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"Warning: This Is a Must Read": Participation and Disruption in Social Artifacts and Spaces

Angela M. Harrison Eng
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**“WARNING: THIS IS A MUST READ”: PARTICIPATION AND
DISRUPTION IN SOCIAL ARTIFACTS AND SPACES**

by

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ABSTRACT

“WARNING: THIS IS A MUST READ”: PARTICIPATION AND DISRUPTION IN SOCIAL ARTIFACTS AND SPACES

Angela M. Harrison Eng
Old Dominion University, 2014
Co-Directors: Dr. David Metzger
Dr. Liza Potts

As I show in three separate case studies, content, technology, and participant relationships are key components in the design of social artifacts and spaces. One study highlights the invention and evolution of content across multiple spaces. The second shows content used as leverage for authority. The last case study examines the relationship between content and technological interfaces and how disruption may not always be successful.

All of these components make up what I refer to as disruption. Disruption describes participant acts that are executed to change existing power-based structures of information sharing. Using the insights gained from this research, I develop the concept of disruption as a component of design that emphasizes the value of participant work and the ability of participants to alter existing structures of information sharing.

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“I fight for the Users!”
Tron Legacy

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CHAPTER 1

INTRODUCTION

A recent Pew survey found 72% of adult Internet users went online in the past year to find disease or illness related information (Fox, 2014). Of those users, 16% sought others who had similar concerns (Fox, 2014). Only 8% of people posted or shared a health-related experience online, and four in ten of those posted about their own health issues (Fox, 2014). Fox (2014) notes a professional is the first source of information for many people. However, she also notes that participant-generated online information is used to supplement information from a professional source (Fox, 2014). The role participant-generated information in online spaces plays in the wider framework of health information warrants examination. It reveals practices everyday people use in order gain control over information they encounter. Ultimately, these practices lead to opportunities for agency and empowerment. The focus of this dissertation is on one of these practices, which I refer to as *disruption*, or how participants divert established channels of information sharing and establish new ones.

Many scholarly studies focus on participant-generated information and its possible effects. Some scholars note the Internet's potential to empower those who participate in online conversations (Samoocha et al. 2008, Wentzer & Bygholm, 2013). Others claim that connections forged in online social networks offer support to participants (Macias, Lewis, & Smith, 2005; Kral 2006; Barnett & Hwang, 2006). A large amount of research focuses on the validity of participant-generated information (Cline & Haynes, 2001; Motoru, Liu, and Johnson, 2008; Baron, 2008). While these studies offer insight into

topics such as empowerment, online and offline effects of support groups, and misinformation, few focus on the methods participants use to create, disseminate, and rework information. Their focus is primarily on *what* information is shared rather than *how*.

The treatment of information as a fixed, finished artifact is evidenced by the tendency of some scholars to focus on content instead of processes. For example, meme research is focused on a particular version of a meme as opposed to the processes of evolution (Knobel and Lankshear, 2007; Shifman, 2014). These studies, while important in their own right, do not address questions of cultural evolution or participant interactions. That being said, a growing number of scholars in a variety of fields are shifting their attention to the “how” of participant interactions. Jenkins (1992, 2008) shows the power participants have when interacting with existing information, how they work with that information to produce meaning, and how they negotiate across a variety of media to produce their own texts. A growing number of scholars are recognizing that the content participants share is important, but that it is only a part of what comprises participant-generated information. Also important is how content is invented, shaped, reworked, and spread. In other words, the other part of what comprises participant-generated information is the experiences that surround the content. Chapter 2 will provide a more robust discussion of this new trend in agency-focused analysis, but a general introduction to this trend will help to identify the general field of inquiry for this dissertation.

