchange Theory (Ridings et al., 2006) and Uses and Gratifications alone or in combination with another theory (Lampe et al., 2010; Moore & Chuang, 2017) and Raddick et al. (2013) developed their survey after analysis of interviews with Galaxy Zoo contributors.

As was found by Malinen (2015) in her literature review, most of the cases in this selection also explore participation depth, often using quantitative measurements of contribution, such as hours per week or number of contributions (e.g., Budhathoki & Haythornthwaite, 2012; Eveleigh et al., 2014; Hertel et al., 2003; Moore & Chuang, 2017; Nov, 2007; Preece et al., 2004; Ridings et al., 2006; Velasquez et al., 2014). Hertel et al. (2003) used quantitative measures as one aspect of a measure of general engagement level; they also considered willingness to be involved in further development as an indicator of engagement. Nov et al. (2010) measured tenure in the community as it related to certain kinds of participation in the community, such as adding tags and joining groups.

Other studies explored the relationship between the roles participants take within the initiatives and motivation. For example, Hertel et al. (2003) differentiated between

interested users and developers in Linux; Lampe et al. (2010), account holders and anonymous users in Everything2; Raddick et al., (2013) forum users and the general population of contributors to Galaxy Zoo; and Gerber & Hui (2014) project funders and creators in three crowd funding platforms. The following two sections will provide an overview of the results from these studies, first summarizing the results of studies addressing the relationship between participation and motivation, followed by a review of studies that explore the relationship between participant roles and motivation.

#### **2.4.1.1 Participation and motivation**

In general, higher levels of motivations were associated with more participation, such as hours spent on a project (Hertel et al., 2003; Nov, 2007). In response to Kollock and Smith's (1996) description of lurking as a form of "free-riding" (i.e., getting something from the community without actively participating), Preece et al. (2004) explored differences in motivations between active and passive participants in online communities. They surveyed 1,188 active and passive members from 375 MSN (Microsoft Network) bulletin boards; 219 of whom were classed as lurkers. Results indicated that community members' initial reasons for joining the community were similar – both lurkers and posters wanted to know more about the topic and were looking for answers to questions. However, attitudes about the community were different between the two groups; lurkers reported lower levels of satisfaction and less sense of belonging. The survey also asked why lurkers lurk. The most common response was that reading and browsing was enough activity to satisfy their needs (53.9%), followed by still learning about the group (29.7%), and shyness (28.3%). Rather than free-riders, Preece et al. found that many cited altruistic reasons for not actively participating, including feeling as though they had nothing of value to contribute, and feeling as though their contributions would cause clutter and detract from others' experiences. Furthermore, as indicated by the second most popular reason for lurking, Preece et al. found that passive participation is an important part of the process of becoming an active contributor to the community.

Ridings et al. (2006) also explored varying levels of participation within online communities, but rather than splitting community members into two groups (active and

passive), a third group, infrequent posters, was added. Lurkers were defined as those who never posted, infrequent posters were those who posted three or fewer times per month, and active posters were those who posted four or more times per month. A survey was distributed to users from a random sample of 20 online communities and yielded 518 responses. The survey was based on social exchange theory, which states that people take part in a behaviour if their expected outcomes compare favorably to their anticipated outcomes. In online communities the goodwill of others is required for community members to meet their expected outcomes; therefore, the authors predicted that trust would be an important factor. Ridings et al. found that active posters were motivated by giving information and exchanging social support; active and infrequent posters were equally motivated by trust, and that all participants were motivated by obtaining information. Because lurkers had lower levels of trust than active and infrequent posters, Ridings et al. concluded that trust plays a key role in community members' decisions to actively participate: while they may not post or respond because they distrust others, they display some levels of trust through their willingness to read others' contributions.

While Preece et al. (2004) and Ridings et al. (2006) focused their analyses on the differences in motivations between passive and active participants, the majority of studies included in this sample examine motivations among those who have varying degrees of active participation. To identify motivations for contributing to Wikipedia, Nov (2007) surveyed 151 Wikipedia contributors and editors who had made profiles. Contribution was measured in hours per week; overall, the respondents were heavy contributors, reporting an average of 8.27 hours per week. Among all participants the top motivations for contributing were fun and the ideology of free information. Career, decreasing loneliness, and contributing because of social expectations were the least commonly cited motivators. When measured against contribution level, Nov found that contribution level was significantly correlated with high levels of fun, the desire to help others, gaining new perspectives, feeling needed, feeling less lonely, and career. Contribution level was not significantly correlated with ideology and social expectations. Nov suggests that while ideology may be a significant motivator for many contributors, it may not translate to behaviour and drive contribution to the site.

Budhathoki and Haythornthwaite (2012) also examined the relationship between participation level and motivation in the peer production project, OpenStreetMap by surveying 444 contributors to the site. Questions regarding contributors' motivations were derived from Self-Determination Theory, literature on volunteerism, a qualitative analysis of the site's discussion forums, and Haythornthwaite's (2009) crowd and community framework. Budhathoki and Haythornthwaite measured contribution using participant log data; participants were classed as either serious mappers or casual mappers if they fell below or above 2 standard deviations from the mean in terms of either the number of items they contributed, the length of contributions, or the frequency of contribution. Contribution patterns of respondents were similar to those estimated by Nielsen (2006); 63 participants were serious mappers and 343 were casual mappers. A factor analysis revealed seven motivational constructs related to monetary reward, learning, self-efficacy regarding local knowledge, personal promotion, altruism, project goal, and personal need. For all but one factor, serious mappers rated motivations higher than casual mappers. Serious mappers were more motivated by their confidence in local knowledge, learning, and community. Career motivations were generally low, but ranked higher among serious mappers than casual mappers, likely because of the time commitment associated with heavyweight participation. While generally serious mappers had higher levels of motivation, casual mappers rated motivations related to free mapping higher than casual mappers. Budhathoki and Haythornthwaite concluded that general ideologies, rather than local or community specific ideals are greater for casual participants because casual participation only affords limited and isolated engagement, which does not provide the opportunity to develop stronger or varied motivations. Personal needs were shared by serious and casual mappers, as was an interest in geography. These findings supported the light and heavyweight model of participation (Haythornthwaite, 2009), where heavyweight participants are driven by a combination of intrinsic and extrinsic motivators while lightweight participants are driven by ideologically-based extrinsic motivators.

In their study on the citizen science project, Old Weather, in which contributors transcribe shipping logs to identify weather data, Eveleigh et al. (2014) sought to



understand more about different levels and types of participation as they relate to motivation. Participation data were derived from three sources: project records identified the number of weather events transcribed and the number of forum posts made, and respondents to a survey reported on whether or not they had transcribed shipping log information in addition to weather data. Motivations for participation were also identified via the survey. Of the total survey respondents, 299 provided their usernames so that analysis of their motivations in relation to their participation could be conducted.

Findings by Eveleigh et al. indicated that those who had provided a greater number of contributions *and* those who had contributed additional transcription data reported high intrinsic motivations; however, reports of high extrinsic motivations were only associated with those who had a high number of contributions (but who did not transcribe additional data). Eveleigh et al. also analyzed differences in motivations between those who had the highest levels of contribution (measured in number of transcriptions) vs those who had the lowest. They found that high contributors were more likely to participate in the forum and had significantly higher levels of both intrinsic and extrinsic motivators than low contributors.

As a follow up to the survey, Eveleigh et al. sought to learn more about motivations for low participation, an activity which their participants referred to as ‘dabbling.’ Through interviews with 17 participants, Eveleigh et al. found that casual contributors participated minimally as part of the process of learning more about the project, their ability to make a valuable contribution, and sought purposive entertainment that they could engage in alone. While dabblers did not provide a large quantity of contributions, Eveleigh et al. found that nonetheless, dabbling contributed positively to the project. Despite not being active participants, the authors found that many dabblers retained an interest in the project and were an active audience for the research and an important recruitment resource. Dabblers often continued participation at this level rather than moving towards increased participation because low levels of participation fit well within their daily life; for example, participants liked to participate when they could and would often describe participating more during the winter when they spent more time inside.

Because increasing participation among initiative members is not easy or straight forward, Jackson et al. (2015) used interviews and trace data of three exemplary contributors in the citizen science project, Planet Hunters, to understand more about why members thought their engagement in the initiative increased. Each of the interviewees described a life-long interest in astronomy and a keen interest in the projects' goals. As their participation in the project increased, they began to personally identify with the project where meeting the project's goals were important to them. During their initial participation, the participants read internal and external sources of information as a way of learning more about the project and how to improve their own work. Each participant made multiple contributions to the project, and often waited until after making a discovery before they began to engage in the social features of the platform. Jackson et al. marked this movement to social engagement as moving from peripheral to core membership— through social engagement in addition to task activity, members would satisfy a broader range of motivations.

Moore and Chuang (2017) surveyed 549 Reddit users to determine motivations for participating on the site. Through observation, the authors identified four ways of participating on Reddit: visiting the site, voting on content, making posts to subreddits, and commenting on posts or other comments. In addition to exploring relationships between motivations and type of participation, the authors also examined frequency of participation. Drawing from Uses and Gratifications Theory, the authors tested participation type and frequency against four motivations: informativeness, socializing/community building, status seeking, and entertainment. Their results showed that informativeness did not predict participation through frequency of any of the participation types. Socializing/community building predicted frequency of posting content, voting, and commenting. Status seeking predicted frequency of voting and commenting, while entertainment predicted frequency of visiting the site. Socializing/community building was the most prominent motivation, followed by status seeking, and entertainment. While findings regarding these three motivations were consistent with the literature, the authors were surprised that informativeness was not a predictor of frequency of participation. The authors conclude that while Reddit is

considered a content aggregation site, users visit the site primarily to interact with others by reading comments and content submitted by others, and engaging in discussions.

Results from the above studies show a link between motivations and the degree of participation; other studies explore the relationship between motivation over time, investigating what might drive people to change the way they participate (Eveleigh et al., 2014; Hertel et al., 2003; Velasquez et al., 2014). Hertel et al. found that pragmatic motivations to improve one's own software tools and to increase personal career opportunities were particularly relevant for participants' willingness to engage in Linux activities in the future, but played only a minor role for the hours participants spent contributing in the past.

Velasquez et al. (2014) interviewed 31 long-term members of the Wikipedia-like site Everything2 whose participation had decreased over time to explore reasons for why participation depth decreases and if participation changes are linked to changing motivations. Four discrete motivations emerged from the interviews: status building, personal relationship development, community building, and human capital building. When asked why they participated less, participants' reasons for decreasing participation corresponded with their original intentions: those who participated to build status participated less due to changes in the site's feedback system; those who wanted to develop relationships participated less because the site developed a more encyclopedic goal that discouraged personalization and left those who wanted to be involved with other users feeling alienated; similarly, community builders felt betrayed by administrators who made broad changes to the site; finally, those who were motivated by developing human capital felt as though policy changes constrained their ability to express individuality. Despite decreasing their participation levels, Velasquez et al. found that participants' current participation was reflected in their original motivations: status builders maintained an audience, relationship developers posted social content, community builders took on administrative roles, and human capital builders provided feedback to other writers.

In addition to exploring casual participation, Eveleigh et al. (2014) also addressed issues that may lead casual participants to drop out of the citizen science project, Old Weather. Eveleigh et al. identified two reasons why people dropped out of the project: concern that their contributions were not useful, and boredom with the task. Boredom as a de-motivator is not surprising, given the importance of the task in motivating contributions within other human computation initiatives, such as Mechanical Turk (Kaufmann et al., 2011).

In their study of Flickr users, Nov et al. (2010) also addressed issues of time as it relates to motivation and participation by exploring the role of length of membership in a community and different activities. Nov et al. distributed a survey to a random sample of 1840 Flickr users and analyzed 276 responses from those who had paid for Flickr Pro accounts (as these users had no photo upload restrictions) and who had been members for at least 3 months; because of these limitations, it can be assumed the responses are only applicable to dedicated Flickr users and that results do not take the motivations and participation patterns of new users into account. Nov et al. found that participation patterns varied over time – users who had been members for longer shared fewer photos but added more tags and bookmarks to photos and used more of the social features of the site, such as joining groups and following other users. They also found correlations between certain activities and motivations: higher levels of self-development (i.e., developing skills, learning new things, and enhancing expertise) and perceived reputation were associated with sharing meta-information (i.e., tags and bookmarks) and participating in communities, but decreased with sharing photos. Higher levels of commitment (i.e., dedication to the Flickr website and community) were associated with photo sharing, and higher levels of enjoyment were associated with making individual and group connections. In connecting the three elements (tenure, activities, and motivations), Nov et al. found that participation varies over time, depending on the activity: picture sharing decreased, while meta-information sharing and socialization increased. They surmised that the social element of participation supported embeddedness in the community and had a positive impact on continued participation. Because of its ability to support search and retrieval of photographs, and to connect

people interested in similar subjects, Nov et al. proposed that sharing meta-information was a social activity and reflected social learning as those who had participated in the community had the opportunity to learn from others and follow community norms. They concluded that social learning also likely played a role in explaining the relationship between self-development and photo sharing: participants posted their best photographs in order to get feedback from the community.

In sum, results from this selection of cases indicate that there is a relationship between participation level and motivation; often people who participate more report higher levels of motivation (Hertel et al., 2003) and more varied motivations (Budhathoki & Haythornthwaite, 2014). As Valesquez et al., (2014) found, participation can decrease over time, particularly if initiative members' original or primary reasons for participating are no longer satisfied, or as found by Nov et al. (2010), as initiative members learn to use platform features and community norms. As noted above, in Section 2.2., and by Malinen (2015), participation in online initiatives is multifaceted. It includes depth of involvement (i.e., the quantity and quality of contributions of the initiative), tenure (i.e., the length of membership in the initiative), and the frequency of participation (i.e., time spent weekly, monthly, or yearly participating in the initiative). However, only Hertel et al. (2003) and Moore and Chuang (2017) take a multi-dimensional approach to the exploration of participation as it relates to motivation. Ridings et al., (2006) included two aspects of participation in their survey (number of hours spent in the community and length of membership); however, lurker, infrequent, and active participation was based rate of contribution rather than tenure. Budhathoki and Haythornthwaite (2012) also include multiple aspects of participation, including number of items contributed, length of contribution, or frequency of contribution; however, these measures are grouped into a single measure of light vs heavyweight contribution. Since the findings from the studies reviewed above indicate a link between motivation and participation within initiatives, the second research questions asks:

RQ2. How do various aspects of participation in an initiative, such as depth, level, and frequency, relate to motivation to participate in open online initiatives?

#### **2.4.1.2 Participant roles and motivation**

As demonstrated by the studies reviewed above, measuring participation quantitatively, such as by the number of contributions or length of membership, is a common tactic to take when examining the relationship between motivation and participation. However, other studies approach participation and motivation by examining the different roles initiative members take within the community. From the studies listed in Table 2., these roles include users and developers of open source software (Hertel et al., 2003), the general population and forum users within a citizen science project (Raddick et al., 2013), anonymous users and account holders in a wiki (Lampe et al., 2010), as well as project creators and project sponsors on crowdfunding websites (Gerber & Hui, 2014). This is not an exhaustive list of potential roles within online initiatives; other potential roles include, but are not limited to, experts and novices, those seeking support and those providing support, as well as moderators and the general population. It is also possible that an individual's role will change throughout their membership in the initiative, and it is possible for a single individual to have multiple roles.

In their study of Linux users, Hertel et al. (2003) explored differences in motivations between those who identify as primarily users of the software and those who have developed parts of the software. The authors distributed a survey (n=141) and questions were developed from research on Open Source Software and involvement in social movements. Among those who were primarily users (n=72), the highest motivators were pragmatic motivations related to the improvement of the Linux kernel, social and political motivations (supporting free software and networking within the Linux community), and hedonistic motivations (i.e., intrinsic motivations). However, those who identified as developers (n=69), were found to be more driven by identification with a specific subsystem in Linux, had higher norm-oriented motivations (defined by Hertel et al. as motives related to the reactions of significant others) and high levels of pragmatic

motivations. When analyzing predictors of engagement, they found that developers had high levels of identification with both the Linux operating system and specific subsystems, and tolerance of time loss due to participation in the project. For users, concern regarding time loss was a predictor of engagement, but identification with the Linux project was not, leading the authors to conclude that time is a significant barrier to participation, and that to encourage development, leadership within open source systems should streamline organizational and developmental processes.

Raddick et al. (2013) distributed surveys to contributors to the citizen science project, Galaxy Zoo to identify their motivations for participation. The authors took their sample from two different sources: the general population of users who signed up for the newsletter using a valid email address, and those who contributed to the discussion forum. The authors hypothesized that contributors to the discussion forum would be more dedicated to the project and therefore have different motivations; 10, 232 respondents were from the general population (who were also offered an incentive for participation) and 760 respondents were from the discussion forum (and who were not offered an incentive). Raddick et al. asked participants to rank how motivating they found various factors and asked participants to select one primary motivation. When asked to rank motivations, there were no significant differences between groups for all but three of the motivators. Of the motivators that were equally important to both groups, contributing to science, discovery, and interest in astronomy ranked the highest. Forum users were more likely to rank community and fun as important motivators. Contributing to science was cited as the primary motivation among both the general population and forum users. The authors conclude that most volunteers are motivated by identification with a general interest in science and the particular goals of the project rather than in engaging with others.

When examining motivations for participating in the Wikipedia-like site, Everything2, Lampe et al., (2010) differentiated between the motivations of anonymous users, in other words, users who primarily read content as an account is required for participation, and account holders. A questionnaire based on Uses and Gratifications Theory and

Organizational Commitment theory was distributed; 295 respondents were anonymous users and 304 were registered users. Those with accounts were more likely to cite providing information and social enhancement as motivations than those who did not have an account, which was unsurprising given that these were activities limited to account holders. Anonymous users were more likely to cite getting information, although this was a frequently cited motivation for all users as was entertainment. Lampe et al. also looked at motivations between registered users who had different rates and types of participation. They found that while interpersonal connectively and social enhancement did not play a significant role in perceived use of the site, participants who had high reputation scores on the site were more likely to interact with other users. This matched the pattern found when comparing anonymous with registered users— those who participated in more ways (reading vs contributing vs social interaction) had more varied motivations for participation.

Gerber and Hui (2014) explored motivations and barriers for participating in crowdfunding communities by conducting interviews with 83 participants of three popular crowdfunding platforms. The authors were interested in the motivations of project funders and creators. Two of their interviewees exclusively created crowdfunding projects, 10 participants exclusively funded projects, 48 had both funded and created a project, and 20 participants considered participating in crowdfunding, but opted not to. Analysis of the interviews found that creators of crowdfunding projects did so because they viewed it as an easy, fast way to raise money; to expand awareness of their project since crowdfunding can support sharing information about their project to a vast and diverse audience; to form connections between themselves and their supporters and maintain these connections over time; to gain approval for both themselves and their work as the amount of funds raised was considered a quantitative measure of success; to maintain control over their project, as self-funding meant they would not have to be accountable to shareholders or investors; and to learn new fundraising skills, such as framing their work for a particular audience, photography, and videography. Interviewees were deterred from creating projects because they believed that their project would not be able to attract supporters, particularly if they believed that the project was for a product



that the general population would not use. They also cited fear of public failure, which could impact their ability to receive funding at a later date and could expose projects' weaknesses. Time was also a deterrent. While crowdfunding is easy to set up, successful campaigns involve active and constant promoting and interaction with supporters. Interviewees were concerned that while applying for funds via grants took more time initially, crowdfunding was more time consuming in the long run.

Gerber and Hui (2014) found that project supporters were motivated by a desire to collect the rewards offered by project funders at certain levels of contribution; often they referred to supporting projects not as donating, but as "buying" the reward. Supporters were also driven by a desire to help others; sometimes project creators were friends or family they wanted to support, other times because they believed that the project would not get support through traditional funding venues. Supporting crowdfunding projects made interviewees feel as though they were part of a community and had a say in the project. This helped promote trusting relationships between project creators and project funders. Finally, project supporters were motivated to contribute because they wanted to support a cause, often one that was analogous with their personal beliefs and values. Interviewees who were hesitant to provide support cited one major deterrent: distrust in the use of funds. While crowdfunding is typically assumed to be a financial transaction, Gerber and Hui note that the breadth of motivations, and in particular the social and learning motivations, demonstrates that crowdfunding satisfies participants' emotional and cognitive needs as well as financial ones.

Results from the studies reviewed above indicate that initiative members with different roles have different motivations. Those who had roles associated with heavyweight participation (e.g., developers, forum users, account holders, and project creators) seem to have motivations that fall within the light and heavyweight model of participation (Haythornthwaite, 2009); these participants have higher levels of motivations than their lightweight counterparts and have more varied motivations, which span the intrinsic to extrinsic continuum. These findings lead to the third research question:

RQ3. How do participant roles within an initiative relate to their motivation to participate to open online collective initiatives?

#### **2.4.1.3 Use of theory in studies of motivation**

As noted in Tables 1 and 2, the two most commonly used theories of motivation are Uses and Gratifications Theory (U&G) and Self Determination Theory (SDT). However, these theories were applied inconsistently across studies. This was expected in the case of U&G. One of the strengths of U&G is its flexibility. However, this flexibility results in studies that produce separate typologies of motivations, making results difficult to compare (Ruggiero, 2000). For example, similar but separate typologies were used by Lampe et al. (2000) and Moore and Chuang (2017), where Lampe et al. differentiated between information seeking and providing information and Moore and Chuang used the more general concept, ‘informativeness.’

Like U&G, SDT was also applied inconsistently. In many cases individual motivations were considered to be extrinsic in one study but intrinsic in another. Examples include learning, which was classed as an intrinsic motivation by Lakhani et al., 2006, Budhathoki & Haythornthwaite (2012), and Curtis (2015) but extrinsic by Kaufmann, et al. (2011); skill development, which was classed as intrinsic by Lakhani et al., and Budhathoki & Haythornthwaite (likely because skill development was considered to be an aspect of self-actualization) and extrinsic by Kaufmann et al.; and interest in the subject, which was classed as intrinsic by Curtis, Eveleigh et al. (2015), and Kaufmann et al., but extrinsic by Kobayashi et al. (2015). Further, some studies use mechanisms to qualify intrinsic and extrinsic motivation such as Kaufmann et al. (2011) who differentiated between enjoyment based and community based intrinsic motivations, and immediate payoffs, delayed payoffs, and social extrinsic motivations, and Kobayashi et al. (2015) who differentiated between personal and social intrinsic and extrinsic motivations. Other studies classed motivations as either intrinsic or extrinsic but did not directly cite SDT. For example, Eveleigh et al. (2015) used a preexisting scale that was influenced by SDT and Budhathoki and Haythornthwaite (2013) used a framework developed in prior work by the first author, which was influenced by SDT.

Finally, all of the studies that used SDT classed motivations as either intrinsic or extrinsic. To my knowledge, no studies using SDT to study motivations to participate in online initiatives have included the spectrum of extrinsic motivations that vary according to the perceived locus of causality (i.e., the extent to which each motivation aligns the with internal values held by the individual). Classing motivations into binary motivations at either end of a spectrum may account for much of the inconsistent application, and the use of SDT in conjunction with other models or part of a broader framework likely explains much of the variation in its use between studies.

#### *2.4.2 LEARNING AS A MOTIVATION*

Of the 20 cases whose motivations were addressed through 23 studies reviewed above, 11 cases (and 13 studies) had participants who were driven by learning and information-related motivations. In some cases, learning as a driver for participation is expected. For example, in communities of practice, groups of people who share a common interest gather to learn more about that interest and improve upon its practice (Wenger-Trayner & Wenger-Trayner, 2015); therefore, it is not unexpected that learning played a role in driving participation in Knowledge Network, an institutional community of practice (Ardichvili et al., 2003) or in the work-related email lists studied by Hew and Hara (2007). Similarly, it is also not surprising that information seeking was a motivation for participating in the two question and answer initiatives (Choi et al., 2014; Lee et al., 2013), in the online open source encyclopedia, Everything2 (Lampe et al., 2010), and in subject-based bulletin boards (Preece et al., 2004; Ridings et al., 2006). However, learning and other information related motivations were also found in online initiatives with primary activities that are not learning, or information seeking-based; for example, learning was a motivation for participating in the crowdsourced project, Next Stop Design (Brabham, 2012), the photo sharing site, Flickr (Nov et al., 2010), the human computation marketplace, Mechanical Turk (Jiang et al., 2015; Kaufmann et al., 2010) and in crowdfunding (Gerber & Hui, 2014).

In initiatives whose members are motivated by learning, learning often occurs through knowledge exchange between members and can thus be characterised as a social process.

Social constructivist learning theory views knowledge as the shared and iterative creation of meaning through social interactions (Vygotsky, 1978). According to social constructivist learning theory, learners are exposed to what Vygotsky refers to as the Zone of Proximal Development (ZPD). ZPD is the distance between what learners know and what they could know through engaging with more knowledgeable others (MKOs). This engagement exposes learners to the knowledge and expertise held by MKOs, which reduces the distance between what they know and what they could know. Further, in online initiatives the technology can provide a space in which learners not only to consume knowledge, but to also be active producers of knowledge content (Downes, 2007). Thus, initiative members can serve as both learners through engagement with MKOs and act as MKOs themselves by sharing their own knowledge.

It is also interesting to consider the cases in which learning and information related motivations were not reported as a factor. For example, it was surprising that despite being a content aggregation website, informativeness was not a predictor of participation on Reddit (Moore & Chuang, 2017). Further, while contributing to science was a key aspect of participation in two citizen science projects (Eveleigh et al., 2014; Raddick et al., 2013), learning was not cited as a significant motivator in either; in Galaxy Zoo, Raddick et al. suspected that while learning was not identified as a driver of participation, it may be happening nonetheless and an important aspect of contributors' participation. Similarly, while Gerber and Hui (2014) list learning as a motivation, they acknowledge that it may be more of an outcome of continued participation, rather than an original driver.

As noted in the introduction, the cases included in the current study both share a common goal of knowledge exchange around a given topic. This leads to the fourth research question:

RQ4. What is the role of learning as a motivator of participation in open online initiatives?

## 2.5 SUMMARY: LITERATURE REVIEW

In Chapter 2, literature from four areas was reviewed. The first section provided an overview of different types of online initiatives. An overview the two major organizational structures online crowds, crowdsourcing and peer production, was provided, and the role of interpersonal connections as a defining feature of online communities was emphasized. The subsection ended with a description of how initiative types fit into Haythornthwaite's (2009) model of light and heavyweight production. The second section reviewed literature on participation in online initiatives, with emphasis on providing insight into the ways in which participation has been measured when studying online initiatives. In prior research, participation is typically measured quantitatively, and emphasis is placed on increasing participation despite findings suggesting that passive participation also contributes to initiative success. The third section provided an overview of theories of motivation that are often used when studying drivers of participation in online initiatives, including a detailed overview of Self-Determination Theory and Uses and Gratifications Theory. The fourth section reviewed case studies on motivations for participating in a variety of online initiatives. Comparing a selection of case studies identifying motivators across a variety of initiative types revealed that further research is needed to identify patterns of participation between initiative types. Case studies exploring the impact of varying aspects of participation showed that there is a need to examine multiple facets of participation and their potential effect on motivation, for example, participation depth, length, frequency, and the various roles initiative members may play. Finally, the role of learning as a motivator in both crowds and communities suggests that it may be an important factor in participation that warrants further study. Chapter 3 will provide an outline of the methods proposed to study participation and motivation in online initiatives.

### 3. METHODS

A review of literature on motivation for participating in online initiatives highlights the need to explore how the type of initiative may impact motivation, and to explore aspects that may affect motivation such as variations in participation and participant roles. This chapter provides an outline of how these questions were addressed. With reference to participation in open online initiatives:

- RQ1. How does the type of initiative relate to motivation to participate in open online initiatives?
- RQ2. How do various aspects of participation in an initiative, such as depth, level, and frequency, relate to motivation to participate in open online initiatives?
- RQ3. How do participant roles within an initiative relate to their motivation to participate in open online initiatives?
- RQ4. What is the role of learning as a motivator of participation in open online initiatives?

The Methods chapter is divided into four main sections: Epistemological Perspective, Case Studies, Data Collection, and Data Analysis.

#### 3.1 EPISTEMOLOGICAL PERSPECTIVE AND METHODOLOGICAL APPROACH

Philosophies of knowledge provide the foundation upon which we build knowledge through research. This section addresses the epistemological perspective, or ‘worldview’ (Creswell, 2009), that underpins the current research, which is social constructivism. In social constructivism truth and knowledge are constructed or co-constructed by people as they strive to understand the world. The process of understanding the world is an active process in which people build knowledge as they make sense of their complex, subjective, varied, and contextual experiences. There are no permanent standards of truth that can be universally known, only agreements about truth that are derived through community negotiation (Guba & Lincoln, 2005). A social constructivist view of

knowledge provides a worldview through which an exploration of the complex and personal topic of motivation can be undertaken.

Theories of motivation, particularly Self-Determination Theory, illuminate the subjectivity of motivations—two individuals may be driven by the same motivator, but may feel differently about it, depending on the degree to which it has been internalized. Similarly, the ways in which individuals participate in online initiatives are complex, particularly as participation may change over time. Because motivations are an aspect of participants' lived experiences, a qualitative methodological approach was used to explore motivations for participating in online initiatives. Denzin and Lincoln (2003) provide a detailed definition of qualitative research:

qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including . . . interviews . . . At this level, qualitative research involves an interpretive naturalistic approach to the world (p. 4-5).

The decision to conduct qualitative research depends on the nature of the research problem. The approach is best used to gain novel understandings of areas in which not much is known, to provide details that describe individuals' experiences, and/or to understand how human experiences are created and given meaning (Guba & Lincoln, 2005). Laurel Richardson (as cited in Denzin & Lincoln, 2005), uses the process of crystallization as an analogy to describe the knowledge building process of social constructivist qualitative research. In her analogy each facet of a crystal is a participant's perspective. Taken together these perspectives form a unified entity that grows and changes; it can be viewed in multiple ways in which varied meanings are derived from the same information. The analogy highlights the varied, complex, and situational nature of knowledge itself.

The methodological approach taken in the current study entails an in-depth examination of motivations to contribute to two online initiatives, carried out through observation and

interviews with individuals participating in these two collectives. As such, the methodology is ethnographically informed, as ethnography can be used to explore how technology use is experienced in specific contexts (Hine, 2000). A case study approach was used, in which data were drawn primarily from interviews and supplemented by participation in and observation of each initiative. A grounded theory approach, in which coding is used to identify themes in data, was chosen for analysis for its explanatory power (Strauss, 1995).

### 3.2 CASE STUDIES

A case is a bounded system, defined by features that members have in common and that distinguish its members from outsiders (Stake, 2005). Case studies are often used to gain a comprehensive understanding of a particular situation (Merriam, 1998). Stake (2005) differentiates between types of case studies depending on their goal. *Intrinsic* case studies are conducted when the goal of the research is to gain a better understanding of the case itself. *Instrumental* case studies are conducted when the goal is for the case to provide insight into a previously identified issue. *Multiple* case studies are instrumental case studies extended to several cases. In this project, a multiple case study approach has been used to explore motivations in different initiatives and to understand relationships between initiative types and motivations. The first case is the Twitter-based community of practice, Healthcare Social Media Canada (#hcsmdca) and the other is the Reddit-based question and answer forum, r/AskHistorians.

The selection of cases is particularly important when conducting instrumental and multiple case study research. The case must be a representative example of the external issue under exploration and must provide potential for learning about that issue (Stake, 2005). Potential for learning about an issue might mean that a case is the most accessible case or is the case that the researcher can spend the most time with. Stake argues that potential for learning may be a superior criterion to representativeness as it may be better to learn a lot from an atypical case than a little from a typical case. Details regarding each case and how it meets the requirements of the research are described below.



### *3.2.1 #HCSMCA*

Healthcare Social Media Canada (#hcsmdca) was a successful community of practice founded in 2010 by Colleen Young, a health community management specialist, and ran under her guidance until February 2016. The community was founded to address how social media could be used in healthcare but expanded in scope to discuss an array of healthcare issues in a Canadian context. Community members communicated with each other primarily on Twitter through an increasingly popular format known as a tweet chat and was supplemented by semi-regular in-person meetups (8 formal meetups took place between 2010-2016). Tweet chats use a predetermined hashtag (for Healthcare Social Media Canada the hashtag is #hcsmdca) so that all relevant posts can be viewed when users follow the hashtag. Those who want to participate in the chat append the hashtag to their posts. Tweet chats are synchronous, so the chat time is agreed upon beforehand. #hcsmdca met weekly on Wednesdays from 1-2 pm EST, with the exception of the last Wednesday of the month when the group met at 9 pm EST. As of February 2016, scheduled tweet chats are no longer taking place; however, the hashtag is still used to share information related to healthcare and social media.

During the tweet chats, #hcsmdca participants discussed a different healthcare or related topic each week and each chat was typically led by a different host. Before the chat, the host composed a blog post on their topic, including three to five questions that would be discussed during the chat. The blog was then published on Young's website and the link was shared via Twitter using the #hcsmdca hashtag. The chats began with group introductions and then the remainder of the chat focused on the discussion questions, ending with a call for final thoughts on the topic. First-time hosts were aided and guided through the chat by Young and the official chat moderator (an account typically run by Young).

Community membership was open to any interested party, and thus membership in the community ebbed and flowed. To my knowledge, demographic information regarding the average age, gender, or education of the community had not been collected. However, using information found in the public profiles of community members who participated

during a 4-week period in 2012, Gruzd and Haythornthwaite (2013), identified the professional roles of community members. Of the 486 unique users who participated in #hcsmda during this time period, 110 were social media health content providers, 89 were unaffiliated, 74 were communicators who were not affiliated with health, 59 were communicators who were affiliated with health, 50 were healthcare providers, 39 were students, educators, and researchers, 31 represented health institutions, 30 were associated with advocacy, and 4 were government and health policy makers.

Using Haythornthwaite (2009) and others' definitions, #hcsmda is an example of an online community. Online communities typically involve a group of people coming together for a purpose and who are guided by a set of norms (Preece & Maloney-Krichmar, 2005); membership is rarely anonymous, and members often know each other personally (Haythornthwaite, 2009). Because of Twitter's, at the time, 140-character limit<sup>2</sup>, and because connections with others can be established without being returned, Twitter is not often thought of as a platform that supports communities; however, using social network analysis and comparing characteristics of the network to community criteria, Gruzd, Wellman, and Tackhteyev (2011) found that Twitter can, indeed support a robust community. Stake's (2005) first criterion for choosing cases is representativeness. How representative of an online community is #hcsmda? One way to evaluate this is by considering #hcsmda from the perspective of prototype theory (Bruckman, 2006). Bruckman (2006) used prototype theory to describe the relationship between online and offline learning communities. Prototype theory argues that categories have exemplars; for example, a robin is a closer exemplar of the category "bird" than an ostrich. #hcsmda exhibits characteristics that argue for its being highly representative of an online community: members of #hcsmda come together to discuss a topic in which they share a mutual interest; the community has developed communication norms and structure; and members are known to each other, some by Twitter handle alone, but most by first and last names. Gruzd and Haythornthwaite (2013) conducted an analysis of the #hcsmda social network from November 12, 2012 to December 13, 2012. The network

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<sup>2</sup> Twitter increased the 140 character limit to 280 characters November 7, 2017.

was comprised of 486 people (nodes) and 736 connections (ties) based on name networks. Name networks connect people if they mention a user, reply to another person's tweet, or retweet a person's tweet. Gruzd and Haythornthwaite's network analysis of #hcsmdca showed a highly engaged community where most participants were engaged in the primary conversation.

Stake's (2005) second criterion for selecting cases is the potential for learning about an issue. #hcsmdca offered high potential for learning as a connection with the group was pre-established and the community leader was highly supportive of research being conducted with the community. Connections to #hcsmdca were made with Colleen Young through her role as community partner in the GRAND NCE (Graphics, Animation, and New Media Network Centers of Excellence) sub-project LEARN SOCIAL. A prior study examining the social network structure of the community (Gruzd & Haythornthwaite, 2013) seemed to generate much interest from the community— the blog post announcing the chat during which Gruzd and Haythornthwaite's study would be discussed generated 13 comments (Young, 2014), and the hour-long tweet chat generated 626 tweets from 42 community members (Symplur Analytics, 2014). The community's apparent interest in discussing the results of this prior study suggested that they would be interested in and willing to participate in subsequent research projects centering on their community, therefore providing ample opportunity for learning about why they participate. Young's support for the study continued throughout recruitment and data collection. Her role as a mediator is outlined in Section 3.3.1.

### *3.2.2 R/ASKHISTORIANS*

r/AskHistorians is a large history-based question and answer forum, also known as a subreddit, hosted on the content aggregation website, reddit.com. As of April 24, 2017, the day data collection began, r/AskHistorians had 593,788 subscribers. It was formed in August 2011 by user, u/Artrw with the intent of providing a space on Reddit in which curious users could ask questions and receive answers from experts in the area of history. Unlike #hcsmdca, discussions on r/AskHistorians are asynchronous and multiple questions can be asked and responded to at once. As with majority of subreddits, r/AskHistorians is

open to the public. Anyone, including those who do not have a Reddit account can read content. However, a Reddit account is required in order to ask questions or engage in the resulting discussion. To obtain a Reddit account, users must choose a unique username and a password; email authentication is optional.

A key feature of r/AskHistorians is its panel of experts. The panel system was established so that users could identify experts through the use of flair, which is a coloured line of text adjacent to the username (See Figure 1). Those who want flair must provide evidence of their expertise in a certain area by linking comments made in r/AskHistorians that demonstrate their expertise. Moderators (the small group of people who are in charge of leading and managing r/AskHistorians) review these submissions and either award flair or provide feedback on how a submission for flair could be stronger.



**Figure 1: Examples of flair in r/AskHistorians**

In 2016, when the subreddit rose to 500,000 subscribers, r/AskHistorians moderators distributed a census; the results, based on 3893 responses were published at the end of the year. The demographic profile of the subreddit is predominantly young, white, and male. The average age of the census respondents was 27, 81% were male, and 77% did not identify as a minority. Of the 23% who did identify as a minority, approximately half identified as being a minority based on their gender/sexuality and approximately half identified as being a minority based on their ethnicity, race, and/or nationality. Most subscribers had some level of higher education: 24% were undergraduate students, 26% had obtained an undergraduate degree, 11% were graduate students, and 13% had obtained a graduate degree; however, only 20% had or were undertaking a degree in History (jschooltiger, 2016).

A primary feature of Reddit is its 'karma' system, which describes the accumulation of points by users based on their contributions to the website. Karma points are awarded or withdrawn by other users through the process of upvoting and downvoting. For example, on r/AskHistorians, a user will ask a question and other users will either upvote or downvote that question. Similarly, a user can answer a question (or respond to an answer) and other users can then either upvote or downvote answers and other comments. The total number of votes, or 'karma,' is used to determine what content is seen. Content that is highly upvoted rises to the top of the question queue or to the top of the discussion page, while highly downvoted content is hidden from sight, although it still viewable when clicked. Thus, for the majority of subreddits, users decide what content is seen and what is hidden. While users can upvote and downvote in r/AskHistorians, a detailed set of rules must be followed when posting, and posts that do not conform will be deleted by moderators. Thus, the rules in combination with the voting system, dictate the content seen in r/AskHistorians.

Initially, r/AskHistorians had few subscribers and thus, few rules. However, in March 2012 subscribership grew quickly after answers to questions were shared on other, larger subreddits. To ensure that responses maintained a certain standard of quality, moderators began to develop rules for asking questions and providing answers, as well as rules of conduct (Fouser, 2017). The rules, in brief, are:

1. Be Nice: No Racism, Bigotry, or Offensive Behavior.
2. Nothing Less Than 20 Years Old, and Don't Soapbox.
3. Ask Clear and Specific Questions, with Time and Place in Mind.
4. Write Original, In-Depth and Comprehensive Answers, Using Good Historical Practices.
5. Provide Primary and Secondary Sources If Asked. No Tertiary Sources Like Wikipedia.
6. Serious On-Topic Comments Only: No Jokes, Anecdotes, Clutter, or other Digressions. (AskHistorians, 2018)

Using Haythornthwaite's (2009) light and heavyweight model of participation for comparison, r/AskHistorians shares characteristics of communities and crowds. Like communities, the success of the initiative is reliant on connected contributions; without someone to ask a question and another to answer, the initiative would be devoid of content. Like a crowd, participation is open to the public and is anonymous; unlike #hcsmdca where the majority of community members' Twitter handles include their real name, it is the norm for Reddit users to create pseudonymous usernames. As with crowds, a history of contribution is unnecessary; however, the comment and post history of Reddit users is publicly viewable. While r/AskHistorians is large enough that it would be theoretically possible to be sustained by one-time users, the subreddit maintains its quality through repeat participation by experts, and in the creation and enforcement of rules by moderators. Rewards and recognition are both quantitative in the form of upvotes and karma accumulation and qualitative in the form of flair and accolades from other participants. Although r/AskHistorians shares many characteristics with communities, study of this case will provide insight into motivations for participating in large online forums, in which connections form around specific questions.

r/AskHistorians meets Stake's (2005) second criterion for selecting a case: potential for learning. The r/AskHistorians moderators regularly conduct censuses, which garner responses from thousands of users, and moderators were enthusiastic about the study. The role of the moderators in as mediators is outlined further in Section 3.3.1.

In sum, two cases were chosen, each along a continuum of initiatives that support light and heavyweight participation. #hcsmdca, a small twitter-based community of practice that discussed healthcare in a Canadian context is representative of a community model, as defined in Haythornthwaite (2009). r/AskHistorians fluctuates between a crowd and community model, where robust, well-sourced answers are provided by a community of experts and voted upon and read by a crowd.

### 3.3 DATA COLLECTION

To explore motivations for participating in online initiatives, observation and semi-structured interviews were used to investigate participants' interpretations of a complex

topic (Warren, 2001). Observation provided insight into the regular operation of each initiative while semi-structured interviews provided participants' perspectives on their motivations through a combination of directed and open questions. Ethics approval was obtained to conduct interviews with and participate in each case from the University of British Columbia's Behavioural Research Ethics Board.

### *3.3.1 RECRUITMENT*

The following section outlines the recruitment process for both cases and consisted of the following steps, which were modified from the approach outlined by Fontana and Frey (2005). The order of the steps varied slightly between cases.

1. Access the setting
2. Observe the initiative
3. Identify mediators, initiative leaders, and/or founders and seek their support
4. Discuss the study with the initiative (See Appendices A and B for recruitment texts)
5. Provide potential participants with information to contact me if they would like to participate; if need be, contact potential participants through snowball sampling
6. Send interested informants an informed consent form (see Appendices C and D for informed consent forms)
7. Arrange time and method to conduct the interview.
8. Continue to observe to learn about the initiative

A risk of recruitment is that some groups may be over- or under-represented. Inaccurate representation can lead to incomplete or misleading results within a specific population (Kristensen & Ravn, 2015) and exclusion from the benefits of research (Tri-council, 2014). In this study the inclusion criteria were not restrictive. All individuals who were involved at some level with the initiative were invited to participate in the study. The demographic make-up of #hcsma is unknown and demographic questions were not posed to #hcsma participants; thus, it is unknown if any groups were over- or under-represented in the study. In r/AskHistorians, women were slightly over-represented in the

study population: 28% of interviewees were women while women make up less than 20% of the r/AskHistorians population (jschooltiger, 2016).

#### **3.3.1.1 Accessing the setting**

A pre-existing relationship had been established with the founder of #hcsma, Colleen Young as part of the GRAND NCE (Graphics, Animation, and New Media Network Center of Excellence) project, Learn Social project (PIs, Anatoliy Gruzd and Caroline Haythornthwaite), which I joined in December 2014. Prior to data collection, Young was contacted via email to obtain permission to use the community as a case in this study, to which she responded affirmatively.

The process of accessing the setting was similar for r/AskHistorians, with the exception that no prior relationship existed between myself or my advisors, and the subreddit. Prior to data collection, a private message was sent to the moderators asking if they would be interested in allowing me to use r/AskHistorians as a case study, to which they responded affirmatively.

#### **3.3.1.2 Observing and participating in the initiative**

In her seminal work on virtual ethnography, Hine (2000) describes the importance of observation of and participation in online spaces. Through observation, researchers can learn about patterns of participation, the values held, and rules enforced by initiative members. Observing each initiative began prior to active recruitment and continued intermittently throughout the study. In the case of #hcsma, I began observing tweet chats several weeks prior to active recruitment; whereas, I had been subscribed to r/AskHistorians for over 5 years. I began formal observation of r/AskHistorians after I was granted permission to use the subreddit as a research site by the moderators. Initial observation in each initiative provided insight into what was being discussed and how each initiative operated. This insight allowed me to participate more naturally during the recruitment discussions (See section 3.3.1.4).



### **3.3.1.3 Identifying mediators**

As respected members of a group, mediators can be used in research to supplement promotion and participation by facilitating contact between researchers and potential informants. Because mediators are known and trusted by potential participants, mediator intervention has a positive impact on the number of participants who agree to participate in a study (Kristensen & Ravn, 2015). Thus, as mediators have the potential to “make or break” a study (Kristensen & Ravn, 2015, p. 725), garnering support from mediators is highly recommended as one way to facilitate successful recruitment.

In #hcsma, Colleen Young, the community’s founder played a key role as a mediator and was an essential element of encouraging participation in #hcsma. First, Young facilitated successful introduction to the community. As non-community members often moderate the tweet chats, Young has a ready-made protocol for introducing a new speaker or host to the community: she recommends that chat hosts observe at least one chat, she helps them write a blog post, and recommends that they create a list of tweets to copy and paste in response to pre-selected topic questions. In addition to the protocol, Young helped me frame my blog post in a way that she knew would be compelling to community members, which would then increase interest and participation in the chat and, hopefully, the study. Second, Young acted as my Twitter mentor. As a newbie both to the community and the medium, Young provided me with guidance about how often to post recruitment notices to the group. Watching her tweet and interact with the community showed me how to tweet; I was able to mirror her style, which in turn helped me become more comfortable communicating via Twitter. Finally, Young played an active role in recruiting. She re-tweeted my tweets to her large follower-base and, unsolicited, sent out an email to community members who she knew might not see the calls for participation via Twitter; i.e., former community members and those who rarely participate in the chats. It was after this email was sent to undisclosed recipients that I received the largest influx of interested participants. While Kristensen and Ravn (2015) warn that because mediators have no part in planning the study that they might miscommunicate information, I did not have this experience.

In r/AskHistorians, subreddit moderators acted as mediators, albeit to a lesser degree than Young. r/AskHistorians moderators provided advice on the day of the week and time of day that typically receives the most traffic to maximize the number of users that might see the recruitment message (See Appendix B). They also actively participated in the discussion/recruitment thread thus demonstrating to other users that they endorsed the study. During interviews and in emails and private messages sent through Reddit, moderators shared examples of previous discussions that they believed would be relevant to my research and provided me with information not accessible to the general public; for example, traffic statistics that had been made private and the complete log of a popular thread that included deleted comments.

#### **3.3.1.4 Discussing the study with initiative members**

For each case, the next step after garnering support from mediators was to actively recruit participants by announcing the research project, opening it up for discussion, and putting out a call for volunteers. In #hcsmdca, this meant first writing a blog post and discussion questions to be published before a tweet chat. The blog post was reviewed by Young before publication so that its content would be more likely to be of interest to the community. A final version of the blog post was shared February 2, 2015 (See Appendix A). Two days later, on February 4, 2015 a tweet chat was co-hosted with Young, during which community members discussed the project as well as their motivations for participating in #hcsmdca. During the hour-long chat, 53 people contributed 534 tweets.

A discussion thread asking, “Why do you read/participate in r/AskHistorians” was posted on April 24, 2017. Unlike a tweet chat which is an hour long, the post remained active until the last comment was posted on May 5, 2017. On the post, 82 people made 290 comments. See Appendix B for the recruitment text.

Because the tweet chat and the discussion thread both addressed why initiative members participate, the discussions were also used as supplementary data sources (for more information on the discussions as a data source, see Section 3.3.3) as well as an opportunity to build trust and rapport. Trust and rapport were established primarily through transparency, i.e., presenting myself as I am, being open about my research,

sharing information about myself if requested, and responding to participants' input with interest. While the speed and limited time of the tweet chat made responding to everyone difficult, the asynchronicity of the r/AskHistorians post meant that I could, and did, respond to each person who commented on the post, save for one.<sup>3</sup> While Berger (2015) and Denzin and Lincoln (2005) warn that rapport may affect a researcher's objectivity, careful reflection during analysis, as recommended by those authors, was undertaken to mitigate this effect.

### **3.3.1.5 Recruiting participants**

Participants who expressed interest in conducting an interview were sent an informed consent form (see Appendices C and D). Participants were provided with ample time to decide whether to participate. Calls for recruitment were solicited through the initiatives and participants contacted me at their leisure. Participants were able to decide not to participate up until the time of the interview, after which they were free to withdraw consent at any time. In r/AskHistorians consent was recorded electronically; in #hcsmtca participants returned the form via email and indicated their agreement by typing their name and the date. If participants were willing to participate, a time and method of interviewing was arranged. Participants were given the option of meeting face-to-face (if they resided in the Vancouver or Lower Mainland area of British Columbia), via Skype or other video conferencing system, or via telephone. Due to the anonymous nature of Reddit, participants in the r/AskHistorians case were given the additional options of participating in an interview via instant messenger or were given the interview script to fill out and return at their own leisure and respond to follow up questions via email. Most participants were recruited through general calls for participation. Recruitment in #hcsmtca consisted of two phases: a general call for participation on Twitter through the hashtag and via an email sent by Young. In r/AskHistorians, recruitment consisted of one major phase: a general call for recruitment through the subreddit, which was followed by

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<sup>3</sup> The comment was dismissive of a moderator's contribution to the recruitment post and read: "haha, what does it even matter if the modteam is white, or male? I would think that their credentials are more important than their skin color, but hey i'm just some white straight guy what do i know."

re-contacting those who had expressed interest in participating in an interview, and snowball sampling. In r/AskHistorians, one participant was a personal friend; this participant reached out to a friend she thought may be an r/AskHistorians participant and this friend agreed to an interview. In both cases active recruitment ceased when the population of willing participants was exhausted.

Warren (2001) notes that at times, researchers may have trouble finding people to talk to, or finding people willing to talk. Kristensen and Ravn (2015) describe how finding participants willing to participate in an interview may be related to the sample from which participants are drawn; they describe this as the effect of a pre-defined sample. In case study research, the pre-defined sample is the case; however, within the case there may be sub-groups of people who are more difficult to access. In this study, lightweight participants were more difficult to recruit than heavyweight participants. This difficulty was likely caused by one, or several factors, such as being less likely to see the call for participation if they did not regularly participate in the group, or they may not view their contribution to the group as important, and therefore may not see their participation as relevant to the study. As the intent was to include people who participate in a variety of ways, calls for participation made it clear that initiative members who participate at all levels were needed to inform the research. In both cases, the alternatives to general calls for participation (i.e., email messages from Young and snowball sampling) led to the recruitment of lightweight participants.

### **3.3.1.6 Participant information**

In accordance with Article 10.4 of the Tri-Council Policy Statement on the Ethical Conduct for Research Involving Humans (2014), participants' identities have been kept confidential. However, The Tri-council Policy Statement on the Ethical Conduct for Research Involving Humans (2014) also notes that in some circumstances, participants may feel as though they may benefit from being identified in the presentation of results of the research. In publications and public presentations that used data from interviews, participants were provided with the quotations I intended to use and asked how they would like to be cited for each quotation. In both cases, many participants opted to be

cited using their real first names and/or Twitter handle/Reddit username. If respondents did not cite a preference I erred on the side of caution and created a pseudonym. When discussing online abuse, I refrained from using usernames during citation to prevent participants from being targeted as a result of the study.

Due to the quantity of quotations used in this dissertation, all quotations from interviews have been cited using pseudonyms. In examples where publicly viewable content is quoted, usernames are used for citations. In Chapter 5, quoted comments that have been deleted from public view are not attributed. Due to these measures there are no anticipated risks for participation due to confidentiality issues.

An overview of the demographic data collected is presented in Table 3 below. Age and education data were not collected from participants in the #hcsmda case.

**Table 3: Participant Demographics in #hcsmda and r/AskHistorians**

Initiative	Gender	Age	Country	Education
#hcsmda (n=24)	Female: 18 Male: 6	n/a	Canada: 23 USA: 1	n/a
r/AskHistorians (n=18)	Female: 5 Male: 13	Average: 32 Range: 21–59	USA: 10	Technical School: 1
			Canada: 5	Some Bachelors: 6
			Australia: 1	Bachelors: 4
			Netherlands: 1	Masters: 4
			Germany: 1	Some PhD: 2 JD: 1

### 3.3.2 INTERVIEWING

To gain insight into motivations for participation, semi-structured interviews were conducted with 42 participants across both cases. Table 4 provides an overview of the interviews for each case. In addition to interviews with 18 r/AskHistorians participants, four participants sent detailed emails and private messages, which were included in the analysis.

**Table 4: Times and methods of interviews in #hcsmdca and r/AskHistorians**

Initiative	Audio	Video	In-Person	Text-based <sup>4</sup>	Avg. Time	Range
#hcsmdca (n=24)	15	6	3	0	44 min	15 min - 1:19 hr.
r/AskHistorians (n=18)	8 <sup>5</sup>	4	3	3	1:13 hr.	38 min – 3:06 hr.

### 3.3.2.1 Media

Because the platforms in which members of each initiative interact are primarily online, participants were located throughout Canada and the world; therefore, various media were used to connect with participants, including audio (23), video (10), in person (6), email (2), and instant messenger (1). Each of these modes were found to have advantages and disadvantages that are similar to those identified in the literature. Audio interviews were fast, convenient, and levelled potential power structures that could arise from differences in age and physical ability<sup>6</sup> (Shuy, 2001); further, telephone interviews likely increased participants' perceptions of privacy.<sup>7</sup> In-person interviews tended to last longer. While Block and Erskine (2012) note that in-person interviewing decreases emotional and psychological distance between interviewers and interviewees, the emotional and psychological distance between myself and interviewees did not appear to be fully dependent on the medium and was likely equally a result of the personality of the interviewee. Audio and other technical issues were the greatest during video conferencing where it was not uncommon for audio and visual connections to cut out several times during the course of the interview. While each media type had advantages and disadvantages, all produced valuable information. This is consistent with findings by

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<sup>4</sup> This includes emailed questionnaires with follow up questions (2) and instant messenger (1)

<sup>5</sup> 2 audio interviews were conducted via Skype, where the participant could see me, but I could not see them.

<sup>6</sup> 2 participants from #hcsmdca described having physical and cognitive disabilities that would make in-person and video interviews difficult

<sup>7</sup> 2 participants in the r/AskHistorians did not want their usernames connected with their 'real life' identity.

Kelly, Harper, and Landau (2008) who found using different modes of questionnaires, such as pen and paper, electronic, and interview style all elicited a similar amount of usable feedback.

### **3.3.2.1 Procedure**

Whether interviews took place in-person, via phone, video conferencing, email, or instant messenger, each interview process followed these steps:

1. Introducing the study by:
  - a. Re-introducing myself,
  - b. Reviewing informed consent, and
  - c. Outlining the interview process by providing an estimated length of time of the interview and the number of questions I would ask.
2. Asking participants if they have questions before we began
3. Asking questions based on the outline in Table 5, p.74 (#hcsmdca) or Table 6, p. 76 (r/AskHistorians).
  - a. As necessary, ask probing questions to get participants to elaborate on what they mean, and/or provide additional context to their responses.
  - b. As necessary, ask follow-up questions
4. Concluding the interview by thanking them for their time and asking for permission to follow up with them at a later time if I have further questions.

### **3.3.2.3 Script**

I used prior research to inform the questions I asked interviewees, as was recommended by Warren (2001). The questionnaire designed by Budhathoki and Haythorthwaite (2013) was influential in the development of the interview script; thus, emphasis was placed on learning about what aspects of contribution were important to participants and why, rather than asking directly about their motivation. Table 5 lists the set of questions that were developed for #hcsmdca and includes a brief rationale for why each question was posed.

**Table 5: #hcsmda interview script**

<b>Question</b>	<b>Rationale for asking the question</b>
1. How long have you been aware of #hcsmda?	To determine general familiarity and experience in the initiative
1a. Has #hcsmda changed since you first became involved?	Included at the suggestion of a community member during the recruitment discussion.
1b. Has your participation changed since you first became involved?	To get a sense of participation over time
2. How did you hear about #hcsmda?	To learn about entry into the initiative
3. About how many hours per week do you participate in #hcsmda	Element of participation weight
4. How would you describe your role in #hcsmda?	To provide information about participants' perceived roles
4a. Is this role important to you? Why/why not?	To provide information about the value participants' place on their role
5. Have you contributed to #hcsmda? (as opposed to lurked)	Element of participation weight
5a. If so, how often?	See Q.5
5b. What kinds of things do you typically contribute?	To identify types of things/activities that lead to active participation
5c. How long had you been following #hcsmda before you contributed?	To identify if the participant engaged/is engaged in quiet enculturation (part of learning how to participate in the initiative)
6. What made you want to contribute/prevented you from contributing to #hcsmda	To identify initial drivers for active/passive participation
7. Is your participation in #hcsmda important to you? Why/Why not?	Element of value
8. Do you consider the topic/goal of #hcsmda to be important to you?	To explore if topic interest contributes to motivation (Budhathoki & Haythornthwaite 2012; Haythornthwaite, 2009)
8a. Personally or professionally?	See Q.8
9. Have you learned anything from your participation in/by following #hcsmda?	To explore if learning contributes to motivation



10. Would you say that you have you made any friends from participating #hcsmdca?	To explore if social interaction and tie strength contributes to motivation
10a. [if yes] Do you consider them close friends?	See Q.10
11. Have you met anyone outside of #hcsmdca? ("met" including other Twitter, email, or social media sites as well as in person)	To explore if social interaction and tie strength contributes to motivation as media multiplexity is associated with strong ties (Haythornthwaite, 2005).
12. Have you made any professional contacts from participating in #hcsmdca?	To explore if professional interaction/potential for monetary gain contributes to motivation
13. Are you a member of any other online initiatives?	Included at the suggestion of a community member during recruitment discussion; question has yielded responses that highlight pros and cons of the community in comparison to others and has, in some cases, lead participants to think about what they want in a community and why that motivates them.
13a. How is #hcsmdca similar or different to those communities?	See Q.13
13b. Is your participation similar or different? Why?	See Q.13
14. Do you anticipate continued participation in #hcsmdca? Why/Why not?	To explore anticipated future motivation.
15. Is there anything that would prevent you from continuing to participate?	To explore de-motivators.
16. Is there anything else you would like to add?	General probing question to address topics I may have not covered

While answering each of the research questions involved analysis of the entire interview, some of the questions were more applicable to certain research questions than others. Motivations (used in responding to each of the research questions) were primarily identified through responses to questions 6-16; types of participation (used in responding to the second research question) were identified through responses to questions 1, 3, and

5; roles (used in responding to the third research question) were identified through responses to question 4; learning (used in responding to the fourth research question) was primarily identified through responses to question 9, although discussions of learning arose in response to other questions as well.

Analysis of interviews from #hcsmdca participants led to a slight alteration of the interview script used when interviewing r/AskHistorians participants. Revisions included adding questions to address emerging themes and noted omissions; removing questions that did not yield relevant data; rephrasing for clarity; and revising the order to improve the flow of the interview. The interview script used when interviewing r/AskHistorians participants and rationale for the changes is included in Table 6.

**Table 6: r/AskHistorians Interview Script, with Revisions**

<b>r/AskHistorians Questions</b>	<b>#hcsmdca Questions</b>	<b>Reason for change</b>
1. How long have you been aware of AskHistorians?	1. How long have you been aware of #hcsmdca?	n/a
	1.a Has #hcsmdca changed since you first became involved?	Dropped. There was little connection to motivation or participation
2. How did you hear about AskHistorians?	2. How did you hear about #hcsmdca?	n/a
2a. What piqued your interest in AskHistorians?		Added. Initial analysis suggested that there may be a link between initial reasons for participation and length and level of participation.
3. Can you describe your current level of participation in AskHistorians?	3. About how many hours per week do you participate in #hcsmdca?	n/a
3a. Has the way you participated changed over time?	1b. Has your participation changed since you first became involved?	n/a

3b. How long had you been subscribed to AskHistorians before you reached your current level of participation?	5c. How long had you been following #hcsmdca before you contributed?	n/a
4. Have you contributed to AskHistorians, for example, asking a question, posting a response, or upvoting or downvoting a post and/or answers?	5. Have you contributed to #hcsmdca? (as opposed to lurked)	n/a
4a. Can you describe your typical type of contribution?	5b. What kinds of things do you typically contribute?	n/a
4b. Is there a reason why you contribute one way and not another?		Added. Prompt added to elicit reasons for participating in different ways.
4c. Under what circumstances would you contribute [x] vs [y]		Added. See above.
4d. How often would you say you contribute vs lurk?	5a. If so, how often?	n/a
5. What makes you want to contribute/prevents you from contributing to AskHistorians?	6. What made you want to contribute/prevented you from contributing to #hcsmdca?	n/a
5a. Thinking about your most recent [comment/upvote, downvote/question/latest thread you've read], can you tell me what made you want to [write/upvote, downvote/read] it?		Added. Prompt included in case general question was too difficult to answer.
6. Is participating in AskHistorians important to you? Why/Why not?	7. Is your participation in #hcsmdca important to you? Why/Why not?	n/a

7. Did you have any goals or outcomes that you wanted to achieve when you first started participating in AskHistorians?		Added. Analysis of #hcsmtca interviews suggested possible relationship between initial reasons for participation and length and level of participation. Question added to explore this more fully.
7a. Thinking back to your first [comment, post, etc.] can you tell me what made you want to [write/upvote, downvote/read] it?		Added. See above.
7b. [if yes to 7.] Would you say you've achieved these goals? 7bi.[if no to a.] Do you anticipate achieving these goals? b7ii.[if no to a.] Do you have any thoughts about what you would need from AskHistorians to achieve these goals?		Added. See above.
8. Have you developed any new goals or desired outcomes as you've been participating?		Added. See above
9. Some people take on roles in AskHistorians or bring a certain kind of expertise to the group; do you consider yourself to have a role in AskHistorians?		Added. Original assumed participants had or saw themselves as having a role
9a. [if yes to 9] How would you describe that role?	4. How would you describe your role in #hcsmtca?	n/a

9b. Is this role [or lack of one] important to you? Why/Why not?	4a. Is this role important to you? Why/why not?	n/a
9c. Is this role similar or different than roles you might take on in other subreddits? What's similar/different? Why do you think it's similar/different?		Added. Question added to see if participation is unique to initiative in question or part of online behaviour generally
10. Do you consider the topic of AskHistorians to be important to you?	8. Do you consider the topic/goal of #hcsmdca to be important to you?	n/a
10a. [if yes] is this personally or professionally important?	8a. Personally, or professionally?	n/a
10b. Is having AskHistorians as a means of discussing history important to you?		Added. Importance of initiative/goal of the initiative was identified as a theme among #hcsmdca participants.
11. Have you learned from your participation in AskHistorians?	9. Have you learned anything from your participation in/by following #hcsmdca?	n/a
11a. What are some examples of learning from your participation in AskHistorians?		Added. Probe added based on experience interviewing members of #hcsmdca
12. Have you developed any sustained relationships with other participants of AskHistorians? For example, someone you find you communicate with regularly on AskHistorians, someone whose posts you read regularly, people whose names you know and trust?	10. Would you say that you have you made any friends from participating in #hcsmdca?	n/a

12a. [if yes to 12] Can you describe the relationship to me?		Added. Prompt added because question 12 was made broader
12ai. Would you consider it to be a personal relationship? professional relationship?	12. Have you made any professional contacts from participating in #hcsmdca?	n/a
12b. [if yes to 12] Would you consider this to be a close relationship?	10a. Do you consider them close friends?	n/a
12c. [if yes to 12] Have you communicated with them outside of AskHistorians? Reddit?	11. Have you met anyone outside of #hcsmdca? (“met” including other Twitter, email, or social media sites as well as in person)	n/a
13. Do you participate in any other subreddits? Other online discussion forums?	13. Are you a member of any other online initiatives	n/a
13a. [if yes to 13] Are these forums similar or different to AskHistorians?	13a. How is #hcsmdca similar or different to those communities?	n/a
13b. [if yes to 13] Is your participation different? Can you tell me why you think your participation is different?	13c. Is your participation similar or different? Why?	n/a
14. On what kind of device do you use Reddit?		Added. Importance of technology was identified as a theme among #hcsmdca participants.
15. Does Reddit’s interface affect your participation?		Added. See above.
15a. Does the interface support the kind of use you’d like?		Added. See above

15b. Does Reddit's voting system affect the way that you participate?		Added. See above.
16. Do you anticipate continued participation in AskHistorians? Why/Why not?	14. Do you anticipate continued participation in [initiative]? Why/Why not?	n/a
17. Is there anything that would prevent you from participating?	15. Is there anything that would prevent you from continuing to participate?	n/a
18. Are there are any downsides to your participation?		Added. Question added after discussion suggested this may be an important theme, particularly among minorities.
19. Is there anything else you'd like to add about why you participate in AskHistorians?	16. Is there anything else you would like to add?	n/a

As above, answering each of the research questions involved analysis of the entire interview with some questions more applicable to certain research questions than others. Motivations (used in responding to all of the research questions) were primarily identified through responses to questions 2, 5, 6-13, 16-17; types of participation (used in responding to the second research question) were identified through responses to questions 1-4; roles (used in responding to the third research question) were identified through responses to question 9; learning (used in response to the fourth research question) was primarily identified through responses to question 11, although discussions of learning arose in response to other questions as well. As technology emerged as an important factor of participation in the #hcsma interviews, questions 14 and 15 were added to discover relationships between Reddit's technology and motivation to participate in r/AskHistorians.

In addition to questions regarding participation and motivation, five demographic questions were added asking age, gender, profession, country of residence, and highest

level of education. While demographic questions were not asked of #hcsma participants, gender, country of residence and profession is known for all. Age may be approximated but is not known and highest level of education is unknown.

While qualitative research is often not associated with risks that impact participants' physical well-being, sensitive questions and breaches in confidentiality may pose risks to participants' mental health or reputation. In this study, questions were limited to participants' roles, involvement, and motivations within each initiative and thus were not anticipated to cause emotional stress. In #hcsma, sensitive topics did not arise. However, in the case of r/AskHistorians, the issue of online abuse arose. Participants affected by abuse were given the opportunity to opt out of discussing issues that may have been sensitive to them; however, all the participants who experienced online abuse seemed comfortable, if not eager, to discuss this issue. I opted not to take an indifferent stance when they described experiencing online abuse; rather, I expressed sympathy and validated their feelings, whether they were indifferent to or hurt by the abuse.

While there were no anticipated direct benefits for participants of this study, several participants expressed that taking part in the study gave them a clearer understanding of what they got out of participating in the initiatives.

### *3.3.3. PARTICIPATION AND OBSERVATION*

In addition to observation of and participation in the initiative as part of the recruitment process, (described in Section 3.3.1). Participation and observation were also used as part of the data collection process. Hine (2000) notes that active participation in an initiative can allow researchers to gain a deeper understanding of what it is like to be a part of an initiative that cannot be gleaned through observation or reading transcripts. My active participation in each initiative was limited. In #hcsma I participated by posting one or two tweets in several tweet chats, typically announcing my presence and providing a “final thought,” and occasionally liking and re-tweeting discussion tweets. In r/AskHistorians, I maintained my level of participation prior to researching the initiative, which was limited to upvoting posts and comments, with the exception of posting two comments in a “meta-thread” (i.e., a post about the subreddit rather than about history).



In #hcsma, participants would be aware of my limited participation as I introduced myself and Twitter-users know who has liked or re-tweeted their tweets. In r/AskHistorians my participation was largely invisible; while users are aware of the total number of upvotes and downvotes a post/comment receives, the system does not show who is upvoting/downvoting whom. The reason for limited participation in each subreddit was primarily topic-based: I know very little about healthcare and while I do have some knowledge of history, I did not perceive myself to have the level of expertise required by r/AskHistorians to respond to questions. However, even limited participation, coupled with observation, provided an enriched understanding of initiative members' practices (Hine, 2000). Insights from participation and observation were collected through memoing, i.e., taking detailed notes regarding my observations and thoughts about these observations. In r/AskHistorians, links to pertinent discussion threads were archived and saved in an Excel spreadsheet.

### 3.4 DATA ANALYSIS

Data analysis was conducted using a modified version of grounded theory as outlined by Strauss and Corbin (1998) and Corbin and Strauss (2008). Strauss and Corbin note that while their aim is to build theory, theory building is not the aim of every research project: the technique and uses of grounded theory are flexible and can be used for description or conceptual ordering. In this research, the goal was not to build or test theory, but to “identify develop, and relate the concepts that are the building blocks of theory” (Strauss & Corbin, 1998, p.13) Therefore, while theory building is beyond the scope of this project, grounded theory analysis is an apt approach to respond to the research questions. As recommended by Eisenhardt (1989), data was first analyzed within each case, followed by cross-case analysis.

Grounded theory is a method of inquiry but is also commonly used as a mode of analysis (Charmaz, 2005). It is an iterative process, likened by Corbin and Strauss (2008) to “peeling an onion” (p. 230) where each stage of analysis delves deeper into the data. Corbin and Strauss (2008) recommend that during the process of reading through transcripts and identifying concepts the researcher write memos that reflect the dialogue

between themselves and the data. This dialogue may include ideas, observations, questions, and brainstorming activities. Memos also become a record of the analytical process. I kept memos throughout data analysis as a way to keep track of observations, themes, and questions.

#### *3.4.1 IDENTIFYING MOTIVATIONS TO PARTICIPATE*

My first step in analyzing the data was to identify motivations to participate through a coding process. According to Corbin and Strauss, coding allows researchers to translate words and actions into broader concepts. Concepts vary in abstraction: low-level concepts provide the detail in high-level categories whereas high-level categories get at the essence of what is being said. High-level categories provide explanatory power, while low-level concepts ensure that researchers are never too far away from the data (Corbin & Strauss, 2008).

The data analysis process used in the current project varied slightly from the process outlined by Strauss and Corbin. While Strauss and Corbin recommend analyzing each transcript prior to the next interview as a way to iteratively build on themes, I began analysis after the willing population was exhausted within each case. This was largely due to time constraints. Interviews were scheduled at the convenience of participants and thus often conducted in quick succession. In some cases, multiple interviews were conducted on a single day, making it impossible to consistently analyze one interview before conducting the next.

After the interviewing process was complete, I read each of the transcripts looking for themes and concepts that emerged from the data using a process known as microanalysis. ‘Microanalysis’ is a detailed type of open coding and is typically used in the beginning stages of analysis to generate ideas by focusing on potentially relevant data whose meanings are not yet known (Corbin & Strauss, 2008). Through microanalysis, data are explored in detail, often line by line, as a way to identify new concepts. During iterative rounds of coding, individual micro-codes were grouped into categories, or represented dimensions of broader categories. These final categories and dimensions were grouped into one of three larger themes. While categories, dimensions, and themes were identified

through analysis of the interviews, observational data were used to provide context and background.

### *3.4.2 IDENTIFYING ASPECTS OF PARTICIPATION*

My second step was to explore patterns between aspects of participation and motivations. Three facets of participation drawn from the literature were used to identify different aspects of participation. The first facet of participation, *length* described how long participants were members of each initiative. I referred to those who had participated for less than a year as Newbies, those who had participated between 1 and 3 years as Regulars, and those who had participated for 4 or more years as Veterans. The timeframes chosen were based on the age of the initiatives as both were around five years old at the time of data collection. Each category represents approximately one third of the initiatives' age to maintain consistency across participants and initiatives.

The second facet, *depth* described the type of participation in the community and is based on the Reader to Leader framework (Preece & Shneiderman, 2009). Readers were those who mostly lurked (#hcsma and r/AskHistorians) or who only attended in person meet-ups (#hcsma); Contributors were those who mostly favouredited, re-tweeted, or posted single tweets using the hashtag (#hcsma) or who mostly upvoted/downvoted posts and comments (r/AskHistorians); Collaborators were those who engaged in discussions with other initiative members and who had likely moderated chats (#hcsma) or regularly contributed responses to questions (r/AskHistorians); and Leaders were those who contributed to the development of the community by helping develop the vision and mission (#hcsma) or moderating (r/AskHistorians).

Finally, the third facet, *frequency* described how often participants participated in the initiative. Those who participated Rarely participated in a few chats a year or less (#hcsma) or checked in on the subreddit less than once a week (r/AskHistorians); those who participated Sporadically participated in chats a few times per month or when the topic was relevant (#hcsma) or described spurts of frequent participation followed by bouts of absence (r/AskHistorians); and those who participated Habitually participated in the chats nearly every week (#hcsma) or between multiple times a week to multiple

times per day (r/AskHistorians). Measures of frequency differed between cases due to differences in the mode of communication; as communication was asynchronous in r/AskHistorians, participants had the option of participating any time of day or week.

As noted above, emails and private messages from four additional r/AskHistorians participants were used as a data source. However, because they were not asked the interview questions, information regarding the way they participate is unavailable for these participants. See Table 7 for the breakdown of participation by initiative.

**Table 7: Facets of Participation**

Facet	Element	#hcsmdca (n=24)	r/AskHistorians (n=18)
Length	Newbie (<1 year)	5	0
	Regular (1-3 years)	9	9
	Veteran (≥4 years)	10	9
	n/a	1 <sup>8</sup>	0
Depth	Reader	3	4
	Contributor	9	1
	Collaborator	9	5
	Leader	3	8
Frequency	Rare	5	1
	Sporadic	11	3
	Habitual	8	14

Appendices E (#hcsmdca) and F (r/AskHistorians) provide a breakdown of participation by each participant.

### 3.4.3 IDENTIFYING ROLES

While types of participation were the same for each initiative, different roles were chosen for each case. In each initiative roles were primarily identified through participants' responses to the question regarding role ("How would you describe your role in #hcsmdca?" and "Some people take on roles in AskHistorians or bring a certain kind of

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<sup>8</sup> This participant attended meetups and read the blogs but had never participated in a chat. They could not recall when they had first become aware of #hcsmdca

expertise to the group; do you consider yourself to have a role in AskHistorians? How would you describe that role?). In r/AskHistorians, an additional role based on the description of the subreddit was included.

#### **3.4.3.1 Roles in #hcsmdca**

In response to Question 4, “How would you describe your role in #hcsmdca?” 12 participants described their level and type of participation using terms such as, “stalwart,” “newcomer,” “lurker,” and “occasional contributor.” As these concepts were covered by the participation analysis in the *type* facet, these characterizations were not used. Eight participants responded to this question by describing what they see themselves doing for the group, using terms such as “greeter,” “steward,” and “champion.” While designations such as these would be interesting to explore, similar descriptions were not available for the majority of participants. Five participants described their role as aligning with their profession or the type of expertise they bring to the community. As a community of practice, roles were thus chosen based on the professional occupations of participants. Further, findings by Gruzdt and Haythornthwaite (2013) show that community members with specific professions occupied more central roles in the network, thus suggesting that occupational role may be an important aspect of participation in #hcsmdca.

The occupational roles selected were done by first looking to the role designations made by Gruzdt and Haythornthwaite (2013) for the population. However, as there were far fewer participants in the current study, some categories identified by Gruzdt and Haythornthwaite were combined: “social media health content providers” and “health-related communicators” were combined to the single role, “Healthcare communicators.” These groups were combined as the two occupations share the same goal: sharing health-related information. “Educators, professors” and “students” were combined to the single role, “Higher education.” These were combined because the students included in the study were studying at the doctoral level. As these participants may have roles that bridge ‘student’ and ‘educator,’ the general designation, “Higher Education” is more accurate. Healthcare professionals and Advocacy were retained with healthcare professional renamed to “healthcare practitioner.” An “Other” category consisted of participants

whose professions included Health Institutions (1), Healthcare technology (1), and Unaffiliated (1). While demographic questions were not asked, each participant made note of their professional affiliation during the interview, which was used to class each in one of the role categories; the professional affiliation noted by the participant was the one used to classify them in a given role. If participants described more than one role, the role chosen was the main source of expertise brought to the initiative (e.g., a part time student participating as a healthcare communicator would be classed as a healthcare communicator). The definition of each role and number of participants occupying it are listed in Table 8. Appendix E lists which participant has each role.

**Table 8: Roles in #hcsmdca**

Occupational Role	Definition	Total
Healthcare communicators	spread healthcare information	9
Advocates	patient voice/other non-profit advocacy	5
Healthcare practitioners	provide healthcare	3
Higher Education	teach and learn about healthcare	3
Other	health institutions, healthcare technology, unaffiliated	3

### 3.4.3.2 Roles in r/AskHistorians

In response to question 9, “Some people take on roles in AskHistorians or bring a certain kind of expertise to the group; do you consider yourself to have a role in AskHistorians?” 13 participants described their role in terms of what they do for r/AskHistorians, using terms such as “flaired user” and “moderator” and “no role.” Thus, four community-based roles were identified. Those who had *no formal role* in the community described having no role or may have identified an informal role for themselves, such as “audience” or “upvoter.” Those who had been awarded *flair* were participants who had contributed at least three high quality responses to a question in a given topic area, applied for flair, and had it rewarded. One flaired participant did not have expertise in a given historical subject nor did he apply for flair; rather, he was awarded an “interesting inquirer” flair due to his history of asking questions in r/AskHistorians. *Moderators* were responsible for community maintenance and rule enforcement. Moderators had a history of active participation in r/AskHistorians and were invited to become moderators by existing

members of the moderation team. Finally, *former moderators* were participants who had contributed as moderators in the past but chose to step down. Two former moderators continued to participate in r/AskHistorians and one did not. See Table 8 for breakdown by in-group role.

The second type of role was based on the source of participants' expertise. This role arose from the subreddit's description: "r/AskHistorians aims to provide serious, *academic-level* [emphasis added] answers to questions about history" (r/AskHistorians, 2018) and from the perception among some participants that all contributors to r/AskHistorians, particularly flaired users and moderators, had at least some graduate-level training in history. Those who were *untrained* had no formal history training, had taken some undergraduate-level courses, or had majored in history at the undergraduate level. *Citizen historians* were considered to be people who had no, partial, or an undergraduate-level education in history; however, their primary method of developing expertise was self-taught. These participants were typically knowledgeable in a specific area of history. Finally, those who were *academically trained* had or were pursuing graduate-level education in history or a related topic, such as archeology. The definition of each role and number of participants occupying it are listed in Table 9. Appendix F lists which participant has which roles.

**Table 9: Roles in r/AskHistorians**

<b>In-group Role</b>	<b>Total</b>	<b>Level of Expertise</b>	<b>Total</b>
No Role	4	Untrained	6
Flair	7	Citizen Historians	5
Mod	9	Academically Trained	10
Former Mod	3	Unknown	1

### 3.4.2 IDENTIFYING RELATIONSHIPS THROUGH AXIAL CODING

After motivations were identified through coding, I identified relationships between motivations, roles, and participation through axial coding. Axial coding is the act of relating concepts and categories to each other. Linking categories through axial coding is an elaborative activity as the connections and relationships between categories provide

more information about them. Further, through axial coding concepts move from descriptions of the data to explanations (Strauss & Corbin, 1998). Axial coding is typically qualitative; however, in the current study a more quantitative approach was used to identify and showcase patterns between motivations, roles, and participation type. For each motivation, a table is presented outlining the number of participants who participated in a given way (e.g., the number of participants who were newbies, regulars, and veterans who had that motivation) and held a given role (e.g., the number of participants who had no formal history training, citizen historians, or formal training who had that motivation). Because data were collected through semi-structured interviews it is possible that some relationships were unidentified. Some themes do not include a table. Themes do not include a table when they are not a motivation per se, but rather provide context to a motivation (such as challenges associated with a particular motivation) or are elements of a particular motivation (e.g., one of a list of factors associated with a given motivation).

The between case analysis was conducted after analysis of both initiatives was completed. The first stage involved identifying differences and similarities between the motivations of participants of each initiative as well as identifying possible explanations for the similarities and differences. Next, to identify cross-case patterns of participation and motivation, participants were categorized as either “light or heavyweight.” A table highlights patterns of participation among those who discussed having each motivation; i.e., identifying which motivations were primarily described by lightweight participants, heavyweight participants, or both. The results of the between case analysis are presented in Chapter 6.

### *3.4.2 USING THEORY*

Corbin and Strauss (2008) note that the use of theory and frameworks in grounded theory research is somewhat controversial. While they note their preference not to begin research with a predefined framework, they list examples where frameworks can be useful. Most relevant to the current study is: “If the researcher is building upon a program of research or wants to develop middle-range theory, a previously identified theoretical



framework can provide insight, direction, and a useful list of initial concepts” (p.40). This work builds upon Haythornthwaite’s (2009) model of light and heavyweight participation and makes use of Preece and Shneiderman’s (2009) Reader to Leader model of participation. Finally, this work also draws upon relevant theories from two areas to explain the results: theories of motivation and social learning theories.

### *3.4.2 REFLEXIVITY*

Denzin and Lincoln (2005) note that qualitative research is an interactive process that is shaped by researchers’ past experiences and present state of being. Because all results are framed by the worldview of the researcher, social constructivist researchers should acknowledge personal characteristics (such as race, gender, culture, ethnicity, religion, and age) and prior experiences that might affect recruitment (Kristensen & Ravn, 2015) as well as relationships between the researcher and their participants, and the researcher’s interpretation of the data (Berger, 2015).

#### **3.4.2.1 Personal characteristics and reflexivity**

According to Berger (2015), typical characteristics that impact access to the field, the researcher/researched relationship, and questions asked and analytical approach, are age (I am a young(ish)), race (I am white), language (English is my first and only fluently spoken language), gender (I am a woman), political and ideological perspectives (I am a left-leaning feminist), and socio-economic status (I am well educated and from a middle/upper middle-class family). On both sites, I used my real name and in the case of Twitter, my real photograph to help solidify a trusting relationship between me and my respondents. My Twitter profile picture and my Reddit username indicate my gender (in the case of Reddit my gender is known to users who recognize the name “Sarah” as female), and in the case of Twitter, race; on Twitter my age could be approximated by looking at my profile picture. On both sites I provided no information regarding nationality; however, through my affiliation with the University of British Columbia, it could be inferred that I am Canadian.

It is unlikely that demographic characteristics impacted recruitment in the case of #hcsma; however, it is possible that my gender may have been an impediment to

recruitment in r/AskHistorians as the subreddit, and Reddit as a whole is predominantly male. As the majority of interviews were conducted via telephone, race, age, and class indicators, were minimally, if at all, apparent to the majority of my participants and did not seem to have a discernable effect on those to whom these characteristics would be apparent. Characteristics, such as my accent and voice (mild Eastern-Canadian accent and vocal fry), that would have been discernable via telephone, also had no discernable effect on my ability to build a trusting relationship between my participants and I. I do not believe that my gender had a significant impact on interviewing participants or analyzing data derived from the #hcsmdca case; however, I do believe that my gender plays a role in analyzing data derived from r/AskHistorians: my identity as a woman places me in the position of a gender minority on r/AskHistorians and Reddit, and may have increased my interest in and empathy with women and other minority groups in the subreddit.

An unanticipated personal characteristic that may have impacted my ability to develop deeper relationships with some #hcsmdca participants is my health. I have been privileged to go through life without having any major health issues. While a few close family members have, and have had, serious illnesses, I have never been in a position where I have had to manage or help manage their care. Thus, it is possible that I neglected to identify potentially relevant probing questions.

#### **3.4.2.2 Prior experiences and reflexivity**

While my personal characteristics have had some influence on how I interpret the data, I believe that my experience with the topic and technology of each initiative has had a far greater impact on data collection and analysis.

##### *Twitter and healthcare*

In addition to demographic characteristics and online presentation, the prior real-world experiences of researchers may affect recruitment success (Kristensen & Ravn, 2015). My prior experience with Twitter was, and still is, limited. Before learning of #hcsmdca, I had never heard of nor participated in a tweet chat. During the recruitment chat one community member asked if I participated in tweet chats; I responded honestly that I did

not. While this community member participated in my study, I cannot say whether or not my response had a negative impact on any other potential informants. Further, my lack of experience with Twitter meant that I experienced difficulty participating in the chat that I hosted as I found it challenging to express my thoughts in 140 characters and had difficulty keeping up with the pace of the chat. Thus, while I found it easy to relate to participants who described similar challenges, it is possible that I have missed relevant contextual information regarding Twitter and tweet chats during analysis.

As mentioned above, I have little personal experience with the healthcare system. I also have had no professional or educational experience in any healthcare related fields. My lack of knowledge about the topic made it very difficult to meaningfully engage in the tweet chats (save for the recruitment chat that I hosted) as I felt that I had nothing of substance to add to the discussions. Further, during the interviews, participants would often refer to other healthcare related tweet chats, hashtags, or topics; therefore, it is possible that not being able to engage with them at this level had a negative impact on my ability to build rapport and to ask potentially relevant probing questions.

### *Reddit and history*

Conversely, I have extensive experience using Reddit. I joined Reddit June 14, 2012, almost 5 years before I began collecting data. I discovered r/AskHistorians shortly after as it had gained its first massive growth of users when responses to questions were regularly shared on aggregator subreddits (e.g., r/BestOf). While I have been reading the subreddit (as well as upvoting and occasionally downvoting) for over five years, prior to data collection I had only made one comment in the subreddit, before the current rules requiring substantive responses were required and I had never asked a question.

However, I have made posts and continue to comment in response to posts semi-regularly in other subreddits. While I have a personal Reddit account using a pseudonym, I created a new account using my real first name, middle initial, and last name (u/SarahAGilbert) to collect data. This was done to protect my privacy and allow potential participants to verify my identity. However, in the recruitment discussion in r/AskHistorians I made it clear to users that “u/SarahAGilbert” is what is referred to as an “alt” (alternate account),

and that I have had a “main” account for around 5 years. This information was shared with readers as a way to establish trust and to let users know that I understand how Reddit and r/AskHistorians work. My personal patterns of participation on r/AskHistorians provided me with insight into lurking on the subreddit, as well as with important contextual insight into how Reddit operates. Further, I believe that being an active Reddit user increased trust and rapport with participants. I was able to talk to participants in-depth about Reddit and r/AskHistorians and was able to ask appropriate probing questions. However, because of my prior experiences I also strongly identified with accounts that matched my preexisting experiences as a Reddit user, in particular participants’ descriptions of the effects of Reddit’s culture and demographic.

I also have a keen interest in history; my undergraduate major was in history, where I focused on modern Chinese history. While I have not kept up with the academic study of history since then and am thus unable to provide the level of contribution expected in r/AskHistorians, I believe that my interest in, and minimal academic experience with history helped build rapport with some participants. First, I could engage with participants on the topic of history and its study. Second, I believe that an interest in history helped build trusting relationships with participants. For example, one participant was interested in my history-related interests and after the interview he followed up via email asking for book recommendations, which I was able to give.

### 3.5 SUMMARY: METHODS

This study takes a social constructivist view of knowledge to explore motivations to participate in online initiatives. As motivations are subjective, a qualitative approach was used where motivations were identified through in-depth interviews. A multiple case study approach was undertaken to identify differences in motivations between two types of initiatives. The first case is the small, Twitter-based Healthcare Social Media Canada (#hcsmdca), dedicated to discussing a variety of topics affecting healthcare in Canada via a weekly tweet chat. The second case is the large Reddit-based r/AskHistorians, dedicated to discussing history using a question and answer format. Prior to data collection ethics

approval was obtained for both cases from the University of British Columbia's Behavioural Research Ethics Board.

Recruitment in both cases involved discussing motivations with initiative members and scheduling interviews, which were conducted via telephone, video-chat, instant messenger, and survey-style with email follow up. 42 interviews were conducted in total; 24 were with participants of #hcsma and 18 were with participants of r/AskHistorians. Data collected from interviews were supplemented with observational data, which were used to provide context to interview findings. Data were analyzed using a grounded theory approach. First, motivations were identified through in-depth micro-coding. These micro-codes were then grouped into larger categories, themes, and dimensions. Patterns and trends between motivations and participation types and roles were identified through a process known as axial coding, where motivations were grouped by characteristics of the participants who described having a given motivation.

## 4. RESULTS: HEALTHCARE SOCIAL MEDIA CANADA

Healthcare Social Media Canada is a Twitter-based community of practice organized around the hashtag, #hcsmdca. #hcsmdca met weekly from 2010 until 2016 to discuss healthcare topics of interest to Canadians. The hashtag served as a community identifier, and in between weekly chats, participants used the hashtag to share news and information with community members. This chapter describes the results of interviews with 24 #hcsmdca participants, including founder, Colleen Young, about their motivations to participate. While some observation occurred through following the hashtag and lurking on and participating in several chats, results are derived primarily from the interviews; observational data were used to provide context and background. Data were analyzed in accordance with the principles of grounded theory, as described in Chapter 3. Interviews show that #hcsmdca provided a rich forum through which participants learned from and made connections with others in their field. Their comments on motivations reveal three major themes: *knowledge exchange*, which describes motivations related to access to information, sharing information, and learning; *community*, which describes motivations related to the organizational and technical structures of the community; and *people*, which describes motivations related to interacting with others and building relationships.

This chapter uses and expands on two earlier publications (Gilbert, 2016; 2017). The chapter is organized by each of the three major themes.

- Section 4.1 Knowledge exchange, describes motivations related to information exchange, including interest in and learning about the topic; knowledge exchange between experts and novices; and learning and applying expertise
- Section 4.2 Community, describes motivations related to the technological and organizational structure of #hcsmdca, including the diverse makeup of the community; its organization and leadership; and positive and negative impacts of Twitter and the tweet chat structure
- Section 4.3 People: Interactions and relationships, describes motivations related to social interactions through #hcsmdca and includes learning who's who in the healthcare field and developing relationships.

## 4.1 KNOWLEDGE EXCHANGE IN #HCSMCA

Over its six years of operation, #hcsmdca was a gathering place where healthcare professionals and other interested stakeholders could discuss healthcare via social media. #hcsmdca members developed connections and a shared repertoire of knowledge, experiences, and best practices, thus establishing itself as a robust community of practice. As knowledge exchange is a key feature of communities of practice it was not surprising that gaining access to information, exchange of views, and learning were described as highly important to #hcsmdca community members. Indeed, motivations such as these emerged as the most commonly cited by participants. This subsection outlines four information-related motivations evident in the #hcsmdca interviews:

- interest in the topic
- learning through participation in #hcsmdca
- sharing and accessing expertise
- skill development

These informational aspects combine to constitute a strong learning-based motivation present in the #hcsmdca group and its members.

### *4.1.1 INTEREST IN THE TOPIC*

Interest in the topic was the most commonly described motivation among #hcsmdca members with all but one participant describing interest in the topic as a driver of participation. For Stephanie, and many others, interest in the topic of healthcare was among her original and primary motivations for participating in the community: “That’s probably one of the main drivers for me . . . they so often are hitting upon topics that I’m interested in.” Similarly, interest in the topic and the opportunity to discuss the topic with others was one of the reasons why Deborah first began following the hashtag: “I used it a lot to find people who had either shared interest or who had a perspective that I was wanting to know more about.” While communities of practice are commonly associated with professional practices, participants often described discussing their common interest as both personally and professionally relevant, with 12 participants noting that

participation was personally important and 13 noting that it was professionally important. When asked, many participants could not distinguish between the two. This is perhaps because people who voluntarily participate in communities of practice are passionate practitioners who care deeply about their profession, consistent with Raymond's (1999) description of peer production, in which activities conducted to meet participants' personal objectives benefit the whole operation. This is also consistent with Uses and Gratifications Theory (Katz et al., 1973), which posits that people will choose a media that will gratify their needs, such as informativeness (e.g., Lampe et al., 2010; Moore & Chuang, 2017). People who are interested in healthcare participate in #hcsma to gratify that interest.

While #hcsma was devoted to discussing healthcare, a different subtopic was addressed each week. Thus, while many participants cited interest in healthcare as a reason for participating in #hcsma, many noted that the subtopics discussed each week were not equally relevant to their interests. For example, Krista found her participation to ebb and flow depending on the topic: "if there's a topic in #hcsma that doesn't interest me . . . I don't feel I have to participate." Participants found the weekly blog posts that provided an overview of the topic and discussion questions to be useful, and would describe reviewing the blog post in advance of the chat to see if the weekly topic was a subject they were interested in discussing or reading about:

it's kind of helpful because you can read ahead and find out whether or not the chat is going to be something that you can participate in . . . if there's a particular week where the topic isn't something you're knowledgeable about or isn't really in your field, then you have the opportunity to make a choice: am I going to lurk this week and just learn, am I going to sit this one out?" (Jackie).

Announcing topics in advance and switching topics from week to week provided #hcsma members with the flexibility to engage with people and topics that were most interesting and relevant to them personally and professionally. By providing a space in which different topics were discussed, community members could adjust the way they



participated based on the topic. Those interested in a breadth of topics could engage each week, while those more interested in discussions aligned with their personal and professional passions could choose to spend the hour elsewhere, such as Krista, or participate passively, such as Jackie.

Participation driven by interest in the topic is an intrinsic motivation (Ryan & Deci, 2000). Ryan and Deci describe the importance of intrinsic motivations as a critical element in the development of cognitive, social, and physical skills. #hcsmdca was designed as a community of practice; in deciding when to schedule the chats, Young chose a time during the workweek with the intent that participation would be integrated into community members' work. However, the near ubiquity of this intrinsic motivation shows that members participated because they were passionate about healthcare rather than because they are required to, for example, as part of their professional portfolio.