Technical communication scholars are interested in the text as an artifact, but they are also interested in the policies, procedures, and social conventions that surround it. The

facets of technical communication most relevant to this dissertation are the processes and technologies that surround a text: tool usage, interface analysis, information architecture, and many others. All of these components are key to answering questions of *how* information passes between participants and social systems, not *what*. For example, Clay Spinuzzi (2009) asked questions of how social software impacts professional communication. He discussed *lifestreaming*¹, collaborative software, and content management systems. All of these phenomena, he claimed, are projects that affect professional communication by moving the user to an active role and opening possibilities for conversations instead of lecturing (Spinuzzi, 2009). Jason Swarts (2010) examined the practice of content repurposing. Instead of viewing the content as an end product for analysis, he focused on the methods people used to collect, interpret, and reshape information. In the process of repurposing, new relationships were constructed (Hart-Davidson, 2008). Johnson-Eilola (2005) discussed how users encountered and navigate online texts through interfaces. He suggested a new vision for online spaces that includes a more flexible, user-friendly infrastructure better suited for productivity and sharing (Johnson-Eilola, 2005). All of these works do not analyze a finished text, system or website. Rather, they take a step beyond analyzing the finished product and work towards an understanding of the people and processes behind them.

In addition, a number of studies conducted on technical communication and social media show participant processes at work in a social media context. Potts and Jones (2011) used a combination of actor network theory and activity theory to trace participant activity on systems such as Twitter, a microblogging platform, and the alternative

¹ “Maintaining a comprehensive list of events in a reverse chronological sequence; such events have been used to provide ambient status information, build personal history, and create online identities through the accumulation of data about online activities” (Spinuzzi, 2009, pp. 254-55).

interfaces to Twitter called Brizzly and Tweetdeck. They concluded with a call to examine such systems more closely to learn how they help or hinder participants in the act of sharing information. Potts and Harrison (2013) used rhetoric in order to examine the post-Boston Bombing Marathon crowdsourcing efforts of the sites 4chan, and image board site, and reddit, a news and entertainment platform with participant-generated content. They argued that interfaces are rhetorical constructions, and these rhetorical constructions affect the way information is shared on each site. In both examples, researchers examined systems, interfaces, and participant actions rather than just the content produced. Looking at the actions and interfaces in tandem with the content leads to a richer view of participant work.

Another research area that highlights the value of participant-generated information is disaster research in social media. Potts (2014) conducted extensive research on several disasters, including Hurricane Katrina, the London Bombings, and the Mumbai Attacks. She examined the usage of social media tools and how they were utilized in each crisis to produce content. In many instances, official channels of information were bypassed in favor of social networks and sites (Potts, 2014). She showed how people used available tools to produce crisis-related knowledge and subvert existing platforms of information sharing to solve problems (Potts, 2014). The result was a richer information-sharing experience and faster dissemination to a wider audience.

Focusing on participant-generated informational processes has also prompted some interesting intersections between the fields of technical communication and health communication, particularly in terms of rhetoric and document design. A case in point, Heidi Lawrence (2013, 2014) conducted research on vaccination rhetoric. Her

dissertation focused on the discourse and rhetoric that surrounds vaccination information from both experts and nonexperts. Her findings concluded that the vaccine controversy is not necessarily a matter of right vs. wrong, but the result of many complex ontologies at work (Lawrence, 2013). Another study placed vaccines in a rhetorical perspective. The focus was on how scientific and social discourses shaped perceptions about the polio and swine flu vaccines (Lawrence, et al. 2014). Ardhuser (2011) studied an online diabetes group through ethnographic methods and rhetorical analysis. She found, through analysis of interactions on the site, that control is a major factor in discussions about the disease. She made a call to study and understand more online communities to discern their values and inform professionals about methods for strengthening patient agency (Ardhuser 2011). Angeli (2012) conducted a study on the metaphors that were used in conjunction with the swine flu outbreak. She concluded that the metaphors were constructed in a way that invoked strong emotions in the reader, most notably fear (Angeli, 2012). She suggested communicators of messages need more awareness of their metaphoric use of language because it affects audiences negatively. All of these studies address rhetoric and not just *what* content is available, but how the content affects communications about specific conditions, disease, and illnesses. In other words, the focus is on *how* people communicate and on the impact of these communication choices.

The connections between technical and health communication go beyond the field of rhetoric and move researchers into the field of document design. Batova (2010) examined clinical trials and informed consent in both Russia and the United States. She noted participant agency is absent in such documents. She recommended more user-centric practices to consider the needs of the patients and an awareness of their questions

and concerns (Batova, 2010). In this example, Batova uses not what content is available, but what content is absent to emphasize to the plight of the participant. Her study addresses questions of the content, but thorough analysis discusses how the absence of content robs participants of agency. She uses these findings as leverage to call for practices that participants in more valued positions. Researchers and health communicators can benefit from such approaches, as they focus on how rhetoric affects audiences. In addition, they address how participants can be placed in positions that are more prominent so they may exercise agency and/or empowerment.

Following this interesting trend in technical communication and health care communication, this dissertation focuses on participant-generated information in social artifacts and spaces specifically related to HPV, the most common STD in the United States. The central research questions for this dissertation are:

1. What practices do participants exercise in the construction and progression of a social artifact? How do they disrupt the producer/consumer binary?
2. How do participants of varying expertise levels share information in a collective space? What participant moves break down the hierarchal structure of expert/nonexpert and what new structure replaces it?
3. How are structures of information hierarchies enforced? What are the consequences of this enforcement?

Responding to these questions requires the development of a methodology that traces how binary, power based relationships are altered in social artifacts and spaces. One of the methods used to alter these binary relationships is disruption. Tracing how disruption occurs and recognizing its implications places value on participant-generated information and on participant work in social artifacts and spaces. Illustrating how participants use information, or in some cases do not use it, is a step towards understanding the cultures and structures that surround information sharing.

This dissertation presents three case studies. The first case study examines the social artifact of the meme and how constructing and/or transmitting memes becomes an act of rhetorical agency. The second case analyzes participant interactions in the social space of HuffPost Live and how these interactions become evidence of empowerment. The last case study focuses on the social space of Twitter, the ways participants use tools on the site to communicate, and how the interface plays a role in how participants communicate. At the heart of these three case studies are the experiences that participants build and how they negotiate meaning through content and interfaces. Each chapter highlights the specific moves participants make in order to disrupt expert/non-expert, producer/consumer relationships. Two chapters establish how new relationships place them in a position of agency or empowerment. One illustrates how disruptive moves fail to create relationships and the implications of this failure.

The first case study (Chapter 3) observes and analyzes the development and evolution of the Hipster Kitty meme. Rather than view the HPV version of the Hipster Kitty meme as a stand-alone artifact, I trace the processes involved with inventing and reworking the meme to form its image macro form. Tracing these progressions

emphasizes the participants' rhetorical agency on both an individual and collective level. It is an example of how a participant begins as a reader encountering a text, then evolves into a writer when he or she reworks the information in the text. Thus, the work of meaning making is not only in the production of the original image, but in the collective group of participants who draw meaning from it. This participant work pushes boundaries of collective work and potentially fosters agency.

The second case study (Chapter 4) examines the social space of HuffPost Live. By looking at the interactions between a variety of sources, this case study examines the methods participants from various backgrounds use to work together to understand the HPV virus. It is an example of an already-established structure of information sharing in which participant knowledge work disrupts the "expert-addresser/nonexpert-addressee" structure, and participant acts become acts of co-collaboration. I analyze the participant interactions between the multiple groups present in this space and identify the methods and tactics they use to communicate their understandings of the virus with one another. This kind of rhetorical analysis shows how participants may not be able to completely erase the existing power structures of information sharing, but they can be subverted. While the established power structure remains, tracing moments of disruption shows how participants are able to work together and create an alternative locus of information and knowledge as opposed to the one HuffPost Live provides. The result is a potentially empowered participant that will have a greater understanding of the virus and the ways that he or she can deal with it.

The third case study (Chapter 5) examines the social space of Twitter. Unlike the other two case studies, it is an example of how disruptive moves are made and ultimately

do not succeed in interrupting the binary power structures present. Through content analysis, the patterns and practices of the participant in the #HPV stream are identified. Through a rhetorical analysis of the interface, reasons why the disruptive moves may have not been successful are discussed. The analysis traces the specific ways participants disrupt structures, but are stymied by the options provided within the interface. It is important to recognize the ways in which participant work can be obstructed as well as successful, so that systems in the future can have more participant-friendly design. Knowing what information sharing practices do and do not work within a site also allows those Working within a space to understand and leverage the tools provided to share information in ways that are more meaningful.