#### *4.1.2 LEARNING THROUGH PARTICIPATION.*

While nearly all members of #hcsmdca described an interest in healthcare as a driving motivation, they also described a desire to learn more about healthcare through participation. When asked why they first began participating in #hcsmdca or when asked if and how their participation was important to them, 19 of the 24 community members interviewed responded that learning was an original driver of participation. Five of those who did not specify learning as an initial motivation did note sharing knowledge with the group as a driver for participation in the community, demonstrating a commitment to the 'teaching' side of learning processes. Facilitating learning between members was one of founder Colleen Young's drivers for establishing #hcsmdca. After participating in the American-centric, #hscm (Healthcare Social Media), Young wanted to create a space in which participants could learn about healthcare in Canada, describing #hcsmdca as "a platform where we can learn from one another where we can improve the healthcare experience."

When directly asked, 'have you learned from participating in the community?' all participants acknowledged that they had, suggesting that while learning was an original driver of participation for most, it was an aspect of sustained participation for all. The

importance of learning is highlighted in a comment by one participant who described how not learning would be a potential deterrent to continued participation; Eliza used a dating metaphor to describe how essential learning was to her continued participation:

I need to feel like I'm learning something, and I need to feel like I'm moving forward . . . what was the topic the other week? It was something like, can social media actually influence or change behaviours? Offline behaviours. And I was like, that's interesting in a sense of 'let's sit around and have a cup of coffee or a glass of wine and talk about that because it's kind of neat.' But am I going to actually move anything forward in terms of like, my abilities and my position? I don't think so ... but maybe. It really depends on what people say. And that's why I'm still dating. Cause I'm not sure yet!

The importance of learning as both an original motivation and driver of sustained participation shown here echoes motivations for participating in other online initiatives, such as the crowdsourcing project, Next Stop Design (Brabham, 2012); the peer production project, OpenStreetMap (Budhathoki & Haythornthwaite, 2012); the citizen science project, OldWeather (Eveleigh et al., 2014); and the human computation platform, Mechanical Turk (Kaufmann et al., 2011). As will be described below, learning in #hcsma was social, as members with varied expertise exchanged knowledge and learned from one another.

#### *4.1.3 KNOWLEDGE EXCHANGE BETWEEN EXPERTS AND NOVICES*

Twenty participants described learning from others as a motivation for participating in #hcsma; 13 interviewees valued the opportunity to share their expertise and 17 valued the opportunity to access the expertise of other members. Access to expertise and being an expert were often overlapping values, for example, as stated by Darlene: 'I learn from others and I try and teach others.' While many participants derived value from both sharing expertise and accessing information through participation, each motivation is discussed separately in the following sections.

#### 4.1.3.1 Sharing expertise and being heard

Sharing expertise was a key motivation. For example, William stated: “I think I’ve got a fair bit of knowledge in this area, so I’d like to contribute that; so it is important for me to provide input when I can.” The rewards for sharing knowledge as an expert are extrinsic and stem from anticipated outcomes that are personally and professionally advantageous. William’s statement evokes a sense of reciprocity and altruism. Sharing expertise as driven by a desire to give back to the community is an extrinsic motivation because the anticipated outcome of sharing expertise is separate from the behaviour itself; however, because it is integrated with personal values (referred to as *integrated regulation* by Ryan and Deci, 2000), sharing expertise for this reason is similar to actions that are intrinsically motivated. Extrinsic motivators that show integrated regulation are also found by Ardichvili et al. (2003) in their study of an institutionally based community of practice. The authors found that managers and experts often shared knowledge because they had reached a point in their careers where they felt as though they should be giving back as mentors. While sharing expertise was often described as driven by a desire to give back to the community, not all motivations demonstrated integrated regulation. For example, William and others noted that being retweeted and receiving responses was personally satisfying, suggesting that gaining reputation through sharing expertise, a motivation demonstrative of introjected regulation and thus not experienced as fully part of the self, also mattered to #hcsmdca participants.

Knowing that their voices were heard when sharing expertise was described as an important aspect of participation by a number of participants. For some, being heard was a way in which to support their advocacy work. As Jane describes: “Once I started getting more involved with healthcare and social media I started advocating for the voice of the patient to be involved.” Others hoped their participation would help them become known in healthcare and could be a platform to demonstrate their interests and expertise.

Motivations related to sharing expertise and being heard were important across participant level and role, although more frequent among heavyweight users and

healthcare communicators and advocates. The breakdown of participants (13 of 24) who described sharing expertise as a chosen motivator is shown in Table 10.

**Table 10: Sharing expertise as a chosen motivator in #hcsmdca**

Participation	Participants (n=13)	Roles (n=13)	Participants
Length		Healthcare communicators	5
Newbie	3	Advocates	5
Regular	3	Healthcare practitioners	2
Veteran	7	Higher education	0
Depth		Other	1
Reader	0		
Contributor	4		
Collaborator	6		
Leader	3		
Frequency			
Rare	1		
Sporadic	5		
Habitual	7		

Similar to findings by Preece et al. (2004), even those with low levels of participation, such as contributors, expressed a desire to share and be heard. According to Soroka and Rafaeli (2006), community members engage in low levels of participation as they take time to “get to know” the community. Being able to join an existing community provides low-level participants with a latent tie structure on which relationships and reputation can be built (Haythornthwaite, 2005). For these contributors, the *opportunity* to be heard is important; as they familiarize themselves with the community they have the potential to move from contribution to collaboration and activate relationships.

Sharing expertise was also commonly described as a motivation by those who participated in #hcsmdca sporadically. For these members, participating to share expertise and be heard is likely related to self-efficacy (Bandura, 1997). Many participants stated that they were more likely to contribute actively when topics appealed to them, when they felt they had something of value to contribute, or could confidently share their expertise. This relationship between self-efficacy and participation has been found in other knowledge sharing communities (e.g., Hung, Lai & Chou, 2015; Soroka & Rafaeli, 2006). This suggests some further insight into motivations associated with the idea of

personal but shared interest, i.e., how personal confidence (self-efficacy) around the topic is necessary for engagement in the online initiative. It also suggests the importance of creating a ‘safe space’ for engagement that supports new member participation.

Being heard and sharing expertise were particularly important for advocates, all of whom described the opportunity to be heard and share expertise as a motivation for participation. Given the nature of advocacy work, this was expected; however, this showed that advocates saw #hcsmda as a community in which interested and passionate people in the field may be interested in learning more about their cause. As will be discussed in more detail in section 4.1.3.3, learning from patient advocates in particular was important to community members.

#### **4.1.3.2 Access to information**

Access to information shared through the #hcsmda hashtag was an important aspect of participation for 18 participants. One participant described the hashtag as her first source for healthcare information: “if I want to know what’s going on in the Canadian healthcare system or I have a concern, or I hear of something, I go to that hashtag first” (Donna). A common theme when discussing access to information through participation in #hcsmda was that it was current, with several using the term, “cutting edge” to describe the information shared.

There was also a social component to accessing information. Participants were not only interested in learning new and current information, but they were also interested in hearing what community members’ thoughts were on given topics. For example, using the community to follow trends was described by Alison: “I think the benefit to me is staying up to date with what people are learning and talking about and making sure that I’m not missing something that other people have gotten onto.” Accessing information and listening to the perspectives shared by community members was also a way for newcomers to orient themselves in the healthcare field. Johanna describes reading discussions as meaningful because: “I’m relatively new to healthcare, so to me that’s a way to understand the dialogues that are currently happening in the field.” For participants such as Johanna, Alison, and many others, the value in accessing information

through participation in #hcsmdca was not only in learning new and current information, but also what influential people in the field are saying about topics. Focus on the contributions of influential people within a network is a common feature of communities of practice, where more knowledgeable others occupy central positions in the network from which they can share expertise (Gilbert & Paulin, 2015).

The breakdown of participants (18 of 24) who described access to information as a chosen motivator is shown in Table 11.

**Table 11: Access to information as a chosen motivator in #hcsmdca**

Participation	Participants (n=17) <sup>9</sup>	Roles (n=18)	Participants
<b>Length</b>		Healthcare communicators	9
Newbie	1	Advocates	3
Regular	7	Healthcare practitioners	3
Veteran	9	Higher education	1
<b>Depth</b>		Other	2
Reader	2		
Contributor	5		
Collaborator	7		
Leader	3		
<b>Frequency</b>			
Rare	3		
Sporadic	6		
Habitual	7		

Regulars and veterans were more likely to mention accessing information as a motivation than newbies. As those who participated in a variety of ways, from reading to leading, as well as those who participated with varying frequency all valued access to information, it may be that the value of these connections and the information they share takes prolonged participation to realize. Participants from a variety of occupations also derived value from accessing information through participation in #hcsmdca. The importance of new and novel information shows that participants benefited from bridging capital

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<sup>9</sup> Participation data is not applicable for one participant who had only attended meetups. A lower n for participation than roles will be seen when reporting motivations described by this participant

provided by the community (Putnam, 2000). As will be discussed in further detail in section 4.2.1 participants are likely deriving value from accessing information shared across occupations.

#### **4.1.3.3 Expertise and role reversal**

The personal and professional experiences of #hcsmda community members are diverse, with members in varying professional roles and with different personal interests. Thus, members may be simultaneously experts and novices according to topic and role. This allows those who are traditionally considered experts to occupy the position of novice. For example, Rick is a physician. In his interview, he described the value he gained from learning from these groups:

I appreciate hearing the perspectives of patients and non-doctors. So, I tune in primarily because I like to listen in and get a different perspective on things. That helps me, in my view, plan services; it helps me respond to patients in the office, it helps me with what we do with our [Name of Practice] work online. And if it's a topic that I can additionally add some information or my input, that's great. But I don't go there to try to have a platform or to speak or to present, I go there to learn. Really listen and learn.

As those who commonly occupy the role of expert find value in learning, those who traditionally occupy the role of novice find value sharing their expertise. For example, patient advocates are given a voice in an industry that has historically ignored them, such as Donna, who described sharing information about her rare disease with the community to raise awareness:

In the early days it was really scary, so that's when I will really tweet something to #hcsmda with that tag ... it's a way to keep the name of this illness out there ... half the battle is ... to get it talked about enough so that it's in [doctors'] minds. Somebody walks into their office and they are struggling with all these things, [doctors] will think of it because people are talking about it.

The exchange of knowledge between novices and experts demonstrates knowledge construction as described by Vygotsky (1978). Vygotsky maintained that knowledge is constructed by sharing perspectives and negotiating meaning between individuals who have different levels and areas of expertise. He described what is known as a Zone of Proximal Development (ZPD) in which novices interact with More Knowledgeable Others (MKO). ZPD is defined as the distance between what experts know and what novices could know through engaging with experts. The ZPD reduces as novices learn. Similarly, learning takes place in #hcsmdca as the distance between what is known by novices and what could be known from experts is reduced through interaction between learners and MKOs. In #hcsmdca this occurs in a variety of contexts as participants with varying expertise share and learn from one another.

#### *4.1.4 FROM LEARNING TO PRACTICE: SKILL DEVELOPMENT IN #HCSMDCA*

Nine participants described applying what they had learned through participation in the community in their personal and/or professional lives as an important aspect of participation in #hcsmdca. For example, Rick, a physician, explained how he was able to use knowledge learned from patients to improve his medical practice. Edgar, also a physician, echoed this sentiment, stating: “I think that makes me a better doctor because I learn those perspectives.”

In addition to improving their practices, some #hcsmdca interviewees, such as Krista, learned new skills through their involvement in the group:

At the beginning #hcsmdca and Colleen did me a huge service by giving me the opportunity to develop skills— hosting, for instance, or moderating. I was terrified. And now I’ve been told I’m born to it, but I never would have thought that. Encouragement in some of my, what I would think, were unconventional thoughts and ideas. So, confidence builder, validator, and then in the meetups too, that Colleen has arranged, I’ve often been the sous chef. Not in the more recent ones but in the beginning we’d figure stuff out together. These are all skills that I never would have been able to hone.



The skills that Krista learned through participation were largely leadership based. Other interviewees described that participating in the tweet chats improved their ability to use and apply Twitter. Stephanie used the community model of the #hcsma tweet chat when developing her own tweet chat. She was able to take the elements that she saw as successful community builders, such as the time allotted to introductions at the beginning of each chat, and apply them in her own chat. In addition to using what he has learned to improve his practice, Edgar described how participating in the tweet chats taught him how to use Twitter effectively:

I used it as a way early on just to learn simple things: you know, how do professionals conduct themselves on Twitter. I mean, a tweet chat is a very good way to kind of figure out what your own style might be; what's kosher, what's not. I actually modeled a lot of it after the way Colleen conducted herself, you know. So, I learned a lot from her actually.

While most of the skills and applied knowledge pertained to community members' professional lives, Jackie noted that participation in the community provided her with information that she could use in her personal life:

I feel much better equipped that, should the time come where I need to be more involved in my own health, I feel like I'm better equipped with the tools that I need than had I not participated in the community.

An important aspect of putting what they'd learned to practice was the opportunity to get feedback on their ideas from community members. Most participants who cited feedback were interested in receiving it to inform their projects and ideas. However, Jackie describes how watching the feedback others receive was also of value to the small medical practice she represented: "it sometimes turns into an informal focus group and we get this kind of sample experience from the feedback that's being shared, and we can apply that to our own knowledge." This exemplifies the role of social capital in #hcsma, where knowledge is held in the network rather than in the 'head' of any particular individual.

A community of practice is distinguished from other types of communities by a focus on *practice*, where members share a common domain in which they have a level of knowledge or expertise that others do not (Wenger-Traynor & Wenger-Traynor, 2015). Thus, in a successful community of practice members should learn about how to improve their domain. The application of knowledge obtained through participation in the community is an important aspect of learning. Downes (2007) describes learning in communities as the process of interacting with and modelling the good practice of experts. As described above, the #hcsmda community is full of experts from whom community members learn; modelling experts such as Young allows for community members to learn through enculturation by exposing them to best practices which they can then apply as they interact with others in the community and in their personal and professional lives. As community members apply what they have learned, knowledge flows from them and into their local practices, thereby highlighting the advantages of the blurred boundaries described in networked learning (Haythornthwaite & De Laat, 2010). These amorphous and permeable boundaries between social worlds allow for knowledge learned within the community to extend beyond community confines and into the world (Strauss, 1978).

The breakdown of participants (9 of 24) who described skill development through participation in #hcsmda is shown in Table 12.

**Table 12: Practice and skill development as a chosen motivator in #hcsmda**

Participation	Participants (n=9)	Roles (n=9)	Participants
Length		Healthcare communicators	6
Newbie	1	Advocates	0
Regular	4	Healthcare practitioners	3
Veteran	4	Higher education	0
Depth		Other	0
Reader	1		
Contributor	3		
Collaborator	4		
Leader	1		
Frequency			
Rare	2		
Sporadic	4		

Habitual	3	
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Skill development was more commonly described as a positive outcome of participation by regulars and veterans as well as those whose participation is sporadic and habitual. This suggests that improving practice through participation is a function of time as community members not only learn new information that could be applicable to their work, but also have the time to implement new knowledge. Contributors and Collaborators were also among those who commonly expressed skill development as an important aspect of their participation, which suggests that some level of active participation may be an advantage for skill development, but not a lot is required.

In its early years, discussion within #hcsmdca focused on the application of social media in healthcare, which is typically within the purview of work conducted by healthcare communicators. Thus, it was expected that healthcare communicators, particularly veteran ones, would have been among those who described improving their practice as a result of their participation in #hcsmdca. However, this shows is that #hcsmdca was a successful community of practice that moved beyond discussions about practice to community members reporting making real and tangible improvements to their work. The other group that described improving their practice through participation in #hcsmdca were healthcare practitioners. As was discussed above in section 4.1.3.3, #hcsmdca provided healthcare practitioners with the opportunity to engage with patient advocates. As can be seen here, they did not only learn from patient advocates, they also made positive changes to their practice.

## 4.2 COMMUNITY

In addition to knowledge exchange, characteristics of the community also emerged as important factors for continued participation in #hcsmdca. At least one aspect of the community was described by 15 participants as important to their participation, including friendliness, supportiveness, and generosity, as well as the well-run nature of #hcsmdca, and leadership by Young. All these factors contribute to expressions of trust in the

community and suggest that the community successfully provides a ‘safe space’ for expression and engagement.

#hcsmdca was described as welcoming, inclusive, and respectful; as summed up by Darlene: “it doesn’t matter what walk of life I come from or even if I’m just a patient or a family member or something; it’s still a place where anybody can come and listen.”

Others describe supportiveness, often in relation to their own contributions. For example, Nick stated: “the group is very supportive especially if you have a bright idea.”

Community members were also described as generous. For example, one participant described community members as generous with their knowledge as they were always willing to share their expertise; another, that community members were caring and always willing to help others.

The friendliness, support, and generosity of the community are factors that contributed to trust, most commonly seen in participants’ perception of the information shared by community members. This trust was described by Young: “when you see someone who you’ve developed that trust with and they say a ‘must read’ you’re going to read that article. So there’s an awful lot of valuable exchange happening that way.” In another example, a participant described her experiences posing questions to the community. She trusted that not only would they be willing to respond to her questions but that they would also provide sound advice. Haythornthwaite (2009) describes trust as an important aspect of participation in online initiatives as participants must trust that the work they contribute will be used in the way participants intend. In #hcsmdca, the trust that is reflected in asking others for more information is a key factor affecting knowledge sharing in communities (Sharratt & Usoro, 2003) as well as building community ethos.

Trust developed through participation in the community was not limited to online interactions, as trust developed online was found to extend offline. Young shared a story that illustrates offline trust: on a trip to the United Kingdom she visited a friend she had met via Twitter. Upon arrival the friend had to leave to run an errand, leaving Young alone in her home for an hour after meeting in person for approximately 10 minutes. For

all intents and purposes Young was a stranger, yet the friend trusted Young in her home; the friend returned home not to find it ransacked, but to a table set with wine and dinner.

The community's ethos as warm, welcoming, supportive, and trustworthy was described as a factor influencing sustained participation by those who participated in a variety of ways and had a variety of occupations. The breakdown of participants (15 of 24) who described community ethos as a chosen motivator is shown in Table 13.

**Table 13: Community ethos as a chosen motivator in #hcsmdca**

Participation	Participants (n=15)	Roles (n=15)	Participants
<b>Length</b>		Healthcare communicators	7
Newbie	2	Advocates	4
Regular	6	Healthcare practitioners	2
Veteran	7	Higher education	1
<b>Depth</b>		Other	1
Reader	2		
Contributor	5		
Collaborator	6		
Leader	2		
<b>Frequency</b>			
Rare	3		
Sporadic	7		
Habitual	5		

Regulars and veteran participants described deriving value from the community ethos of #hcsmdca, suggesting that time spent in the community plays a role for this motivation.

There are two possible explanations for the importance of community ethos among regular and veteran participants: those who enjoy the community are more likely to continue participating, and/or the impact of the community's structure and ethos becomes more salient over time. Those who participated in varying depths were also driven by community ethos. While readers may not experience friendliness, they can observe it; if they see the community as welcoming they may move from passive participation to active (Lave & Wenger, 1991; Preece, 2000).

#### *4.2.1 ACCESS TO DIVERSE VOICES*

#hcsmda is an open community that welcomes participants with diverse roles and who have varying backgrounds. Its diversity gave rise to the expression of different experiences, ideas, and opinions during discussions. Social network analyses conducted by Gruzd and Haythornthwaite (2013) showed that active #hcsmda community members came from a variety of roles within healthcare. This diversity was roles is an important aspect of participation for community members. Fostering professional diversity within the community was a specific goal of Young. Young initially recruited members from diverse areas in healthcare as a way of what she described as “busting silos” within the field, which would encourage intellectual cross pollination between professions:

I wanted to ensure that people didn’t just see this as just communicators learning how to use social media, but also patients and physicians and researchers and policy makers– the whole gamut, so I actually went out and talked to those people before I even launched the hashtag and said, ‘Is this something that you’d be interested in and would you take part in it?’

The role diversity of the group was identified by 14 interviewees as a valuable feature of the community. Participants described several advantages of diversity, such as access to a breadth of knowledge. William also valued the breadth of knowledge afforded by diversity in the community, describing specific advantages he derived from tapping into the knowledgebase:

At the micro level I get insights into projects and perspectives that I wouldn’t otherwise have any knowledge of, especially in Canada. I get more insight into various aspects of the community or groups in the community, like the engaged patients and the other health professionals, the PR people that are working for hospitals. I gain a lot of insights into where people are coming from so the value I get from it ranges from very specific topics and areas.

Role diversity was also perceived to increase the quality of discussions within the community, not only by providing diverse information on topics, but also by providing diverse perspectives on these topics. For example, Stephanie noted that the diversity of membership prevented topics from being discussed within an echo chamber:

I end up going there and gathering different perspectives. I think that's the real main key of it— it's just such a diverse group of participants that you would never get to interact with otherwise. So, you're not just like in your little bubble of one perspective, you're getting to see all the different perspectives on one thing.

The diversity of the #hcsmdca was often described as unique. In the quotations above, William and Stephanie both comment that if not for the community, they would have less exposure to the diverse thoughts, experiences, and perspectives of people involved in healthcare.

While diversity in role was most commonly cited by #hcsmdca community members, geographic diversity, a benefit of distributed communities of practice, also mattered, as expressed by Krista: “The fact that I have this worldwide pool of brains that I can call upon and will answer me is like gold.” Geographic diversity was particularly important to community members from outside of Toronto who described feeling isolated from others. For example, Alison described the importance of geographic diversity: “Vancouver is a very isolated place in Canada and I think that it was a national group kind of appealed to me, to kind of have a community.” For Rick, both aspects of diversity are important: “There's great value in the geographic diversity of the community as well as the composition of the community.” As will be discussed in greater detail in Section 4.3.4, Young described the decision to host #hcsmdca on Twitter as being motivated by her desire to foster access to diverse voices. Unlike other social networking sites, Twitter does not require pre-existing relationships to be established between participants prior to communication, nor does it require permission to join a closed group. Its openness supported bridging gaps between geographic and occupational divides.

An aspect of the community that may have contributed to its diversity was fluctuation in membership. Community members came, went, and returned. Scheduling conflicts often prevented members from participating during the designated times and so they may have missed discussions for several weeks or months on end. Others did not participate regularly and only joined in on chats that addressed topics that were of particular interest to them. Regular participation was not a requirement for participation in #hcsmdca and several community members described advantages of sporadic participation. For example, Edgar highlighted the advantage he got from amorphous membership and his own flexible participation:

It's a window into understanding different perspectives. Truth be known even though I wander in and out a little bit there's new people that seem to be on every time so there's an opportunity to continue to learn and figure out different perspectives. So, I think it's good that way.

However, Darlene felt as though her sporadic participation placed her at a disadvantage:

I'm disappointed that I can't be part of it more than I am right now. Because if you're there every week then you have a better flow of what's going on . . . and you lose the connection when you can't be there every time.

Finally, diversity was seen by Young as egalitarian, a sentiment mirrored by early Internet researchers, as reported by Herring (2002). By creating a forum in which silos between various stakeholders could be busted, so too were hierarchies implicit in these structures:

The value is in the conversation, not the accreditation behind your name. So, whether you're giving or receiving healthcare, whatever level you're doing that at, you should be able to participate in the conversation. And it was set up really for cross learning of those silos in a safe place that wasn't bound by hierarchy of a given institution, that was really just people coming together on an open platform (Colleen Young).



The effect of creating a diverse community in which multiple stakeholders were included can be seen in the passage quoted above from Rick, who described one of his key motivations for participating as learning from patients. This is an inversion from traditional hierarchies in the healthcare system, in which expertise typically flows from physician to patient.

The breakdown of participants (14 of 24) who described access to diverse voices as a chosen motivator is shown in Table 14.

**Table 14: Access to diverse voices as a chosen motivator in #hcsmdca**

Participation	Participants (n=14)	Roles (n=14)	Participants
Length		Healthcare communicators	7
Newbie	1	Advocates	3
Regular	5	Healthcare practitioners	3
Veteran	8	Higher education	0
Depth		Other	1
Reader	1		
Contributor	3		
Collaborator	8		
Leader	2		
Frequency			
Rare	1		
Sporadic	6		
Habitual	7		

Valuing diverse voices as a motivator was commonly cited by collaborators, which suggests an association between depth of participation and diversity: participants who interact with others in meaningful ways are able to gain more insight into the expertise and roles of other community members. Access to diverse others was also an important aspect of participation for healthcare communicators and practitioners. Healthcare communicators valued the having #hcsmdca as a space in which to communicate with those in various roles within healthcare as well as the geographically diverse makeup of the community. Healthcare practitioners valued diverse voices for these reasons as well, but a greater proportion also described finding value in egalitarianism as important, particularly the role of the community played in allowing them to learn from patient advocates.

While many #hcsmda members reported diversity of the membership as providing access to diverse information and ideas, prior research suggests the caveat that Twitter users are unlikely to be exposed to cross-ideological content (Himmelboim, McCreery & Smith, 2013). Indeed, some community members did express concern that topics were discussed within an echo-chamber. While Stephanie connected the diverse makeup of group members as supporting diverse ideas, one interviewee cited concern that there was not enough debate within community discussions. The issue of #hcsmda as an echo chamber also arose during the chat I hosted, during which other community members expressed concern that because they hold similar values, there was not enough disagreement. Participants in the chat agreed that debate was a positive aspect of a community for its role in encouraging innovation but did not agree as to whether or not the seeming lack of debate was hindering the development of innovative knowledge within the community. The concerns raised by #hcsmda members reflect Granovetter's (1973) strength of weak ties theory, in which he describes how diverse networks consisting of weak tie relationships provide access to novel information sources; as conduits of new and diverse information, weak ties are a foundation of learning networks (Haythornthwaite & De Laat, 2010). Given the makeup of the group, it is likely that while roles of community members are diverse, their values are homogeneous.

#### *4.2.2 ORGANIZATION AND LEADERSHIP*

Similar to community ethos, participants also expressed that the operation of #hcsmda was an important aspect of their participation. Twelve participants described the organization and leadership of the community as a key factor of sustained participation. In her statement, Darlene describes several positive effects of the organization of #hcsmda: "I think that it has a very high standard for their discussions and for the way they run it and I really admire that. There's a real consistency and continuity." Like Darlene, the others described the community as well run, which ensured a high level of quality in both the discussions and information exchanged.

As Young was the driving force behind the community, its organization was inextricably entwined with her leadership; eight of the twelve participants described her role in the

community as an important element of their participation. For example, Jackie lauded Young for her community management skills, describing the significance of Young's work revitalizing the community through eliciting feedback from members and adapting the community: "I have to say that as far as Twitter chats go, #hcsma is definitely one of the best ones going." In addition to managing the community, participants also described deriving value from Young's role as a bridge between community members. For example, the importance of her role as a connector was described by Deborah:

Throughout the week she is active in saying 'this person' or that person, or she's connecting with this person, or she's like 'oh, this is a good idea, what do you think, Deborah?' That's more where I see the value.

As someone who spans multiple social networks, Young was an important bridge through which new people, information, and ideas entered the community.

Table 15 shows the breakdown of the participation types and roles of participants (12 of 24) who derived value from the organization of #hcsma and Young's leadership.

**Table 15: Leadership and organization as a chosen motivator in #hcsma**

Participation	Participants (n=11)	Roles (n=12)	Participants
<b>Length</b>		Healthcare communicators	4
Newbie	0	Advocates	3
Regular	4	Healthcare practitioners	1
Veteran	7	Higher education	2
<b>Depth</b>		Other	2
Reader	1		
Contributor	2		
Collaborator	7		
Leader	1		
<b>Frequency</b>			
Rare	1		
Sporadic	6		
Habitual	4		

Participants who held a variety of occupational roles described leadership as an important aspect of participation; however, no new participants and very few readers, contributors, and rare participants described this as a motivation. This suggests that active, sustained,

and frequent participation are important factors in seeing the value of leadership in #hcsmdca. While Young participated in each chat through her personal account and the official #hcsmdca moderator account, much of the preparatory work that went into each chat was unseen, as will be discussed in greater detail in the following section. Participants, such as many collaborators and leaders, who have hosted chats would have a greater understanding of the key role Young played in managing and sustaining the weekly chats. While they may not have direct experience working with Young, regular, veteran, and frequent participants who did not host chats likely saw the benefits of Young's weekly efforts promoting chats and creating bridges between community members.

#### **4.2.2.1 Responsibilities and challenges of running #hcsmdca**

While participants described Young's role as leader as an important aspect of their participation, in her interview Young highlighted the role of the *community* in the organization and development of #hcsmdca. She noted that all decisions were made with community consultation. For example, when redeveloping #hcsmdca's vision and mission statement, Young, aided by several community members, asked the wider community what they saw as its vision and mission. The insights shared by the community were then incorporated in the revised statement. The operation of #hcsmdca was also directed by the community. Originally suggestions for chats were made by the community in an open Google document and three topics were chosen for discussion each week. This meant that within a single chat, topics could vary widely. When the community expressed a desire to delve deeper and spend more time on a single topic, the format changed, and a new mode of operation was developed where a host would choose a single topic, write a blog post, and choose discussion questions. Similarly, the decision to move one chat per month to an evening time slot was made at the direction of the community. Young described how even small decisions, such as choosing the avatar used by the #hcsmdca moderator account, were directed by the community.

However, while the decisions may have been made by the community and while certain community members took leadership roles within specific projects, such as the

redevelopment of the vision and mission statement, Young herself was often solely responsible for implementing changes and running the community. Young's work for the community was unpaid and the effort required to maintain the community extraordinary. Young's responsibilities emerged through the interview and included:

- **Hosting & moderating chats.** When #hcsmdca used the Google document format of deciding topics, Young hosted 80% of the chats. In the new format, Young continued to moderate chats in the background
- **Scheduling topics.** While hosts often proposed topics, Young was responsible for scheduling when each topic would be discussed.
- **Vetting hosts.** Not all potential hosts and topics were appropriate for #hcsmdca. Young spent time either rejecting or working with potential hosts so that their topics aligned with the expectations and values of the community.
- **Training hosts.** Since #hcsmdca chats were primarily hosted by guests or community members, Young began training first-time hosts. Training included posting and sometimes revising the blog post written by hosts as well as providing practical instruction and emotional support for newcomers to the tweet chat format.
- **Promoting chats.** In between chats, Young promoted upcoming chats using her personal and official #hcsmdca accounts.
- **Facilitating connections.** Young often reached out to specific community members she believed would be interested in a topic and/or have interesting perspectives to add to discussions.
- **Providing hosts with feedback.** Young collected and shared chat statistics with hosts after their chat.
- **Reviewing summaries.** Young mentored an intern whose responsibility was to write and post summaries of each chat. This mentorship also included English as a second language tutoring.

- **Planning meetups.** Young did not discuss specific tasks associated with meetups, but did say: “I sort of do the meetups whenever there’s a community cry for one! So they don’t let me relax!”

During interviews with Young prior to the current study, she expressed a desire to take the focus off her and put it more to the community– e.g., in having guests lead the tweet chats. This succeeded in distributing conversations while she was present (see Gruzd & Haythornthwaite, 2013). However, in the interview for this study, Young acknowledged that this transition actually increased her workload. While managing #hcsmdca was described as a labour of love, it was also tiring:

It’s just exhausting how much work it is! I just really want people to understand that it just doesn’t happen on its own. There’s an awful lot of inviting to the chats, reminding that they’re happening, to make sure that the depth of the conversation is meaningful. You know there’s a lot more than just sort of bringing people into a room to chat.

During our interview Young described herself at a crossroads– unsure of whether to continue to lead the community in new and exciting directions she imagined, or to step down. Approximately a year after data collection began, Young made the decision to step down. Young’s role as a leader and connector was advantageous for the entire community, but the group was highly affected by her departure as no one took her place organizing weekly tweet chats. While there are no longer chats, the hashtag #hcsmdca is still regularly used to share information.

#### *4.2.3 #HCSMDCA AND TWITTER*

Technology plays a vital part in online communities. Young explained why she believed that Twitter was a good technology through which to support the community:

Twitter is just extremely accessible. It’s very quick. People do have some skepticism around the length of the messages that people are able to write, but there’s a lot of efficiency in keeping your comments to 140 characters. It’s a really level playing field for that as well.

During their interviews, participants echoed these advantages of the platform. For example, Nick highlighted the speed at which information could be shared on Twitter as an advantage of using the medium: “Twitter is really becoming a forum to rapidly share information.” Others echo Young’s description of Twitter as a level playing field. For example, Jane said:

It’s easier for me to meet people and talk to people online than it is to talk to them in person. I mean it seems more egalitarian doesn’t it? ... You’re influenced so much by the way people look, right? And so if you’re young and vibrant and well dressed and you have great shoes, you’re going to get a different response than if you’re older and maybe a little stooped and your shoes are ugly...So I like that that’s not what happens so much on Twitter.

The computer-mediated environment of Twitter provided a comfortable place for Jane and provided support for the idea that this kind of technological mediation affords an egalitarian environment that encourages contribution (Herring, 2002). As Young described, a reason for founding #hcsma was removing hierarchies: “I think that there’s an inherent hierarchy still, in the room when those people are working together. And when they’re discussing a topic on social media that hierarchy is somewhat removed.” As noted above, this also allowed conversations to cut across professional roles within healthcare and also to provide a place for the voice of patients.

Young saw Twitter as: “the communication channel that has opened in order to give voice to the under voice.” For community members who identified as patients, Twitter provided a comfortable format for engagement. For example, one interviewee, a patient advocate, described how a cognitive impairment impedes her ability to communicate, yet Twitter allowed her to stay present in the community: on good days she was able to participate in chats, while on bad days Twitter allowed her to stay visible while participating minimally through favouriting and retweeting tweets. While she could not always contribute to the conversation, Twitter allowed her to maintain a social and cognitive presence in the community (Garrison, Anderson & Archer, 2010). While Hew and Hara (2007) found that reduced social presence was a deterrent to knowledge sharing

in a listserv community, this example shows that providing users with the option to choose from varying degrees of participation can help them maintain a sense of involvement with the community by enabling them to participate at a comfortable level.

Other affordances of Twitter help support participation in the community. For example, Ashley identified two specific aspects of the platform that helped her learn: “Hashtagging has become a way to aggregate learning processes and learning opportunities as well as go back and look at things historically, and for me that’s important.” After each chat, Young used an external service to archive the tweets and would share link to the transcript of the discussion. Six interviewees stated that they had reviewed a transcript if they were unable to participate on a day when a topic that interested them was discussed. Further, the blog that provided introductory information about each chat was published via Young’s webpage. While Twitter was the primary technology used to support the community, other technologies were used to supplement Twitter, creating a technological ecology that supported the needs of the community.

While the majority of participants found that Twitter and the supporting technologies, were fast, easy-to-use, and flexible, six interviewees noted limits to using Twitter as a platform for the community. The most common issue was that they found the tweet chat format awkward and hard to follow. For example, Deborah described how the tweet chat format impacted her participation:

I actually don’t enjoy the chats at all. I find them very stressful. The information comes so quickly and it’s really hard to follow up at the time. You’ve read a comment and processed it and you want to add a reply, or add a comment, the conversation has kind of moved on and you have like, seven more thoughts to process and you get different conversations and different streams going on. It’s very cognitively taxing and I find it very difficult. It causes a lot of anxiety or stress so that’s why I really tend to avoid them. I don’t get much out of them.

Some community members noted that they were not particularly proficient Twitter users: one interviewee struggled to remember to add the hashtag when she wanted to share



relevant information with the community; and another had trouble expressing herself within the confines of 140 characters.

The 140-character limit left two interviewees feeling as though the format could not support the depth of conversation they would like to see come from the community:

The Twitter thing was just scratching the surface. And that's the thing that we all talk about is like how much can you say in 140 characters and what are we missing by just limiting ourselves to that form? (Alison)

Difficulty expressing oneself through the technology was also found to be a barrier to knowledge exchange, in other online initiatives, such as the listserv examined by Hew and Hara (2007).

To supplement the chats, community members collocated on the west coast of Canada formed a sub-community that meets regularly in person. In addition, Colleen Young organised semi-regular meetups. In line with findings by Koh, Kim, Butler, and Bock (2007) and Angelopoulos and Merali (2015) and supporting Haythornthwaite's theory of media multiplexity (2001), meeting in person fortified the relationships community members built online and allowed community members to discuss topics in more depth. For example, Rick described the value of a meetup he had recently attended: "It wasn't just fun and games good; it was really productive. It was really just a good connection."

Overall, most #hcsmdca community members enjoyed the tweet chat format and found it to be an efficient mode of communication that provided an egalitarian space in which knowledge could be shared quickly and easily, and where archived discussions were useful for future reference. For others, the character limit of the tweets and the pace of the chats hindered their ability to fully engage in the discussions. Challenges associated with Twitter was also found by Quan-Haas et al. (2015) in their study of digital humanities scholars' use of Twitter. As Herring (2002) notes, computer-mediated communication is not equally effective for all users.

### 4.3 PEOPLE: INTERACTIONS AND RELATIONSHIPS

Making connections with others was among the most commonly described original drivers of participation, comparable to interest in the topic. Two motivations related to people and relationships were identified through analysis: learning who's who in the healthcare field and developing personal and professional relationships with community members.

#### 4.3.1 *WHO'S WHO IN HEALTHCARE*

Participation in #hcsmdca provided participants with the opportunity to orient themselves to the field of healthcare, by learning who's who and who does what within the field, a form of transactive memory where knowledge is stored and can be retrieved from the minds of other community members (Wegner, 1987). This type of orientation was an important motivation to participate in #hcsmdca for 15 participants. Further, learning who's who was often described as an original driver for participation. For example, as someone who recently began work in healthcare, Eliza described how learning who knows what helped her situate herself in the field: "I'm reading who's writing what, when are they writing, what are their positions, opinions, and then, if I want to ... I can pursue something more." Knowing who knows what means that Eliza and others knew whom to approach to help them solve problems that may arise. Learning who knows what could be achieved through both passive and active participation, as Eliza went on to describe: "Lurking allows me to read who's writing what, when are they writing, what their positions are, their opinions, etc."

While most participants described learning who knows what as an advantage to them professionally, several participants also described how knowing who knows was helpful for personal reasons, such as Donna:

You know there are people to go to in the group if you have an issue and they would welcome it. They would welcome you. If you're a patient like me with cognitive impairment and you have a situation and you can't think of how to handle it there are people in that group who know how. So, you could shoot them a message, like "can I talk to you about this?" and they would be able to

give you advice. Not medical advice, but the steps to take or how to approach a situation in the healthcare system. That's really invaluable.

As with knowledge exchange between experts and novices, learning who knows what provides scaffolding for connection-building between learners and MKOs. In connectivist learning theory (Siemens, 2005), knowing who knows what is an important element of sense-making as learners discover who the experts in the community are prior to learning from their expertise.

Learning who's who and who knows what in the healthcare field also provided participants with the opportunity to learn who is respected in the field. For example, Donna described #hcsmdca as her 'go-to information source' for healthcare news because she valued the commentary provided by its prestigious community members: "When you want to get the truth in this situation, or what's really going on, I go to #hcsmdca because the people involved are generally there." While most participants described the value of learning from influential people, Angus valued the prestigious makeup of the community as a way to achieve his advocacy goals: "My real reason for joining is to try and have influence and to try and make these influential people see things from a more global perspective." These two examples show the direction of information flow in this community— Donna received information from the community, whereas Angus promoted views to the community. This two-way information flow provided the opportunity for more generalized reciprocity in exchanges. Conversations were not just one-on-one; rather, the community was seeded with information and opinions, both of which contributed resources that added to the social capital of the network (Lin, 1999).

The breakdown of participants (15 of 24) who described learning who's who in the healthcare field as a chosen motivator is shown in Table 16.

**Table 16: Learning who's who in healthcare as a chosen motivator in #hcsmdca**

Participation	Participants (n=15)	Roles (n=15)	Participants
<b>Length</b>		Healthcare communicators	7
Newbie	3	Advocates	4
Regular	4	Healthcare practitioners	1
Veteran	8	Higher education	2

Depth		Other	1
Reader	2		
Contributor	4		
Collaborator	7		
Leader	2		
Frequency			
Rare	3		
Sporadic	6		
Habitual	6		

Those who described learning who's who in healthcare as a motivation to participate were often new, regular, and veteran participants; those who participated at varying depths, from reader to leader; and sporadic or habitual participants. While some participants, such as Eliza, described learning who's who as an initial driver, those who tuned into the chats sporadically and habitually may have more opportunities to learn who knows what than those who rarely participate. Active participation may also be a factor, suggesting that engaging with community members is an important element of this motivation. Finally, patterns among people with various occupations suggests that role played within the healthcare community may also factor into this motivation. As healthcare communicators have the largest representation in #hcsmdca (Gruzd & Haythornthwaite, 2013) it is unsurprising that this group is interested in learning who in their subfield is doing what and where. As noted above, it is likely that advocates value discovering who's who as a means of targeting influential individuals in the community.

#### *4.3.2 DEVELOPING RELATIONSHIPS*

To assess the role of relationships as a motivation for participation, participants were asked if they had developed a relationship with any other community members, if that relationship was personal or professional, and if they considered any of these relationships to be close. Seventeen participants described developing relationships with community members, making both personal (10 participants) and professional (15 participants) connections. Developing professional relationships was more commonly described by participants. The two types of relationships are described next, followed by

a discussion of the experiences of those who had not developed relationships through participation.

#### **4.3.2.1 Professional relationships**

While often described as friendly, professional relationships centered around work. Developing professional relationships was most often described as a positive by-product of participation, although a few noted that the hope of developing professional relationships was an original driver of participation. For some, learning who's who in the healthcare field was the first step in the development of professional relationships. For example, Edward described the importance of the relationships he developed through participation in #hcsmdca: "professionally, it's been very powerful—it opens up relationships with people that I can now get a hold of if I need to—professional contacts who know me."

Rather than one-off connections in a given tweet chat or information exchange via the hashtag, professional relationships were sustained. Krista described how relationship development went beyond making connections: "There are people that I never would have gotten access to, but [also] the ear of and the respect from." In other words, not only did #hcsmdca provide a forum in which Krista was introduced to other healthcare professionals, but that these professionals listened and considered what she has to say. Another participant described a situation in which a grant to which she was applying called for the inclusion of patients. Knowing that patients involved in #hcsmdca were often highly engaged and interested in research, she was able to reach out to these patient advocates who then joined the grant. Another participant, a healthcare communicator, described how she came to see #hcsmdca as a place to recruit staff members. She stated that if potential hires had not heard of or were involved in #hcsmdca they were likely not "plugged-in" to the field. Participants understood that community members were passionate about healthcare and thus would be suitable colleagues.

Professional relationships made through participation in #hcsmdca were often described as close. Further, they were also highly valued:

It's really great to have a network of people that you can tap into at any time. There's just been so much value after the last four years. To us as an organization, to me as a professional– it's been really really valuable to use for sure (Jackie).

Young described how integral the professional relationships she had developed through #hcsmdca were to her professional career: “it's helped not only my business development, but it's also helped my continuing education so it's, it's really my connection to everything that I do.”

The breakdown of participants (15 of 24) who described developing professional relationships through participation as a chosen motivator is shown in Table 17.

**Table 17: Professional relationship development as a chosen motivator in #hcsmdca**

Participation	Participants (n=14)	Roles (n=15)	Participants
Length		Healthcare communicators	8
Newbie	2	Advocates	1
Regular	3	Healthcare practitioners	3
Veteran	9	Higher education	1
Depth		Other	2
Reader	2		
Contributor	2		
Collaborator	7		
Leader	3		
Frequency			
Rare	2		
Sporadic	5		
Habitual	7		

Veterans, collaborators, and habitual participants all described developing professional relationships, which suggests that prolonged, sustained, and active participation is associated with professional relationship development. These findings are similar to those of Nov et al. (2010), who found that long-time Flickr users had more contacts and belonged to more groups. Developing professional relationships was also important to both healthcare communicators and practitioners. Given that the most common

professional role in the community was healthcare communication, it was expected that these participants would highly value the development of professional relationships with other communicators. However, professional relationships described by healthcare practitioners were often interdisciplinary; rather than developing relationships with other doctors or pharmacists, they developed them with others in the healthcare system. This suggests that the silo busting intended by Young was achieved through participation in #hcsmdca.

#### **4.3.2.2 Personal relationships**

When asked if they had made friends through participation, many participants found it difficult to define a boundary between personal and close professional relationships, particularly as the professional relationships were described as friendly. Indeed, four of ten participants who described developing personal relationships as a positive outcome of participating in #hcsmdca described these relationships as “work friends” in which the friendship centered around a common interest in healthcare and a mutual passion for the work they do. However, the remainder of participants who had made friends through participation in #hcsmdca did not qualify the type of friendship developed.

Personal relationships developed through #hcsmdca ranged from casual to close and provided both bridging and bonding social capital. Jackie described developing bridging social capital through casual friendships with participants:

I’ve definitely made a lot of friends and people that I can bounce ideas off of or just kind of chat with. It’s always really exciting to see a lot of them when we get together at these events too. I’d say I’ve made some really genuine connections.

Other friendships were described as close. For example, while Rachel had a difficult time defining “close” she described deriving bonding social capital such as emotional support from friends made through #hcsmdca:

I’ve made friends [through #hcsmdca] that if I’m having a hard time, I’ll message them and say ‘Hey, things are really rough right now.’ I Skype a couple of them

to chat and I've met them in person and I've had them . . . to stay in my house. I've made really good connections of people that I care about. Not just people that I know and would say hi to.

Two participants noted that the friendships they had made online were as good or better than many of their offline relationships. One participant described developing friendships with participants from across North America, one of whom had sent gifts to her granddaughter. While geographic distance did not affect the ability of these participants to develop friendships, that was not the case for all. For example, William described distance as a limiting factor in developing friendships: "If I was in Toronto I would probably have more social interaction with some of the people in the group." As will be discussed in Section 4.3.2, for some participants the opportunity to meet in person was an important criterion for developing closer, more personal relationships.

The breakdown of participants (10 of 24) who described developing friendships as a chosen motivator is shown in Table 18.

**Table 18: Developing friendships as a chosen motivator in #hcsmdca**

Participation	Participants (n=10)	Roles (n=10)	Participants
<b>Length</b>		Healthcare communicators	5
Newbie	1	Advocates	3
Regular	2	Healthcare practitioners	2
Veteran	7	Higher education	0
<b>Depth</b>		Other	0
Reader	0		
Contributor	0		
Collaborator	8		
Leader	2		
<b>Frequency</b>			
Rare	0		
Sporadic	4		
Habitual	6		

Participants who described developing personal relationships were veterans, collaborators and leaders, and habitual participants. This suggests that time spent in the community, substantial active participation, and habitual participation all contribute to the



development of friendships and bonding social capital within #hcsma. This mirrors findings by Velasquez et al. (2014) who found that relationship development was an important motivating factor for many of the long-term members of the site, Everything2. Friendships were described as an important aspect of participation by members in a variety of professional roles. While the development of professional relationships was most often described by healthcare communicators, it seems as though friendship development spans professional boundaries.

#### **4.3.2.3 No relationships**

A minority of participants had made neither personal nor professional relationships through participation in #hcsma. However, four of the seven participants who had not developed relationships saw the potential for relationship development. As Jessica stated, “I think I have potential. There’s no one that I’ve worked with *yet*. But I feel like there’s people who, if the opportunity ever arose I could connect with.” Another participant, Ashley, expressed that professional relationship development was likely a matter of time and opportunity: “There are names and faces and people that I see quite regularly . . . that I wouldn’t hesitate to connect to face-to-face if I was heading off to a conference.” For these participants, #hcsma was a network in which they saw the potential to convert latent professional ties (i.e., potential relationships that have not yet been activated through social interaction) to weak ties (Haythornthwaite, 2002). The intent to activate these latent professional ties harkens back to the role of #hcsma in providing participants with an overview of who is doing what in the field of healthcare. Should they need to, they know who to contact.

In addition to feeling as though they could develop professional relationships with #hcsma community members, a lack of relationships did not preclude feelings of admiration for other community members. When asked if they had developed relationships with other participants in the community, two participants said that while they had not, they respected or felt fondness towards other members of the community. These sentiments were described by Donna:

I respect them, I admire them, I really appreciate what they share and what they have to say and they're my go-to resource that I trust. But I wouldn't consider them a friend. Most of them probably don't even know that I exist because I'm rarely in there.

The relationship described by Donna is one-way; interaction is not required by Donna to develop a sense of trust and admiration for other members.

The breakdown of participants (7 of 24) who as a had not developed any type of relationship through participation is shown in Table 19.

**Table 19: No relationship development through participation in #hcsmdca**

Participation	Participants (n=7)	Roles (n=7)	Participants
<b>Length</b>		Healthcare communicators	2
Newbie	3	Advocates	2
Regular	3	Healthcare practitioners	0
Veteran	1	Higher education	2
<b>Depth</b>		Other	1
Reader	0		
Contributor	7		
Collaborator	0		
Leader	0		
<b>Frequency</b>			
Rare	2		
Sporadic	3		
Habitual	2		

Participants who had not developed relationships tended to be newbies or regulars. All were contributors while none were readers, collaborators, or leaders. As noted above, relationship development is likely a factor of time spent in the community. However, depth of participation is also likely to play a role as minimal contributions, such as favoriting and retweeting, are not enough to support relationship development. Interestingly, all three of the lurkers described developing relationships. This is likely because each of these participants read the chats, but communicated with members in other ways, such as in-person meetups.

Participants who had not developed relationships also held a variety of roles. However, two of the three participants in higher education as graduate students had not developed relationships. As these participants were not yet practitioners, they may not have developed professional relationships through participation, which, for most participants was a pathway to developing personal relationships.

#### 4.4 SUMMARY: HEALTHCARE SOCIAL MEDIA CANADA

Chapter 4 presented results from interviews with 24 participants of the Twitter-based community of practice, #hcsmdca. In this chapter community members' motivations to participate were identified, including the important role of learning as a motivation. Further, it provided an overview of motivations that were described by those who participated in a variety of ways and held different roles. This summary makes note of how each of the research questions were addressed in the results above.

##### *4.4.1 MOTIVATIONS TO PARTICIPATE IN #HCSMDCA*

Before research questions two and three can be addressed, motivations to participate must first be identified. This section summarizes participants motivations to participate and responds to the fourth research question, which asked about the particular role of learning as a motivator.

Participation in #hcsmdca provided participants with a variety of informational and human resources that helped many improve their careers. Originally driven to the community to connect with others who share their interest in healthcare and orient themselves in the field, participants also found a space in which they could learn more about current and salient topics within the Canadian healthcare context as well as share their own expertise. Many participants described applying what they had learned through participation and thus improving their practice. Learning was facilitated by the community, which was described as welcoming, friendly, and supportive. Young's role in founding and nurturing the community was a significant factor in its success, although the importance of her role remained unseen by many.

As an open community, #hcsmdca welcomed all those interested in healthcare to participate, and indeed, participants from a variety of fields and with varying expertise joined the community. Young created #hcsmdca with the intent of busting silos within healthcare; reports from participants suggested that this goal was successful as many learned from stakeholders across healthcare fields. Silo busting was not limited to breaking boundaries between those in various professions; Young also described #hcsmdca as a space in which hierarchies inherent in the healthcare system could be razed. Indeed, participants who would traditionally be viewed as experts, such as physicians, described deriving value from participation as it gave them the opportunity to learn from participants who are traditionally viewed as non-experts, such as patients. Twitter played a role in supporting silo busting, as participants described how it allowed them to connect with a geographically diverse group and prioritized the content people shared rather than their credentials. However, while Twitter and the tweet chat format worked well for some, others found the chats difficult to follow and stressful.

It is difficult to untangle #hcsmdca community members' intertwined motivations for participating. As an open community, people interested in all aspects of healthcare could tap into the diverse membership of the community to discover who knows what, share expertise with the group, learn from them and put this knowledge into practice. The community ethos supported the development of trusted relationships that span from personal to professional and support development of both bridging and bonding social capital within #hcsmdca and the healthcare sector.

In viewing the themes as interwoven, the rich tapestry of learning through participation in #hcsmdca emerges. The results presented here show a community of practice with a core focus on the topic of interest, healthcare in Canada, was maintained through the focal technology of Twitter. Both aspects are supported by interweaving threads. For learning, the community members join and persist because of engagement with a diverse representation of healthcare roles, benefits derived from knowledge gained and shared, and relationship recognition of others and themselves. For technology, community members derive benefit from the open forum of Twitter, complementary technological

support of blogs, presentations, and chat transcripts, and relationship support through other online means and offline meetups. The community came together around interest but was able to function and persist due to the invisible work of the organizer, and the knowledge exchange and learning benefits built from communal interaction.

#### 4.4.2 MOTIVATIONS AND PARTICIPATION TYPE

The second research question asked about patterns between types of participation, such as length, depth, and frequency, and motivations to participate. Table 20 provides an overview of motivations commonly described by participants within each facet of participation. Motivations were included in the table if two thirds of participants in each facet described it as a motivation. If a motivation was not expressed by two thirds of the participants in any facet it was not included in the table.

**Table 20: Facets of participation and motivation in #hcsmdca**

Motivations	Participation									
	Length			Depth				Frequency		
	Newbie	Regular	Veteran	Reader	Contributor	Collaborator	Leader	Rare	Sporadic	Habitual
Interest in the topic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Learning	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Access to information		✓	✓	✓		✓	✓	✓		✓
Sharing expertise	✓		✓			✓	✓			✓
Community ethos		✓	✓	✓		✓	✓	✓	✓	✓
Diverse voices			✓			✓	✓			✓
Leadership			✓			✓				
Who's who	✓		✓	✓		✓	✓	✓		✓
Professional relationships			✓	✓		✓	✓			✓
Friendship			✓			✓	✓			✓
No relationships	✓				✓					

Participants in all facets were motivated by interest in the topic and learning. While most newbies had not made relationships, they were eager to learn who's who in healthcare as well as share their expertise. All Newbies described having the opportunity to be heard, suggesting that new members see #hcsmdca as a forum in which they can share their expertise. Despite participating in the community for a short time, newbies participated in the exchange of social capital by adding their voices to the discussion and benefiting from interactions with experts. Regulars and veterans were more likely to describe community ethos, suggesting that those who enjoy the community are more likely to continue participating, and/or the impact of community ethos becomes more salient over time. Veterans had more motivations than newbies and regulars and also valued diversity, leadership, and relationship development.

Readers were interested in learning who's who in healthcare and connecting with people with similar interests. Both of these are motivations that can be achieved through passive participation and are reflective of legitimate peripheral participation (Lave & Wenger, 1991), which provides opportunities to learn the culture of the community and practice, and to make that practice their own. Interestingly, readers described developing professional relationships. This is likely because these readers had attended in-person meetups, highlighting how multiple modes of communication can help participants overcome technological constraints. Very few motivations met the 2/3 threshold among contributors. This suggests that motivations among this group may be diverse. Leaders and collaborators shared similar motivations and were interested in both aspects of knowledge exchange by wanting to share and access expertise. They were also more likely to describe community related motivations, such as community ethos, diversity, and leadership. There may be a connection between active participation and diversity as participants who interact with others in meaningful ways are able to gain more insight into the expertise and roles of other community members.

Those who participated rarely tended to have motivations that would provide them with an overview of the initiative, as they were interested in learning and accessing information about healthcare, and learning who's who. As with contributors, those who

participated sporadically had diverse motivations, with only interest in the topic, learning, and community ethos passing the two thirds threshold. As with veterans, collaborators, and leaders, those who participated habitually also tended to describe more motivations to participate in #hcsma. Habitual participants developed personal and professional relationships suggesting that ritual participation is associated with building strong bonds. Habitual participation also provided these community members with regular access to information as well as a space in which they could develop their ideas with input from others.

#### 4.4.3 MOTIVATIONS AND ROLES

The third research question asked about patterns between roles and motivations to participate. Table 21 provides an overview of motivations commonly described by participants within each role. Motivations were included in the table if two thirds of participants in each role described it as a motivation. If a motivation was not expressed by two thirds of the participants in any role it was not included in the table.

**Table 21: Roles and Motivations in #hcsma**

Motivations	Roles				
	Healthcare communicators	Advocates	Healthcare Practitioners	Higher Education	Other
Interest in the topic	✓	✓	✓	✓	✓
Learning	✓	✓	✓	✓	✓
Access to information	✓	✓	✓		✓
Skill Development	✓		✓		
Sharing expertise		✓	✓		
Community ethos	✓	✓	✓		
Diverse voices	✓	✓	✓		
Leadership		✓		✓	✓
Who's who	✓	✓	✓	✓	

Professional relationship	✓		✓		✓
Friendship		✓			
No relationships				✓	

In #hcsmdca, participants in higher education, including graduate students and faculty, and those who had other occupations, reported fewer motivations. Prior research has found that people who participate less tend to have fewer motivations (e.g., Hertel et al., 2003; Nov, 2007), which suggests a potential link between professional role and level of participation in #hcsmdca. Indeed, each of the participants in Higher Education, and two of the three participants in other occupations tended to participate rarely, were new, or were readers, or contributors. This is likely because while these participants were interested in healthcare, the topic and discussions were less relevant to their work. Nonetheless, in addition to interest in and learning about healthcare, these members saw participation in #hcsmdca as a way to learn who's who in healthcare (those in higher education) and develop professional relationships with other members (other).

Like those in higher education and other professions, healthcare communicators, advocates, and healthcare practitioners were all interested in learning more about healthcare and saw #hcsmdca as a friendly space in which they could access information through connections with geographically and professionally diverse members. Healthcare practitioners and advocates described sharing expertise as a motivation more often than healthcare communicators. While sharing expertise was a motivation of healthcare practitioners, it was rarely described as a key motivation. For example, one healthcare practitioner, a physician, described his experience sharing expertise in the community: as one of a few physicians he felt his voice carried great weight. While not described as a key motivation for participation, healthcare practitioners found that #hcsmdca was a space in which members valued their contributions.

Conversely, sharing expertise and being heard was a key motivation for advocates. For many of these participants #hcsmdca was an important space to share their experiences as patients, as #hcsmdca and other tweet chats and online spaces, were among the few places



they felt heard. Healthcare practitioners and communicators described skill development as an important factor for sustained participation. Participants in both groups described how participation taught them skills and knowledge that they could incorporate into their practice. Healthcare communicators and practitioners described developing professional relationships while practitioners and advocates described developing personal relationships. The motivations of participants within these three roles highlight the success of Young's goals for #hcsmdca: participants busted siloes by exchanging knowledge with multiple stakeholders in the healthcare system.

Results from #hcsmdca suggest a potential link between occupational role, number of motivations, and thus participation. This may be limited to communities of practice, where motivations for participation are tied to participants' professional domain. Those whose professions are at the periphery of the community of practice, either because of representation in terms of numbers (i.e., fewer people in the community of practice share their profession) or relevance (i.e., the topic of the community of practice is tangentially related to their profession) may get less out of participation. However, participation by those in peripheral occupations satisfies the motivations of the core. In #hcsmdca, this core was comprised of healthcare communicators, practitioners, and patient advocates. These participants highly valued diversity, which was brought to #hcsmdca by participants with occupations at the periphery.

## 5. RESULTS: R/ASKHISTORIANS

Chapter 4 described motivations for participating in the small Twitter-based community of practice, #hcsmdca. This chapter presents results for participating in the large Reddit-based question and answer forum, r/AskHistorians. Motivations were identified through analysis of interviews with 18 participants and emails/private messages<sup>10</sup> from four additional participants. Observation of the subreddit was used for explanatory purposes, such as providing background information, as well as to provide supplementary evidence for motivational themes that emerged from the interviews. Formal observation began upon receiving permission from r/AskHistorians moderators to use the subreddit as a research site and continued throughout the course of the study. Data were analyzed in accordance with the principles of grounded theory, as described in Chapter 3.

Analysis of the data shows that r/AskHistorians is a community of engaged participants, from lurkers to moderators, who enjoy a pseudo-academic space on Reddit, where academic norms and practices, such as providing sources for claims, remaining on topic, and engaging in civil discussions, are followed. Results are discussed below in relation to three key themes: motivations that relate to knowledge exchange between users of the subreddit, the community as a whole, and relationships developed through participation. As both initiatives are centered on discussion of a particular topic, the three overarching themes are the same in each initiative. As in #hcsmdca, *knowledge exchange*, describes motivations related to access to information, sharing information, and learning; *community*, describes motivations related to the organizational and technical structures of the community; and *people*, describes motivations related to interacting with others and building relationships. The chapter is organized as follows:

- Section 5.1 Knowledge exchange in r/AskHistorians provides an overview of what participants learned through participation, including topics and expertise;

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<sup>10</sup> The emails and private messages did not follow the interview script. Thus, while these data sources were used to provide insight into these participants' motivations, self-reported patterns of participation in r/AskHistorians (see interview questions 1-4) is unavailable.

how the subreddit facilitated learning; and the role of sharing expertise and why participants were driven to share.

- Section 5.2 Community, describes r/AskHistorians' role as a public history site; the importance of audience, including serving as the audience, having an audience, and benefits and challenges associated with the Reddit audience; and the importance of rules and moderation from the perspectives of those responsible for enforcing the rules and those who are subject to them.
- Section 5.3 People: Interactions and relationships, describes the development of relationships through participation as well as the role of fandom, a term used here to describe appreciation of particular members of r/AskHistorians.

## 5.1 KNOWLEDGE EXCHANGE IN R/ASKHISTORIANS

Results from the interviews show that r/AskHistorians participants have a keen interest in the topic of history. Although many found it difficult to remember how they first discovered r/AskHistorians, participants described interest in history as one of their key reasons for gravitating to r/AskHistorians. The subreddit provided them with a place to learn, engage in discussions, and share history-related expertise with others. In discussing their interest in history and how that interest is satisfied through participation in r/AskHistorians, two inter-related categories emerged: r/AskHistorians as a forum for learning, and as a place where people with expertise could share their knowledge with others. This section first provides an overview of learning as a motivation and is followed by an overview of the role of sharing knowledge as a motivation.

### 5.1.1 LEARNING IN R/ASKHISTORIANS

For many participants, an interest in history led to their participation in r/AskHistorians, which in turn led to learning about more about history. Thus, learning was described as a motivation that sustained participation rather than serving as an initial driver. Learning through participation in r/AskHistorians was both intrinsic and extrinsic: participants described learning as important to them because it was both inherently satisfying and because it could lead to a separable outcome (Ryan & Deci, 2000). This section discusses

what participants learned (subsection 5.1.1.1) and how r/AskHistorians facilitated learning (subsection 5.1.1.2).

#### **5.1.1.1 What participants learned**

In the interviews and emails/private messages, participants described learning about a variety of topics and expertise. Indeed, r/AskHistorians was described by Anna as a “giant pool of wisdom that you could basically just tap and get information.” This pool of wisdom included knowledge on a variety of topics, practices, and skills. This is described in the following two subsections, “Learning new topics” and “Gaining expertise.”

##### *Learning new topics*

In discussing the content they learned, participants described learning more about the past, the present, and human behaviour. Learning about the past was expected by participants as their interest in history drove them to the subreddit. However, learning about the present, as well as learning about human nature were described as by-products of participation. The following three sections describe learning about these topics through participation in r/AskHistorians.

##### **The past**

History is the study of the past. Thus, it is not surprising that an interest in learning about the past motivated participation. Learning more about the past through their participation in r/AskHistorians was discussed by 14 participants. Topics ranged widely, including learning more about the Mayans, the prevalence and treatment of acne during wartime, the Holocaust, experiences of medieval nuns, the American Civil War, the history of narcotics in America, Greek history, marriage in the Mongolian Empire, the Great Man Theory, American history in general, music, folklore, the Japanese Shogunate system, and medieval history.

The breakdown of participants (14 of 18 interviewees) who described learning about the past as a chosen motivator is shown in Table 22.

**Table 22: Learning about the past as a chosen motivator in r/AskHistorians**

Participation	Participants (n=14)	Roles	Participants (n=14)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie <sup>11</sup>	0	Untrained	5
Regular	7	Citizen Historian	3
Veteran	7	Formal Training	6
<b>Depth</b>		<b>In-group role</b>	
Reader	3	No role	4
Contributor	1	Flair	3
Collaborator	3	Moderator	6
Leader	7	Former moderator	1
<b>Frequency</b>			
Rare	1		
Sporadic	3		
Habitual	9		

Learning new topics was cited by participants with a range of participation levels, roles, and expertise. The readers who described learning new topics through r/AskHistorians described the learning experience as unique, either because it was their only venue to read about history, or because they viewed other venues as unreliable (e.g., r/history) or inaccessible (e.g., at a level of depth that was difficult to enter, or by using writing styles and language that was unengaging). Readers were not the only participants who described learning new topics through participation in r/AskHistorians. Participants who described learning new things participated at varying depths and levels of expertise. This suggests that r/AskHistorians is a forum in which diverse topics are discussed, as even experts describe learning something new. One potential explanation for this will be discussed in greater detail in 5.1.1.2, Unexpected Learning, when addressing the ways in which r/AskHistorians makes history accessible to readers.

In relation to learning new topics, the experiences of participants highlight how participation in r/AskHistorians kindled an interest in learning by extending subject areas and by presenting a new view of history. For example, three participants, none of whom had formal training in history, noted that they learned about topics not covered in their

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<sup>11</sup> As noted in the Methods, no newbies participated in the study

high school history classes, e.g., non-Western history. For example, Reagan contrasted r/AskHistorians discussions with the way history had been taught to her:

I've been vaguely interested in ancient Greek history as a kid, but all the history taught in class beyond the ancient Greeks was super duper boring. It was mostly things like 'so then this dude decided to attack these people and that lead to the signing of this document' which is important and all but really politics-focused, not people-focused. And politics is only interesting because of the motivations/expectations/methods of people participating.

Two described how, prior to participation in r/AskHistorians they believed they were not interested in history, as is described by Anna:

History has become very interesting to me. I think I was in denial about it for a long time. I really hated it in high school. That was also kind of a eureka moment that is related to r/AskHistorians . . . I think I was answering somebody and was about to write, 'you know, I actually hate history' and I'm like, wait a second. You're reading nothing but historical fiction, you're actively doing independent primary and secondary source research here. You know scads about kings and queens of Europe, going back into the 16th C in four different countries. This might actually not be true anymore!

For these participants history, as discussed on r/AskHistorians, was interesting despite expressing a disinterest in the topic in the past, suggesting that there is something about the way content is presented or experienced that increases interest. This will be discussed in greater detail in Section 5.1.1.2, Accessibility.

### **The present**

When asked why learning about history through participation in r/AskHistorians was important to them, six participants expressed that learning about the past was important because of its role in helping them understand more about the present. While there is a moratorium on discussing topics less than 20 years old, the rules allow some caveats,

such as making comparisons between current and past events, so long as the response is grounded in history; explaining effects of an historical event, so long as the bulk of the response is grounded in history; and during discussions of historiography and methods.

The breakdown of participants (6 of 18 interviewees) who described learning about the present as a chosen motivator is shown in Table 23.

**Table 23: Learning about the present as chosen motivator in r/AskHistorians**

Participation	Participants (n=6)	Roles	Participants (n=6)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	2
Regular	2	Citizen Historian	2
Veteran	4	Formal Training	2
<b>Depth</b>		<b>In-group role</b>	
Reader	1	No role	2
Contributor	1	Flair	1
Collaborator	1	Moderator	3
Leader	3	Former moderator	0
<b>Frequency</b>			
Rare	0		
Sporadic	1		
Habitual	5		

As with learning about the past, these participants participated in a variety of ways, held different roles, and had varying levels of expertise. Most of the participants who discussed learning about the present through participation in r/AskHistorians were habitual participants; the one participant who participated sporadically had participated habitually in the past. It is likely that these users see a greater variety of questions, as well as recurring features, such as Monday Methods, in which modern historical practices are discussed. Further, the topics encountered by these participants may place them in a better position to see how events of the past have paved the way for current events.

Learning about the present through the study of the past was highly valued. For example, Jon described why the study of history is important to him:

I'm interested in history because [of] its power to explain why things are the way they are. I love that moment where something clicks and I understand that this is here because this happened, this happened because that happened, and you know, you can just keep asking that 'what came before?' question back and back and back and back.

While Jon described an intrinsic love of learning about the present by looking into the past, some participants described extrinsic reasons for learning about the present. For example, two participants believed that the study of history had the potential to make the world a better place: "I just kind of look around and go man, if everybody just knew the history of this or that, or of this family or the history of their neighbourhood, things would be so much better!" (Oliver). While extrinsic, the value placed on learning about the past for the good of the present is close to intrinsic, what Ryan and Deci (2000) have labeled integrated regulation, and thus shares many qualities of intrinsic motivations.

### Human nature

In addition to learning about the past and present, eight participants also reported learning about negative aspects of human nature. Participants described learning about the prevalence of racism, sexism and bigotry and how questions asked by others can identify biases. The breakdown of participants (8 of 18 interviewees) who described learning about human nature as a chosen motivator is shown in Table 24.

**Table 24: Learning about human nature as a chosen motivator in r/AskHistorians**

Participation	Participants (n=8)	Roles	Participants (n=8)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	3
Regular	5	Citizen Historian	1
Veteran	3	Formal Training	4
<b>Depth</b>		<b>In-group role</b>	
Reader	1	No role	1
Contributor	1	Flair	1
Collaborator	1	Moderator	5
Leader	5	Former moderator	1
<b>Frequency</b>			
Rare	1		



Sporadic	0	
Habitual	7	

Moderators and former moderators were more likely than other participants to describe learning about human nature. Of the five participants who described learning about the prevalence of racism, sexism, and bigotry, all were moderators or former moderators. For example, when asked what he learned through participation in r/AskHistorians, moderator, Josh responded:

I guess I'd had a rosy-eyed view of humanity and thinking that people are mostly good. And I do think that people are mostly good, but I didn't think that people could be so malicious. I don't know if I want to go so far as to say evil, but hurtful to other people and that's one of the sadder things, but I think it's one of those things that have made me more mature as a person.

In Josh's case, learning about human nature was part of personal growth and self-development. As will be discussed in greater detail in Section 5.2, moderators regularly interact with Reddit users who engage in disruptive, abusive, or nefarious behaviour. Further, as their responsibilities include deleting comments that break the rules of the subreddit, moderators engage with content that goes unseen by all other participants because of their efforts.

However, two participants who were not moderators also described learning about human nature through participation in the subreddit. This was through observations of content that did not break rules and thus remained visible. For example, four participants noted that the types of questions and the way they are asked can provide insight into why people are asking them:

after a while you get used to the moderators or the person responding saying, 'you've made this assumption here and this is how the question should be stated in my opinion' and that's one thing that's helped me being able to recognize a loaded question, because I find myself often asking, not just in history but in other

situations in life . . . That's one way that's helped me, kind of, you know, in this turbulent time, kind of go, what is this person really saying: is he making underlying assumptions or questions or anything like that? It's a helpful tool (Oliver).

Oliver was a habitual reader and occasional contributor to r/AskHistorians and was able to detect question-askers' motivations by watching how biases were addressed by moderators. Sebastien, a former moderator, described learning how to detect anti-Semitism in questions and answers from watching moderators with expertise in the Holocaust respond to these users. Learning from more experienced community members is demonstrative of social learning communities where members learn from engagement with More Knowledgeable Others (Vygotsky, 1978).

### *Gaining expertise*

In addition to learning new content, participants also described gaining expertise, such as learning more about how history is conducted professionally, and skills they could apply in their own work. As with learning about the present and human nature, gaining expertise sustained participation. Each of these concepts are described in the following subsections.

### **How history is professionally practiced**

Participation in r/AskHistorians provided members with the opportunity to learn about history beyond historical topics and their impact on current events. Eleven participants described how participation in r/AskHistorians allowed them to learn more about how history is practiced professionally, including historiography. For several participants, this knowledge had practical applications. For Helena, a librarian, learning how good historical questions are asked and how professionals discuss and frame their topics was helpful to her professionally: "I'm more interested in how do people who are really knowledgeable in this field discuss this . . . because that's useful to me as far as being able to deal with people asking history questions at work." Sebastien and Steven, a former moderator and a current moderator, described how learning more about

historiography helped them evaluate the quality of responses to topics they had little knowledge of:

it's that sort of thing where you can just look at something and immediately assess it, even when you don't actually have any familiarity with it. I don't know the history, but I know the historical method, I guess. That is really something I've learned in r/AskHistorians from watching people day in day out doing that here (Steven).

Jim, who was pursuing an undergraduate degree in history echoed this notion: "I'm learning more from Reddit on historiography than [from] my teachers." As with those who reported learning more about human nature, Steven and Jim both describe social learning processes described by Vygotsky (1978).

Participants who discussed learning about the professional practice of history participated in a variety of ways. The breakdown of participants (11 of 22 participants, 10 interviewees, and 1 who sent a private message) who described learning how history is practiced as a chosen motivator is shown in Table 25.

**Table 25: Learning how history is practiced as a chosen motivator in r/AskHistorians**

Participation	Participants (n=10)	Roles	Participants (n=11)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	4
Regular	5	Citizen Historian	3
Veteran	5	Formal Training	4
<b>Depth</b>		<b>In-group role</b>	
Reader	3	No role	3
Contributor	1	Flair	4
Collaborator	3	Moderator	3
Leader	3	Former moderator	1
<b>Frequency</b>			
Rare	1		
Sporadic	3		
Habitual	6		

While four of the eleven participants who described learning more about the practice of history had some level of formal training, the majority had none. Similar to learning about certain historical topics, participants did not learn about historical methods and historiography at the high school and undergraduate levels. Indeed, this is similar to my experience studying history at the undergraduate level. My exposure to historiography has been gained through reading r/AskHistorians.

Learning more about how the public understands history and areas that are underrepresented (or unrepresented) in high school and undergraduate curricula was an important aspect of participation for moderator and graduate student, Robert:

I've really learned a lot about how the public perceives history and how, in some ways, it's been taught to them incorrectly and what misconceptions they have, which is absolutely important if we want to interact with them better and teach them better and train better historians for the future.

Participants also reported learning about how non-historians understand history, particularly through the way questions are asked. This was described by five participants. While Robert noted that questions can be used to identify misconceptions, Ira, whose expertise is in the Holocaust, described what misconceptions regarding his subject area say about human nature:

it is fascinating that the way questions are asked reflect an understanding of this historical event as a sort of mechanical process, divorced from its actual historical reality, in the sense that people, especially victims, seldom figure into these questions.

Learning about the practice of history was extrinsically motivated because it was seen as having a positive outcome for their work, whether that is in another profession (such as librarian), academic (such as the student or instructor), or as a moderator. However, it shows high levels of integrated regulation, which, according to Ryan and Deci (2000) shares qualities with intrinsic motivations, such as high-quality learning and creativity.

## Skill development

The term “skill” is used here to describe the development of particular abilities. Nine participants described how participation in r/AskHistorians provided them with the opportunity to learn and practice skills. The most common skill learned was writing improvement, which was described by eight participants, including Oliver: “it’s provided me an outlet to practice my writing. I am not a writer!” Of the seven, two participants who worked in history-related fields noted that writing responses in r/AskHistorians provided them with a space to practice communicating their work to a lay audience: “I think every type of writing practice helps in some way. Getting past clichés, learning how to get down to basics for an uninformed audience, that kind of thing” (Mable).

Participation provided five participants with the opportunity to do work that directly contributed to their professional and/or academic positions. For example, four of these five participants were able to use comments written in response to questions posed on r/AskHistorians as a part of their academic work. The most successful example of using contributions to r/AskHistorians in their academic work is Josh:

I basically used it as a way to write my thesis. I had people ask questions on something I was beginning to research, and I’d answer it and could just copy the answer and then reformat it and have it for my thesis.

When asked if he thought this process worked well, Josh responded: “it worked out really well for my thesis! I won a bunch of awards on the thesis, like, pretty big academic awards that I was very excited about. I turned the thesis into a book.”

While improving writing skills was most commonly reported, three participants described learning and developing other types of skills. For example, when applying for a new job a moderator was able to cite experience working with a global team. Another was able to use debating skills he learned through participation in r/AskHistorians before it had developed rules requiring in-depth responses:

the looser rules meant more aggressive debates that required on the spot sourcing of arguments, as well as an ability to narratize arguments quickly for immediate public

consumption. Both of these skills have served me well in academia, and because of them, I feel I don't fear my comps as much as I could be, because it too will require a broad memory and fast synthesis, as well as finding their relevance within an argument (Jamie)

Finally, a moderator who had begun contributing to the production of the r/AskHistorians podcast described how this had led to the development of audio production skills, such as recording and mixing.

The breakdown of participants (9 of 22 participants, 7 interviewees, and 2 who sent a private message) who described skill development as a chosen motivator is shown in Table 26.

**Table 26: Skill development as a chosen motivator in r/AskHistorians**

Participation	Participants (n=7)	Roles	Participants (n=9)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	1
Regular	3	Citizen Historian	3
Veteran	4	Formal Training	5
<b>Depth</b>		<b>In-group roles</b>	
Reader	0	No role	1
Contributor	1	Flair	3
Collaborator	2	Moderator	4
Leader	4	Former moderator	1
<b>Frequency</b>			
Rare	0		
Sporadic	1		
Habitual	6		

When examining the ways in which members participated in r/AskHistorians and the roles they held, two patterns emerged. Learning and practicing skills was a motivation described almost entirely by academically trained and self-taught historians, with the exception of one participant. Further, all but one participant had a formal role in r/AskHistorians, either as a moderator or a flaired user. This suggests that having expertise and gaining new expertise may be positive feedback loop: having some expertise in history, either formal or self-taught, means that these participants can

actively engage in the community by answering questions, thus providing them with more opportunities to hone and learn new expertise. For these participants, r/AskHistorians is not only a question asking and answering forum, it is a community of practice where they can develop skills relevant to their work.

#### 5.1.1.2 How r/AskHistorians enables learning

The preceding section described the types of things learned through participation in r/AskHistorians. This section describes two ways r/AskHistorians facilitated learning: unexpected learning and accessible learning.

##### *Unexpected Learning*

When discussing learning about the past, participants often described learning about topics they did not expect. r/AskHistorians covers a breadth of topics that can be addressed in a variety of ways, depending on the question asked. As Kelcey put it: “I didn’t know I had the same question until I heard someone else ask it,” a sentiment also expressed by 13 others. Not only did participants describe learning about topics that they otherwise would not have known about, but also that they did not expect to be interested in.

The breakdown of participants (13 of 22 participants, 12 interviewees, and 1 who sent a private message) who described unexpected learning through participation is shown in Table 27.

**Table 27: Unexpected learning in r/AskHistorians**

Participation	Participants (n=12)	Roles	Participants
<b>Length</b>		<b>Level of Expertise (n=12)</b>	
Newbie	0	Untrained	4
Regular	6	Citizen Historian	3
Veteran	6	Formal Training	5
<b>Depth</b>		<b>In-group role (n=13)</b>	
Reader	4	No role	4
Contributor	1	Flair	3
Collaborator	3	Moderator	4
Leader	4	Former moderator	2
<b>Frequency</b>			
Rare	1		

Sporadic	3	
Habitual	8	

Unexpected learning was experienced across all types of participants, regardless of role or level of expertise. One participant with no formal training in history described how he did not realize that a feminist approach to history would interest him. Another participant, a moderator and citizen historian, was at one time responsible for finding interesting responses to questions to share via Twitter. When she held this role, she read every response over 500 words. Although she noted a great deal of repetition, she still found herself surprised by the questions asked and breadth of knowledge within the community, using an example of a question about strawberry pin cushions and a response that provided an overview on the history of Shaker art in America.

While these examples of unexpected learning refer to learning about new topics, unexpected learning also took place within participants' areas of expertise. Four participants, both formally trained and self-trained historians, described how questions asked on r/AskHistorians encouraged them to explore unexpected areas within their subject of interest, such as Travis: "a couple of the responses that I've written have really opened doors for what I've realized I am interested in that I wouldn't have otherwise known about."

### *Accessibility*

r/AskHistorians was described as accessible both because it provided access to academic-like content (i.e., well-written, thorough, and well-sourced) that is perceived as unavailable to those without academic affiliation, and because it was presented in a way that a lay audience could understand. For five participants, accessibility was a key aspect of learning through r/AskHistorians. One participant described how as a non-academic, he did not have access to primary sources or journal articles; therefore, reading quality responses to historical questions was important to him because he would not otherwise have access to that information. Responses to questions posted on r/AskHistorians were considered trustworthy, as most responses contained sources, and thorough, due to their



length. Further, responders, particularly those who had been awarded flair, were seen as authorities on the subject and thus participants derived value from the level of nuance they brought to discussions.

Responses to questions on r/AskHistorians were described as interesting and easy to understand: “it was clearly written and well-explained at a fairly elementary level so that I could understand the responses to the questions about . . . things that I have absolutely no background in” (Anna). Helena also described how the well-written responses kept her interested in the topic-matter:

I also like how people answer the questions. That’s a huge part of it. If it weren’t, if it were either super dry or just not well written then I would probably lose interest . . . some of them are really good at filling it with information but [also] making it fun to read.

The breakdown of participants (5 of 18 interviewees) who described the importance of accessibility, both in terms of the way information was presented and the availability of information is shown in Table 28.

**Table 28: Accessibility of r/AskHistorians**

Participation	Participants (n=5)	Roles	Participants (n= 5)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	4
Regular	4	Citizen Historian	1
Veteran	5	Formal Training	0
<b>Depth</b>		<b>In-group role</b>	
Reader	3	No role	4
Contributor	1	Flair	0
Collaborator	0	Moderator	1
Leader	1	Former moderator	0
<b>Frequency</b>			
Rare	0		
Sporadic	2		
Habitual	3		

Accessibility was particularly important for participants who had received no formal training in history. Most often, these participants did not have a formal role, and were primarily readers and contributors. Through its rules, r/AskHistorians provides a pseudo-academic space for the discussion of history. This is particularly important for users who do not otherwise have access to history through academic sources. Further, r/AskHistorians discusses history in a way that is easily understood by and interesting to those with no, or very little prior experience, with history. As was discussed above, this can help foster an interest in history, which can be leveraged into learning about history, and, potentially, gaining expertise as a self-taught historian.

### 5.1.2 SHARING EXPERTISE

As a question and answer forum the success of r/AskHistorians requires participation in the form of answering questions. As a pseudo-academic space, its success also requires a portion of its userbase to have a certain level of expertise so that they can adequately answer questions. The previous section described the types of things participants learned through their participation in r/AskHistorians. This section outlines sharing expertise as a motivation for participation. Sharing expertise as a motivation was described by 16 participants; often r/AskHistorians was noted as one of a few, or their only, outlet for sharing their expertise. Sharing expertise was largely described as an initial motivator where those who felt they had expertise saw r/AskHistorians as a place to share it. The breakdown of participants (15 interviewees, and 1 who sent a private message) who described sharing expertise as a chosen motivator is shown in Table 29.

**Table 29: Sharing expertise as a chosen motivator in r/AskHistorians**

Participation	Participants (n=15)	Roles	Participants
Length		Level of Expertise (n=15)	
Newbie	0	Untrained	3
Regular	6	Citizen Historian	4
Veteran	9	Formal Training	8
Depth		In-group role (n=16)	
Reader	1	No role	1
Contributor	1	Flair	6
Collaborator	6	Moderator	7
Leader	7	Former moderator	2

Frequency		
Rare	1	
Sporadic	2	
Habitual	12	

Common factors among those who had a desire to share expertise were training, depth of participation, and habitual participation. Habitual participation among participants motivated by sharing expertise may be explained by the unpredictable nature of topics addressed in r/AskHistorians— when the audience dictates the topic of discussion, infrequent participation may result in a missed opportunity to share expertise when the topic arises.

Because r/AskHistorians has strict requirements for responses that reflect the academic pursuit of historical knowledge, it is unsurprising that those with academic training play more active roles in the community and take on additional responsibilities. However, r/AskHistorians also played a unique role in its inclusion of citizen historians. This is described by one moderator in her presentation to at the National Council on Public History annual conference, the text of which she shared with r/AskHistorians:

‘The only qualification for writing an AskHistorians answer is the ability to write a good answer.’ Thanks to our lack of concern for credentials and the culture of anonymity fostered by our Reddit platform, we’re the meeting place for different conceptions of history, rather than hierarchies of historians (Stevenson, 2017).

The importance of this aspect of r/AskHistorians as a public history platform for citizen historians was described by Gordon:

Because I’m not someone who’s in an academic setting and don’t have any credentials I don’t really have any other way to make use of my knowledge about these subjects. Very seldom am I going to get asked to go on a radio program as the expert on this or that because I don’t have the job title that says: ‘he teaches urban history at the University of Whatever.’ And that is what so much of the world is about today, the credentialism. I’m very unlikely sit down and write a monograph on one of these topics, even if it’s one where I’ve done substantial

original research, just because there no real payback for that for the independent scholar. There's no money in writing a book anymore and so the only people who really do it are folks who need it to get tenure and who are paid to do this as part of their job duties and neither one really applies to me, and so finding a way to, if you will, show off, or a nicer way to put it, to share my knowledge, is hard to come by . . . r/AskHistorians helps to fill that desire to be recognized as knowing about stuff (Gordon).

Gordon highlights the importance of openness of r/AskHistorians, where those who have the expertise but not the credentials can share their knowledge with an audience.

While these 16 participants expressed a desire to share their expertise, they described a range of reasons for doing so, including *self-efficacy* (providing a response because they feel that they are capable of doing so), *earning flair* (contributing to earn visual recognition of their expertise), *correcting errors* (a desire to right a perceived wrong), *filling a gap* by providing expertise in an underserved area, *helping and bringing enjoyment to others*, and *promoting historical thinking*. These motivations ranged from intrinsic to extrinsic; however, most of the extrinsic motivations showed high levels of internalization with personal values, which, according to SDT have similar benefits as intrinsic motivations, such as positive self-perception and high-quality engagement (Ryan & Deci, 2000). In addition to the various motivations for sharing expertise through r/AskHistorians, some participants also reported risks. A description of the motivations for sharing expertise and associated risks are described next.

#### **5.1.2.1 Self-efficacy**

The term self-efficacy refers to an individual's belief that they are capable of executing a given task (Bandura, 1977); in r/AskHistorians, this task is providing high quality responses to questions about history. Eight participants described a desire to share expertise when they saw a question they believed they could answer. For most participants, such as Gordon, self-efficacy was directly tied to the level of knowledge they had on a given topic: "it was a subject that I had done a lot of research on. Perhaps more than anybody else in the country."

Perceptions of self-efficacy changed over time, particularly for those who study history academically. As Brandon said: “since I’ve started my PhD program, I’ve seen that the number of questions that I feel comfortable answering has expanded.” This development has had positive outcomes for Brandon: “It kind of confirms I did get smarter doing this and I have learned stuff by coming here [grad school]!” Changes in self-efficacy also apply to skills associated with practice. For example, Kelcey described developing greater self-efficacy in terms of his ability to make any topic enjoyable to read and easy to understand.

While self-efficacy can grow, it can also diminish. For example, two participants considered themselves to be initially *too* self-confident. Learning more, both through participation in r/AskHistorians and as part of their higher education, served to decrease their sense of self-efficacy, and thus their willingness to share their expertise. For example, Josh described his early participation on r/AskHistorians: “I think it was just kind of the arrogance of someone with an undergrad history degree but not quite the humility that came with the graduate degree.” Josh began participating in r/AskHistorians shortly after the subreddit was created and when the rules for responding to answers were more relaxed. As the rules for posting grew stricter Josh’s participation waned and did not increase until he began a graduate degree in history.

Similarly, Steven described his motivation behind his initial contributions:

when I first started reading and writing I would definitely say that the main goal, honestly, was probably just to get credit for stuff that I thought I knew . . . I wanted to teach people, yeah, but a big part of me also wanted to show off my historian cred.

When recalling his first comment on r/AskHistorians, Steven expressed some embarrassment. He had made a detailed comment explaining why he believed the Tiger Tank was an over-rated piece of artillery. The sense of embarrassment was in large part due to growth of his interest in history from what he described as “rivet counting” to the human side of history, as well as the development in his motivations from wanting to

appear knowledgeable to wanting to educate others: “I became increasingly conscious of the importance of actually presenting rigorous and interesting stuff to teach people rather than to just look good.” While Josh continues to provide responses to questions in his field, Steven chose to revoke the flair he had earned in a particular topic area for the more general, “Quality Contributor” flair, as after learning more he no longer considered himself an expert.

Having a sense of expertise can positively and negatively affect participation. For Gordon, Brandon, Kelcey, and eventually Josh, self-efficacy contributed to their willingness to contribute answers and share their expertise. However, Steven, whose self-efficacy decreased over time, changed the way he participated in the subreddit, spending the majority of his time moderating and very little time responding to historical questions. Lack of confidence in one’s expertise will be discussed further in Section 5.2.3 with regards to how the rules of the subreddit can contribute to decreased self-efficacy that prevents participation.

#### **5.1.2.2 Earning flair**

Participants described the flailing system as a feature that contributed to the quality of the subreddit and made r/AskHistorians stand out from other online spaces. For example, the ability to earn a merit-based flair was particularly important to Mable, for whom earning flair was one of her initial drivers of participation: “I also find r/AskHistorians more satisfying, despite the repetitive and sparse questions, because of the understanding that having a flair and having a well-sourced answer means something.” Mable described how flair on r/AskHistorians was a visual representation of her expertise that allowed her to speak on the topic with more authority than in Facebook groups in which there was no flair. While the possibility of earning flair was more commonly described as a motivation for sharing knowledge, the flailing system also provided a way for other r/AskHistorians users to identify those with expertise. For example, Jon, a lurker, particularly enjoyed seeing responses to questions answered by flaired users because it contributed to the trustworthiness of their responses.

### **5.1.2.3 Correcting errors**

Related to self-efficacy is a desire to respond to perceived errors made by others; five participants described correcting errors for their own sense of satisfaction as motivation to share expertise. In describing this motivation Sebastien alluded to the popular xkcd comic, “Duty Calls” (Munroe, 2008): “it was a case of ‘somebody’s wrong on the internet’ and I had to correct them.” For two of these participants, correcting an error was the driver that encouraged them to make their first comment on r/AskHistorians. Anna describes how nerve-wracking this experience was for her:

And then the question came up on– it was specifically a question about why did Welsh stick around so strongly and Scottish Gaelic faded. And I clicked on that because I have an interest in Scottish Gaelic, and I went through and one of the moderators at the time had answered the question and it was like, not right. And I was pretty much literally shaking in my boots, like cold sweats total anxiety and the whole deal about this and I finally decided, no I can’t let this stand. Something has to be said. And so I gave a long, detailed response on like, compare and contrast back to the mod and it turned out that they didn’t actually bite my head off! So that was good!

As noted by Haythornthwaite (2009) comments from established users can hold more weight than comments from new or unknown users. Thus, the positive response from a user Anna perceived as an established expert likely contributed to her continued participation in r/AskHistorians.

### **5.1.2.4 Filling a gap**

The eight participants who were motivated by filling a gap saw the opportunity to share their expertise in topic areas that people asked questions about but no one, or few people could answer. When describing why she initially wanted to contribute to r/AskHistorians, Mable stated: “I was eager to help out in an area that was underserved.” Mable is an expert in Western fashion and as of writing, only one other flaired user has an expertise in fashion. Similarly, Anna began responding to questions in her area of expertise after

she saw that questions were regularly going unanswered: “I realized there wasn’t anybody out there who was going to answer them but me. So, I basically filled a gap that I had self-identified.” One further reason for filling a gap was to share rare sources. Oliver’s father was in the military and passed his library, which contained rare primary and secondary sources about President Eisenhower, to him. When a question was asked about Eisenhower, Oliver was eager to share the content of these books, to which he knew few people would otherwise have access.

#### **5.1.2.5 Helping and bringing enjoyment to others**

Sharing expertise was associated with a sense of altruism from which five participants derived a deep sense of satisfaction and fulfillment. For example, Gordon describes how answering questions and helping people makes him happy:

I think I’m deep down happiest when I’m answering a question that someone has or helping them in some way with the talents that I have . . . If someone has posed a question and I have the wherewithal to answer it, it gives me a great deal of pleasure to do so.

Gordon has fully internalized helping others, an extrinsic motivation. Similarly, Brandon saw sharing his expertise as a worthwhile activity: “If I’ve taught someone today, I’ve done a good thing. You know, something in the real world. Something that matters. There’s a deeper satisfaction that comes from that.” For Kelcey, enjoyment comes from making historical information accessible:

One of the things that I love doing . . . is explaining things that are complicated in a simple way. So, informing someone about a complicated topic and distilling it down in a simple way that they can understand it and comprehend it and even enjoy it. And so that’s what I enjoy doing.



While Gordon describes how helping people brings him satisfaction, for Kelcey, providing others with not only accessible information, but also entertainment is important:

What makes it rewarding for me is that I feel I'm connected with people. I feel like the time and effort that I put in has paid off. That the words that I've written are being read, being understood, and that people will have taken an effort to acknowledge that they read, understood, and enjoyed it.

Using expertise to provide others with aid and entertainment is a motivation that is not uncommon for participants of communities of practice (e.g., Ardichvili et al., 2003; Hew & Hara, 2007). Thus, suggesting that for a subset of users, participation in r/AskHistorians can meet motivations associated with participation in a community of practice.

#### **5.1.2.6 Promoting historical thinking**

Three participants described finding value in sharing expertise to promote historical thinking and thus improve the practice of history, a key feature of a community of practice (Wenger-Trayner & Wenger-Trayer, 2015). The perceived values of the broader Reddit demographic was particularly important for these participants. Participants who were driven to promote historical thinking felt it was particularly important to teach those who do not have experience in the humanities about history and historical methods and thus saw Reddit as an apt venue to do so. For example, Robert stated: "And in that you're kind of helping promote good historical thinking because that's half of the history process is asking the right questions." Sebastien also saw how r/AskHistorians could be used to teach and promote better historical thinking but described this in the specific context of Holocaust denial. While Sebastien is no longer affiliated with r/AskHistorians, he described taking what he'd learned about how to approach Holocaust denial through participation in r/AskHistorians and applying these lessons when teaching high school students about the Holocaust.