The final chapter (Chapter 6) provides an outline of disruption's importance. It highlights the goals and challenges of disruption. Key points from each chapter are emphasized in order to provide a rounded view of what constitutes disruption, how it reaches a particular goal or defines a specific challenge, and what the implications are. It also provides a starting point for designing for disruption. The chapter ends with a few further considerations of how the definition and practices of disruption can be applied in other fields and contexts.

The case studies in this dissertation show how social artifacts and spaces are viable sources of information. While participant-generated information may not always be accurate, the methods and practices participants use to create, disseminate, and rework that information into knowledge serve as a valuable source for future work. Research on these artifacts and spaces inform researchers and health communicators of the culture that

surrounds these information-sharing practices and the ways available tools are used to aid in the development and spread of information.

These notions have great value for technical communicators and health professionals, as newer communication structures can be developed that support participant work and encourage co-collaboration. Examining participant-generated information from the standpoint of health professionals allows a view into how the public perceives the virus, what they do or do not understand, and why they pose specific questions. In technical communication, this line of inquiry has the potential to solve issues with participant-generated information. Examining how the information is shared, how it spreads, and how relationships are forged through social spaces and artifacts is of use to experience designers and architects, as they design systems to highlight and situate the value of participant-generated work.

CHAPTER 2

REVIEW OF THE LITERATURE AND A METHODOLOGY FOR TRACING DISRUPTION IN SOCIAL ARTIFACTS AND SPACES

2.1 INTRODUCTION

The value of participant-generated information in the digital landscape is changing. The paradigm shift of the professional/nonprofessional in technical communication (Carliner, 2010; Diehl, Hart-Davidson, Grabill, & Iyer, 2008; Johnson Eilola, 2004) parallels the paradigm shift of the producer/consumer in participatory culture (Jenkins, 1992; Bruns, 2008) and doctor/patient in health communication (Luftey and Wishner, 1999). In all of these cases, the binary relationship between the information producer and the information consumer is no longer a top-down, hierarchal approach. Instead, these relationships shift to one where binaries are no longer the only model for interaction. The binary relationships are broken through disruptive moves, or the interruptions and interjections participants make to reassert their place in spaces where information is shared. Tracing the methods participants use in order to share information and disrupt hierarchies in a collective space asks several questions:

- How participants react to information presented to them;
- How participants reshape and repurpose information;
- How structures of information sharing are broken down and reinforced

The new roles participants acquire need to be fully explored in order to understand and integrate the information they share. Understanding how participants disrupt structures

and assume new roles have the potential to further instances of empowerment and/or agency in digital spaces.

When researchers and health professionals who engage with social systems understand participatory practices, both groups can work towards a better design across a variety of systems that encourage participation from many sources as opposed to a few. Inviting and enabling participation from a variety of sources allows potential for the flattening of existing hierarchies of information. The flattening of hierarchies is characterized by the removal of layers through which information passes (Burnett and Clark, 1997). When participants are able to access and interact with information, then share it with others as knowledge, the hierarchal structures of information sharing shifts. Understanding how these shifts occur is central to designing systems that encourage the availability of interactive information. When hierarchal structures of information are collapsed and reformed, participant-generated information becomes more visible. The increased visibility of participant-generated information not only highlights its value, but allows observation for researchers and industry professionals that work with social spaces.

The varieties of approaches for the methodology used in this dissertation acknowledge and support the value of participant-generated information. In this chapter, I review the literature for three different topics: participatory culture, technical communication, and health communication. All three of these areas experienced role shifts in their histories. In participatory culture, the producer/consumer binary collapsed and resulted in a producer/consumer hybrid. In a professional/non-professional context, the hierarchy still exists, but the non-professional voice is taken into account alongside

the professional. A similar shift occurs in the doctor/patient relationship, though not as advanced. The dynamic of these relationships is one where participatory roles are constantly in flux and binaries no longer apply. The literature in these areas provides a sufficient backdrop for examining and mapping these new relationship dynamics.