### **5.1.2.7 Challenges of sharing expertise on r/AskHistorians**

Sharing expertise was most often described as personally satisfying and rewarding; however, sharing expertise was not conducted without risk. An example of this occurred on April 26<sup>th</sup> 2017, two days after I began recruitment for this project when a question was asked that gained tens of thousands of upvotes within hours. The question asked, “What was the context to these photos and was it uncommon?” The body of the post contained a link to 13 images of women performing sex acts in front of crowds of uniformed men. Moderator and Holocaust expert, u/commiespaceinvader provided a response to the question by discussing sex shows in the Pacific Theatre of WWII and provided a caveat that it is incredibly difficult to gain accurate historical information from photographs alone. In response to the answer, he was asked a follow up question: “Is there anything about the uniforms or weapons that would give away the era or arena of conflict?” u/commiespaceinvader responded to the follow-up question by explaining that he had little desire to delve into minutiae of the uniforms as that is the least important part of what the photographs show: a public sex show that, due to the nature of occupation, the women were likely directly or indirectly coerced into performing.

This response was met with considerable pushback, many comments of which were deleted for rule-breaking. The moderator team shared with me the full log of the thread, including the comments that were deleted. The following is one of several examples of this pushback found in the deleted comments, quoted in full with spelling and grammar retained from the original:

Christ have you ever thought about changing or removing the stick up your ass?

Its sad when someone who claims to be a historian can't seem to remove his perspective and bias from 60 years later and impose it on a historical context.

Maybe these were well paid prostitutes or entertainers who were not being oppressed in their own point of view. That's likely not true but it could be. But because you are such a prissy uptight know it all you feel compelled to place your tight assed point of view onto it. Grow up Sheldon.

While deleted comments are hidden from regular participants, they remain visible to moderators. Thus, u/commiespaceinvader would have seen insulting comments, such as the example above. While this is an example from one question, receiving offensive and abusive comments such as this was far from uncommon and was reported to occur most frequently when highly upvoted questions are pushed into the feeds of Reddit users who are unfamiliar with r/AskHistorians' strict moderation policy. Ira described the difficulty of maintaining a professional tone when confronted with insults and pushback: "there is an aspect of emotional labor to participating sometimes. It can be difficult to maintain a semi-professional tone etc. when one is confronted with upright hostility because of the content of my answers."

### *5.1.3 SUMMARY: KNOWLEDGE EXCHANGE*

Knowledge exchange through participation in r/AskHistorians includes learning and sharing expertise. An interest in history, a desire to learn about the past, and share historical expertise were motivations that brought participants into the community. However, aspects of knowledge exchange also kept them participating, such as learning about the present, learning about human nature, gaining expertise, and developing a greater sense of self-efficacy. These motivations were both intrinsic and extrinsic. However, extrinsic motivations were highly integrated with individuals' desires and values; thus, while motivations would lead to a separable outcome, actions taken to satisfy these motivations were derived from a sense of self (Ryan & Deci, 2000).

The motivations of participants who participated in different ways and held different roles generally fell into Haythornthwaite's (2009) light and heavyweight patterns of participation. Participants who were motivated by learning about the past and present were both light and heavyweight participants in r/AskHistorians. Those who learned new skills were primarily heavyweight participants and those for whom accessibility was important were most often lightweight participants. However, patterns of motivations among those who played certain roles or participated in a certain way emerged in a few cases. For example, because their role in r/AskHistorians exposed them to disruptive behaviour, those who reported learning more about human nature through participation

were most often moderators and leaders as opposed heavyweight participants that did not play this role. Those who reported learning how history is practiced often had no formal training in history, suggesting that historiography and historical methods are not always taught at high school and undergraduate levels of education.

The expertise gained and shared through r/AskHistorians shows that the subreddit shares some commonalities with a community of practice. Wenger-Traynor and Wenger-Traynor (2015) define communities of practice as “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (para. 5). One difference between communities of practice and other types of online communities is that a community of practice is centered around work people do rather than a topic they are interested in. r/AskHistorians is not a community of practice in and of itself. The vast majority of its hundreds of thousands of subscribers are not “doing” history; rather, given that interest in history was a motivation for each participant it is likely that the majority of subscribers share this interest, particularly as subscribing to r/AskHistorians is voluntary. However, for heavyweight participants, r/AskHistorians meets Wenger-Traynor and Wenger-Traynor’s definition of a community of practice. Through participation they gain expertise and work towards the better practice of history through the promotion of historical thinking.

Interestingly, the emphasis on motivations related to knowledge exchange described by r/AskHistorians’ participants differed from findings by Moore and Chuang (2017), who found that informativeness was the least prominent motivation for participating on Reddit. This is likely due to variations between subreddits. Participants in subreddits dedicated to sharing images or casual discussions are more likely to be motivated by entertainment or socialization. As subreddits such as these are popular<sup>12</sup> it is not surprising that socialization and entertainment would be motivations that figure prominently in a study of Reddit as a whole. Conversely, r/AskHistorians is designed as a

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<sup>12</sup> Other than r/announcements, the official subreddit for the site’s administration to share information relating to the site with users, the top two subreddits by subscribers are r/funny (image sharing) and r/AskReddit (discussion).

pseudo-academic space for the discussion of history; as such the most common original drivers of motivation were interest in history and a desire to share historical expertise. Thus, it is unsurprising that participation is sustained when these motivations are gratified, such as through learning. This is enabled because of the mission of r/AskHistorians and its rules, regulations and norms. The importance of the community itself as a motivation to participate is discussed next.

## 5.2 COMMUNITY

The community itself, its mission and how it is run, was a key aspect of participation for each of the participants, with many describing r/AskHistorians as a unique space. First, it was unique in its role to act as a public history site in which experts can interact with a large audience who can ask specific questions and receive trustworthy responses and second, the rules and norms of r/AskHistorians create a unique space on Reddit that was highly valued by users. This section addresses these aspects of r/AskHistorians and the role these play in people's motivations for participating, as well as the technological and cultural challenges associated with r/AskHistorians' location on Reddit. This section is organized as follows:

- 5.2.1 describes the role of r/AskHistorians as a public history site
- 5.2.2 discusses the importance of having an audience to reach, being that audience, and the challenges and benefits associated with Reddit's demographic as the broader audience.
- 5.2.3 describes the rules and norms of r/AskHistorians and discusses how these rules allow r/AskHistorians to function as successful and reliable public history site. It also discusses the experiences of those enforcing the rules (moderators) and those upon whom the rules are enforced (all other participants).

### 5.2.1 R/ASKHISTORIANS AS A PUBLIC HISTORY SITE

The National Council on Public History defines public history as "history beyond the walls of the traditional classroom" (n.d.). Over time, r/AskHistorians has evolved into a public history site in which users can discuss history and receive reliable responses to

their historical questions. r/AskHistorians role as a public history site and its mission of public history was described by nine participants as an important motivation, the majority of whom also noted that public history was the most important reason for their participation. For example, in her interview, Mable described r/AskHistorians' mission as her primary motivation and why she believes that r/AskHistorians in particular works well as a public history site:

My basic motivation for involvement with AskHistorians is that I love the mission - it's the most direct method of public history out there. At a living history site you have site interpreters (who are most often actors who can't answer questions they haven't been trained in) between the public and the curators/researchers; a book is a one-way street, as is a museum exhibition, whether the recipient is passively taking the information that's handed out and possibly unable to get the specific information they're looking for.

For Mable, the key component of r/AskHistorians and what makes it unique is the interactivity between the audience of interested lay people and those with expertise. In other public history sites, those providing information may have limited knowledge (living history site) or may not provide the exact information needed (books and museums). The size, breadth, and potential for targeted information dissemination are characteristics of r/AskHistorians that differentiate it from other modes of public history. Mable's description of the benefits of r/AskHistorians is echoed by Jon, a participant who regularly reads r/AskHistorians, but does not actively contribute:

if you word a question a particular way you get a particular kind of answer, which is something that you can't do [in other circumstances]— you can't ask a book a question. The information is just what is there. And so, when I'm looking for something I'm looking for something specific. I've worded a question a specific way, admittedly in Google, and it will sometimes take me to an answer that is better suited to what I'm trying to find than something more general [like] a history book.

For Jon, the difference between r/AskHistorians and other sources is that r/AskHistorians provides a more efficient route to answers that may be difficult to find in other sources. The role of r/AskHistorians as a public history site ties back to knowledge exchange motivations– the subreddit’s mission of public history provides a forum through which knowledge exchange can occur.

The breakdown of participants (9 of 22 participants, 7 interviewees, and 2 who sent a private message) who described public history as a chosen motivator is shown in Table 30.

**Table 30: Public History as a chosen motivator in r/AskHistorians**

Participation	Participants (n=7)	Roles	Participants (n=9)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	0
Regular	2	Citizen Historian	1
Veteran	5	Formal Training	8
<b>Depth</b>		<b>In-group role</b>	
Reader	1	No role	0
Contributor	0	Flair	2
Collaborator	1	Moderator	5
Leader	5	Former moderator	2
<b>Frequency</b>			
Rare	1		
Sporadic	1		
Habitual	5		

Of the participants who described r/AskHistorians’ mission of public history as a motivation, all but two were or had been a moderator; both of these participants were flaired users and one’s area of expertise was in public history. All were regular and veteran participants, all were leaders (save for one reader who is a former moderator) and all participated habitually (save for the former moderator whose current participation was rare). All had received academic training in history, save for one who was primarily self-taught.

For most participants, the value of r/AskHistorians as a public history site became a driver of participation after they had contributed to the community– for most, this

contribution was a combination of providing responses to answers and moderation. Two participants described public history as an initial motivator: one works for a public history site and the other studies public history at the graduate level. As with several motivations for sharing expertise, such as filling a gap, helping, others, and promoting historical thinking, public history is a highly internalized extrinsic motivation that is deeply important to the people for whom it motivates.

### 5.2.2 AUDIENCE

In its role as a public history site, r/AskHistorians provides a place in which an interested audience can interact with experts who can provide tailored responses to their specific questions. In order for this interactive model to be successful, it is important to have an audience to reach. The concept of “audience” was described by 12 participants as an important aspect of participation. This includes three participants who described the importance of being the audience as well as nine participants who valued having an audience with which to engage. The nature of the audience also emerged as both a positive and negative factor in participation.

#### 5.2.2.1 Serving as the audience

Participants recognized their role as an audience for those sharing expertise; however, serving as the audience was not a widely described motivation as it was described by only three participants. The breakdown of participants (3 of 18 interviewees) who described the importance of serving as the audience shown in Table 31.

**Table 31: Serving as the Audience in r/AskHistorians**

Participation	Participants (n=3)	Roles	Participants (n=3)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	3
Regular	3	Citizen Historian	0
Veteran	0	Formal Training	0
<b>Depth</b>		<b>In-group role</b>	
Reader	2	No role	3
Contributor	1	Flair	0
Collaborator	0	Moderator	0
Leader	0	Former Moderator	0
<b>Frequency</b>			



Rare	0	
Sporadic	1	
Habitual	2	

Two readers and one contributor, described the importance of being the audience. Two participated habitually and one sporadically and all had been participating in the subreddit between one and three years. None had formal training in history and none played a formal role. This type of response typically stressed that experts needed someone with whom to share their expertise. For example, Helena stated: “if their goal is to disseminate information more broadly then I am one of those people that they’ve shared their information with and shared their knowledge with.” This suggests that formal roles, training, or active participation in an online initiative are not required to appreciate the important role lurkers play in its subsistence.

While these participants acknowledged that an audience was important for the sustainability of the community, they did not typically see their individual role as a member of that audience as an aspect of participation that was highly motivating.

#### 5.2.2.2 Having an audience

While serving as the audience was not described as an important motivation, having an audience to reach was described as highly motivating, with nine participants describing having an audience as an important aspect of their participation. This suggests that not only can the initiative itself gratify the needs of users, as is described in Uses and Gratifications Theory (Katz et al., 1973), but that some users’ motivations can gratify the motivations of others. The breakdown of participants (9 of 18 interviewees) who described having an audience as a chosen motivator is shown in Table 32.

**Table 32: Having an Audience as a chosen motivator in r/AskHistorians**

Participation	Participants (n=9)	Roles	Participants (n=9)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	1
Regular	2	Citizen Historian	2
Veteran	7	Formal Training	6
<b>Depth</b>		<b>In-group role</b>	

Reader	1	No role	0
Contributor	0	Flair	2
Collaborator	2	Moderator	6
Leader	6	Former moderator	1
<b>Frequency</b>			
Rare	1		
Sporadic	1		
Habitual	7		

Of those who described having an audience as an important aspect of participation, six were moderators, one was a former moderator, and two were flaired users. All but two had formal training in history. All but two participated habitually, and all but two were veterans. Five were leaders, two were collaborators, and one was a reader. Two themes emerged from discussions of having an audience: the size of the forum and level of interest, and the justification audience interest provided for the study of history.

#### *Size of the forum and level of interest*

The potential to reach a broad audience was described as a motivation to participate by four participants. The role of audience was outlined by a moderator in her presentation at the National Council on Public History annual conference:

The biggest incentive for AH panelists [i.e., flaired users] is the audience. Who's going to read my dissertation? My advisor. My mother, my best friend. The rest of my committee if I'm lucky. I write something on AH in three hours, and 4000 people might read it that day alone (Stevenson, 2017).

Participants also mentioned the importance of the karma system as providing a quantitative measure of audience interest. Upvoting and downvoting was important for two reasons: first, it allowed experts to assess how many people were interested in having a particular question answered as well as providing an indication that a response to a question resonated with the audience. For example, when asked how he decides which questions to answer, Kelcey responded:

I'll select the ones that show a lot of interest from outside the community and the reason I do that is selfish. Because I know that when I spend the time answering that question, I will be rewarded with more points of my own. I know that people will read that as a result and that it will be shared by more people.

By “outside the community” Kelcey is referring to users who do not regularly read or subscribe to r/AskHistorians. In addition to providing users with points, the karma system also ensures that highly upvoted posts are seen by more people. When a post is upvoted highly it will be viewable on subscribers' homepages; once it is upvoted highly enough, it will be viewable on r/all, the default page for users with no account, and thus seen by people who may not subscribe to r/AskHistorians. Thus, when a post is highly upvoted it will reach a very large audience. Kelcey knows that if he provides a response to a question that has been highly upvoted, his answer will also receive many upvotes. The role of upvotes in providing a sense of audience was not universally described as positive. One participant, Myles, described feeling pressure to answer a question he had the expertise to answer but did not interest him, simply because it had a lot of upvotes. While upvotes provided a quantitative measure of interest in a question, they also provided a quantitative measure of how a response was received. In addition to the four participants motivated by audience, four more described feeling rewarded when a response had received a lot of upvotes while two described feelings of irritation when a response was downvoted.

#### *Justification for the study of history*

Four participants described the importance of having an audience as a way to provide justification for the study of history. For two participants, this justification was personal: having audience attention provided them with the knowledge that what they study is interesting and validated their choice to study history academically:

it was a good chance to be able to show that I could put what I was learning in school to use outside of school . . . so when I first saw a couple of questions that I could answer was stuff I'd learned, it was really exciting because it kind of gave me a legitimacy to what I was doing (Robert).

For others, the popularity of r/AskHistorians also provided a sense of professional legitimacy and value for academic history. For example, Josh described r/AskHistorians as a much-needed bridge between the general public and academics studying of history:

The humanities does, as a whole, a very bad job of justifying its continued existence. . . We need to do a better job of that and I see r/AskHistorians as . . . a stepping stone towards a resolution of being public intellectuals, being public historians, justifying our reasons for our research. And I think the ability to bring in both enthusiasts and hobbyists, and professors, and master's students into a history project, one of the larger history projects that's on the Internet is my reason I guess, for doing that.

This sentiment was also noted by Jamie, who focused on the role of citizen historians in r/AskHistorians:

The second reason for staying involved, is because I believe in the project of AskHistorians itself, which is to serve as a bridge to communicate professional history to the lay audience. This fills a niche sorely lacking in our field, and it perhaps says something that the majority of our posters are not PhDs or professors, but MA students or the self taught.

The idea that r/AskHistorians' large audience and wide reach plays a role in justifying the continued existence of the humanities played a role when moderators decided to use it as a forum to promote federal funding for history and history-related projects. While r/AskHistorians has a global user-base, the highly charged political climate in the United States since the 2016 Presidential election heightened participants' perceptions of the need for public history:

we have a president that believes that global warming was a hoax that was invented by the Chinese. If there's ever a time where people with knowledge need to be publicly engaged and not just locked up in an ivory tower, it's now (Brandon).

In March 2017, r/AskHistorians moderators used the subreddit to take a political stance in response to a proposed United States budget that would defund the National Endowment for the Humanities, the National Endowment for the Arts, and the Corporation for Public Broadcasting. A post was made outlining r/AskHistorians' mission of public history, the role of each of these organizations as funding and dissemination bodies, with links to information on the history of these organizations, and instructions for contacting local government representatives. The post was wildly popular: it received approximately 14,600 upvotes and as of April 2018, is the sixth most highly upvoted post on the subreddit of all time.

#### **5.2.2.3 Challenges and benefits associated with Reddit's audience**

While having an audience was highly valued, participants also described challenges and benefits of the audience. r/AskHistorians' audience is comprised of Reddit users, like the subreddit, are predominantly young, white, and male (Barthel, Stocking, Holcomb & Mitchell, 2016; jschooltiger, 2016). Participants perceived that characteristics associated with this audience exercised a great effect on r/AskHistorians because the questions asked and content promoted through upvoting reflected interests stereotypically associated with this demographic, such as Western European History, Military History, and Medieval History. They also described how the technology of Reddit played a key role in amplifying the effect of the demographic: if young white men ask questions that are perceived to reflect young white male interests, they also upvote these questions. This means that not only are the *questions asked* viewed to be driven by the young white male audience, but so is the *content seen*.

Participants described facing challenges derived from observed patterns between the demographics, questions asked, and questions upvoted. For example, seven participants noted that their participation was negatively impacted by a lack of questions asked in their field. Of those seven, four studied topics that were not the history of the West or studied topics that reflected interests stereotypically held by women: Islamic History, African History, South American History, and Fashion. Mable describes the types of

questions she typically responds to, and what she believes would happen should more women and/or women's fashion experts participated in the subreddit:

Most of my questions are about menswear (which I honestly don't care as much about as women's and children's dress), why don't we wear hats, why do we wear ties, etc. etc. While there are plenty of women who know nothing about fashion history, if there were more of them in the sub, they might at least ask about more interesting whys (when did we switch from stockings to tights, what's the history of pockets in women's dresses, did women of all classes wear corsets) - and maybe the rest of the fashion history community would be interested in asking each other questions here.

Participants also observed that r/AskHistorians' demographic reflected a predominance of interest in only certain types of historical figures and roles they play. For example, they stated that questions about people's experiences were more likely be asked from the perspective of soldiers, commanders, and leaders. This pattern of interest is described by moderator, Ruth:

What is undeniably true, however, is the rarity of questions about women's issues (and swap in black, queer, etc) and the patterns in which they tend to fall. Basically: rape, sex, marriage age, and rape. And rarely from women's perspective.

Similarly, when asked about the role of the demographic, moderator Leah responded: "I think what it reflects to me is that there's a lot more boyish topics that come up, whether it's war and weapons and video games, and then a lot of really insensitive questions about rape."

In a public post, u/sunagainstgold (2017b) provided an explanation for the treatment of historical subjects by the wider audience:

. . . it illustrates a distinct empathy gap, a socially-conditioned inability to default-extend intellectual personhood to people "different than us." One of the

absolute most-asked questions on AH is "Did ancient soldiers have PTSD?" Sometimes we get to hear questions about knights having PTSD, too. Anyone want to take a swing at, in comparison, how many times people have asked about rape survivors and PTSD? (And when you search for it, be sure to filter out the questions that ask about the *soldier-rapists developing PTSD from massacring and raping civilians*).

This empathy gap can be seen in the discussion resulting from the question about the photographs of women performing sex acts in front of uniformed men. In response to the questions, moderator and Holocaust expert, u/commiespaceinvader explained that the soldiers in the photos were likely in occupied territories and thus in a position of power over the women in the photographs. Despite explaining that the photos likely depicted sex acts performed under direct or indirect coercion, users continued to question the issue of consent:

I'm not arguing your expertise here, nor your sentiment, but isn't it a little presumptuous to imply that these women are acting under duress? . . . there is nothing wrong with acknowledging this for what it probably is: a rather crude form of entertainment solicited by American servicemen to satiate their sexual urges while deployed overseas (pm\_me\_ur\_jay-jay, 2017).

The moderators chose not to delete this question, likely to provide context to u/commiespaceinvader's response, which was to explain again, in more detail, issues with power and consent in occupied territories. While the above post was public, the empathy gap between the users and the women who are the subjects of the photos is demonstrated even more acutely in the deleted comments. Examples<sup>13</sup> include jokes, such as: "They're going to get sandboxes." and "A standard new England clambake, as done in French Indochina during the war." as well as insults: "women are after all perfectly capable of pursuing this work out of greed and self interest." and, "In addition, women (and many men) were known to have an increased level of pancakes (a.k.a. "flapjacks) in

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<sup>13</sup> Original spelling and grammar is retained from the original.

their diet during the war . . . hence the nature of the “pancake-tits” seen in the photographs.”

Deleting insensitive questions and comments such as these, as well as racist and other bigoted questions and comments, is one way in which r/AskHistorians moderators ensure that the subreddit is a safe space for women and minorities. Other approaches taken by moderators to combat uneven questions and the empathy gap include creating posts to address topic areas that rarely arise through organic question-asking and deliberate effort by subject experts to address the lived experiences of historical subjects. The success of these approaches can be seen in the audience’s voting patterns: for example, each of u/commiespaceinvader’s responses about power and consent in occupied territories garnered hundreds of upvotes while the comment by u/pm\_me\_ur\_jay-jay received less than 20, suggesting that while the demographic may exhibit biases through the types of questions asked and upvoted, they respond positively to new perspectives. Positive responses to posts that are friendly to women are not uncommon and help highlight female-oriented topics; as Ruth recounts:

I don't find AH hostile to questions about women's history. I've won Best Of<sup>14</sup> *several* times for explicitly feminist topics, including March's post on "No Irish Need Apply" which was basically me accusing US social historians and pop history journalism of misogyny.

However, despite moderators’ efforts to create a safe space on r/AskHistorians, the culture of Reddit as a whole and acts as a backdrop to behavioural norms. Reddit is host to sexist, racist and xenophobic subreddits (e.g., r/Holocaust is dedicated to Holocaust denial and r/GentilesUnited promotes anti-Semitic conspiracy theories) and participants in these subreddits are free to participate in r/AskHistorians. Reddit culture, and the system of upvoting and downvoting impacts r/AskHistorians by providing the technical

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<sup>14</sup> Best Of in this case likely refers to r/AskHistorians’ monthly and/or annual “Best of” competition threads where answers are nominated and then voted upon by users rather than the subreddit, r/bestof in which users post and vote on content from across Reddit.



infrastructure that allows the boundaries between r/AskHistorians and controversial subreddits to be permeated (Mills, 2018).

Further, the idea of “free speech” is highly ingrained in Reddit’s culture. The culture of free speech on Reddit is less related to the American First Amendment, which provides protection from the government, but instead can be interpreted as speech without consequence, including consequences such as downvoting and deleting posts and comments. The impact of Reddit’s culture and voting system on r/AskHistorians is described by moderator, Steven:

Reddit’s voting mechanics are our enemy and are a real problem for us. And it stands as this constant conflict for us about de-listing ourselves from r/all, which we want to do because r/all is the worst of Reddit and brings in the worst of Reddit to our community, but we haven’t done it to date because it would be a fundamental defeat for our mission statement, which is historical outreach. If we de-list ourselves from r/all then the people who really need to understand this shit more than anyone else, won’t. You know, these are our audience. These are the people who need to learn.

Because Reddit’s culture of free speech runs contrary to the strict rules and active enforcement of those rules on r/AskHistorians, many Reddit users (i.e., the audience referred to by Steven) view moderators deleting comments as a form of censorship and an affront to free speech. The preferred alternative is to let the community determine quality based on what it chooses to upvote and downvote. However, participants provided two explanations for why upvoting and downvoting as an indication of quality does not work for r/AskHistorians: first, responses posted first tend to receive the most upvotes; and second, the majority of people voting are not experts and thus unqualified to differentiate between a high or low-quality answer.

Two participants observed that comments posted first were likely to receive the most upvotes. In a subreddit where the best responses can take hours to write, with one participant estimating spending upwards of seven hours responding to a single question,

it is possible, and likely that should the rules not be enforced, the highest quality responses would be buried by lower quality quick to write responses, thus making the best information difficult to find. Highly upvoted yet poor quality answers can be frustrating for regular users, such as Gordon:

Something that I've encountered a couple of times in the last year to my frustration is that I won't see a question for three or four hours and then somebody once had a college class that read a chapter about this topic will have given what I would consider a C- answer. Something that is only tangential to the central question that's been asked, but by the time I get to the question they have been upvoted 30, 40 times, and my, what I think is a better answer [only] 8 or 10 people see it.

The second reason the premise 'let the upvotes decide' does not work for r/AskHistorians was noted by four participants: most users are not experts in history and thus not qualified to assess the quality of a given response. Two users described seeing this occur: sometimes poor-quality comments slipped through the cracks before a moderator could see them and delete them, yet they would be highly upvoted. When discussing consequences of free speech on Reddit, Ira provided an example to highlight why 'letting the upvotes decide' is problematic for r/AskHistorians:

The frequently brought up argument that the ideas of Holocaust deniers will be easily defeated in the „free market place of ideas“ is to me as someone who deals with the subject an incredibly misguided one since: A.) lying is always easier than debunking lies. People who deny the Holocaust will simply say „crematoria don't produce smoke! it is all a lie!“ and for those debunking them, it is necessary to actually make an argument based around how crematoria actually work, which is not something most of us have ever expected to deal with. And B.) it assumes that all people are rational and will follow the better argument (hello again, white, male, patriarchal notion of knowledge), which as current politics illustrate is decidedly not the case. People will believe what fits their world view.

Ira notes that not only do users upvote content that is poor quality, but that the upvotes often reflect users' biases. This was also observed by Mills (2018), who noted that highly upvoted comments often reflected users' consensus on a given topic. r/AskHistorians rules, and their active enforcement work to ensure that not only high quality, but also trustworthy information is shared on the subreddit.

While r/AskHistorians has a long list of rules that are actively enforced, moderators have no control over the audiences' voting practices, the content of private messages, or comments made on other subreddits. Therefore, while the work of the moderators creates a safe space within r/AskHistorians, women and other minorities are nonetheless aware of the potential consequences of being minority on Reddit. Four of the five female interviewees described identity management and self-censorship as strategies taken to mitigate potential issues.

Avoiding gender-based abusive messages was the reason behind moderator Anna's decision to manage her identity by creating two user accounts: one in which she is female and the other in which she is ostensibly male. The female account is used for participating in parenting subreddits while the male account is used to participate on all other subreddits, including r/AskHistorians. When asked if it was to maintain her privacy she responded:

It's mostly because you get enough shit thrown at you as an r/AskHistorians mod without it becoming gendered. I mean I have received death threats and people threatening to murder my family not knowing that I even had a family. And I can just imagine what kind of disgusting rape comments and sexual harassment comments I would be getting if I was actually openly female. Some of the mods are openly female and I don't know how they do that.

Anna's practice of identity management through the use of a secondary Reddit account to discuss personal aspects of her life mirrors findings by Leavitt (2015) who found that Reddit users who create temporary second accounts known as "throwaways" typically do so to maintain boundaries and share personal information anonymously. Leavitt also

found that creating throwaway accounts was more likely to be practiced by women, who were 154% more likely to use a throwaway account than men.

Unlike Anna, Leah doesn't believe that her gender is a factor of her participation on r/AskHistorians; however, she practices identity management through hiding her gender when participating in other subreddits, particularly that of her favorite sports team, the subreddit where she is most active aside from r/AskHistorians:

I think I do make a point of not revealing that I'm a woman just because you just sort of feel like people aren't going to take you as seriously . . . You just want your comments to stand on their own merit, and not have some other baggage attached to it.

Another tactic used by women to protect themselves from gendered abuse is self-censorship. Anna takes pains to avoid discussing certain topics using her male account: "I can't have any work experience because my work experience is so very particular that there's probably not two people in the world that have worked in the various specialties that I have." While Anna self-censors by refusing to discuss certain topics that may reveal her real-life identity, others self-censor completely. Helena is a lurker. While her primary reason for not leaving comments in r/AskHistorians is her lack expertise in the subject area, she also does not participate actively in subreddits in which she does have expertise, such as r/askscience: "this has nothing to do with r/AskHistorians, it's just Reddit itself, but you can occasionally open yourself up to unwanted attention. And that is something that I just don't want to deal with." Rather than being cautious about the information she shares online, it is easiest for her to simply not participate. Reagan, another lurker of r/AskHistorians, had bad experiences posting in other subreddits in the past and thus describes a similar reason for lurking: "popular subreddits can be pretty hostile sometimes. AskHistorians is EXTREMELY well-moderated, but I just don't want to deal with the unnecessary stress that comes with submitting a post." r/AskHistorians' position on Reddit and its inability to disentangle itself from the culture of Reddit as a whole has a negative impact on some women's participation, despite strict enforcement of rules and moderators' efforts to create a safe space for women.

Reddit's demographic, culture, and technology may also explain the lack of participation by minorities and those interested in the study of non-Western and non-East Asian history. For example, Sam described their experience trying to foster discussion in under-represented areas:

I hoped to use my position as mod to encourage people interested in African history, South Asian history, and other under-represented areas to get involved and apply for flair. However, there was never much success attracting people to apply for flair on those regions. I think that is because questions on those regions are rarely asked, and tend to receive fewer upvotes, so there is less opportunity for knowledgeable people to comment before the posts fall off the front page and are not seen by the sub's audience. In any case, my inability to promote those sorts of discussions and find more experts was disappointing.

In her presentation to the National Council on Public History, one moderator observed that it is particularly challenging to recruit and retain female and minority flaired users. Her belief is that this is due to the demands on women historians' time, citing studies that highlight career differences between men and women in academia such as men taking parental leave to work while women take it to parent, and that women have greater departmental service obligations than men. She theorized that if professional credit were given for participation in r/AskHistorians, participation by women and other minorities could increase (Stevenson, 2017). The lack of value the academic world puts in participation in a public history site was felt acutely by another moderator, Anna, who applied for a master's degree in History. Despite having moderated one of the world's largest public history forums for over five years, despite having presented on a panel at a national history conference, and despite having conducted extensive independent historical research, Anna was not admitted to any programs because she did not have the requisite major in history.

Despite contributing content and/or working on development and maintenance of a large and successful public history site, its association with Reddit meant that some

participants were hesitant to use their participation to advance their careers, despite potentially relevant experience participation provided them. Two interviewees stated that they would not include contribution to r/AskHistorians on their CVs, as described by Steven:

Even though I probably spend at least as much time moderating r/AskHistorians as I do studying at the moment, and that's been a consistent trend over the last year and a half, I can never put this on my resume. I can't really present it as work expertise or anything like that, even though I'm working with a panel full of people with doctorates, right? Like, I work with a group of professional historians on a professional historical outreach project as an undergrad and I will never really be able to cash in on that for resume purposes, which, unfortunately matters.

In a thread posted September 2016 thanking the moderators for their contributions to the subreddit, several moderators and two flaired users discussed contribution in r/AskHistorians in relation to their professional lives. All agreed that Reddit's culture was problematic. Reactions ranged from feeling the need to differentiate r/AskHistorians from the remainder of Reddit when speaking about their participation to colleagues to avoiding any connection to the site in their professional lives. For example, flaired user u/AshkenazeeYankee commented: "I love posting stuff here, but have to make sure it doesn't leak into my real real professional life or I'm sunk" (AshkenazeeYankee, 2016). While Steven stated that he would not include his moderator work on his resume, he had spoken about r/AskHistorians to professors, describing how Reddit's culture made these conversations difficult to navigate: "you're treading so carefully because you can't just say, 'look, I run the world's largest historical outreach project' . . . But I've gotta say, 'I run the world's largest historical outreach project and it's on a cesspool of a website.'"

While several users discussed their preference to hide their participation on r/AskHistorians in their professional life, this was not the case for everyone. Three participants did include participation in r/AskHistorians on their CV, and an additional participant stated that he would consider it. In a public talk given at the National Council

on Public History Annual Conference in 2016, one moderator argued for including participation in r/AskHistorians on their resumes: “The quality of work being produced on AskHistorians is often astronomical. We need to get over our own anonymous user accounts and claim it” (Stevenson, 2017). Each of the participants who had included participation in r/AskHistorians on their CV had participated in a conference during which they spoke about r/AskHistorians. One participant described how she was able to draw from her experiences as a moderator of r/AskHistorians during the interview for her current job and had even added r/AskHistorians to her work’s list of resources. However, while she was open about her participation in r/AskHistorians at work, she was not entirely comfortable with it: “Everybody knows me as the person who’s the moderator of r/AskHistorians. Um, it’s kind of embarrassing!” When asked why, she responded:

because we all know the connotations around people whose social life consists of the internet and web forums don’t have a great reputation and Reddit itself has a very poor reputation. So, it kind of makes you out to be a certain type of person. It’s created a bit of a conflict with me and one of my coworkers who does know Reddit and lurks on Reddit who kept sending me really Reddit-y stuff and I’m like, I don’t think you understand why I ended up on that site.

Despite seeing their contribution to r/AskHistorians as participation in a public history project, r/AskHistorians’ location on Reddit was problematic, primarily due to the conflation of r/AskHistorians with Reddit culture more generally. Even among those who were able to leverage participation in r/AskHistorians in their careers, several described feelings of embarrassment when discussing their participation with others. This echoes findings by Shelton, Lo, and Nardi (2015) who found that Reddit users in their study compartmentalized disclosing Reddit use to non-users, often due to embarrassment. While participants in the current study who opted not to discuss participation with others or felt embarrassment when discussing their Reddit use with others, only one participant expressed feeling morally conflicted by r/AskHistorians’ location on Reddit; more often participants felt that positive outcomes associated with r/AskHistorians location on Reddit justified their use of the site.

*Positive outcomes from Reddit's demographic*

As addressed in the subsection of section 5.1.2, 'Promoting Historical Thinking,' the perceived demographic of r/AskHistorians' audience plays an important role. For example, reaching a STEM educated audience was described as important by two participants, including Robert, who described how growing up in a university town, with a STEM educated family and initial plans to study STEM topics in university, provided him with a unique perspective to connect to an audience that stereotypically undervalues the social sciences and arts because they are perceived as subjective:

I feel like I've got the experience and the perspective of where they're coming from to be able to help them out and maybe point them in the right direction . . . And so, whatever I can do to help them get a better idea of what we actually do and how we arrive at our conclusions, I try to do that. And r/AskHistorians is a great place to do that and get engaged with those people who are so, so incredibly distant from the actual ideological process [of the social sciences].

In addition to the perception that Reddit users value STEM-based knowledge over the humanities and are thus an important audience to reach, r/AskHistorians position on Reddit, a website that also hosts virulent Holocaust denial, misogynistic, and xenophobic communities, also factored into participants' motivations for contributing to the mission of public history:

I do see this enormous, really problematic, deeply dangerous, in my opinion, misunderstanding of history, often a misappropriation of history by political groups and people with often very nasty agendas. And I see r/AskHistorians as basically the best historical outreach program that basically anyone has come up with so far. And I'm more than proud to be a part of that, just for the mission it represents there. It's teaching millions of people who might never have given a hoot about history all about it (Steven).



In discussing the thread regarding wartime sex shows, Steven noted that it had, indeed taught people: “we know we reached people because we did get a lot of feedback . . . So as awful as it was, at least it was another step forward for our mission statement.” Indeed, several users left comments stating that u/commiespaceinvader’s responses had changed their view: “I can say with absolute certainty that you changed my perspective on the topic at hand. What I saw as a relatively harmless consensual situation was revealed to be something very different which I would have never considered” (Deleted Account, 2017). Changing views through participation on r/AskHistorians was not limited to a single instance of having one’s view changed regarding a single topic. Two people, one interview participant and one commenter in the recruitment thread described how reading responses changed their views on political ideologies, such as feminism and the impact of colonialism on the present:

Answers here have helped me inform my political opinion, my thoughts regarding issues such as LGBT rights and feminism (it was actually an answer here that made me fully consider patriarchy theory!), colonialism and and (sic) its very subtle effects on today's society, and last but perhaps most importantly, have had an influence on my overall thought process and problem solving (Thienan567, 2017).

In addition to promoting historical thinking among Reddit users, r/AskHistorians also provides a positive model for the rest of Reddit. As described by u/restricteddata (2016):

AH is sort of a "killer app" for "what the Internet could be if people are willing to put the effort into it" and I think that's very positive. The fact that the rest of Reddit can be so awful in so many different ways only underscores the contrast — if Reddit can be made to be non-awful, what else is possible in the world?

Indeed, in a recent study, r/AskHistorians was used as an example of a well moderated site in an attempt to identify abusive behaviour using machine learning techniques (Chandrasekhara, Samory, Srinivasan, & Gilbert, 2017). Participating in r/AskHistorians,

a subreddit revered for being one of the few places to read and engage in high quality discussions was often associated with a sense of pride. For example, Brandon stated:

someone called AH best comment section of the internet. And I felt a certain swell of pride with that! I like being a participant in a community that other people recognize is doing some kind of good, or at least is producing something of cultural value.

The quality of r/AskHistorians has also been recognized by Reddit administrators. However, two participants described recognition by administrators as a source of frustration: they felt as though r/AskHistorians was used as a fig leaf while putting little effort into the eradication of subreddits whose users have abused r/AskHistorians participants.

It is important to note that r/AskHistorians location on Reddit was not a premeditated decision to address misconceptions about history by a STEM-educated audience, nor was it created to combat disinformation and misinformation spread through Reddit. Rather, the role of r/AskHistorians as a counter-balance to these communities on Reddit was a viewed as an unexpected, yet positive outcome.

### *5.2.3. RULES AND MODERATION*

As has been referenced throughout, r/AskHistorians has a detailed set of rules that are actively enforced by moderators. The rules and their strict enforcement is what defines r/AskHistorians as a public history site (discussed in 5.2.1) and differentiates r/AskHistorians from the general Reddit culture (discussed in 5.2.2.3). As a recap, the abridged rules are:<sup>15</sup>

1. Be Nice: No Racism, Bigotry, or Offensive Behavior.
2. Nothing Less Than 20 Years Old, and Don't Soapbox.

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<sup>15</sup> The rules in their entirety can be accessed here:  
<https://www.Reddit.com/r/AskHistorians/wiki/rules>

3. Ask Clear and Specific Questions, with Time and Place in Mind.
4. Write Original, In-Depth and Comprehensive Answers, Using Good Historical Practices.
5. Provide Primary and Secondary Sources If Asked. No Tertiary Sources Like Wikipedia.
6. Serious On-Topic Comments Only: No Jokes, Anecdotes, Clutter, or other Digressions.
7. Report Comments That Break Reddiquette or the Subreddit Rules.

Rules and their enforcement are a marker of community, signaling behavior that shows the kind of content and behaviour expected within the bounds of the community.

r/AskHistorians rules were an important aspect of participation for all of the participants. This subsection addresses three themes associated with the role rules and moderation practices play for participants: the importance of rules for those who are responsible for enforcing them (i.e., moderators), community members' perceptions of the rules, and the relationship between rules and self-efficacy. Because enforcing the rules are largely enforced by moderators, and because the rules were an important aspect of participation for each participant, tables presenting patterns between participation and roles are not included in this section.

#### **5.2.3.1 Enforcing the rules**

Rules in r/AskHistorians are enforced by moderators, although community members can help moderators by reporting content they believe may be breaking the rules. When asked to describe their current patterns of participation, moderators described enforcing the rules as their primary contribution to the subreddit, even when they also participated by responding to questions. Moderators described enforcing the rules in primarily positive terms; however, enforcing the rules also required them to manage disruptive behaviour on a regular basis. These two aspects of enforcing the rules are discussed below.

##### *Positive aspects of enforcing the rules*

Contributing to r/AskHistorians through rule enforcement was described in overwhelmingly positive terms. For example, Mable stated: "I want to help keep it great

by doing the strict moderation we're famous (and loved!) for.” Similarly, former moderator Sebastien’s description was also positive: “you can ban the people who are jerks and do the wrong things. And yeah, you can reward people with flair, for example, who contribute a lot, so that’s even better!” In breaking down what was positive about enforcing the rules, several categories emerged: maintaining the community’s ethos, fun, and reciprocity.

Four participants described maintaining the community’s ethos as one reason they enjoyed enforcing the rules. One way in which community ethos was maintained was by ensuring that question askers got high quality responses to their questions, which often involved deleting inappropriate comments. Sam describes the moderators’ perspective on deleting comments to ensure quality:

A major part of that effort has been to delete comments that are low effort, or speculative, or promote pseudohistory or bigotry. The AH mod team sees the deletion of such bad comments as "curating the sub", akin to pulling out weeds so flowers can grow.

Leah described moderation as a way to not only to ensure quality, but also the safety of the people placing themselves in a vulnerable position by asking a question:

It’s this kind of protective instinct I think. I want to make sure that nothing bad is happening. I don’t want people insulting the OP [Original Poster; i.e., the person asking the question]. People should feel safe to ask questions. I don’t want them getting attacked. They often get criticized for asking dumb questions and stuff. I don’t want to see racist jokes . . . So, I’m kind of on patrol making sure . . . that nobody is coming in and being hurt.

Similarly, Ira described how enforcing the rules could work towards establishing r/AskHistorians as a safe space on Reddit: “I think it is important to highlight that the way Askhistorians is moderated, including its strict rules and dedication to quality, it can be a way to carve out a more diverse space in the demographic homogeneity of Reddit.”

Two participants described enforcing the rules as an enjoyable activity. For example, Anna stated: “Periodically I do enjoy scolding them like I scold my children.” Enforcing the rules, even when described in terms of scolding, is often well-received. Anna described one instance in which she scolded the userbase and was gifted Reddit gold<sup>16</sup> twice and the comment is among her most highly upvoted. It is not uncommon for a moderator to be gifted Reddit gold (also referred to as “gilding” on Reddit) for enforcing the rules. In the thread asking the question about wartime sex shows, [u/sunagainstgold](#) (2017a) received Reddit gold for deleting a comment and leaving the response: “Homophobic slurs are not welcome in AskHistorians. You've been banned from the subreddit.” In his interview, Steven described the importance of a largely supportive audience: “we’re lucky to have a subreddit that really does love the moderator community, which is great. And our regulars think we’re great and we really appreciate that because we need validation too!” Much of the time enforcing the rules is fun because moderators’ efforts are supported by the community, which rewards them with upvotes, Reddit gold, and positive comments.

Not all moderators described enforcing the rules as fun. For example, Kelcey moderated as a form of reciprocity, where moderating and enforcing the rules was important to him as he saw it as a form of giving back to r/AskHistorians:

I think being a contributor is more fun for me. I think being a moderator is more like cleaning house or being a janitor. It’s a lot more fun to live in a house than to clean the house, and so I think being a contributor is like living in the house and sitting on the couch reading a book, or cooking a meal in the kitchen, and being a moderator is having to clean that kitchen after the meal is over, or vacuuming the house, or cleaning the couch off. Those things are a lot less fun. But I’m willing to do it because I have answered so many questions; I have invested enough time into contributing that it feels like if I want to keep contributing, I should

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<sup>16</sup> Reddit gold is premium membership and provides added features to the site. A month costs \$3.99. Reddit gold can be purchased by users for themselves or given to another user as a gift.

contribute also into cleaning the house and maintaining the site. So, while it's not as much fun, I feel like it's an obligation or that it's the right thing to do in order to keep things on the go.

While Kelcey was the only moderator to discuss enforcing the rules as an act of reciprocity, reciprocity was also a reason why one flaired user hoped to one day become a moderator: he saw it as a way to give back to the subreddit. Reciprocity was cited as a motivation among participants of communities of practice (Ardichvili, et al., 2003; Hew & Hara, 2007); however, in these cases reciprocity was described as a motivation for sharing expertise with novices rather than taking on a leadership role within the community.

#### *Effects of disruptive behaviour on enforcing the rules*

As noted above, moderation was described in primarily positive terms— the vast majority of participants' moderating experience was viewed as important and rewarding. However, moderators also described regular exposure to disruptive behaviour. Responses to managing disruptive behaviour were mixed and often overlapped: eight participants described negative experiences resulting from disruptive behaviour, three participants described disruptive behaviour in neutral terms, and two had positive experiences.

The two participants who described having positive experiences engaging with disruptive behaviour found humor in it. Mable described finding it funny when people responded with cruelty to being banned, as the effort was futile, stating: “instead of being stressful it amuses me.” Anna described one reaction of a user who was banned from the site as humorous:

You do occasionally get comedic ones, like the time that somebody was really mad at me and so looked at my flair and decided that I had to be a 20-something Scottish man living in my mother's basement and kind of dying because not only do I not meet any of those criteria, but my mother was actually living in my basement at the time!

While Anna could find humor in some of the reactions, much of her experiences were described as negative; Mable was the only participant who described general amusement with disruptive behaviour.

Although they did not describe their experiences as positive, three participants described managing disruptive behaviour in neutral terms. For example, even when discussing people behaving badly, Robert seemed unfazed:

There are particularly aggressive people and outrageous people where you're just like, I didn't know that there were that many people who had those words in their vocabulary still! And those are actually, for me, easier to deal with because there's no like, bad feelings about that. Like, you used 15 racial slurs in your 16-word sentence; I don't feel bad about banning you.

Similarly, although she is often the target of gendered abuse as she is 'openly' female, bad behaviour was not the source of Ruth's most upsetting experiences on Reddit: "For me, seeing the neglect of women in history and the lack of participation by women is far harder than any sexually harassing PM I get or comment I delete." One participant, Kelcey described the bad behaviour on r/AskHistorians as less severe than he had anticipated:

it's not as bad as I thought it might be. There's less of it that's intentional rather than simply young people who haven't been exposed to other ideas yet. There's a lot less malicious, purposeful racism, sexism and anti-social behaviour than I was expecting, which is a good thing.

Although several participants described positive and neutral experiences managing disruptive behaviour, negative experiences were more common. Five participants described primarily negative experiences managing disruptive behaviour on r/AskHistorians. These negative experiences included feelings of shock upon transitioning to the role of a moderator, feeling depressed or despondent over time, and normalizing abusive behaviour as a coping mechanism.

While Kelcey had expected disruptive behaviour to be worse, two participants described the sudden exposure to bad behaviour after becoming a moderator as surprising. One participant, Leah described this realization as a paradigm shift: “I suddenly saw that this civilized, grown up, friendly corner of the internet I found wasn’t actually that at all! It was just as crap as everywhere else.” Similarly, Steven likened becoming a moderator to “seeing how the sausage is made,” referencing an idiom implying that while the result is appealing, the process required to get there is not.

Regular exposure to bad behaviour was also often described as depressing and frustrating and something that began to wear at them over time: “it can get very depressing and, yeah. Depressing and disheartening and it makes you want to not do it anymore because you know, you don’t want that pushback and you can’t take that pushback after a certain point” (Anna).

The disruptive behaviour described by participants varied in severity, ranging from pushback and argumentation to targeted and prolonged abuse. While several participants described examples of extreme abuse directed towards their colleagues, two described having it happen to them personally; Anna discussed receiving death threats, while Ira described how one user threatened to torture him:

Many of us, especially those commenting and moderating some of the more sensitive topics such as Holocaust denial or anything to do with sexism have also received unsolicited pms [private messages] hurling insults at us and further. I once had a user message me 200 times in 40 minutes detailing how they would dismember and eat me after I had banned them from the sub.

After receiving the threat, Ira reported it to Reddit’s administration who instructed him to block the user; because the user had not broken Reddit’s rules they were not banned from the site.

Examples of egregious abuse, such as that experienced by Ira, were taken seriously by moderators, particularly when it happened to their colleagues. However, less extreme bad behaviour occurred with such regularity that it had become normalized. Normalizing



abuse is not unique to r/AskHistorians moderators. For example, users of HeartMob, a site designed to provide support for victims of online abuse and harassment, also reported normalizing harassment (Blackwell, Diamond, Schoenbeck & Lampe, 2017). Four participants normalized disruptive behaviour, describing receiving threats, being the subject of harassment, and regular exposure to racism, sexism and bigotry as part and parcel of the work of moderation:

it's something that comes with the territory, I guess . . . it hasn't kept me up at night . . . But I guess I'm very good at removing myself emotionally from situations that would bother me like that (Josh).

Leah and Ira use similar coping mechanisms to Josh's. Leah stated that while she was formerly bothered by abuse and exposure to disruptive behaviour she is now able to tune it out and Ira described most of the abuse directed towards the moderator team as "white noise." Only Steven expressed concern with the normalization of bad behaviour:

Some of it you just get really sick of discovering how many racists we deal with on a day to day basis. It just becomes normalized. It's perfectly normal for me to see people denying the Holocaust on a daily basis, because why wouldn't you, right? Like, stuff that really shouldn't be just normal kind of is.

For the majority of these participants, normalizing the bad behaviour and abuse to which they were regularly exposed was a coping mechanism that allowed them to continue their work as a moderator. It is possible that the participants who described positive or neutral experiences with disruptive behaviour have also engaged in normalization practices as a way to cope.

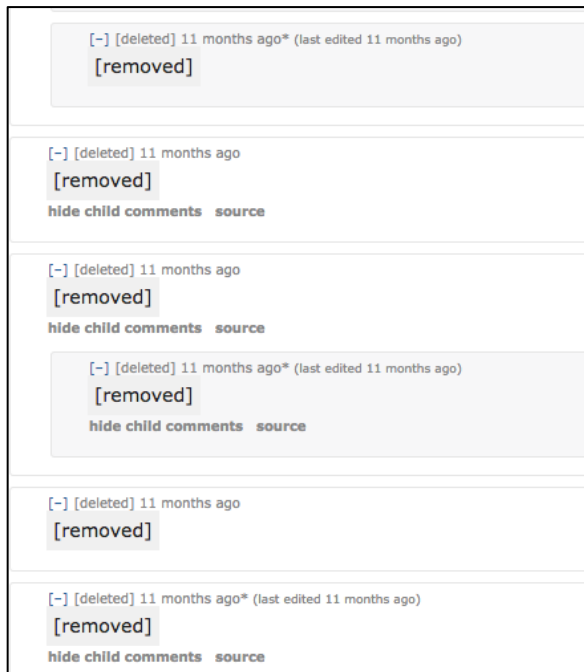
While regular participants of r/AskHistorians are familiar with the rules, goals, and moderation style of the subreddit, people who are new to the subreddit but participate in other subreddits can cause disruption upon first entry until they learn the rules and norms of the community (Keine et al., 2016; Lin, Salehi, Yao, Chen & Bernstein, 2017). Indeed, several participants, including those who are now moderators, described their initial contributions to the subreddit as disruptive noting that their first comments were deleted

because they violated the rules of the subreddit. When new members enter the subreddit on a small scale it is relatively easy to handle as rule-breaking comments can be manually deleted by moderators. However, when questions are highly upvoted they begin to attract attention from people who do not normally participate and are not familiar with the rules. Questions such as these were described by Robert as the source of most of the disruptive and abusive behaviour targeted at moderators: “Usually obnoxious modmails come from big threads like this [the ‘what is the context to these photos?’ question], where it’s people saying, ‘I can’t believe that you run your sub like this. Whatever happened to free speech?’” The source of comments such as these is not just a misalignment between r/AskHistorians rules and Reddit’s culture (see Section 5.2.2.3 for more detail); it is also technical. Posts in the feed state the total number of comments below the title (see Figure 2).



**Figure 2: Comments viewable**

However, as the vast majority of comments made in r/AskHistorians, particularly in posts upvoted as highly as the example shown in Figure 2, break the rules, they are deleted by moderators. Using Figure 2 as an example, users click on the link expecting to see 728 comments, yet in this thread only 39 comments remained. As part of a Reddit-wide effort to maintain transparency, it is possible to see where comments have been removed, shown in Figure 3.



**Figure 3: Removed Comments**

Seeing how many comments are deleted causes confusion, resulting in comments such as this example, which was also deleted by moderators: “So, where are all the answers? All I see are a bunch of deleted comments.” In addition to confusion, the visibility of deleted comments also results in accusations of censorship, as can be seen in this deleted comment: “11,000 upvotes. All of the comments are deleted because of censorship. This post is a ghost town. Reddit is dead. R.I.P.” Being able to see how many comments are removed in combination with an expectation that comments should not be removed was reported by moderators to be the source of the majority of disruptive behaviour. One solution that has been debated by the moderator team is opting out of being listed in r/all. However, as noted by Steven above, popular threads are often the source of increased subscribership and are a key component of the subreddit’s mission of public history. For example, the question “What is the context to these photos and was it common?” resulted in a huge spike in subscribership, gaining the subreddit around 7000 new subscribers in one day.

Another technological factor contributing to disruptive behaviour is the speed at which upvotes can bring attention to a particular question. Ranking posts by the number of upvotes it receives creates a positive feedback cycle: the more a post or question is upvoted, the higher it will feature on the subreddit page, users' home pages, and r/all. The more exposure a post gets, the higher it will be upvoted, which results in even more exposure. This cycle can be fast, sometimes taking as little as an hour for a popular post to reach the front page of r/all. However, writing high quality responses takes time. Because questions are often highly specific, responding to them requires participants to not only write responses, but also to conduct research. This means that popular posts will often have no responses when they are at their most popular. Those unfamiliar with r/AskHistorians may not understand why a popular question has no response and make rule-breaking comments. An example can be seen in the deleted comments from the question "What is the context to these photos and was it common?":

6 hours 9k upvotes. pitty it doesnt look like anyone can provide an answer to OP.  
i guess that's an accomplishment? have something unique enough to stump  
everyone!

Reddit users likely understand that researching and writing a short paper can take longer than six hours. However, on Reddit where popular posts can accrue thousands of comments within an hour, six hours with no response is highly unusual. This is likely an effect of Reddit's upvoting system. As it is more common for Reddit users to browse through their home page of subscribed subreddits in which only highly upvoted posts appear, or r/all, in which only the highest upvoted posts appear, it is likely that users such as the one above only see questions that are highly upvoted because the question is popular and before a responder has had time to provide an answer.

### **5.2.3.2 Recipients of rule enforcement**

Study participants subject to the rules discussed them in primarily positive terms, often because the rules resulted in high quality and informative discussions: "it was also a community I wanted to be a part of, because of the high quality of participation" (Morgan). The curation of comments as a quality assurance measure was appreciated by

participants. Jon found that the curation carried out on the subreddit made it easier to navigate, as he could avoid skimming through hundreds or thousands of jokes, memes, off-topic, or low-quality responses before seeing a high-quality comment:

I really like the fact that it's really heavily modded. I don't want to have to search through a bunch of people making Alexander the Great puns. I like going in and seeing one really good post from a flaired commentator. . . And then a whole bunch of crap deleted underneath – that's beautiful! This is a wonderful part of the Internet!

Users also have a sense of trust that what the moderators are deleting is not information they would wish to see: “While it is frustrating to see ‘removed removed removed removed’ at the same time you just know that that was a whole bunch of off topic crap and I don't have to see it” (Helena). Finally, two readers noted that should the rules change or be relaxed, they would lose interest in the subreddit and read it less: “If the mods decided to loosen up the rules I probably wouldn't read as much. Their quality control is very important” (Reagan).

One of the key reasons participants described r/AskHistorians as unique was the quality of discussions that take place in the subreddit. As expressed by Travis, “part of what I like about r/AskHistorians itself is that there's a certain level of discourse that's expected there that would be lacking in other areas.” As described above, r/AskHistorians' norms are similar to those of academia, which sets the subreddit apart from the remainder of Reddit. This is described by Sam: “the culture AskHistorians has built is unique for Reddit, and we don't want to embrace the wider culture of laissez-faire moderation, because that would mean lots of lazy and uninteresting comments.” The depth of the responses to questions on r/AskHistorians as compared to other subreddits was described by interview participants as well as responders to the recruitment post as an important aspect of participation. For example, Jon stated: “one of the reasons I like going to [r/AskHistorians] is because it's a lot more trustworthy than something that is on, like r/history, where anyone can do whatever they want.” While r/history addresses a similar topic matter, its lax rules and “laissez-faire” moderation affect the quality, and thus the

perceived trustworthiness of information exchanged. Robert attributes the rules and their enforcement by the moderators as the key thing that makes r/AskHistorians unique: “there’s no Facebook groups that are equivalent; there’s no forums that are equivalent. And it makes it a really unique space and the moderation is all that makes it this different. It is the only difference.”

Participants were not only supportive of rules being enforced more generally, they often described positive or neutral responses to rules being enforced in response to their own contributions. For example, Oliver described his response to having a comment deleted by a moderator:

It was a very positive experience. He wasn’t mean about it or rude about it. It was fine. And that’s one of the reasons why I use the subreddit: because I can get feedback if I post a question or post a response.

Indeed, many participants, including moderators, noted that their first comment to the subreddit had been deleted for not adhering to the rules. For example, moderator, Steven noted:

I made a number of mistakes; posted a couple of rule-breaking responses here and there that just weren’t up to snuff– that initial post about the Tiger Tank was removed. It was removed for being off topic though! It wasn’t wrong!

While support for the rules of the subreddit was frequently expressed, both in the interviews, PMs, emails, and in the recruitment thread, this support was not universal, as can be seen in the examples of deleted comments. Further, Gordon described his negative experience with rule enforcement:

I had some push-back pitches and got warned two or three times by moderators, this was maybe about 2 or 3 years ago maybe was the most recent time and I found that a little off-putting. They warned me that my answers were too short, where I felt that I worked very hard to make them nice and succinct, but they didn’t feel like they were up to the standard. And so that gave me some second

thoughts and I suppose I’m kind of always looking over my shoulder when I decide to answer a question. Because I don’t tend to write, I don’t like to write the really long ones that delve into a lot of cul de sacs, a lot of side trips, or irrelevant [information] because I want to answer the question that was actually posed rather than giving a lengthy history of the subject.

Gordon goes on to surmise that the strict rules and active enforcement may discourage people from contributing. Similarly, upon seeing how many comments were deleted in “What is the context to these photos and was it common?” thread, one user came to the same conclusion: “I think everyone is to scared to answer in fear of being banned.” The effect of rules on participation was addressed by Kiene et al. (2016) in their study of a subreddit that experienced a sudden surge in popularity. The authors found that while strong rules helped maintain community norms, they also came with costs such as frustration among experienced users and were perceived as stifling discussion.

### 5.2.3.3 Low self-efficacy

Indeed, low self-efficacy, resulting in large part due to the strict rules that require thorough and well-sourced answers, affected the participation of 13 participants. The breakdown of participants (9 of 18 interviewees) who described low-self efficacy as a de-motivator is shown in Table 33.

**Table 33: Low self-efficacy as a de-motivator in r/AskHistorians**

Participation	Participants (n=13)	Roles	Participants (n=13)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	5
Regular	5	Citizen Historian	3
Veteran	8	Formal Training	5
<b>Depth</b>		<b>In-group role</b>	
Reader	3	No role	3
Contributor	1	Flair	4
Collaborator	4	Moderator	5
Leader	5	Former moderator	1
<b>Frequency</b>			
Rare	1		
Sporadic	3		
Habitual	9		

Feelings of low self-efficacy that affect participation were described by participants with different types of participation, those with different community roles, and among people with varying sources of expertise. Five participants described feeling as though they didn't have the expertise to participate when they first discovered r/AskHistorians. For some, this was a personal choice: "I didn't have the expertise or the knowledge to give really comprehensive answers to the level that I wanted to" (Josh). Two described feeling intimidated, for example, Anna stated: "I was very intimidated because I had in my mind that everybody had a graduate degree or two and that was sort of scary for me." While Anna, a citizen historian, was intimidated due to her perception of other contributors' degree of academic training, Sebastien, who had obtained a master's degree in history, also described initially feeling intimidated. All five of the participants who described feeling low self-efficacy that impacted their initial participation all became regular participants, including four who became moderators. Two of these participants discussed overcoming low self-efficacy upon seeing a response to a question in their area of expertise that they believed had been answered incorrectly.

Anna's sense of other users' expertise as a source of insecurity was also described by five other participants. Three participants described feeling as though they might be capable of responding to the question, but avoided doing so because they knew, or felt, as though someone else could provide a better response:

I know a lot about there are far more qualified people on there that would be able to answer those questions a lot better. I mean, I only know the background of a couple of those mods, just by saying, "Oh, I'm a professor here" or "I'm a grad student here." A lot of it would be that I don't want to answer a question on WWII knowing that a professor from the University of California is the person that's going to be answering this question above mine (Jon).



While four of these five participants were citizen-historians or had no academic history training, participants with graduate degrees in history also expressed a similar sentiment, for example, Brandon stated:

One thing that impresses me about those people is that they do feel comfortable addressing a broader range of subjects. I'm just terrified of embarrassing myself! I don't want to go and write something that I have a pretty good idea about and then just get destroyed by, you know, someone with a little bit more expertise. So I'll usually only comment if I have a really good answer to give or if I'm quite sure in what I have to say.

Learning and understanding the rules of the subreddit also contributed to lack of participation due to low self-efficacy. Oliver had attempted to respond to questions, only to have them deleted: "Which is seeing as I understand the sub rules now, I've kind of came to the understanding of trying not to respond specially to a question unless I'm knowledgeable on the topic and can provide resources to back up my points." As this happens rarely, Oliver has only had the opportunity to respond to one or two questions. Similarly, Helena understands that the rules are strict and that as a non-historian, adequately responding to a question would be more trouble than it was worth: "I would have to read a lot of books and then someone probably would have answered it already. So, I'm not the type of person they want answering a question in the first place."

#### *5.2.4 SUMMARY: COMMUNITY*

r/AskHistorians was seen as a public history site through which tailored, well-sourced answers could be given to those asking questions about history. Because r/AskHistorians is highly interactive, it was seen as overcoming shortcomings of other public history and history education sources, such as living history sites, museums, and books. While this mission was an initial driver for some, it's value as a public history site was not seen by most participants until after they had participated for a period of time; further, it was a motivation held almost exclusively by moderators and former moderators, suggesting that those in leadership roles are more likely to see the value and potential of open discussion spaces as forums that can support learning. As with learning and sharing expertise, the

mission of public history was often described as a highly internalized extrinsic motivation, which was heavily influenced by the personal values of participants. As noted by Ryan and Deci (2000), internalized extrinsic motivations are highly motivating and when fostered can result in high quality learning and creativity.

In order for the mission of public history to be enacted, it is necessary to have an audience. Several lightweight participants recognized the importance of having an audience and acknowledged their role as a member of that audience; however, this was not a strong motivator. Conversely, having an audience was an important aspect of participation for many heavyweight participants. These participants described two key reasons having an audience was important. First, the large audience supported broad dissemination of information; second, interest from the audience allowed these members to justify the study of history. This was described as personal for some, who found that audience interest provided justification for their pursuit of history, while others saw that widespread interest demonstrated that the study of history is important at a societal level. As with public history, extrinsic motivations satisfied by having an audience are also highly internalized, while the extrinsic motivations of being the audience were not. As predicted by Ryan and Deci (2000) the internalized extrinsic motivations were more important to participants. Similarly, these participants were more likely to have engaged in active participation, such as responding to questions, confirming Benkler's (2011) prediction that intrinsic, and in this case, internalized extrinsic motivations, are more likely to encourage active engagement in online initiatives.

While audience is important to the mission of public history, r/AskHistorians' position on Reddit and the wider Reddit audience could be problematic. Reddit's demographic of mostly young white, STEM educated men was seen to affect the questions asked, content promoted, and topics discussed. Topics that typically interest this demographic were described by participants as over-saturated, while they noted that topics and perspectives of the global south and women, were underrepresented. While the over-representation of topics was viewed by participants as problematic, some described the audience as one that could benefit from the high-quality historical education participants saw

r/AskHistorians as offering. The demographic of the audience was not the only problematic feature of Reddit's audience. As Reddit is host to subreddits dedicated to misogyny, racism, anti-Semitism, and other bigotry, r/AskHistorians' audience members sometimes held these beliefs. This was found to affect participation among members of targeted groups.

The rules and their enforcement play a key role for r/AskHistorians participants, particularly in sustaining participation. Interview participants who were subject to the rules were largely supportive of them as they saw the rules as a factor in maintaining the quality and trustworthiness of the information shared through r/AskHistorians with several participants expressing that should the rules change, they would no longer be interested in participating in r/AskHistorians, even as a lurker. However, support was not universal. Concerns included a preference for the more common model of operation on Reddit, which is to let the audience determine quality through upvoting and downvoting; that the rules stifled discussion; and that they prevented participation, even among qualified participants. The difference in perception of the rules is likely a factor of how integrated the rules are to participants' own values (Ryan & Deci, 2000). For example, participants whose values aligned with the rules were motivated to continue to participate, so long as the rules continued to be actively enforced.

Those responsible for enforcing the rules described positive and negative aspects of performing this task. Positive aspects included ensuring that content submitted to r/AskHistorians was high quality and that the community was a safe space for those asking questions. Negative aspects were primarily associated with regular exposure to disruptive behaviour, which could cause depression and frustration over time; for some, exposure to bad behaviour had become normalized. Technical and cultural constructs of Reddit contributed to these negative aspects. The rules and norms of r/AskHistorians differ substantially from Reddit more broadly. The system of upvoting and downvoting means that users new to r/AskHistorians often enter the subreddit in waves rather than trickles. As these users are unfamiliar with r/AskHistorians' rules and norms, their behaviour is disruptive and can occur *en masse*.

The technology of Reddit affects moderators by making some of the work they do visible. As described by Star and Strauss (1999) making work visible can cause risks. In the case of r/AskHistorians, the visible work of moderators deleting comments that break subreddit rules was often seen as censorship by the wider Reddit userbase. The visible removal of comments in combination with norms divergent from Reddit more widely exposed moderators to harassment and abuse. While some of the work moderators do is visible, much is invisible. While Star and Strauss note that visibility can expose people to risks, so too can invisibility. In r/AskHistorians, participants described how calmly responding to questions despite receiving pushback and insults requires emotional labour that often goes unseen. Further, while moderators felt widely supported by regular r/AskHistorians users, they also described experiencing a lack of empathy for the work they do by some.

As described above, subreddit rules are externally imposed, meaning that those driven to comply are only doing so because their motivation is externally regulated. According to Ryan and Deci (2000), “Individuals typically experience externally regulated behavior as controlled or alienated.” As r/AskHistorians rules are strict, unfamiliar, and externally enforced upon new users, they will be less likely to be driven to comply. While support for the rules was not universal, the mission of public history and its outcome of providing a space to exchange historical knowledge was widely supported, and while extrinsically motivated, it was highly integrated into participants’ values, suggesting that there may be broader support for r/AskHistorians *norms* rather than its *rules*.

### 5.3 PEOPLE: INTERACTIONS AND RELATIONSHIPS

This section provides an overview of the importance relationship development and interactions between r/AskHistorians members played (or did not play) in driving and sustaining participation in the subreddit. The first subsection (5.3.1) provides an overview of two different types of relationships developed through participation in r/AskHistorians: collegiality and friendship, as well as the perspectives of participants who had not developed relationships through participation. The second subsection (5.3.2) describes the role of “fandom” on participation in r/AskHistorians. The term fandom is an in vivo

code used here to describe instances where participants derived value from the contributions of and feedback from specific r/AskHistorians contributors. The third subsection (5.3.3) describes challenges associated with interacting with other r/AskHistorians participants, in particular between those who work together as moderators of the subreddit.

### *5.3.1 RELATIONSHIPS*

The term “relationships” is used here to describe prolonged and explicit interactions between participants in r/AskHistorians. Participants described relationships that varied in intensity (i.e., the level of closeness) as well as function (i.e., the purpose of the relationship). When asked about relationships, interviewees who had relationships with other participants described one of two types: 1) *collegial* relationships were focussed on work and, in the case of r/AskHistorians, not close or 2) *friendships*, in which relationships extended beyond the work of moderating r/AskHistorians or discussing history and were often described as relatively close. The development of relationships was a positive outcome of participation for 14 participants, one of whom described wanting to be part of the friendly group of flaired users as an initial driver of participation. The two types of relationships are described in further detail below, with Collegiality addressed in 5.3.1.1 and Friendship addressed in 5.3.1.2. Seven participants noted that they had not developed relationships through participation in r/AskHistorians. The experience of these participants is addressed in 5.3.1.3.

#### **5.3.1.1 Collegiality**

Collegial relationships focussed on work. Interactions were largely limited in scope, often limited to discussions regarding running the subreddit or about history, and rarely extended to discussing their personal lives. Four participants described having collegial relationships with other members of r/AskHistorians. For example, when asked if he would describe any of his relationships as friendships, former moderator Sebastien replied: “We worked very well together. But no, I think friends implies something more.” Moderator, Leah regularly interacted with other moderators as part of maintaining the subreddit. As a non-historian she noted that she would occasionally consult with

moderators who had expertise in history if the quality of a response to a question was unclear. However, she noted that developing friendships was not an important aspect of her participation on the subreddit: “I guess it’s just for me that I don’t want to socialize when I’m doing this. I sort of figure I’ve got enough friends that I don’t spend enough time with! I don’t need more!” Leah described her work as a moderator as a form of volunteer service where the important aspect of her participation was completing moderation tasks rather than socializing.

Several backchannels of communication are available to flaired users and moderators. Flaired users are granted access to a private subreddit. Moderators have access to the private subreddit for flaired users, their own private subreddit, as well as two Slack channels: one for work related discussions and one for fun. Three participants (including one participant who had made friendships) described avoiding the fun Slack channel. The two moderators who described having collegial relationships did not participate in the fun Slack channel because they saw socializing as independent from the work they were there to do as moderators. In the case of one participant, seeing other moderators participating on the fun channel while not contributing to the development or maintenance of the subreddit caused resentment. Challenges associated with inter-personal relationships are discussed in more detail in Section 5.3.3. The breakdown of participants (4 of 22 participants, 3 interviewees, and 1 who sent a private message) who described developing collegial relationships through participation in r/AskHistorians is shown in Table 34.

**Table 34: Development of Collegial relationships with participants of r/AskHistorians**

Participation	Participants (n=3)	Roles	Participants (n=4)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	1
Regular	0	Citizen Historian	0
Veteran	3	Formal Training	3
<b>Depth</b>		<b>In-group role</b>	
Reader	1	No role	0
Contributor	0	Flair	2
Collaborator	1	Moderator	1
Leader	1	Former Moderator	1
<b>Frequency</b>			

Rare	1	
Sporadic	1	
Habitual	1	

Of the four participants who described having primarily collegial relationships with other r/AskHistorians members, two were flaired users, one was a current moderator, and one was a former moderator. Three had received formal training and one had not.

Participation data were not available for one of the four as an interview was not conducted with this participant; however, of the remaining three all were veteran participants, one was a reader, one a collaborator, and one a leader. One participated rarely, one sporadically, and one habitually.

A combination of roles and participation are associated with the development of collegial relationships: those who habitually contribute to the initiative appeared to be more likely to feel as though they had developed collegial relationships with other members. The development of collegial relationships also occurs over time. The existence of backchannels likely hastens the development of collegial relationships particularly as the rules and norms of the main subreddit are designed for the service of question askers and thus prohibit discussions about the subreddit itself unless the post is labelled: “[meta].” Adding a backchannel of communication provided a media type that supported the development of weak tie collegial relationships (Haythornthwaite, 2001).

#### **5.3.1.2 Friendship**

Participants who made friends through participation in r/AskHistorians described these relationships as close and meaningful and included sharing information about each other’s personal lives. Developing friendships was described as an important aspect of participation by ten participants. Friendship was described as a positive aspect of participation and for some, and the friendships they developed played a major role in why they continued to participate. For example, moderator Josh stated: “without that part [friendships] I probably would have faded out a long time ago.” Another participant, former moderator but current participant Jamie, described friendship as having a similar role: “I would say that is the number one reason for continued involvement. I like the

people I'm hanging out with.” These friendships were often described as unique. Participants described how they would bore offline friends and family by talking about history, whereas r/AskHistorians provided them with an outlet in which they could engage in or read discussions with people who shared their love of history. For example, Steven said: “it’s the sort of stuff that would bore most of my friends to death with, so here’s a whole group of people who are here specifically to ask about my passion.”

For others, friendships were described as important, but not vital to their participation; rather, friendships with other participants were described as ‘icing on the cake.’ For example, moderator Kelcey stated:

If I didn’t enjoy answering questions and helping people out with the questions that they have, those relationships would not keep me there otherwise. They’re like the icing on the cake. They make it much more enjoyable and happy and something I enjoy doing, but they’re not why I eat the cake.

The breakdown of participants (11 of 22 participants, 8 interviewees, and 3 who sent a private message) who described friendship development as a chosen motivator is shown in Table 35.

**Table 35: Friendship Development as a chosen motivator in r/AskHistorians**

Participation	Participants (n=8)	Roles	Participants (n=11)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	0
Regular	4	Citizen Historian	4
Veteran	4	Formal Training	7
<b>Depth</b>		<b>In-group role</b>	
Reader	0	No role	0
Contributor	0	Flair	1
Collaborator	1	Moderator	8
Leader	7	Former Moderator	2
<b>Frequency</b>			
Rare	0		
Sporadic	1		
Habitual	7		



Moderators and former moderators described developing friendships as an important aspect of their participation. Most participants who described developing friendships with other participants had academic training history and three were citizen historians. Of the eight with whom interviews were conducted, four were veterans and four were regular participants, all but one (a collaborator) were leaders, and all but one (a sporadic participant), participated habitually. It is likely that a combination of the type of contribution to the initiative as well as dedication to the study of the topic supports the development of friendships. Those who spend a considerable amount of time studying history academically or on their own likely value having friendships with other like-minded people and collaborative moderation work provides more opportunities for participants to get to know one and other.

When asked what role friendship plays in their participation, participants described its importance for professional and personal support. Professional support was also mentioned by a participant who described his relationships as collegial, indicating that close friendships are not required for this type of support.

#### *Professional support*

As discussed in Section 5.1.1., much of the professional support received by participants was in the form of skill development. Participants exchanged drafts of papers, cover letters, and resumes for feedback. This was particularly valuable for participants early in or soon to be starting academic studies in history. Professional support was also given in the form of advice. The importance of this kind of professional support was described by Robert:

talking with them about interests and problems and things they had experienced was really helpful and kind of giving me confidence that I had made a good choice. And that the problems I was having were problems that everybody else was having.

While some public r/AskHistorians posts provided professional advice, much of the targeted professional support between friends was provided via backchannels. The

professional support experienced by these participants support findings by Gilbert and Paulin (2015), whose social network analyses demonstrated that experts occupied highly central positions in a Twitter-based backchannel. High levels of centrality placed experts in positions from which they could easily share expertise with novice participants. The backchannels of r/AskHistorians serve as further evidence that r/AskHistorians serves as a community of practice, where novice and citizen historians can learn through interactions with experts (Vygotsky, 1978; Wenger-Trayner & Wenger-Trayner, 2015).

### *Personal support*

In addition to providing professional support, participants, such as Mable, also described friendships as a source of personal support: “those of us that are more active get to know about each other's lives and give sympathy/congratulations when necessary.” Social support is not only extended when needed for life events outside of r/AskHistorians, it is also important when members are the target of abuse as a result of participation in the subreddit. When asked what kept u/commiespaceinvader going after the abusive and emotionally taxing comments he received when responding to the question regarding the context of the photos of women performing sex acts, he responded:

In the immediate aftermath of that thread I felt awful . . . What kept me going after that particular thread and after similar incidences in particular is not just the conviction that AskHistorians . . . is something worthwhile doing overall but in the more immediate situation, first, some of the messages of support and understanding I received in the thread and also via pm and equally important the support and understanding from fellow moderators. Being able to talk about these things and voice these feelings of awfulness almost immediately as well as voice the desire to throw the lap top across the room in the setting of a group of people who understand these emotions and are supportive of expressing them, show understanding, and support self-care was and remains a major part of what makes me continue my participation.

As moderators are at the forefront of managing disruptive behaviour, friendships provide social support that can help alleviate ill effects of regularly interacting with challenging

or abusive users. As noted above, the majority of those who made friends described friendship development as a positive byproduct of participation. It is likely that friendship plays a key role in sustaining participation among subreddit leaders because the responsibility of moderating r/AskHistorians can be taxing.

#### **5.3.1.3 No relationships**

While the majority of participants described forming some type of relationship with other members of r/AskHistorians, seven participants did not. Of these seven participants, only two expressed either a desire to develop relationships with other participants in the future or a sense of loss from not having developed relationships. Travis had recently applied for and was awarded flair in his area of expertise. As noted above, flaired users are granted access to a private, flair-only subreddit. When asked if he participated in discussions on the private subreddit, he responded: “To be honest, I’m a little bit intimidated by commenting there. At the moment, because it’s been so recent since I’ve joined, and they know each other much better than I do.” When asked if he planned on joining discussions in the future, Travis responded:

Yeah, once I establish myself a little bit more I would. I also have this sense that, even though I know that many of them are university students, not all of them are and it sort of feels like this imposter syndrome type thing at times.

Not only does lack of self-efficacy lead to a lack of participation, as discussed in 5.2.3.3, but it can also be an impediment to the development of relationships. When Helena, a lurker, was asked about downsides to participation in r/AskHistorians, she described how developing relationships with other participants could improve her experience:

I think that you could probably get a lot of reward out of having that unique community where you do actually communicate with people that you don’t know in person that you’ve never met, and they don’t live anywhere near you, but you still interact with. Especially one that’s an intellectual interaction like they have in [r/AskHistorians].

For Helena, relationship development with other r/AskHistorians members was not necessarily something she desired for herself, but she did see benefit to it.

While Helena and Travis discussed varying degrees of interest in relationship development, the remaining five participants did not. For example, when asked if he had developed any relationships with other r/AskHistorians members, Oliver responded: “I’ve not made any real stable relationships. But then again that isn’t one of my goals on r/AskHistorians.” Earlier in the interview Oliver had described his goals for r/AskHistorians as using it as tool of self-enrichment. r/AskHistorians was a place where Oliver could engage in life-long learning by asking questions, reading responses, adding to his reading list, and occasionally providing responses. Similarly, Jon’s goals were to also use r/AskHistorians as a tool. However, for Jon r/AskHistorians was a way for him to cross-check and verify information. While relationship development was not one of his goals, the reasoning behind Jon’s lack of relationship development was not related to r/AskHistorians; rather, Jon expressed an aversion to developing online relationships in general:

I don’t like interacting with online communities. I don’t. I just don’t . . . enjoy it. Like, I feel like any, whether it’s Facebook or anything like that, it’s not an area of my life I want to expand into . . . I’m just not interested in interacting with strangers in that sort of way.

This aversion extends from Jon’s previous online experiences. After taking a leadership role in the game World of Warcraft and engaging heavily with Facebook, Jon made a conscious decision to avoid engaging in online interactions altogether.

The breakdown of participants (7 of 22 interviewees) who noted that they had not developed relationships through participation is shown in Table 36.

**Table 36: No relationship development through participation in r/AskHistorians**

Participation	Participants (n=7)	Roles	Participants (n=7)
Length		Level of Expertise	
Newbie	0	Untrained	4

Regular	5	Citizen Historian	2
Veteran	2	Formal Training	1
<b>Depth</b>		<b>In-group role</b>	
Reader	3	No role	4
Contributor	1	Flair	3
Collaborator	3	Moderator	0
Leader	0	Former Moderator	0
<b>Frequency</b>			
Rare	0		
Sporadic	1		
Habitual	6		

Of the seven participants who had not established any sort of relationship with other r/AskHistorians members, all participated habitually; five were regulars and two were veterans; three were readers, three were collaborators, and one was a contributor. Four had no role in the community while three had flair. Four had no academic training in history, two were citizen historians and one had training. None of seven participants played a leadership role in r/AskHistorians.

While applying for and receiving flair requires active participation in r/AskHistorians, active participation appears to be independent of relationship development. Rather, relationship development seems to be more related to the role played in the community. Those who are, or were moderators develop relationships through collaborative maintenance of the subreddit.

### 5.3.2 FANDOM

In addition to relationships with others, participants described a type of interaction that could be likened to fandom, in which participants described an appreciation for the contributions of specific users or derived particular encouragement when receiving attention from specific users. These two aspects of fandom are described below.

Eight participants described enjoying reading the contributions of particular contributors to r/AskHistorians, including moderators and flaired users. Typically, they would describe reading anything written by a particular contributor, even if it did not align with their general area of interest, or even checking the post histories of these users to see if

they had responded to any questions recently. In these cases, particular contributors were treated similarly to well-known authors; for example, as stated by Jon: “I’m a fan of a couple of the mods.”

While audience attention was more frequently mentioned as an aspect of participation (see Section 5.2.2), two users described recognition from moderators as motivating. Oliver described his reaction to the response he received after posting one of his first answers to a question: “The responses, especially from the guy that asked it, was ‘you’re a rock star! thank you!’ . . . It made me feel awesome and he was a moderator too, so wow! You know? Wow! That’s a pretty big compliment!” As a further source of pride, another moderator submitted his answer to the Sunday Digest post where moderators and users submit interesting and overlooked posts. Similarly, Anna, a first-generation university graduate, described how it felt to be asked to be a member of the moderation team:

for me these people with shiny MAs and PhDs after their name, they were the intellectuals. They were powerful. They were way smarter than me and all the rest of this stuff and they wanted me in their treehouse. Okay! I will come!

This is consistent with Haythornthwaite’s (2009) description of heavyweight communities in which receiving recognition from a high-ranking member, such as a moderator, is more valuable than recognition from others.

Table 37 provides a breakdown of the roles and types of participation of participants (8 of 18 interviewees) who described having a fan-like appreciation for other members of r/AskHistorians.

**Table 37: Fandom in r/AskHistorians**

Participation	Participants (n=8)	Roles	Participants (n=8)
<b>Length</b>		<b>Level of Expertise</b>	
Newbie	0	Untrained	3
Regular	4	Citizen Historian	2
Veteran	4	Formal Training	3
<b>Depth</b>		<b>In-group role</b>	
Reader	2	No role	2

Contributor	1	Flair	4
Collaborator	4	Moderator	1
Leader	1	Former Moderator	1
<b>Frequency</b>			
Rare	1		
Sporadic	2		
Habitual	5		

Deriving value from the contributions of and feedback from particular users did not require an explicit relationship. Two participants, one reader and one collaborator, described how they would feel if the people they admired left r/AskHistorians. Travis stated, “I would notice their absence.” And Jon stated, “I wouldn’t shed a tear, but I would notice.” Thus, this aspect of fandom is a form of latent tie where a connection between the fan and the ‘celebrity’ is available but is does not require interaction (Haythornthwaite, 2002).

The level of participation, role, and level of training in history does not seem to factor into the development of fan-like relationships in r/AskHistorians, as participants ranged from readers to leaders, played each potential role in r/AskHistorians, and could be untrained, self-trained, or academically trained in history. Rather, gaining an appreciation for the expertise held by others in the community is likely a factor of time. Of the eight participants who described fan-like appreciation for other members of r/AskHistorians, all had subscribed to the subreddit for at least one year and four had been subscribed for at least four years; five read the subreddit at least once a week and the two who participated less than that were a moderator and a former moderator, suggesting that at one time their participation was habitual.

The vast majority of relationships and interactions with other r/AskHistorians participants, from friendship to fandom, were described in positive terms. However, some interactions were described as challenging. The following section discusses these challenges.

### 5.3.3 CONFLICTS

The conflicts discussed in this section refer to those between r/AskHistorians participants who act in good faith when participating and does not refer to interactions with disruptive or abusive users. Six participants, all current or former moderators, described negative aspects of interactions with others. The majority of the conflicts referenced in interviews and private messages were between members of the moderation team. While two participants referred to conflicts between flaired members of the community, these conflicts were only mentioned in passing. Thus, the following discussion is specific to conflicts between moderators.

Conflicts between moderators are largely kept to the backchannels, as noted by Steven: “The moderator community does one really good thing with our drama, which is that we manage to keep it out of the public eye. And holy shit does that take some effort!”

However, while these conflicts may be hidden from the public eye, they take a toll on the moderators themselves. Two former moderators noted that conflicts with other members of the moderation team played a role in their decision to step down. Conflicts also had an impact on current moderators, affecting their emotional well-being, the impression they had of the subreddit, as well as how they chose to participate. For example, one participant described conflict between moderators as taking a higher toll on him than the regular abuse, racism, sexism, and xenophobia he regularly encounters through his work as a moderator. Another moderator, Robert, described how these conflicts resulted in a paradigm shift regarding the subreddit:

I had been under the impression that most people were responsible adults. Sometimes there's petty disagreements on the mod team that lead to someone quitting in a furious rage that, I guess kind of, I don't want to say is disappointing, but that's probably the best way to say it because I thought all these people were great folks who are doing a wonderful public service and they're all on board and it's such a great group of friends and family. But then you get stuff like that that happens and you're like, Oh. Maybe this isn't the place for me and I don't want to have to deal with more drama like this. This isn't high school.



While some moderators were willing to engage in the conflicts, two participants actively avoided conflicts by reducing their participation in the backchannels and limiting backchannel interaction to business-as-needed.

#### **5.3.3.1 Causes of conflicts**

In discussing conflicts between members of the moderation team, three interrelated causes emerged: organizational structures, including unequal participation within the moderation team; personal differences between moderators, often as a result of differences in opinions regarding how the subreddit should operate; and technological structures of Reddit that force an implicit hierarchy.

##### *Organizational structure of the moderation team*

In theory, the moderation team is non-hierarchical: each member has one vote. As Steven describes, this structure is problematic: “if you get a board of 36 people with no hierarchy and try and get them to decide on the time of day they’ll still struggle, so it is incredible that we manage to get anything done.” Yet, Steven acknowledged that the day to day running of the subreddit was generally smooth; conflicts tended to arise when a consensus was required to make a decision. Former moderator, Sebastien also described this problem and his proposed solution: rather than requiring consensus, the moderation team could be broken up into sub-teams, each with its own responsibility:

You have groups and they can decide and they can act quickly because if you only have to discuss things with three people it’s quicker than when you have to discuss them with 20 or 30 people. One moderator, or two disagreed with that. The two moderators who do 0 to 1% of the mod actions, which is a shame. They said everything’s fine. I disagreed.

Sebastien was not the only participant who acknowledged difficulties arising from an unequal distribution of labour. Two others also noted this issue:

the other hidden problem, and one that is a real issue for me is lack of participation from a number of members of the team. We have 35 moderators,

but I think at any given time, 10 of them do about 90% of the actual official workload (Steven).

It was not only accepted that participation would ebb and flow but encouraged as a way to avoid burnout; however, prolonged infrequent contribution was frowned upon. In fact, one moderator (not included in the six who discussed conflict) was considering stepping down because she felt as though she was no longer contributing enough. Yet, moderators whose contributions were limited to decision-making rather than the day to day operation of the subreddit often remained as moderators. This was in part because there was no internal performance review or activity requirement to remain a moderator.

### *Technological structure*

Although r/AskHistorians does not operate as a hierarchy, there is a technological construct that is a feature of Reddit that creates an implicit and artificial hierarchy. When a Reddit user creates a subreddit, they are automatically a moderator. When the subreddit creator adds other moderators, they are added to a list in the order in which they were added. Moderators can only be removed by moderators who are higher on the list than they are. The founder/top moderator of the subreddit can either voluntarily step down, the moderation team can submit a petition to Reddit administrators who decide whether or not to remove the top moderator, or the administrators can remove the top moderator without the support of the moderation team.

The result of this ranking and removal system is that moderators near the top of the list have more power than those at the bottom of the list: few people have the power to remove those at the top, yet they have the power to remove anyone below them. Therefore, while consensus is sought, if the top moderators do not agree to a proposed policy change supported by newer moderators, it is unlikely that the change will be implemented.

Wielding removal power as a weapon was described by one participant. A moderator who was relatively high on the list was involved in a conflict with a moderator listed below them. Before quitting the moderation team, the higher ranked moderator removed

the lower ranked moderator with whom they had a conflict. While the removed moderator was invited back to the mod team, they could not be restored to their original rank on the list and were instead added to the bottom.

Another result of this system is that it disincentivizes people who no longer contribute to the regular operation of the subreddit to leave voluntarily: “we do have a couple of members of the team who are literally only there because we have no capacity to remove them” (Steven). This is the case with r/AskHistorians founder, u/Artrw, who, as of May 2018, had last posted a public comment in r/AskHistorians in August 2017 and whose last public participation as a moderator was July 2016.

Our head mod is technically /u/artw, who is completely not doing anything on Reddit these days and is only accessible by a couple of mods on Facebook (but who doesn't want to give up the sub) - so there's no real "authority" present. (Mable).

### *Personal differences*

Participants described personal differences as arising from differences in opinion regarding the way the subreddit should be run, including differing approaches on how to handle behaviour from non-moderator contributors to r/AskHistorians that is acceptable on Reddit as a whole but is banned from r/AskHistorians. The rules regarding behaviour are stated in the post advertising applications for flair:

We invest a large amount of trust in the flaired members of /r/askhistorians, as they represent the subreddit when answering questions, participating in AMAs [Ask me Anything], and even in their participation across Reddit as a whole. As such, we do take into account an applicant's user history Reddit-wide when reviewing an application, and will reject applicants whose post history demonstrate bigotry, racism, or sexism. Such behavior is not tolerated in /r/askhistorians, and we do not tolerate it from our panelists in any capacity. We additionally reserve the right to revoke flair based on evidence of such behavior

after the application process has been completed. /r/AskHistorians is a safe space for everyone, and those attitudes have no place here (Georgy\_K\_Zhukov, 2017).

However, in practice, what constitutes bigotry, racism, or sexism is not always clear. Personal differences arising from varying opinions in how this rule should be implemented were at the heart of Sebastien's decision to leave the subreddit. When discussing whether or not a particular flaired user should be banned for comments made in another subreddit, Sebastien suggested that because Reddit has a global user-base, they should confirm with the user that the comment was indeed grounded in racism rather than a mistake based on culture, which he compared to the use of blackface in the United States versus dressing up as Zwarte Piet.<sup>17</sup> While the moderator team disagreed with him and decided to ban the user without further discussion, Sebastien claimed that after this discussion another moderator on the team repeatedly accused him of racism. After months of the conflict going unsolved, Sebastien chose to leave the moderator team.

Another example of a personal conflict arising from how a rule should be implemented was shared by a current moderator, Steven. This excerpt from the rules in r/AskHistorians shows that usernames should not contain hateful language:

If your user account's name is something that would be unacceptable on a post - bigoted or hateful slurs, references to sexual violence, and so on - that user account will be banned on sight. We recommend you use an account with an innocuous name when posting on /r/AskHistorians.

Shortly after joining the moderator team, Steven argued that this rule was too limited and should extend to other types of usernames, such as "shitfacemcfucklord," as it was his belief that having questions asked by users with what he described as childish nicknames reflected poorly on the subreddit. However, he eventually conceded:

I understand why that is the line we draw now, because we can't draw any other line. It's so hard for us to maintain consistency for what is and isn't an

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<sup>17</sup> A character in Dutch folklore in which those depicting him wear blackface. Whether or not dressing up as Zwarte Piet is a racist act is hotly debated, even in the Netherlands.

appropriate username, particularly on Reddit where so many usernames are so childish. (Steven)

Conflicts arising from personal differences such as these highlight the challenges faced by moderators in running r/AskHistorians on Reddit where the values and ethos of one is in stark contrast with the other.

#### **5.3.3.2 Conflict resolution**

As a response to the interpersonal conflicts that arise, the moderators developed a mediation policy. Two moderators described the enactment of a formal mediation policy as a relatively recent development and described the mediation role as important to them. For example, Mable stated,

I don't mind it, and I actually like helping to resolve disputes in general . . . it's emotional labor, but it's a welcome kind? It's constructive, it's not in person (important! I am not bold enough in person), and it's challenging.

Steven, who described spearheading the development of the mediation policy, expressed pride in his ability to successfully mediate conflicts:

I am very good, somehow, at conflict resolution and that means that my relationships both with the mods and the flairs are covered by that because I tend to be the person, or one of the people, talking folks down from being at each other's throats when it gets to that point, as it does. I guess you could call me the HR of the moderator community.

I am uncertain whether or not a formal mediation policy was in place before Sebastien left the subreddit; however, he did describe engaging in mediation with several different mediators over the course of several months in an effort to resolve the conflict. However, in his case this mediation failed to successfully resolve the conflict.

#### **5.3.4 SUMMARY: INTERACTIONS AND RELATIONSHIPS**

The majority of participants in the study had developed various kinds of relationships with other r/AskHistorians participants; these participants tended to be veterans,

collaborators, leaders, and habitual participants. The types of relationships developed between members were described as either friendship or collegial. While often friendly, participants also reported conflict. Collegial relationships were developed by participants who saw their participation in r/AskHistorians as work-like. Collegial relationships were preferred by these participants, who often avoided backchannels dedicated to off-topic discussions as well as meeting in-person.