2.2 PARTICIPATORY CULTURE

Henry Jenkins (2006) situates *participatory culture* in contrast to *consumer culture*: “rather than producers and consumers occupying separate roles, we might now see them as participants who interact with each other according to a new set of rules no one fully understands yet” (p. 3). Therefore, the roles of producer and consumer are no longer separate; they have collapsed into one. Jenkins conducted numerous studies on participatory culture in fan culture, from participants who write fan fiction to knowledge communities coming together to speculate about a TV show (1992, 2006, 2008, 2014). However, participatory culture is prevalent in more spaces than the recreational. As Jenkins (2006) noted, skills learned in these collective, participatory spaces are put to use in more contexts.

2.2.1 Power Dynamics and Hierarchies in Participatory Culture

Applying Jenkins’ work to the research in this dissertation, I am interested in how participants interact with the information they locate online and what methods they use to blur the line between producer, the one who creates information, and consumer, the one that reads the information. Participant interactions on social sites spread knowledge, while other participants react with their own opinions, beliefs, and values. In the health

communication context, participants work to spread information by offering stances on topics such as illness, disease, doctors, tests, and other health-related subjects. However, they also interact with others to expand upon, reshape, and recirculate information and generate knowledge through methods such as learning, arguing, and disputing. These interactions disrupt the established stakeholders of information and potentially generate a site of empowerment and/or agency. From the health communication perspective, taking note of the trends and topics that participants generate in social spaces gives insight to the knowledge participants may or may not possess concerning an illness or condition, thus providing a snapshot of differing public perceptions and opening conversations for better engagement with patients.

Jenkins (1992) rejects the notion of the unthinking, brainwashed consumer. He views fans as cultural agents that engage in acts of meaning making. He uses the work of Michel DeCerteau (1984) as the underpinning of his work, namely the concept of *textual poaching*. Poaching, DeCerteau (1984) maintains, is the act of engaging in active reading and interacting with a text as opposed to passively reading it. DeCerteau (1984) believes that the meaning of a text is always in flux, and the “presence and circulation of a representation . . . tells us nothing about what it is for its users” (p. xiii). *Poaching* occurs when people manipulate and remake texts. In the context of health communication online, social media participants are similar to fans because they are everyday people engaged in conversations about specific topics, reading texts, and producing texts. These texts include images, video, and written text. In many cases, participants interact with texts circulated by producers, but in some cases, other participants reshape and recirculate those texts. In other words, they are engaged in textual poaching. Their interactions

become a cycle in which the roles of producer and consumer are blurred. The processes textual poachers use to produce their own meanings from texts and share them in a collective space is indicative not only of the value of their work, but the breaking down established hierarchies of information as well.

Bruns (2008) shows how the process of production has drastically changed over the years, including the relationship between producer and consumer². In previous models, they were on opposite ends of a linear continuum where the producer made a product to distribute to consumers. As a result, the consumer would be at the end of a production line. However, the development of new technologies such as open source software, social media, and collaborationware (Bruns, 2008), give the consumer a larger voice than before. *Produusage* is the term for what consumers now create. The web is more collaborative and user-led, allowing participants to engage with information more. As a result, there is no longer a linear path between the producer and consumer. Tracing the moments of disruption in the existing hierarchies within social media infrastructures shows the methods participants use to empower themselves and engage in a collective mode of information sharing. The identification and tracing of these moves both enhances the value of participant-generated work and generates conversations for design practices that may further enhance empowerment.

² Bruns (2008) sketches out a brief history of the collapsed production hierarchy and how the advent of social spaces altered it. The industrial model of production was a short chain from producer to consumer, with the distributor in the middle. Both producer and consumer were viewed completely independent of one another, and the consumer had little to no say over the production of goods. This model changed with the advent of customer feedback, which gave consumers more of a voice in production. The model shifted further with the rise of the Internet and social networking spaces. The consumer took on a new role as both the consumer *and* the producer, directly challenging the traditional hierarchal relationship reflected in the industrial production model.

2.2.3 *Social Artifacts and Social Spaces*

To discuss the changing of relationships between producers and consumers, it is necessary to define what these terms mean in the context of this dissertation. Gergen defines a *social artifact* (1985) as “the terms in which the world is understood . . . products of historically situated interchanges among people” (p. 267). A social artifact is not effortless; it is man-made and is the result of a collaboration of many people that are somehow related (Gergen 1985). The digital artifact is like the social artifact in the sense that it is man-made and is a cultural footprint, but it is intangible and global, as opposed to local (Lyman & Kahle 1998). The roots of this definition are in sociology, but they are applicable to the digital artifact.