Those who had developed friendships described them as an important aspect of participation; for some, friendships were the key factor in sustaining their participation on the site. Friendships provided both personal and professional support. As moderators were regularly exposed to disruptive and abusive behaviour, personal support was particularly important in helping them cope. As described above, the work of moderation involves a great deal of invisible emotional labour. While not all moderators had developed friendships, among those who had, several expressed that the social support provided by friends was key for sustaining their participation and described discussing their experiences with friends who understood what they were going through as a form of self-care.

Managing relationships developed through participation could also be challenging; however, challenges were only expressed by members of the moderation team who came into conflicts when working together towards the common goal of managing r/AskHistorians as a public history site. While most conflicts arose from personal differences, they were exacerbated by the hierarchy imposed by Reddit's system of ranking moderators based on how long they had been members of the moderation team rather than the amount or quality of the work they do. Conflicts affected the emotional well-being of participants and were the primary cause behind some participants' desire to leave the moderation team and the subreddit entirely. In an attempt to manage conflicts, the moderation team developed a mediation system, whereby conflicts between moderators could be managed with the help of others.

Those who had not developed relationships through participation in r/AskHistorians typically had lightweight participation, although some participated actively, either by

responding to or asking questions. The majority of these participants were content with not having developed relationships; only one described potentially developing relationships with other r/AskHistorians participants in the future.

A final type of interaction between members was identified. The term ‘Fandom’ was used here to describe instances of participants placing high value on the contributions of and feedback from specific members of the community. Both light and heavyweight participants expressed fan-like sentiments towards others in the community. Placing particular importance on particular members of a community is a feature of online communities (Haythornthwaite, 2009). The openness of r/AskHistorians means that while not everyone has the expertise or desire to participate actively, even those who do are not practicing or training historians. Fandom lends further support to the idea that all participants can derive some of the benefits associated with communities of practice without having to contribute. r/AskHistorians provides a learning environment in which latent ties between readers and active participants facilitate learning (Haythornthwaite, 2002). Further, the development of fan-like relationships shows that explicit relationships are not required for participants to learn from More Knowledgeable Others (Vygotsky, 1978).

#### 5.4 SUMMARY: R/ASKHISTORIANS

This chapter presented the results of analysis of 18 interviews, four discussions via email and private message, as well as observation with participants of r/AskHistorians. Results of this analysis demonstrate members’ motivations to participate, including the role of learning and knowledge exchange as motivations. Further, it provided an overview of motivations that were described by those who participated in a variety of ways and held different roles. This summary makes note of how each of the research questions were addressed in the results above.

##### *5.4.1 MOTIVATIONS TO PARTICIPATE*

Before research questions two and three can be addressed, motivations to participate must first be identified. This section summarizes r/AskHistorians members’ motivations to

participate and responds to the fourth research question, which asked about the particular role of learning as a motivator.

r/AskHistorians uses a question and answer format to discuss history; thus, it was expected that motivations related to learning and sharing expertise as part of *knowledge exchange* would be described by participants. Participants discussed learning a variety of topics through participation, including learning about the past, present, and human nature. r/AskHistorians was described as a unique space for learning about history due to the high quality, in-depth, and well-sourced responses to questions. While learning about the past and present were described as motivations by those who participated in different ways, learning about human nature was most often described by moderators as an outcome of managing disruptive behaviour. In addition to learning new subjects, participants also described learning expertise. For example, participants learned more about the professional practice of history. This motivation was particularly valuable for those with no formal history training and was often described as the only place they had learned about historical methods. Learning was also described as unexpected. The size and popularity of the subreddit meant that participants saw questions asked that they never would have anticipated being interested in. Unexpected learning was described by those who participated in a variety of ways and all levels of expertise, highlighting cross-domain learning among experts as well as novices. Finally, learning was described as accessible by those with no formal training in history. r/AskHistorians provided a space in which academic-like discussions could be had without perceived institutional barriers, such as the high price of books and database subscriptions.

While those who participated in a variety of ways and across sources of expertise described learning through participation, sharing knowledge was a motivation held by collaborators, leaders, citizen historians, and those with formal training. For citizen historians, r/AskHistorians was unique. Academia has a high barrier to entry whereas the only requirement to share expertise on r/AskHistorians is to follow certain standards of posting to maintain quality. Thus, r/AskHistorians provides a unique space in which a knowledgeable public can not only learn about history but can also *be* authors. A number



of factors led to participants sharing their expertise, including self-efficacy, the potential to earn flair denoting expertise, seeing an error to correct, filling a perceived gap in expertise, bringing enjoyment to others, and promoting historical thinking. While participants described sharing expertise as rewarding, they also described drawbacks, such as expending emotional labour.

In addition to knowledge exchange, participants also described three aspects of the *community* among their motivations to participate in r/AskHistorians: the subreddit's role as a public history site, audience, and rules and moderation. Participants who described the mission of public history were often moderators who often ranked it as their most important motivation. As one of the world's largest public history forums, r/AskHistorians was one of the few places participants with formal training and those who are self-taught could share their knowledge with the wider public. Further, the question and answer style engagement allowed participants to interact with the public. Not only could experts provide targeted responses to highly specific questions, but they could engage further through follow-up questions and even friendly debate.

A public history site would not exist without an audience; indeed, serving as the audience as well as having an audience were both described as motivations by participants. Serving as the audience was described as important to several participants, the majority of whom were readers. While these participants acknowledged the important role of an audience, their role as the audience was not viewed as a strong motivator to them. However, those who valued having an audience described it as an important motivator. The size of the audience as well as quantitative measurements of reach and success through Reddit's karma system were important to participants. Further, having an interested audience provided participants with justification for the study of history as it showed that history is an important topic to study because people are interested in it and that they had made a sound academic or career choice in studying a topic that many people valued.

However, Reddit's audience also brought challenges. First, the demographic of primarily young, white males were observed to ask and upvote questions that reflect stereotypically young, white, male, interests. The result was that some topics were over-saturated while

others were under-represented. Further, the audience was observed to lack empathy for historical subjects unlike themselves by asking questions that were insensitive to the experiences of these subjects and making jokes at their expense. In addition to the demographic, Reddit is host to subreddits that promote sexist, racist, and bigoted ideologies. These users are free to participate in r/AskHistorians and participants described contending with those espousing such ideologies. Finally, Reddit more widely operates under a culture of free speech, meaning that the voting system alone should dictate content seen. However, r/AskHistorians has strictly enforced rules designed to maintain the quality of content shared through the subreddit. New participants, particularly those entering r/AskHistorians upon seeing a highly upvoted post, were often not supportive of the rules and engaged in disruptive behaviour. Reddit's demographic and culture affected participation in several ways: first, participants with expertise in areas that diverge from popular interests found that opportunities to share their knowledge were rare; second, those in minority groups, such as women, engaged in identity management and self-censorship to avoid gender-based abuse and harassment; and third, despite potential career advantages, participants were hesitant to discuss their participation in r/AskHistorians outside of Reddit. To mitigate these downfalls, moderators have responded by encouraging empathy in responses to questions, seeding the subreddit with questions and discussions of topics that rarely arise organically, and deleting offending questions and comments.

The development of rules and their enforcement through moderation were supported by study participants because the rules ensured r/AskHistorians remained a safe space and because they encouraged high quality content. Those responsible for enforcing the rules were driven to do so for a variety of reasons, including maintaining community ethos and reciprocity. However, rule enforcement also exposed these participants to disruptive behaviour, harassment, and abuse which occurred with enough frequency that for many it had become normalized. Recipients of rule enforcement were often supportive of the rules, with several participants describing that should the rules change, they would no longer be interested in participating. While the majority of interview participants were supportive, support for the rules was not universal as some believed that they were too

strict and thus discouraged participation. Indeed, low self-efficacy was described as a common deterrent to participation in r/AskHistorians.

Finally, participants described motivations related to *people and interactions*. Participants described developing two degrees of relationships with others: those that could be described as collegial and friendships. Collegial relationships were work-like and not often described as an important aspect of participation. Conversely, most participants who developed friendships described these relationships as a primary factor of sustained motivation as these friendships provided valued professional and personal support. Personal support was particularly important for those affected by harassment and abuse. While the majority of participants had developed relationships, some had not. While several of these participants described advantages associated with relationship development, most were satisfied by reading the subreddit rather than engaging with others. In addition to relationships, participants also described feelings akin to fandom for prominent r/AskHistorians members. These participants highly valued the contributions of particular members. They also found attention from these members to be particularly rewarding. While most interactions with other r/AskHistorians members were described as positive, moderators also described conflicts with other moderators. Conflicts between moderators were described as negative and at times resulted in disengagement from the subreddit. To mitigate the effects of conflicts, moderators developed a mediation policy.

#### 5.4.2 MOTIVATIONS AND PARTICIPATION

The second research question asked about patterns between types of participation, such as length, depth, and frequency, and motivations to participate. Table 38 provides an overview of motivations commonly described by participants within each facet of participation. Data from this table are derived from interviewed participants only.

Motivations were included in the table if two thirds of participants in each facet described it as a motivation. If a motivation was not expressed by two thirds of the participants in any facet it was not included in the table. Because none of the interviewed participants were newbies, no information is available about this group. Only one participant was a

contributor and one participated rarely. Thus, motivations listed for these groups reflect these individuals' motivations for participation.

**Table 38: Motivations and participation in r/AskHistorians**

Motivations	Participation									
	Length			Depth				Frequency		
	Newbie (n/a)	Regular	Veteran	Reader	Contributor	Collaborator	Leader	Rare	Sporadic	Habitual
Interest in the topic		✓	✓	✓	✓	✓	✓	✓	✓	✓
Learning about the past		✓	✓	✓	✓	✓	✓	✓	✓	✓
Learning about human nature					✓		✓			
Learning how history is practiced				✓	✓	✓			✓	
Skill Development					✓		✓			
Unexpected learning		✓	✓	✓	✓	✓		✓	✓	
Accessibility				✓	✓				✓	
Sharing expertise		✓	✓		✓		✓	✓	✓	✓
Public history							✓	✓		
Serving as audience					✓					
Having an audience			✓					✓		
Low self-efficacy			✓	✓	✓	✓	✓	✓		✓
Collegiality								✓		
Friendship							✓			
No relationships					✓	✓				
Fandom					✓	✓		✓	✓	

All participants were interested in history and learning about the past. In addition to these motivations, regulars were also interested in sharing their expertise and described instances of unexpected learning. Veterans also shared these motivations, but also described the importance of having an audience as well as low self-efficacy. High levels

of low self-efficacy among veteran participants may be reflective of learning new information. A common sentiment among those who reported low levels of self-efficacy was that the more time they spent in the community the more they learned and the more they realized how little they knew.

In addition to learning about the past, readers were interested in learning about how history is practiced and reported unexpected learning. An important aspect of r/AskHistorians was that the information they learned through reading was not only novel, but that it was also accessible. There was considerable overlap between readers and participants who were untrained, which is discussed in detail in 5.4.3. In addition to the motivations described by readers, the contributor and collaborators also described motivations associated with active participation, such as sharing expertise and skill development. That these motivations were also described by the contributor suggests that high levels of active contribution may not be needed for these motivations to be satisfied. Many leaders reported public history as their primary motivation to participate. They also described learning more about human nature through participation, often describing learning how to detect biases and the pervasiveness of bigotry. Friendship was a key aspect of sustained participation, particularly as these friendships provided emotional support that helped leaders cope with negative aspects of participation, such as managing disruptive behaviour and being targets of abuse.

The participant who rarely read or contributed to r/AskHistorians was a former moderator and thus shared many of the same motivations as leaders, such as public history. Those who participated sporadically described the information learned through participation as accessible. These participants were also interested in sharing their expertise, suggesting that some sporadic participants may participate more when topics discussed align with their areas of interest or expertise. Despite sporadic participation, these participants described feelings akin to fandom towards other participants, suggesting that habitual participation is not required to develop an appreciation of the contributions of specific members in r/AskHistorians. Habitual participants were also motivated by sharing expertise. While sporadic participants may be motivated when topics align with their area

of interest or expertise, others may have more general interests and thus tune in regularly or may tune in regularly so as not to miss an opportunity to share expertise. Habitual participants also described low levels of self-efficacy. As noted above, this may be because habitual participation afforded more opportunities for these participants to learn how much they did not know.

#### 5.4.3 MOTIVATIONS AND ROLES

The third research question asked about patterns between roles and motivations to participate. Table 39 provides an overview of motivations commonly described by participants within each role. Motivations were included in the table if two thirds of participants in each role described it as a motivation. If a motivation was not expressed by two thirds of the participants in any role it was not included in the table. While two different types of roles were examined in r/AskHistorians, in-group role overlapped with participation depth, which used Preece and Shneiderman's (2009) Reader to Leader framework. In other words, leaders and moderators shared the same motivations, as did collaborators and flaired users, and those with no formal role and contributors and readers. The one exception was a former moderator who was a current reader. Because of the overlap between these roles and depth of participation, results from in-group roles r/AskHistorians are not addressed in this section to avoid repetition with the previous section.

**Table 39: Roles and motivations in r/AskHistorians**

Motivations	Roles		
	Untrained	Citizen historians	Academic training
Interest in the topic	✓	✓	✓
Learning about the past	✓		✓
Learning about human nature			
Learning how history is practiced	✓		

Skill Development			
Unexpected learning	✓		
Accessibility	✓		
Sharing expertise			✓
Public history			✓
Serving as audience			
Having an audience			✓
Low self-efficacy			
Collegiality			
Friendship		✓	✓
No relationships	✓		
Fandom			

In r/AskHistorians, few motivations met the two thirds threshold established to identify a particular motivation as important to participants with a given role. Only two motivations were described by two thirds or more of citizen historian participants: interest in the topic as an initial motivation and friendship as a factor of sustained participation. Motivations among members of this group are not homogenous. While they are self-trained, these participants come from different backgrounds and bring varied expertise to the initiative, which may provide an explanation for their varied motivations. While those with no training were less likely to develop relationships with other r/AskHistorians participants, they were able to learn about the past by reading responses to questions they would have never thought to ask, nor would have thought would be interesting. Those with formal training saw r/AskHistorians as a place to share their expertise. These participants placed more emphasis on the role of r/AskHistorians as a public history site where experts could engage with an interested audience. Those with formal history training also learned more about history, particularly through reading contributions by those who conduct research in areas different from their own. They were also likely to value and develop friendships with other participants by connecting with others over a shared love of history.

Roles in r/AskHistorians highlight the directionality of knowledge exchange. Those with formal training see r/AskHistorians as a public history site through which to share and promote historical thinking; those with no formal training see r/AskHistorians as a space that provides accessible historical information. As noted above in the discussion of audience, those with varying roles participate in ways that gratify the motivations of participants in other roles, highlighting that not only can a particular initiative gratify the needs of its participants (Katz et al., 1973), but so can members of the initiative.

\* \* \*

#hcsmdca and r/AskHistorians share similar characteristics. For example, both are open platforms devoted to discussing a particular topic. Thus, the overarching motivations, *knowledge sharing*, *community*, and *people and interactions* are the same. The next chapter discusses similarities and differences in motivations between the two initiatives.



## 6. DISCUSSION: COMPARING CASES

The research presented in this dissertation set out to examine a variety of factors that impact motivation to participate in online initiatives, including the type of initiative, the ways people participate, and the roles they take. To explore motivations to participate, in-depth interviews were conducted with members two open, online initiatives: #hcsmdca and r/AskHistorians. These two cases present different models of online learning and knowledge exchange: the former with a focus on interests in healthcare, and Twitter as its principle technology; the latter with interest in history, and Reddit as its principle technology.

While each technology provides an open platform that allows people with varied expertise to participate, there are significant differences between the sites, such as named interaction in #hcsmdca versus pseudonymous interaction on Reddit; and an interaction culture rooted in professional norms in #hcsmdca versus one that is rule-based in r/AskHistorians. As will be discussed in the chapter below, these similarities and differences affect individuals' motivations for participating in each initiative. Thus, each initiative has motivations that overlap, while others differ. Overlapping motivations include internally developed recognition that rewards expertise; deep engagement in learning about the topic of interest; public orientation and prosocial action related to the topic (healthcare, patient advocacy, improved practice; and public history, improving the understanding of history, factual and accurate knowledge presentation), while differences include relationships and expertise associated with offline careers (#hcsmdca) versus relationships and expertise based only on in-site recognition (r/AskHistorians); and reluctance to participate due to challenges associated with the technology and format (#hcsmdca) versus reluctance to participate due to the culture of the platform (r/AskHistorians).

In examining these cases, results echo a number of themes and theories found and proposed in the research literature. These are discussed further below and include Ryan and Deci's (2000) Self-determination Theory and Haythornthwaite's (2009) light and

heavyweight model of participation. Ostrom's (2000) work on social norms is introduced to provide an explanation for some differences found between the two initiatives.

This chapter is organized as follows:

- Section 6.1 provides an overview of motivations to participate in each initiative, describing and explaining differences and similarities between motivations. This section responds to RQ1 and RQ4.
- Section 6.2 discusses motivations and types of participation in the two initiatives. This section responds to RQ2.
- Section 6.3 discusses motivations and roles in the two initiatives. This section responds to RQ3.

## 6.1 MOTIVATIONS FOR PARTICIPATION IN ONLINE INITIATIVES

Analysis of interviews from both cases found motivations to participate that were grouped into three categories: *knowledge exchange*, which describes motivations related to access to information, sharing information, and learning; *community*, which describes motivations related to the organizational and technical structures of the community; and *people*, which describes motivations related to interacting with others and building relationships. The first research question asked: *How does the type of initiative relate to motivation to participate in open online initiatives*. To respond to this question the following section describes differences and similarities between motivations within each initiative and provides insight on what can be learned from these differences and similarities. Because each initiative centered around discussion of a particular topic and thus had similar goals, the three overarching themes were the same for both. The first theme, Information and Knowledge Exchange describes learning as a motivation for participation, and thus also addresses the fourth research question: *What is the role of learning as a motivation to participate in open online initiatives*? This section is organized by theme and compares and contrasts how each theme manifests within each case.

### *6.1.1 INFORMATION AND KNOWLEDGE EXCHANGE*

Participants in #hcsmdca and r/AskHistorians described a variety of factors related to information and knowledge exchange as motivators, with a pattern that suggests a progression from interest in a topic to sustained participation motivated by learning. While learning was found to be a key motivator for participation in a variety of online initiatives, such as online communities of practice (Ardichvili et al., 2003), gamified citizen science projects (Curtis, 2015); crowdsourcing projects (Brabham, 2012; Choi et al., 2014; Lee et al., 2013); and human computation (Jiang et al., 2015), the progression from interest to learning was only alluded to by Gerber and Hui (2014) in their study of motivation to participate in crowdfunding operations when they described learning as a positive by-product of participation rather than an original driver. Referring back to Uses and Gratifications Theory (Katz et al., 1973) participation in both #hcsmdca and r/AskHistorians gratifies participants' interest in the topic as they learn more about it.

#### **6.1.1.1 Learning new topics**

In both cases, participants valued exposure to and learning about new topics. In #hcsmdca participants learned more about healthcare sectors and stakeholders, practical health information, and current information. The latter was particularly important with participants using the term “cutting edge” to describe information shared through the hashtag. In r/AskHistorians participants primarily described learning about the past; but also using the past to understand more about the present. In both cases, participants learned about social processes, although these were work oriented in #hcsmdca (e.g., in learning about others' healthcare experiences), and discussion oriented in r/AskHistorians (e.g., how people make arguments and how to identify bias in question-asking).

While participants in both initiatives described learning more about their topic, only participants in r/AskHistorians reported learning more about human nature and unexpected learning. This difference is likely due to a combination of factors: the value-based homogeneity and stability of #hcsmdca participants versus the larger number and rotating membership of participants in r/AskHistorians. Thus, there is a regular influx of participants in r/AskHistorians who are entering the initiative not only with new ideas

that lead to unexpected learning by others, but also varying worldviews that drive different ways of asking and responding to questions, including those with bigoted agendas. This is consistent with findings by Wellman et al. (2000) who noted that large networks consisting of weak-tie connections can expose people to ideas and behaviours, some which they may find disagreeable.

#### **6.1.1.2 Learning new skills and expertise**

Another similarity between the two initiatives is that members learned new skills through participation in which they gained knowledge about practices relating to their professional or academic lives. For example, in #hcsmdca physicians described learning from patient advocates and improving their practice because of what they had learned; and graduate student participants in r/AskHistorians were able to integrate responses to questions they had answered into theses and school assignments. Other skills were gained about the practice of online communication. For example, a participant in #hcsmdca described learning presentation skills through moderating chats and hosting meetups and in r/AskHistorians a participant learned production skills through contribution to the r/AskHistorians podcast.

While skill development was a motivation for participants in #hcsmdca and r/AskHistorians, it was only described as a motivation to participate in iStock (Brabham, 2008b) and Mechanical Turk (Jiang et al., 2015). In both these examples, skills were developed through completion of tasks associated with participation: iStock participants improved their photography skills and Mechanical Turk participants found they were able to better manage time. This was similar for r/AskHistorians participants, whose skills were primarily described as writing improvement. In #hcsmdca, participants developed skills through participation, such as moderation, as well developing knowledge they could translate to practice.

The development of skills, particularly those that improve the practice of a shared domain, is reflective of a community of practice (Wenger-Traynor & Wenger-Traynor, 2015). Young developed #hcsmdca as a community of practice. By contrast, the original intent behind the formation of r/AskHistorians was for a high-level, but casual, discussion

of history. Over time, rules and norms developed to reflect a more academic model and regular threads are now dedicated to discussing the professional practice of history. A key difference between the two initiatives is the makeup of their user base. In #hcsmdca the majority of participants work within the healthcare system, either professionally or in an advocacy role. However, according to the most recent r/AskHistorians census, only 3% of participants were employed full or part time in academic history or employed full or part time in another historical field, and only 20% had or were pursuing a higher-education in history (jschooltiger, 2016). In each initiative, a community of practice is based around a central core. In #hcsmdca, Young provided that core, as did the semi-stable periphery of highly engaged regular participants. In r/AskHistorians the central core was provided by moderators and experts. However, by watching and engaging with core participants, results show that the periphery which makes up the vast majority of r/AskHistorians can learn history practices and engage in historical thinking.

#### **6.1.1.3 Knowledge sharing**

Participants in both initiatives described the opportunity to share their knowledge as a motivation for participation, often as an original driver of participation. While knowledge sharing was described as an important factor of participation in both cases, this motivation was not commonly described in the cases reviewed in the literature aside from Ridings et al. (2006) and Lampe et al. (2010) who found that active contributors were motivated by giving information. However, this may be because knowledge sharing was treated as a form of participation rather than as a motivation to participate, e.g., Ardichvili et al. (2003) and Hew and Hara (2007).

In r/AskHistorians, several participants described the drive to share expertise as the impetus that pushed them across the threshold from passive lurker to active participant. In both initiatives the drive to share expertise was primarily extrinsically motivated; however, these extrinsic motivations crossed the spectrum of extrinsic motivations outlined by Ryan and Deci (2000). For example, correcting errors and reaping quantitative rewards from the community (i.e., favorites and retweets on Twitter or upvotes on Reddit) is indicative of introjected regulation, where a task is performed to

enhance ego or pride. In contrast, contributing their knowledge for the benefit of the community, such as by filling a gap, bringing enjoyment to others, and promoting historical thinking in r/AskHistorians is an example of integrated regulation, where sharing expertise is congruent with personal values. As Ryan and Deci note, tapping into the intrinsic and highly integrated extrinsic motivations of people creates a positive learning experience in which learners are driven to seek new knowledge, and as Benkler (2011) notes, can increase active participation.

#### **6.1.1.4 Professional development**

Participants in #hcsmdca and r/AskHistorians shared many of the same information and knowledge exchange motivations; often, learning was related to the professional practice of healthcare and history. Professional development was found to be a motivation to participate in a wide variety of online initiatives, such as communities of practice, where participation improved ability to problem solve (Ardichvili et al., 2003); the Next Stop Design project, where participation was hoped to support career advancement (Brabham, 2012); and in OpenStreetMap, where career-based motivations were found to be low over all, but higher for serious mappers (Budhathoki & Haythornthwaite, 2012).

In r/AskHistorians, professional development included learning more about how history is practiced. This motivation was most often described by non-professional historians, which suggests that these participants could tap in to some of the benefits of history communities of practice without needing to be professionally engaged in the domain. However, while it was professionally advantageous to be a known participant in #hcsmdca, with one member describing participation in #hcsmdca as an important consideration in hiring a new employee, several r/AskHistorians participants described either hiding their involvement in the initiative or feeling embarrassed about their involvement. This was in large part due to differences between the platforms, and their culture and reputation. While Twitter is not immune to trolling, harassment, and other disruptive behaviour, the platform itself does not share the same unsavory reputation as Reddit. Professionals often make use of Twitter to share information relating to their domain, for example digital humanities scholars (Quan-Haas et al., 2015). Conversely,

Reddit's poor reputation prevented many members from disclosing participation on the site. While participation in #hcsmdca could lead to direct professional advancement (e.g., gaining employment due to participation in the community) and indirect advancement (e.g., through learning skills), participation in r/AskHistorians was largely limited to indirect professional advancement.

### *6.1.2 COMMUNITY*

Three major characteristics contribute to the operation of these two online initiatives: openness, rules and norms, and leadership. While identifiable in each case, their presentation is different. The following discusses these aspects and how they contribute to participant motivations.

#### **6.1.2.1 Openness**

Discussions within both #hcsmdca and r/AskHistorians are open to the public. Their openness is an important aspect of each initiatives' mandate as both academia and healthcare are often seen as inaccessible to outsiders. For example, Young described #hcsmdca's openness as a foundational principle of the initiative because it could provide a "voice to the under-voice." Similarly, r/AskHistorians moderators described the subreddit as applying an academic model yet providing a space in which anyone with any source or level of training could participate. The importance of openness is reflected in participants' motivations. For example, in #hcsmdca patient advocates described the importance of sharing their expertise and being heard while healthcare practitioners described the importance of learning patient perspectives. Further, Young described how diversity in #hcsmdca could "bust silos," in which the platform could provide a space where stakeholders with multiple interests and from across Canada could meet and discuss healthcare. Similarly, a participant in r/AskHistorians described how the subreddit plays an important role for him because it is the only venue he has to share his expertise as a non-academic, in essence, showing that r/AskHistorians can "bust silos" between academia and laypeople. In both initiatives, the open platform provides a space where those who have been traditionally excluded from discussions can participate on equal footing. In prior research, values of openness were most often described by

participants in peer production projects, such as Wikipedia (Nov, 2007) and OpenStreetMap (Budhathoki & Haythornthwaite, 2012).

A key aspect of openness in both initiatives is diversity, particularly in terms of the sources and types of expertise held by initiative members, but also geographic and demographic diversity. Due to technological design elements, diversity in #hcsmtca was more apparent to #hcsmtca participants than the diversity of r/AskHistorians was to r/AskHistorians participants. This is likely due to the amount and type of information available about participants afforded by the platform. Twitter, and thus #hcsmtca participants, have a profile page whereas Reddit, and thus r/AskHistorians participants, do not.<sup>18</sup> By providing information about users, profile pages can make it easier for initiative members to identify common ground (Ellison & Vitak, 2015). While profile pages in Twitter are not particularly detailed, it was common for #hcsmtca participants to use their real first and last names, a picture of themselves, and include profession information in their profiles (Gruzd & Haythornthwaite, 2013). This information showed other members who was participating, in what professional capacity, and from what geographic location. In r/AskHistorians this type of identity information was largely unavailable. While some r/AskHistorians users have earned flair that provides a broad overview of their area of expertise and others have chosen to share personally identifiable information in comments or through a user profile in the wiki, sharing personal information is outside the norm of Reddit where maintaining the privacy of other users was among the site's earliest rules. Further, through observation it appears that participants who choose to reveal personally identifying information are often experts with at least some level of higher education in history. During the interviews many non-expert participants speculated that participants with flair denoting their expertise had received academic training in that area. These non-academic participants felt hesitant to

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<sup>18</sup> In May 2017, shortly after data collection began, Reddit launched the development of profile pages for beta users. As of June 2018 profile pages are available to all users; however, they do not seem to be in wide use nor do they typically contain personally identifiable information. Prior to the development of Reddit profile pages some flaired members had included education information in a user profile in subreddit's wiki. However, participants did not seem aware of these profiles.



actively contribute, believing that their contributions would have little value compared to those of academically trained experts. As will be described further below, participants in r/AskHistorians have been subjected to abuse and harassment. Thus, requiring r/AskHistorians participants to share personally identifiable information as is the norm in #hcsma, is not an apt solution for facilitating a perception of openness in r/AskHistorians.

While diversity was valued by participants in both initiatives, it was achieved in both with varying degrees. In #hcsma a minority of participants expressed concern that their similar values led to topics being discussed in an echo chamber; however, the majority described geographic and vocational diversity as an important aspect of participation suggesting that fostering diversity in #hcsma was successful.

Diversity in r/AskHistorians is complex. Participants described benefits associated with diversity, most notably about unexpected learning, but also described how the predominantly young, white, male demographic of Reddit and r/AskHistorians shaped the questions asked and the upvoting behaviour, thus neglecting the perspectives of other populations. Further, some participants reported experiencing what they described as an “empathy gap,” where questions that involve historical subjects outside the main areas of interest were discussed with little sensitivity. Moderators have attempted to mitigate this effect by creating regular discussion threads that address rarely asked questions and by crafting responses that encourage empathy for historical subjects. These tactics, particularly the latter, are well-received by r/AskHistorians participants who upvote, gift Reddit gold, and nominate these posts for “best of” awards. Further, these tactics appear to be somewhat successful in providing learning opportunities outside the mainstream areas of interest, as two participants (one interviewee and one respondent to the recruitment thread) noted that participation in r/AskHistorians had taught them about the effects of patriarchal and colonial systems.

Openness has the advantage of allowing participation from a diverse population; however, this may be limited by the diversity of the wider platform and technological systems that showcase content based on popularity, as can be seen in the case of

r/AskHistorians. Strong leadership can be leveraged to encourage diversity, as with Young's early efforts to recruit stakeholders from a variety of healthcare sectors and r/AskHistorians moderators' efforts to seed the community with questions and responses that showcase diverse perspectives and encourage empathy. However, each tactic relies on who chooses to stay in the initiative; requires ongoing work to encourage, maintain, and support diversity; and may be stymied by technology.

### **6.1.2.2 Rules and norms**

Community ethos, i.e., the character, spirit, and values of the initiative, was a motivation for participants in #hcsmdca and r/AskHistorians. Similarly, community ethos was found to be an important aspect of participation in a variety of initiatives, such as online communities (Ridings et al., 2006); communities of practice (Hew & Hara, 2007); the crowdsourced project, Threadless T-Shirt Design (Brabham, 2010); and the gamified citizen science project, FoldIt (Curtis, 2015). While these initiatives take a variety of organizational forms, each was described by the authors as a community, suggesting that community ethos maintained through rules and norms may be particularly important in small groups of more closely connected ties. In #hcsmdca participants described the initiative as friendly, welcoming, and supportive. Participants trusted other members as well as the information they shared. Trust was also key for many r/AskHistorians participants, particularly that the information shared, and the discussions held were truthful and fact-based.

Each initiative's ethos reflects its social norms. Ostrom (2000) defines social norms as: "shared understandings about actions that are obligatory, permitted, or forbidden." (p. 143-144). According to Ostrom, social norms are often maintained cooperatively by members of a particular society through acts such as exhibiting prosocial behaviour and sanctioning antisocial behaviour. The more people believe that others will cooperate, the more likely they will be to behave cooperatively themselves. In both initiatives, participants maintained social norms by exhibiting good behaviour and sanctioning disruptive behaviour, albeit with varying frequency.

Participants in #hcsma rarely described experiencing disruptive behaviour. Two participants, including Young, made mention of a single troll who infiltrated the community for a brief period. One participant described working to discourage the troll from returning, thus participating in sanctioning behaviour. Far more often #hcsma participants described reciprocating prosocial behaviour, such as supportiveness and generosity. Conversely, participants in r/AskHistorians described disruptive behaviour as a far more regular occurrence. Moderators, whose role it is to maintain the social norms of r/AskHistorians through enforcing its rules, held the most responsibility for sanctioning disruptive behaviour; however, one participant with flair also described supporting social sanctioning by reporting rule-breaking content to the moderators.

While both initiatives have social norms that are supported and cooperatively maintained by through exhibiting prosocial behaviour and sanctioning disruptive behaviour, r/AskHistorians experienced a much higher level of disruptive behaviour than #hcsma. There are likely several factors contributing to this difference, including size (as a considerably smaller initiative, #hcsma may be less likely to draw the attention of bad actors) and the cultural and technological constructs of both initiatives. As described in Section 5.2, r/AskHistorians' rules and norms mirror those of academia, thus differing the subreddit from the wider culture of Reddit. While r/AskHistorians has a strict set of rules and a policy of removing content that breaks these rules, participation on Reddit more widely is assumed to operate under a principle of free speech: users should be allowed to say anything, while other users maintain quality through the voting system. According to Ostrom (2000), a "mild degree of external monitoring discourages the formation of social norms while also making it attractive for some players to deceive and deflect and take the relatively low risk of being caught" (p. 147-148). Indeed, this description characterizes the wider Reddit culture where external monitoring by the site's administration has historically been minimal. Although Reddit's administration is taking a more proactive stance on banning subreddits widely viewed as offensive than it has in the past, a culture of tolerance for all types of content and behaviour has limited the development of social norms across much of Reddit. Thus, those entering r/AskHistorians are often confronted with rules and norms that are markedly different than the norms of the overall Reddit site.

Those accustomed to participating elsewhere on Reddit may not realize the need for additional legitimate peripheral participation to learn how to participate in r/AskHistorians.

Disruptions due to a clash between r/AskHistorians' norms and Reddit culture are exacerbated due to how users enter and re-enter the subreddit. According to the census, nearly two thirds of r/AskHistorians participants come to read a thread by seeing it on their homepage while just over a third go to r/AskHistorians intentionally (jschooltiger, 2016). Further, when asked how they originally discovered r/AskHistorians 14% had seen a thread on r/all (jschooltiger, 2016). Patterns of entry and re-entry suggest that participants may not have a strong sense of the rules. Indeed, interview participants, including those who had gone on to become flaired users and moderators, often described learning the rules through trial and error, with several noting that their initial contributions to the community had been deleted for breaking the rules.

Conversely, #hcsmtca participants described entering the initiative in one of three ways: through a previous interaction with Young, after seeing a colleague use the hashtag, or by searching Twitter for healthcare-related hashtags and discussions. While navigating r/AskHistorians' rules and norms upon entry was less straightforward, #hcsmtca participants did not describe similar challenges. One #hcsmtca participant stated that she could tell immediately that #hcsmtca was a community of practice comprised of healthcare professionals. The contextual clues provided by previous interactions with community members as well as profile information indicating members' professional associations made the intent of the community clear to new users. #hcsmtca members were able to draw upon norms of the profession, rather than norms exhibited elsewhere on Twitter. On r/AskHistorians, the rules and norms are less clear; thus, when new users enter and engage in behaviour consistent with the cultural norms of Reddit, deleted comments such as those quoted in the previous chapter show that new users are confused and even angry when this behaviour is sanctioned.

Ostrom (2000) suggests that a strong culture of cooperation can influence how people behave in a community. As cooperative enforcement of social norms is voluntary, it is

thus a highly integrated extrinsic motivation (Ryan & Deci, 2000). Ostrom also notes that rules can crowd out cooperative behaviour in a community. This aligns with Self Determination Theory, which describes engaging in an activity in response to rules as an externally regulated motivation where individuals experience their own behaviour as controlled and alienated. #hcsmdca had no formally established rules; rather, social norms were established as participants willingly engaged in prosocial behaviour reflective of internally regulated motivations (Ryan & Deci, 2000). This is also the case for regular participants in r/AskHistorians. The rules and norms were highly valued and widely supported. However, new participants may see the strict rules without understanding that these rules were created to establish social norms modelled on academia.

### **6.1.2.3 Leadership**

Setting norms and enforcing rules are tasks undertaken by leaders of online initiatives. While community ethos established through social norms was noted as a motivation in prior research, the role initiative leadership plays in establishing and maintaining community ethos was not. While not noted in prior work, leadership was described as an important aspect of participation for both members of #hcsmdca and r/AskHistorians. In #hcsmdca, the tasks and duties of leadership were primarily undertaken by founder, Colleen Young. The value of Young's role in #hcsmdca was mentioned by a number of participants who appreciated the work she did maintaining the community and connecting people within and external to the community. In r/AskHistorians the majority of participants interviewed described the important role moderators played in sustaining participation in the subreddit. Some expressed that, should the current rules or moderators' enforcement of the rules become more relaxed, they would no longer be interested in participating.

Leaders in both initiatives faced challenges. For Young, the primary challenge was time. Managing #hcsmdca was volunteer work that she conducted in conjunction with paid employment. Eventually, doing both was unsustainable and when Young stepped down from her leadership role, the weekly chats ceased. Moderators of r/AskHistorians also described time as a challenge, noting that they often spent time moderating in lieu of

other leisure activities, such as reading, spending time outdoors, engaging in physical activity, or socializing with friends in person. However, r/AskHistorians moderators faced a challenge that Young did not: regular exposure to disruptive behaviour, including abuse and harassment.

There are three possible explanations for why leaders of r/AskHistorians were exposed to disruptive behaviour, including abuse and harassment, while Young was not. First, Reddit's voting system exposes r/AskHistorians' moderators to disruptive behaviour as it affords sudden influxes of new participants who do not understand r/AskHistorians' rules and norms. Second, Reddit is host to a number of subreddits that promote misogynistic, racist, and xenophobic principles. r/AskHistorians moderators observed that perpetrators of abuse and harassment often participated in these subreddits and targeted moderators and experts on subjects such as the Holocaust, women's history, slavery, and colonialism. Third, anonymity likely plays a role in enabling harassment (Suler, 2004). While it is not uncommon to participate anonymously on Twitter, as noted above, it was the norm for #hcsma members to participate in the chat using an account associated with their real name and profession. Indeed, one participant described an encounter with a user who did not share identifiable information when asked, leading to feelings of distrust. In r/AskHistorians participating anonymously was described as a way to protect themselves from abuse and harassment; however, it is also likely that anonymity, enabled through the creation of single-use throwaway accounts not connected to post history or accumulated Reddit karma scores, also contributed to the willingness of others to perpetrate abuse.

### *6.1.3 PEOPLE AND RELATIONSHIPS*

The two cases show how individuals in open, online initiatives build relationships that support both bridging and bonding social capital (Putnam, 2000). Bridging social capital is associated with weak tie relationships between diverse groups of individuals that share novel information, while bonding social capital is associated with strong-tie relationships between homogenous groups that share social and psychological support (Putnam, 2000). In #hcsma, weak-tie relationships were formed between participants based on professional relationships. Even participants who said that they did not develop

relationships also described the development of bridging social capital, most notably by learning about new topics and discovering who's who within Canadian healthcare. Similar results were found in r/AskHistorians, where participants who had developed either collegial relationships (i.e., based on a shared responsibility to the initiative rather than the profession) or no relationships, also reported learning new information, and thus developing bridging capital. This suggests that informational bridging social capital need not require a direct relationship; rather, as described by Haythornthwaite (2002) this social capital can be developed through latent ties afforded by the initiative. Further, it shows that this capital is held in the network rather than in the heads of individuals (Lin, 1999). Feelings akin to "fandom" towards certain members of the community may contribute to the development of bridging capital among participants with no established relationships. In both #hcsmdca and r/AskHistorians, participants described valuing the contributions of and feedback from prestigious users. As these participants share their knowledge within each initiative, others in the social network can benefit, similar to conclusions drawn by Gilbert and Paulin (2015) about more knowledgeable others in their study of Twitter conference networks. While participants in r/AskHistorians did not describe developing professional relationships with other participants, the bridging capital derived through participation was similar in both initiatives: as described in 6.1.1, participants learned novel and diverse information as well as developed new skills.

Participants also developed bonding social capital through the development of friendships. Participants #hcsmdca and r/AskHistorians described deriving social support through the friendships made with other initiative members; however, this was described with less frequency in #hcsmdca than in r/AskHistorians, likely because several of the #hcsmdca participants who had developed friendships described these as "work friendships" where the support derived was primarily professional. In r/AskHistorians, the social support provided through the development of friendships was a key aspect of continued participation for some. This was largely described by initiative leaders whose responsibilities exposed them to managing disruptive behaviour, harassment, and abuse. This suggests that encouraging and supporting systems through which participants can

develop and access social support is particularly important within systems that expose users to this kind of behaviour.

While the bridging and bonding social capital developed through participation in #hcsmdca and r/AskHistorians was beneficial to individual participants, these relationships also provided benefits that helped sustain each initiative as a community of practice. As open spaces for discussion the regular influx of participants with varying interests and expertise brought new ideas and fresh perspectives on topics discussed within the initiatives. Bonding capital was particularly important for core participants whose participation sustained these initiatives as communities of practice.

#### *6.1.5 SUMMARY*

By exploring motivations for participation in two different types of initiatives, two of the four research questions posed in chapter two are addressed. With respect to Research Question 1, how the type of initiative relates to motivation, this study examined #hcsmdca as a representative of a small, densely connected community of practice and r/AskHistorians as a representative of a large question and answer forum. Results show many similarities between motivations for participating in each initiative. Participants in #hcsmdca all described interest in the topic as a motivation to participate. Through the central activity of each initiative, discussing the topic, participation gratified this need, as outlined by Uses and Gratifications Theory (Katz et al. 1973). Participants learned through engagement with a supportive community. They also perceived the information shared as trustworthy, which was likely due to strong leadership, the establishment of social norms that support sharing high quality evidence-based information, as well as trust in the contributions of particular known and respected initiative members.

However, there were also several key differences, including how participation in each initiative supported professional development and the impact of culture and technology on participation. While both initiatives discussed topics pertaining to participants' careers, they did not equally support professional development. As a community of practice, participants in #hcsmdca placed more value on learning who's who and connecting with others within healthcare fields. While r/AskHistorians shared some of



the characteristics of a community of practice, anonymous participation in r/AskHistorians placed emphasis on the contributions of users rather than their credentials. In #hcsmdca, Young's goal of silo busting and hierarchical leveling seems to have been largely realized as participants described learning from contributions made by those who do not typically have a voice in the healthcare system; however, while hierarchies were levelled, the "who" still mattered.

Another key difference between #hcsmdca and r/AskHistorians was the impact of technology and culture, and the challenges these presented. While time was an issue for leaders in both initiatives, social, technical, and cultural constructs of Reddit affected participation in r/AskHistorians in ways that were not described by #hcsmdca participants. For example, participants attributed the overrepresentation of questions that align with interests stereotypically held by young white males as reflective of Reddit's (and thus r/AskHistorians') demographic of predominantly young, white males. Further, Reddit's voting system meant that questions that interest this group would be highly upvoted and thus seen, while the interests of other groups were hidden. Thus, while participants described learning about unexpected topics, moderators tended to view the topics discussed as problematically homogeneous or approached with little sensitivity. The voting system also meant that initiative growth often came in waves as popular questions resulted in an influx of new users whose participation was disruptive due to differences between Reddit's norm of free speech and r/AskHistorians norms based on academia. Reddit's tolerance of misogynist, racist, and xenophobic subreddits discouraged participation by those negatively affected by such ideologies and also exposed certain participants to harassment and abuse. While abuse and harassment are rife on Twitter, they played little to no role in #hcsmdca and participants did not describe these as deterrents to participation. Rather, the format of the tweet chat, which some found difficult and stressful, served as more of a deterrent.

Exploring motivation to participate in each initiative reinforced prior findings that learning often plays an important role in participation in online initiatives. With respect to Research Question 4, the role of learning as a motivator, many described learning about a

topic that was of interest to them. In both initiatives, participants learned by reading the contributions of and engaging in discussions with other participants. Through these exchanges, both passive readers and active contributors acquired new knowledge about topic-related information and developed a variety of skills. In #hcsma, knowledge acquisition included access to current information regarding healthcare in Canada. Further, participants gained an understanding of professional social network structures, including who's who and who knows what, which helped them orient themselves in the field and tap into the transactive memory of the group (Wegner, 1987). Finally, they developed skills through participation including social media skills such as learning how to tweet, leadership skills through hosting chats, and professional skills that helped them improve their practice. Participants of #hcsma also valued the opportunity to share expertise. Membership in the community provided them with a forum to share knowledge across subfield, geographic, and hierarchical boundaries.

Learning through participation in r/AskHistorians was similar to learning through participation in #hcsma. In addition to reading and learning about new and familiar aspects of history, r/AskHistorians participants reported having a better understanding of the present, as well as human nature. Participants also described learning new skills, most often citing improvement in writing for a wide audience. As with #hcsma participants, r/AskHistorians members were also motivated by sharing expertise to fill gaps that existed in the knowledge-base of the initiative, bring readers entertainment, and promote historical thinking. Participants in both initiatives built knowledge through interactions with peers (Vygotsky, 1978) through sharing, producing, and consuming knowledge (Downes, 2007).

## 6.2 TYPES OF PARTICIPATION AND MOTIVATION

The second research question asked how the various ways people participate an initiative, such as length, depth and frequency, relate to motivation. Table 40 provides a summary of the findings regarding type of participation across the two cases, in which participants are grouped according to the light and heavyweight model of participation (Haythornthwaite, 2009). Newbies, Readers, Contributors, and members who participate

rarely are associated with lightweight participation; while Regulars, Veterans, Collaborators, Leaders, and members who participate habitually are associated with heavyweight participation.

**Table 40: Participation weight and Motivations**

Motivations		Participation	
		#hcsmdca	r/AskHistorians
Information	Interest in the topic	everyone	everyone
	Learning	everyone	n/a
	Learning about the past	n/a	everyone
	Learning about the present	n/a	everyone
	Learning about human nature	n/a	heavyweight
	Sharing expertise	heavyweight	heavyweight
	Access to information	everyone	n/a
	Skill Development	heavyweight	heavyweight
	How history is practiced	n/a	everyone
	Unexpected Learning	n/a	everyone
	Accessibility	n/a	lightweight
Community	Ethos	heavyweight	n/a
	Diversity/ Public history	heavyweight	heavyweight
	Organization & leadership	heavyweight	n/a
	Being the audience	n/a	lightweight
	Having an audience	n/a	heavyweight
People	Who's who in the field	everyone	n/a
	Prof. relationships/ Collegiality	heavyweight	heavyweight
	Personal relationships/ Friendship	heavyweight	heavyweight
	No relationships	lightweight	lightweight
	Fandom	n/a	everyone

The table shows that findings are relatively consistent across the two cases. Where motivations are shared by members of both initiatives, the participation weight of those who described that motivation is consistent. For example, in both cases interest in the topic is shared by all participants, sharing expertise is shared by heavyweight participants, and participants with no established relationships tended to be lightweight. This suggests that participants of initiatives centered on knowledge exchange will likely share motivations with others who participate at similar levels (i.e., light or heavyweight).

Lightweight participation in both #hcsmdca and r/AskHistorians was associated with the development of weak tie relationships facilitated by the latent tie structure of the initiatives, and the predominantly bridging social capital it affords. In #hcsmdca participants accessed new information by connecting with people who have a shared interest and were able to use these connections to see an overview of the field. In r/AskHistorians, participants accessed novel information through unexpected learning.

Early characterizations of lightweight participants described them as “free loaders” who used a common good (the initiative) without giving back (Kollock & Smith, 1996). However, findings here support work by Preece et al. (2004) and Preece and Shneiderman (2009), which suggests that lightweight participation provides an essential aspect of an online community’s vitality. In #hcsmdca, through their desire to be heard, lightweight participants, and in particular newbies, brought novel information to the network (Granovetter, 1973) and had the potential to act as bridges between #hcsmdca and other social networks (Burt, 2004). Readers and Contributors in both initiatives engaged in legitimate peripheral participation (Lave & Wenger, 1991) as they learned about the topic, the community, and its norms. Several lightweight participants described contributing to the discussion when the topic was in their area of expertise, suggesting that even through minimal participation, lightweight participants in #hcsmdca and r/AskHistorians contributed to the generalized reciprocity associated with the exchange of social capital. This also shows how interest in a topic can serve as motivator to cross the threshold from lurking to contributing, from a latent tie to an expressed weak tie association with the initiative. A community in which membership ebbs and flows as new members enter and as latent ties are activated supports the introduction of fresh perspectives and new ideas. In both #hcsmdca and r/AskHistorians, lightweight participants also contributed to generalized reciprocity through favoriting tweets and upvoting and downvoting questions and comments; however, several lightweight participants in r/AskHistorians noted that they rarely voted. Despite their contributions to the space, lightweight participants acknowledged, but did not highly value, the important role they play as the audience. Yet, even without voting, these participants demonstrate the way non-participatory engagement bolsters the success of open, online initiatives.

In addition to bridging social capital described above, participation in both initiatives provided heavyweight participants with the opportunity to share their expertise with an interested audience and develop new skills and expertise. Heavyweight participation was associated with strong tie relationships and the predominantly bonding social capital it affords. In #hcsmdca, interactions within the well-organized and supportive community contributed to the development of trusting personal and professional relationships that extended beyond Twitter. While Hofer and Aubert (2013) found higher levels of bridging social capital among a convenience sample of Twitter users, findings here suggest that it is not so much the technology, but rather the community that supports heavyweight participation in Twitter that can facilitate the development of rich bonding capital. Similarly, many heavyweight participants in r/AskHistorians also developed close relationships, although these were primarily described as personal friendships rather than professional connections. These relationships were particularly important to sustaining participation among r/AskHistorians participants as bonding social capital provided them with support when managing disruptive behaviour.

A motivation shared by Young and r/AskHistorians moderators was the idea that each initiative could support breaking barriers through open participation. In #hcsmdca Young described this as silo busting between fields within healthcare and providing a space in which the “under-voice” could speak and be heard. In r/AskHistorians, moderators described this as part of the goal of public history. As a public history site with norms based on an academic model, r/AskHistorians provided a space where academics and knowledgeable others without academic training in history could share knowledge and engage with an interested public within the bounds of the rules. The benefits of open communication were key motivations for Young and the majority of r/AskHistorians moderators. Understanding this motivation can help explain why initiative leaders spend substantial amounts of volunteered time working towards the success of the initiative and, in the case of r/AskHistorians, why moderators continue to participate despite the various challenges they face. Given the important role initiative leaders play in maintaining online spaces, particularly in cases where leaders have control of content

seen, as in r/AskHistorians, it is important to understand the work leaders do, how social, technical, and cultural constructs affect their ability to do that work, and why they do it.

Generally, patterns between participation and motivation in #hcsmda fit the light/heavyweight model; however, in #hcsmda a deviation from the norm was observed among those who participated sporadically. In their study of a citizen science project, Eveleigh et al. (2014) found that sporadic contributors had motivations and participation patterns associated with lightweight participation. However, sporadic participants in #hcsmda described many of the same motivators as those who engaged in heavyweight participation. While this seems at odds with the ideas of light and heavyweight participation, it supports one of the dimensions proposed in this model, i.e., that lightweight users include both those observing the initiative as legitimate peripheral participants, and who may aim to join the community as more engaged participants. This highlights another difference between #hcsmda and r/AskHistorians, where long-term lightweight membership may be more appropriate in r/AskHistorians as it can provide the audience that motivates heavyweight participants. By contrast, for #hcsmda, long-term membership may have better supported key motivations such as gaining in-depth knowledge and becoming recognized in the field through active participation.

Interviews with sporadic participants in #hcsmda suggested that their participation was affected by two factors: community structure and time available. As #hcsmda discussed a different topic every week, not all topics were equally appealing to all members; many participants explained that they would not follow or participate in chats if the topic did not appeal to them. As found by Ransbotham and Kane (2011) and Eveleigh et al. (2014), sporadic active participation in #hcsmda based on expertise suggests that this kind of turnover is beneficial to the initiative as participants contribute varied, high quality information. Time was also often associated with sporadic participation; community members did not always have time to participate or had scheduling conflicts. That these members were able build bonding capital shows that in #hcsmda, habitual participation was not a requisite for the development of bonding capital. Because only three r/AskHistorians participants participated sporadically, it is difficult to identify similar

patterns; however, two of the three described time available as their reason for sporadic participation while the other noted that she would forget to check the subreddit. The former two were otherwise heavyweight participants while the latter was lightweight, suggesting further investigation to see whether, or under what circumstances, sporadic participation is feature of light or heavyweight participation.

Overall, patterns of participation generally align with the light and heavyweight model of participation. These patterns support the framework described by Haythornthwaite (2009) and are aligned with findings by Budhathoki and Haythornthwaite (2012) and Eveleigh et al. (2014), for example, that heavyweight participants tended to have a wider array of motivations than lightweight participants. Thus, in #hcsmtca and r/AskHistorians, the light and heavyweight model can be used to explain motivational aspects of these two initiatives as well as extend it by highlighting particular aspects of light and heavyweight participation that are associated with different motivations, such as the particular importance of openness for leaders not shared by other heavyweight participants.

Patterns between light and heavyweight participation also build on Peters et al. (2018) Motivation, Engagement and Thriving in User Experience (METUX) framework that applies Self Determination Theory for use in studying technologies. METUX describes six spheres of influence: adoption, interface, task, behaviour, life, and society. Both light and heavyweight participants in both cases described interest in the topic as one of the primary motivations that led to initial participation in the initiative (i.e., *adoption*). As interest in the topic is intrinsic and participation is volunteered, adoption in both cases for light and heavyweight participation is highly autonomous. While participants in r/AskHistorians were largely satisfied with Reddit's *interface*, a subset of primarily lightweight #hcsmtca participants expressed challenges with the tweet chat format. As highlighted by METUX, the tweet chat format did not meet these participants' need, competence, and thus undermined motivation to participate. *Tasks* varied between lightweight participants, whose participation consisted primarily of reading or providing minimal contributions such as favoriting, retweeting, and voting, and heavyweight participants, whose participation consisted of reading, minimal contributions, and more

substantial contributions, such as engaging in discussions, asking questions, providing responses, and moderating the initiative. Lightweight participants' tasks (reading) supported the *behaviour*-related motivation, learning, and heavyweight participants tasks (writing) supported the behaviour-related motivation, knowledge sharing. The final two-spheres were primarily limited to heavyweight participants. Participation in the initiatives provided heavyweight participants with opportunities for skill development (i.e., *life*). Further, motivations related to the *society* sphere, such as the importance of openness, diversity, and boundary razing, were only described by initiative leaders and not by other heavyweight participants, such as collaborators. This suggests a potential link between participation, motivation, technological spheres of influence where lightweight participation will satisfy motivations that are related to in-initiative participation where heavyweight participation will include motivations that extend to spheres beyond the initiative.

### 6.3 ROLES AND PARTICIPATION

The third research question focused on how *participant roles relate to motivation*. Two types of roles were identified for analysis: in-group roles (i.e., function of participation in r/AskHistorians) and external role (i.e., type (#hcsma) and source (r/AskHistorians) of expertise). While in-group roles were found to overlap significantly with participation depth, comparing motivations between participants in each external role was found to have two advantages. First, the contributions and motivations of participants with different types and sources of expertise were found to satisfy each other's motivations. Second, as the motivations of participants with different roles were satisfied, the overarching goal of initiative leaders (i.e., razing occupational and hierarchical boundaries) was found to be successful.

Examining motivations by roles highlights how participants can satisfy the motivations of other participants. For example, through participation in #hcsma and r/AskHistorians, those without expertise in a given domain can learn more about other professions. As public venues to discuss a particular topic, the rules and norms in each initiative support participation of individuals with a breadth of expertise. Through their openness,



traditional barriers can be razed, whether those barriers are between subfields in a domain or between those whose voices have traditionally been privileged and those whose voices have not. This demonstrates that not only can the initiative and its central activity gratify participants' motivations, so too can other initiative members.

## 6.4 SUMMARY

This study explored motivation to participate in two open, online initiatives: Twitter-based #hcsmdca and Reddit-based r/AskHistorians. Exploring similarities and differences between these two initiatives highlighted the impact of initiative goals, social norms, and the technological affordances of the platforms on which they are hosted. Similarities between the initiatives were related to the similar goals of each initiative. As both #hcsmdca and r/AskHistorians focused on knowledge exchange, similar motivations included internally developed recognition and rewards relating to expertise; deep engagement in learning about the topic of interest; and public orientation and prosocial action related to the topic. Differences highlighted the impact of culture and technology on participation. For example, #hcsmdca participants developed relationships and expertise associated with offline careers while r/AskHistorians participants developed relationships and expertise based only on in-site recognitions due to concerns regarding Reddit's poor reputation and reluctance to participate due to challenges associated with the technology and format.

Results also explored relationships between motivation and participation type, such as length, depth, and frequency, as well as roles associated with the type and source of expertise. Patterns across participation type aligned with those described by Haythornthwaite (2009). Lightweight participation was associated with bridging social capital as these participants connected with people who had a shared interest and exchanged novel information. Heavyweight participation was associated with both bridging and bonding capital. Bonding capital was derived through the development of relationships that provided personal and professional support. These findings suggest that participants of initiatives centered on knowledge exchange will likely share motivations with others who participate at similar levels. Further, it suggests that those whose

participation is at a comparable weight will share motivations with those who participate similarly.

Finally, participants within different roles were found to satisfy the motivations of participants with other roles in the initiative. For example, in #hcsma healthcare practitioners were primarily motivated by learning, while advocates were motivated by sharing. In r/AskHistorians those with formal training saw r/AskHistorians as a public history site through which to share and promote historical thinking while those with no formal training saw the subreddit as a space that provides accessible historical information and where they can learn about how history is practiced professionally. Findings regarding roles highlight how users and their goals can work towards meeting the needs of each other.

## 7. CONCLUSION

This dissertation reported on the results of in-depth interviews with participants in two open, online initiatives to address research questions about what motivates such participation. As outlined in the introduction, the term “online initiatives” is used to capture the way people working in distributed locations, with varied skills, contribute to common goals. Such initiatives are variously identified as sites for online or virtual community, crowdsourcing and peer production. Online initiatives are increasingly used for a variety of purposes, including building knowledge, developing relationships, creating and sharing art, promoting and fundraising causes, and staying up to date with family, friends, and current events. As these initiatives become more pervasive, supporting a variety of needs for completion of a multitude of tasks, it is important to understand why people contribute. Examining motivation contributes to our understanding of contemporary knowledge production, an important and vital need in society as more information is conveyed online, and knowledge disseminated through online posting and discussion.

To learn more about motivations to participate in online initiatives this study used in-depth interviews with members of two online initiatives: the small Twitter-based community of practice, Healthcare Social Media Canada (#hcsmdca) and the large Reddit-based question and answer and forum, r/AskHistorians, to understand more about why they participate. This chapter is organized as follows: the first subsection provides an overview of the current literature and reviews the research questions; the second a summary of the findings; the third highlights contributions of the study to theory, methods, and practice; the fourth notes limitations of the study; and the fifth outlines future work.

### 7.1 OVERVIEW OF CURRENT LITERATURE

This study builds on past research into why people participate in online initiatives, which offered insights into a number of major sites, including the human computation project Mechanical Turk (Jiang et al., 2015; Kauffman et al., 2011), the question and answer site, Yahoo! Answers (Choi et al., 2015) and the gamified citizen science project, FoldIt

(Curtis, 2015). Other studies have focused on a single type of initiative, such as Brabham's (2008b, 2010, 2012) work on a variety of crowdsourcing initiatives. While it is difficult to make comparisons between studies, trends between types of initiatives and motivations, as well as theoretical work by Haythornthwaite (2009), suggest that there may be a relationship between the type of initiative and what motivates individuals to participate in that initiative. Thus, the first research question asked how initiative type relates to motivation to participate.

Kraut and Resnick (2011) note that online initiatives rely on active contribution for their success. Thus, prior research has focused on how to increase participation by harnessing motivations. In her literature review of studies on participation in online initiatives, Malinen (2015) found that most research looked at single and quantitative measures of participation, such as tenure in the initiative, depth of participation, or how often contributions are made; for example, motivations associated with those who spent more hours per week contributing to Wikipedia (Nov, 2007); number and type of contributions to the citizen science project, Old Weather (Eveleigh et al. 2014); and frequency of contributions to Reddit (Moore & Chuang, 2017). While there are many aspects of participation, few studies have taken a multi-faceted approach when exploring links between participation and motivation and those that did combined these aspects of participation into a single measure. Thus, through responding to the second research question, which asked about the impact of participation type, such as length, depth, and frequency on motivation to participate, this study explored how these multiple aspects relate to motivation to participate.

In addition to types of participation, prior research on motivation to participate in online initiatives has also explored relationships between roles played in the initiative and motivation. For example, varying motivations between users and developers of the open source software, Linux (Hertel et al., 2003); between account holders and anonymous users of the Wikipedia-like project, Everything2 (Lampe et al., 2010); and between fund seekers and sponsors in crowdfunding campaigns (Gerber & Hui, 2014). Thus, through

responding to the third research question, this study explored relationships between roles and motivation.

Finally, as both initiatives were information-centric, where the central activity of the initiative involved discussing a topic, particular attention was paid to the role of learning and knowledge exchange as a motivation. Thus, through responding to the fourth research question, which asked about the importance of learning as a motivation to participate, this study explored the role knowledge exchange through participation.

## 7.2 OVERVIEW OF FINDINGS

By exploring motivations across two types of initiatives, this study compared cases to identify differences and similarities between social, organizational, and technical constructs that support participation in open online initiatives. Three overarching themes were found to be consistent across both initiatives: knowledge exchange, community, and people and relationships. Similar motivations within these themes included interest in and learning about the topic, sharing and developing expertise, trust that information shared within the initiative was valid, openness and diversity, and relationship development. These similarities suggest that participants in other initiatives centered around information exchange will also hold these motivations.

While some motivations were consistent across sites and thus demonstrate how the goal of initiatives relates to motivation to participate, differences between motivations across the two cases highlight the impact of technical and cultural constructs of the platforms on which each initiative was hosted.

### *7.2.1 SOCIOTECHNICAL AND ORGANIZATIONAL STRUCTURES AND MOTIVATION*

Participants' experiences also provide insight into the way the technical features of the platform affect their ability and comfort with engagement in the online initiative. The social interacts with the technical to affect how well they can express themselves. For example, participants in #hcsmdca found the tweet chat structure overwhelming to use and the conversations difficult to follow. Further, #hcsmdca participants struggled to express themselves fully within 140-character limit of tweets. Technical features of anonymity

interact with the development of the initiative culture. The in-group norms that maintain the culture of the environment then affect participation and use, for example in how free participants feel to submit postings of negative intent. While Twitter users may experience harassment and abuse, #hcsmtca participants did not report experiencing this, further, only two participants describing a single instance of trolling. This may be in part because it was not the norm to participate in #hcsmtca anonymously or pseudonymously. Conversely, r/AskHistorians participants, particularly women and moderators, described feeling greatly affected by online abuse, disruptive behaviour, and negative content found on Reddit more generally. For example, moderators described managing disruptive behaviour on a large scale as well as experiencing harassment and abuse and women described taking steps such as identity management and self-censorship to avoid experiencing gendered abuse. In addition to cultural norms that support pseudonymous participation on Reddit, Reddit's technology also enabled participants from outside of r/AskHistorians' to participate, thereby blurring boundaries between the subreddit and others that support bigotry, racism, and misogyny.

The culture of the environment also affects whether belonging to and participating in the initiative is seen as a public asset or liability. As discussed above, in Section 5.2, Reddit's culture of 'free speech' carries into the r/AskHistorians subreddit and impinges on discussion practices. The impact shows a difference between sites in that the culture of Reddit left participants of r/AskHistorians feeling unable to bring participation into their professional lives, despite participating in a large public history site, while participants of #hcsmtca were able to benefit professionally from their participation.

Finally, while study participants in both initiatives valued openness and diversity in sources and areas of expertise, technological features of the platform had a negative impact on the ability of this goal to be accomplished in r/AskHistorians. While a minority of participants of #hcsmtca reported homogeneity in terms of values held by members of the community, the majority found the role and geographic diversity of the group to be highly motivating. Conversely, while r/AskHistorians participants described examples of unexpected learning, many described the topics discussed as homogenous. These

participants attributed the homogeneity of topics discussed to the demographic of Reddit and r/AskHistorians; however, difficulty achieving diversity is also a feature of Reddit's technological system that promotes content based on popularity through upvoting. As the audience consisted of mostly young, white males, questions asked, upvoted, and promoted were observed to reflect topics stereotypically favoured by this group. Further, the upvoting system that promotes posts based on upvotes meant that most of the content seen also reflected these interests.

Exploring differences and similarities in motivations between the two spaces highlighted the effects of sociotechnical and organizational structures on motivation to participate. Even in cases where participants in both spaces expressed similar motivations, such as diversity, the technological, organizational, and cultural elements of the larger platform on which each initiative was hosted had an effect on if and how well given motivations could be achieved.

### *7.2.2 SUSTAINING PARTICIPATION*

Similarities and differences were also found in patterns of joining and sustaining participation. Original drivers for joining in both initiatives included interest in and learning about the topic. However, #hcsma participants were more likely to mention making connections with others as one of their original drivers. Motivations that sustained participation in both initiatives included the development of skills and expertise, openness and diversity, and relationship development. In #hcsma, Young's leadership and community ethos sustained participation; in r/AskHistorians the rules and their enforcement sustained participation. These patterns suggest that motivations grow and develop over time, and that certain benefits of participation, such as those derived from aspects of the community (such as leadership, diversity, and trust) may not be readily apparent to new or short-term initiative members.

### *7.2.3 PARTICIPATION AND MOTIVATION*

The second research question explored the relationship between types of participation, such as length, depth, and frequency, on motivation to participate. Findings showed that, generally, motivations aligned with patterns of light and heavyweight participation as

outlined in Haythornthwaite (2009). Lightweight participants (e.g., newbies, readers, contributors, and rare participants) brought new information into the initiatives and learned about the topic of discussion and the norms of initiatives. By engaging in a minimal way, lightweight participants could contribute to generalized reciprocity as an audience member, and by providing quantitative signs of support and approval through favouriting/retweeting and upvoting. Those moving into fuller participation began by contributing to discussions that touched on their area of expertise. In addition to the motivations described by lightweight participants, those who participated more fully (heavyweight participants) also valued the opportunity to share expertise with an interested audience and benefited from the development of relationships.

The findings also provide additional insight into how participation engenders closer associations with an initiative yet are not necessarily associated with high levels of observable participation. Both personal skill development, and communal appreciation of others' contributions fall into this category, associated with greater time spent with the initiative, yet not necessarily greater active participation (i.e., hosting tweet chats or responding to questions). Both suggest an apprentice style of learning.

Finally, results highlighted initiative leaders' motivations of openness, inclusivity, and razing traditional boundaries inherent their fields, such as between patients and practitioners and between siloed professions within healthcare, as well as between academics and laypeople. For leaders of both initiatives, motivations related to openness were the among the most important. In #hcsmdca Young established the community with the goal of providing a space where all those involved with healthcare could participate; in r/AskHistorians, moderators saw the subreddit as a public history site where anyone with in-depth knowledge of history could share their expertise with an interested audience.

#### *7.2.4 ROLES AND MOTIVATION*

As both initiatives in the current study were information-centric, roles explored in this research focused on expertise. In #hcsmdca, roles were distinguished by participants' areas of expertise, such as healthcare practitioners, healthcare communicators, and patient



advocates; while in r/AskHistorians, roles explored related to the source of expertise, such as whether it was derived from academic education or was self-taught.

In both cases results showed that those in different roles have different motivations and often, motivations of participants in one role meet the needs of participants in another role. For example, in #hcsma healthcare practitioners described learning and connecting with a diverse membership as among their primary motivations. Conversely, patient advocates valued sharing their expertise and being heard. In this way, patient advocates who share their expertise meet the needs of healthcare practitioners who want to learn, thus meeting the needs of patient advocates who want to teach. Similarly, in r/AskHistorians participants with no formal education derived value from learning more about how history is practiced while participants with formal education were described participating to promote historical thinking. Thus, these results show the importance of understanding the participants' roles, motivations, and how they work together.

### 7.3 CONTRIBUTIONS

The introduction outlined several contributions of this research. First, it was predicted that results would contribute first steps in developing a theory of motivation specific to online environments; second, that they would contribute to an area of interest to academics seeking to understand the organization of contemporary work; and third that would contribute to knowledge building for organizers of online initiatives included in the study as well as organizers of other online initiatives. This section highlights these contributions, first by discussing how the results contribute to theory, second, methodological contributions, and third how they contribute to practice.

#### *7.3.1 CONTRIBUTIONS TO THEORY OF MOTIVATION TO PARTICIPATE*

Results from this study provide first steps in the development of theory for motivation to participate in online initiatives, extends existing theory, and suggests best practices for applying two theories when studying motivation to contribute to online initiatives.

Comparing two initiatives has highlighted factors that affect motivation to participate in online initiatives. For example, similarities in motivations between the two cases show

the impact of the goal on motivation. As both #hcsmdca and r/AskHistorians shared a goal of information seeking and knowledge exchange around a particular topic, participants in both initiatives were highly motivated by interest in and learning more about the topic. However, there are also differences between motivations that highlight the impact of technological affordances and overarching culture of the initiatives, and in particular how technology and culture can deter participation.

Findings also contribute support for and extends Haythornthwaite's (2009) model of light and heavyweight production by confirming patterns of participation and motivation along the light to heavyweight continuum and provides an extension of the model by highlighting motivations associated with particular facets of participation.

This study also supports and builds on Uses and Gratifications Theory (Katz et al., 1973). #hcsmdca and r/AskHistorians share a similar central activity: discussing a particular topic. All participants were motivated by interest in the topic, showing that through discussion, participants' interests were gratified. Further, comparing motivations across roles showed how participants' motivations could work to gratify the needs of other participants. For example, patient advocates were motivated by sharing expertise while healthcare practitioner were motivated by learning from others and those with no formal training described value in serving as the audience for those with training in history, both self-taught and through formal education.

Results also build on Self-Determination Theory (Ryan & Deci, 2000), and its adoption to technology through the Motivation, Engagement and Thriving in User Experience framework (Peters et al., 2018) by showing how light and heavyweight participation are connected to technological spheres of influence. Lightweight participation is largely limited to adoption, interface, task, and behaviour, while heavyweight participation is associated with motivations that extend into users lives and society more broadly.

Finally, findings from this study demonstrate best practices for employing existing models often used when studying motivation to participate in online initiatives: The Reader to Leader framework (Preece and Shneiderman, 2009) and Self-Determination

Theory (SDT) (Ryan & Deci, 2000). As Preece and Shneiderman acknowledge, participation in online initiatives shifts over time. Findings from the current study noted that moderators and former moderators shared similar motivations, even if former moderators' current level of participation was as a Reader. This suggests that motivations may align with participants' highest level of participation, echoing findings by Velasquez et al. (2014) who identified an additional "latent" stage to describe users whose participation had lapsed. As Velasquez et al. found that users' motivations aligned with their original motivations, results here provide further evidence for classing participants whose participation has waned s at their highest level of participation, or with a qualifier such as "latent leader."

SDT is one of the most commonly used theories of motivation used by researchers when exploring participation in online initiatives. However, as noted in the literature review it is often used inconsistently (i.e., the same motivation is classed differently across studies). Results from this study demonstrate the utility of including a wide range of characterizations of extrinsic motivations, particularly as extrinsic motivations are often thought to be impoverished sources of motivation and not guaranteed to increase a desired behaviour (Benkler, 2011). Results here show that the wide variety of extrinsic motivations means that, as stated by Ryan and Deci (2000), extrinsic motivations that align with individual values can also be highly motivating.

### *7.3.2 METHODOLOGICAL CONTRIBUTIONS*

This study provides two methodological contributions. First, is its multiple case study approach. Comparing cases highlighted similarities between cases that showcase the impact of initiative goals on motivation. Further, the differences observed between the two initiatives demonstrated the impact of technical and cultural constructs. Second, is that the in-depth interviewing showed how participation is multi-faceted and how certain motivations are associated with individual facets, such as tenure in the initiative, and depth and frequency of participation.

### *7.3.3 CONTRIBUTIONS TO PRACTICE*

Exploring motivations across two different initiatives also provides insights useful to leaders and organizers of online initiatives that support knowledge sharing and learning. For example, results showed that open online initiatives that encourage and support diversity of experience also foster learning and knowledge exchange. Organizers could stress and support this type of diversity so that members with varying areas and levels of expertise could engage with others to promote social learning processes. Organizers of new initiatives can seed the community through specialized recruitment efforts aimed at diverse knowledge sources as Young did when establishing #hcsma. Organizers of existing initiatives can use or develop design elements that showcase the range of expertise within an initiative, such as the flair designation does for r/AskHistorians. Issues of self-efficacy that may inhibit participation can be addressed by showcasing the diverse sources of expertise by finding (e.g., through a census) and reporting sources of expertise held by current expert users, combatting issues such as those reported by some participants in r/AskHistorians who perceived that moderators and flaired users had obtained a graduate level of education in history.

Results also suggest ways that community can be supported. Comparing the two initiatives highlighted the role of social norms in maintaining community cohesion. As #hcsma followed social norms associated with professional practice, new members were able to identify it as a community of practice. Conversely, r/AskHistorians' social norms were at odds with the culture of Reddit. Coming from that culture, the r/AskHistorians norms were not understood by new members, some of whom reacted with frustration and anger when sanctioned for operating under social norms accepted on Reddit more widely. When rules are not integrated with participants' values, they are perceived as externally enforced, which can lead to resentment (Ryan & Deci, 2000). Therefore, one solution is to communicate the social norms held by the initiative. Understanding and accepting norms can help shift new users' perspective of the rules from externally enforced to internally valued. For example, communicating that the r/AskHistorians norms are associated with academia, a model many Reddit users would be familiar with and supportive of, may make it easier for new users to more quickly understand the rationale

for the rules and make a connection between the rules and a system of knowledge they value.

Finally, results suggest the importance of supporting the development of relationships through various technological and organizational infrastructures, particularly among heavyweight users. Relationships were found to foster trust within initiatives, provide social and professional support, and were a key element of sustained participation. Thus, strengthening relationships creates a dedicated core that sustains the operation of the initiative, as moderators do for r/AskHistorians, and produces the majority of the content, such as flaired users in r/AskHistorians. While not all r/AskHistorians participants described relationship development as equally important, some described it as a key aspect of sustained participation without which their participation would have faded. Organizers can support the development of relationships in several ways. For example, off-topic discussions can help participants learn more about each other's personal and professional lives and find commonalities that extend beyond the focus of the initiative. Organizers may also foster relationships by providing alternate spaces for participants to interact; for example, off-line meetups as was done in #hcsmdca or alternate subreddits, as was done in r/AskHistorians.

#### 7.4 LIMITATIONS

The limitations of this study are those related to research design, and those related to demographics and sampling. Two limitations related to research design are: first, demographic questions were not asked of #hcsmdca participants. While demographic information, such as gender and profession could be gleaned from their Twitter profiles, additional demographic information, such as age and education could not. Second, the method encouraged reporting of motivations that most affected interviewees. Thus, it is possible that motivations are underreported, e.g., a participant who did not describe unexpected learning may have nevertheless had this experience in a more minor way.

Limitations associated with demographics and sampling are also twofold. First, participants generally had a favorable view of the initiatives; the study does not include the perspectives of one-time or short-term participants who enter the initiative and leave

and insight from only one participant who had completely disengaged from the initiative. Second is that the r/AskHistorians' sample did not include all facets of information as no newbies participated in the study. The only information about newbies' experiences on the subreddit are drawn from observation and participants' descriptions of their initial participation in the initiative.

## 7.5 FUTURE WORK

Future work will build on results from this study. Results suggested a progression from a small number of original motivations, to a large number of motivations that sustain participation. Further research will map the progression of participation and motivation to identify patterns in motivation as participation ebbs and flows between passive and active. Exploring patterns of participation will have several benefits, such as identifying ways to encourage participation and identifying characteristics of initiatives that encourage and impede active participation.

Another area of future work is to focus on the work and experiences of leaders within online initiatives. Results suggest that much of the work of online leaders is invisible. However, as is seen in r/AskHistorians, making this work visible may have negative consequences, such as exposure to disruptive behaviour, harassment, and abuse. Online moderators are responsible for maintaining rules and norms and curating much of the content seen across social media sites; in many cases, such as Reddit, this work is done voluntarily. Thus, it is increasingly important to understand the work moderators do and why they do it.

As the current study has demonstrated, rules and norms play an important role in establishing trust, particularly in ensuring that information shared through online initiatives is truthful. Thus, future work will explore the how rules and norms can establish trust in online initiatives.

Finally, this study focused on two initiatives that shared a similar goal (knowledge exchange surrounding a particular topic) and central activity (discussion) further research

will study motivations to participate across initiatives with varied goals, tasks, and activities.

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## APPENDICES

### APPENDIX A: RECRUITMENT BLOG #HCSMCA

Posted February 2, 2015

Retrieved from: <https://cyhealthcommunications.wordpress.com/2015/02/02/why-do-you-take-part-in-hcsmca-introducing-a-study-examining-motivations-for-participating-in-online-groups/>

#### **Why do you take part in #hcsmca? Introducing a study examining motivations for participating in online groups**

By Sarah Gilbert (@\_sgilbert\_) and Colleen Young (@colleen\_young)

Have you ever wondered what motivates people to take part in online communities? It's certainly a question that fascinates me. That's why I welcomed the opportunity to introduce Sarah Gilbert to #hcsmca in the hopes that you would help advance her research. I'll let her tell you more.

Hi #hcsmca! I'm Sarah @\_sgilbert\_, a PhD student at UBC studying why people participate in online communities. This research is part of my doctoral dissertation research and is also part of a larger study on learning using social media, called "Learning Analytics for the Social Media Age," under the supervision of Principal Investigator, Caroline Haythornthwaite (Co-author of *Enabling Community Through Social Media – A Social Network Analysis of #hcsmca*)

*Why are we conducting this study?*

We want to learn more about why people participate in online communities. As a follower of and/or contributor to the Twitter community #hcsmca we'd like you to tell us about why you contribute (or don't!) so that we can learn more about what motivates people to participate in online groups. The crux of my doctoral research is exploring why

people are motivated to participate in and contribute to certain communities and to identify variables that impact motivations.

I will be conducting a series of case studies in which I will use a grounded theory approach to identify motivations based on what community members tell me through interviews.

*Why #hcsmdca?*

I believe that the #hcsmdca community would be a particularly interesting group to study given its proven success (as of October, 4 years, 12,892 tweeters, 149,859 tweets!) and its mission to bring together people who both deliver and receive healthcare. I believe that the community's diverse perspectives will yield particularly interesting insights into my study on motivation. Thus I approached Colleen Young, #hcsmdca Founder, to ask whether she thought you, the #hcsmdca community, would be interested in giving me your input on why you contribute (or just lurk or not participate at all) in the weekly discussions. She responded "I'm confident that #hcsmdca community members and people outside our community would be very eager to participate in such a study. Let's start with sharing information about your research and your goals in an #hcsmdca chat."

*Let's chat*

Thus, I'll be joining the #hcsmdca chat on February 4 at 1pm ET (10am PT). We can talk about the study and I'll answer any questions you might have about the project. But let me tell you a bit more about it here first.

*What happens if you agree to participate in the study?*



If you opt to take part, I will invite you to an in person, phone or online (instant messaging or Skype) interview that will last from 1 to 1.5 hours. Questions will be semi-structured.

*I will ask you things like:*

Your involvement in #hcsma. For example, we will ask questions like “How long have you followed the #hcsma hashtag?”

Why you participate (or just follow along)

What you get from participation in #hcsma. For example, we will ask questions like “Have you learned anything from your participation in #hcsma?”

To inquire about taking part, contact Sarah at [sagilber@mail.ubc.ca](mailto:sagilber@mail.ubc.ca)

*How will your privacy be maintained?*

Your confidentiality will be respected. All transcriptions of interviews will only be identified by code number and you will not be identified by name or Twitter handle in any reports of the completed study. All audio and text records will be kept in password-protected files on an encrypted computer and only the principal investigator and I will see or hear the recordings to ensure confidentiality.

*Who is funding this study?*

This study is funded by the GRAND (Graphics, Animation, and New Media) NCE (Network of Centres of Excellence).

*How can you see the results of this study?*

The results of this study will be published in my doctoral dissertation and may also be published in journal articles and books. When results from this study are published, I will share them with #hcsmda community via Twitter and Colleen Young.

*What are the benefits of participating in this study?*

By understanding why people are motivated to participate in different communities, and variables that impact motivations, I hope that my findings can be leveraged by community leaders to improve their communities and better meet their members' needs.

Colleen here: I'm going to jump back in to the conversation about this point. Contributing to this research is in keeping with #hcsmda's mission to research, discuss, and problem solve health and health care challenges and opportunities. In our increasingly connected world, understanding online communities and motivations for participation will help us serve and support people in health settings. I encourage you to join the chat on February 4 to ask questions and find out more. Here are some of the questions I plan to put forward. Do you have any other questions to submit?

- T1: Can you tell us more about your research and what motivated you to study online communities?
- T2: #hcsmda Why do you think #hcsmda members would be suited (or not) to participate in @\_sgilbert\_'s research?
- T3: What questions would you like to ask @\_sgilbert\_?
- T4: Do you have concerns? What would prevent you from participating in this research?
- T5: Interested in participating? Contact Sarah at [sagilber@mail.ubc.ca](mailto:sagilber@mail.ubc.ca)

## APPENDIX B: RECRUITMENT POST: R/ASKHISTORIANS

Posted: April 24, 2017

Retrieved from:

[https://www.Reddit.com/r/AskHistorians/comments/6790qv/meta\\_why\\_do\\_you\\_readparticipate\\_in\\_askhistorians/](https://www.Reddit.com/r/AskHistorians/comments/6790qv/meta_why_do_you_readparticipate_in_askhistorians/)

### **Why do you read/participate in AskHistorians?**

Hello! My name is Sarah Gilbert. I'm a PhD candidate at the University of British Columbia's iSchool: School of Library Archival and Information Studies, in Canada whose doctoral research explores why people participate in online communities. So far, my research has focussed on the relationship between different kinds of [participation and motivation](#) and the role of [learning as a motivation](#) for participating in an online community. I'm also really interested in exploring differences in motivations between online communities.

And that's where you come in!

I've been granted permission by the AskHistorians moderators to ask you why you participate in AskHistorians. I'm interested hearing [sic] from people who participate in all kinds of ways: people who lurk, people up upvote and downvote, people who ask questions, people who are or want to be panellists, moderators, first time viewers - everyone! Because this discussion is relevant to my research, the transcript may be used as a data source. If you'd like to participate in the discussion, but not my research, please send me a PM.

I'd love to hear why you participate in the comments, but I'm also looking for people who are willing to share 1-1.5 hours of their time discussing their participation in AskHistorians in an interview. If so, please contact me at [sgilbert@ubc.ca](mailto:sgilbert@ubc.ca) or via PM.

Edit: I've gotten word that this email address isn't working - if you'd like to contact me via email, please try [sagilber@mail.ubc.ca](mailto:sagilber@mail.ubc.ca)

## APPENDIX C: INFORMED CONSENT #HCSMCA

### **Informed Consent**

#### **“Bazaar Motivations: Exploring Participation in Crowd-Based Initiatives”**

##### *Who is conducting the study?*

Principal Investigator:  
Caroline Haythornthwaite  
iSchool at UBC  
604-827-4790

Co-investigator:  
Sarah Gilbert  
PhD Student at iSchool at UBC  
604-827-4790

This research is being conducted as part of Sarah’s doctoral dissertation research and is also part of a larger study on learning using social media, called “Learning Analytics for the Social Media Age.”

##### *Who is funding this study?*

This study is funded by the GRAND (Graphics, Animation, and New Media) NCE (Network of Centres of Excellence).

##### *Why are we conducting this study?*

We want to learn more about why people participate in online communities. As a follower of and/or contributor to the Twitter discussion group #hcsmdca (Health Care Social Media Canada) you are being asked to tell us about why you contribute (or don’t!) so that we can learn more about what motivates people to participate in online groups.

##### *What happens if you agree to participate?*

If you say “yes” we will:

- Ask you about your involvement in #hcsmdca. For example, we will ask questions like “How long have you followed the #hcsmdca hashtag?”
- Ask you about why you participate (or just follow along)
- Ask you what you get from participation in #hcsmdca. For example, we will ask questions like “Have you learned anything from your participation in #hcsmdca?”

The interview will last from one to one and a half hours.

You may choose how and where the interview will be conducted. If you live in Vancouver BC, we can conduct the interview in-person. If you live in Vancouver or anywhere else in the world, we can conduct the interview using Skype, an instant messaging system, or the telephone. Interviews conducted in person, over the phone, or via Skype will be audio recorded. You can still participate if you choose not to be recorded. All audio, and text records will be kept in password-protected files on an encrypted computer and only the principal investigator and I will see/hear the recordings to ensure confidentiality.

*How can I see the results of this study?*

The results of this study will be published in Sarah's doctoral dissertation and may also be published in journal articles and books. When results from this study are published, I will notify the group using the #hcsmda hashtag on Twitter.

*Are there any risks associated with participating in this study?*

We do not think that any of the questions we will ask will upset you. However, if they do, you can choose not to answer and/or stop the interview.

*What are the benefits of participating in this study?*

We do not think that taking part in this study will help you. However, we hope that the results can be used by #hcsmda leaders to help create a better online community.

*How will your privacy be maintained?*

Your confidentiality will be respected. All transcriptions of interviews will only be identified by code number and you will not be identified by name or Twitter handle in any reports of the completed study.

*Who can you contact if you have questions or concerns about the study?*

If you have questions or concerns about the study or what we are asking you to do, please contact either the principal investigator or co-investigator, whose names and contact information are listed at the top of page 1 of the form. If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598.

Taking part in this study is entirely up to you. You have the right to refuse to participate in this study. If you decide to take part, you may choose to pull out of the study at any time without giving a reason and without any negative impact on your membership in the #hcsmda Twitter group. If the interview is completed, it will be assumed that consent has been given.

Audio recording is optional. If you choose to be audio recorded, please check the box and enter your name.

☐ I, \_\_\_\_\_ agree to be audio recorded.

## APPENDIX D: INFORMED CONSENT R/ASKHISTORIANS

### **Informed Consent**

“Motivations for participating in online initiatives: Exploring motivations across initiative types”

*Who is conducting the study?*

Principle Investigator:

Luanne Freund

Professor/Acting Director

iSchool: School of Library, Archival and Information Studies @ UBC

604-827-4790

Luanne.Freund@ubc.ca

Co-advisor:

Caroline Haythornthwaite

Professor/Director

iSchool @ Syracuse University

chaythor@syr.edu

Co-investigator:

Sarah Gilbert

PhD Candidate

iSchool: School of Library, Archival and Information Studies @ UBC

604-827-4790

sgilbert@ubc.ca

This research is being conducted as part of Sarah’s doctoral dissertation research and is also part of a larger study on learning using social media, called “Learning Analytics for the Social Media Age.”

*Who can participate in this study?*

Anyone who is aware of the AskHistorians subreddit; you do not need to have asked a question or written a comment to participate.

*Who is funding this study?*

This study is funded by SSHRC (Social Sciences and Humanities Research Council Canada).

*Why are we conducting this study?*

We want to learn more about why people participate in online initiatives. As a follower of and/or contributor to the subreddit, AskHistorians you are being asked to tell us about why you



contribute (or don't!) so that we can learn more about what motivates people to participate in online groups.

*What happens if you agree to participate?*

If you say “yes” we will:

- Ask you about your involvement in AskHistorians. For example, we will ask questions like “How long have you been aware of AskHistorians?”
- Ask you about why you participate (or just follow along)
- Ask you what you get from participation in AskHistorians. For example, we will ask questions like “Have you learned anything from your participation in AskHistorians?”

The interview will last from one, to one and a half hours.

You may choose how and where the interview will be conducted. If you live in Vancouver BC, we can conduct the interview in-person. If you live in Vancouver or anywhere else in the world, we can conduct the interview using Skype, an instant messaging system including Reddit's private messaging system, email, or the telephone. Interviews conducted in person, over the phone, or via Skype will be audio recorded. You can still participate if you choose not to be recorded. All audio, and text records will be kept in password-protected files on an encrypted computer and only the principal/co-investigators will see/hear the recordings to ensure confidentiality.

*How can I see the results of this study?*

The results of this study will be published in Sarah's doctoral dissertation and may also be published in journal articles, conference proceedings, and books. When results from this study are published, Sarah will share publications with the moderators and post the results on r/Science and r/AskHistorians.

*Are there any risks associated with participating in this study?*

We do not think that any of the questions we will ask will upset you. However, if they do, you can choose not to answer and/or stop the interview.

*What are the benefits of participating in this study?*

We do not think that taking part in this study will help you. However, we hope that the results can be used by AskHistorians moderators to help create a better online community.

*How will your privacy be maintained?*

Your confidentiality will be respected. All transcriptions of interviews will only be identified by code number and you will not be identified by name or username in any reports of the completed study unless you choose. Interview transcripts will only be viewed by the primary and co-investigators.

*Who can you contact if you have questions or concerns about the study?*

If you have questions or concerns about the study or what we are asking you to do, please contact either the principal investigator or co-investigator, whose names and contact information are listed at the top of page 1 of the form. If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail [RSIL@ors.ubc.ca](mailto:RSIL@ors.ubc.ca) or call toll free 1-877-822-8598.

Taking part in this study is entirely up to you. You have the right to refuse to participate in this study. If you decide to take part, you may choose to pull out of the study at any time without giving a reason and without any negative impact on your membership in AskHistorians. If the interview is completed, it will be assumed that consent has been given. You will be asked to provide consent at the time of the interview.

APPENDIX E: ROLE AND PARTICIPATION TYPE BY PARTICIPANT: #HCSMCA

Name	Participation Type			Role
	Length	Depth	Frequency	
<b>Alison</b>	Veteran	Leader	Sporadic	Healthcare communicator
<b>Angus</b>	Newbie	Contributor	Sporadic	Advocate
<b>Ashley</b>	Veteran	Collaborator	Habitual	Other
<b>Darlene</b>	Veteran	Collaborator	Sporadic	Advocate
<b>Deborah</b>	Regular	Reader	Rare	Higher Education
<b>Donna</b>	Veteran	Contributor	Sporadic	Advocate
<b>Edgar</b>	Regular	Collaborator	Sporadic	Healthcare professional
<b>Edward</b>	Veteran	Collaborator	Sporadic	Healthcare communicator
<b>Eliza</b>	Newbie	Contributor	Sporadic	Healthcare communicator
<b>Jackie</b>	Veteran	Collaborator	Habitual	Healthcare communicator
<b>Jane</b>	Regular	Collaborator	Habitual	Advocate
<b>Jessica</b>	Regular	Contributor	Rare	Healthcare communicator
<b>Johanna</b>	Newbie	Contributor	Rare	Higher Education
<b>Krista</b>	Veteran	Collaborator	Sporadic	Healthcare communicator
<b>Lillie</b>	Regular	Contributor	Sporadic	Healthcare communicator
<b>Nick</b>	Newbie	Contributor	Habitual	Other
<b>Paige</b>	n/a	Reader	Rare	Other
<b>Rachel</b>	Newbie	Collaborator	Habitual	Advocate
<b>Rick</b>	Veteran	Collaborator	Habitual	Healthcare professional
<b>Samantha</b>	Regular	Reader	Rare	Healthcare professional
<b>Mildred</b>	Regular	Contributor	Sporadic	Higher Education
<b>Stephanie</b>	Regular	Contributor	Sporadic	Healthcare communicator
<b>William</b>	Veteran	Leader	Habitual	Healthcare communicator
<b>Young, Colleen</b>	Veteran	Leader	Habitual	Healthcare communicator

# APPENDIX F: ROLE AND PARTICIPATION TYPE BY PARTICIPANT: R/ASKHISTORIANS

Name	Participation Type			Role	
	Length	Depth	Frequency	Community Role	Level of Expertise
<b>Anna</b>	Veteran	Leader	Sporadic	Moderator	Citizen Historian
<b>Brandon</b>	Veteran	Collaborator	Sporadic	Flair	Trained
<b>Gordon</b>	Veteran	Collaborator	Habitual	Flair	Citizen Historian
<b>Helena</b>	Regular	Reader	Sporadic	No role	Untrained
<b>Ira</b>	Regular	Leader	Habitual	Moderator	Trained
<b>Jamie</b>	n/a	n/a	n/a	Former moderator	Trained
<b>Jim</b>	Regular	Collaborator	Habitual	Flair	Untrained
<b>Jon</b>	Regular	Reader	Habitual	No role	Untrained
<b>Josh</b>	Veteran	Leader	Habitual	Moderator	Trained
<b>Kelcey</b>	Regular	Leader	Habitual	Moderator	Citizen Historian
<b>Leah</b>	Veteran	Leader	Habitual	Moderator	Untrained
<b>Mable</b>	Regular	Leader	Habitual	Moderator	Trained
<b>Morgan</b>	n/a	n/a	n/a	Flair	Trained
<b>Myles</b>	Regular	Collaborator	Habitual	Flair	Citizen Historian
<b>Oliver</b>	Regular	Contributor	Habitual	No role	Untrained
<b>Reagan</b>	Regular	Reader	Habitual	No role	Untrained
<b>Robert</b>	Veteran	Leader	Habitual	Moderator	Trained
<b>Ruth</b>	n/a	n/a	n/a	Moderator	Trained
<b>Sam</b>	n/a	n/a	n/a	Former moderator	n/a
<b>Sebastien</b>	Veteran	Reader	Rare	Former moderator	Trained
<b>Steven</b>	Veteran	Leader	Habitual	Moderator	Citizen Historian
<b>Travis</b>	Veteran	Collaborator	Habitual	Flair	Trained