In this dissertation, I explore the concept of the image as social artifact. Images are the product of human creation (Berger 1977). Berger notes that an image is a *reproduction* that has “been detached from the place and time in which it made its appearance and preserved” (pp. 9-10). Furthermore, these reproductions are consumed through the act of viewing, which leads to theories such as encoding/decoding, poaching, and convergence to describe how people read, interpret, and rework media texts (Hall 1979; DeCerteau, 1984; Jenkins 1992). However, the social artifact is not the only focus of this dissertation. It also focuses on the processes that surround the creation and spread of the social artifact.

I refer to the people who aid in these processes of creation and spread of a social artifact as *participants* as opposed to *users*. *User* is considered a derogatory term because it “depersonalizes” the person that is engaged with a system (Norman, 2006). The term makes the person devoid of any thinking and reduces him or her to the role of a mouse-

clicker. People are more than just users, they are thinking, breathing people with the capacity to make decisions. Potts (2014) distinguishes the difference between these two terms by defining users as a people who are involved with using the a system or application, and participants as people who “leverage their activities as points of mediation” (p. 8). The activities that are focused on in this dissertation arise from disruption. By moving away from viewing the individual as a user, the actions a person is engaged with become more meaningful. There is no longer simply the “using” of a technology, there is active participation within these spaces that involve communication with others. How participant practices work in tandem with these systems—and in some cases work against—yields insight into how they work to create meaning and share it.

Bourdieu (1985) refers to the social world as represented “within a space (with several dimensions) constructed on the basis of principles of differentiation or distribution constituted by the set of properties active within the social universe in question” (pp. 723-724). The “dimensions” in this space include “economic, cultural, and social capital” (Veenstra, 2005, p. 14). Their level of capital distinguishes these dimensions. The more capital a dimension has, the more power it has. The social world is caught up in these struggles for power. In an online space, there is a constant struggle between these three dimensions. Therefore, I refer to a *social space* as one in which power relations between participants are at work.

The terms social space and social network are not interchangeable. A social network is characterized as a collection of people and their acquaintances (Baym 2011, boyd & Ellison, 2007). Connections between people and their acquaintances are the key to a social network, and these connections vary in frequency (boyd & Ellison, 2007).

Though the sites discussed in this dissertation can be considered social, they are not necessarily networks. While connections are made between participants, they are not necessarily acquaintances and are not a crucial part of analysis. I refer to them as social spaces because they are a digital representation of a social space in which interactions occur and power relations are present. In technical communication, power relations are a long-standing topic. From the encoding/decoding standpoint (Hall, 2006), the power relations are a struggle between encoding and decoding. Encoding is in the hands of producers of information, and decoding in the hands of the receivers of that information. The role of the technical communicator is to provide articulation of meaning within the encoding/decoding process (Slack, Miller, & Doak 1993). However, the power relations in the social sites examined in this dissertation do not rely on the producer/consumer model, nor do they depend on some form of mediation to decode for them. Rather, the communication about HPV that takes place in these social sites are between a myriad of sources: authoritative sources of information, everyday people, experts, nonexperts, and laypersons. It is important to examine the power relations between all of these different groups as opposed to the binary power relations that are emphasized in the current literature on health communication. Examining these relations will provide crucial information about communication methods and patterns to technical communicators that have the potential to aid in the design of better systems.

2.2.2 Participant-Generated Information in Social Spaces

Scholars study the value of participant-generated information in social media spaces in several contexts, including communication in times of crisis and at academic

gatherings. In the context of disaster, Potts, Seitzinger, Jones, and Harrison (2011) examine the practice of using Twitter and hashtags in the wake of the New Zealand and Japan Earthquakes. This study explored some of the issues that arose with hashtag use and how participant-generated information is organized. Though their work is associated with hashtags in a time of crisis, the questions they raise are relevant to this study. They noted the volume of content available on the site and commented that people left to their own devices will sort through and identify legitimate data. They end the article with a call to examine the ways people engage with massive streams of information and to “understand and design participatory experiences that enable people to manage information” (Potts et al., 2011). This study shows how participants are creating and sifting through information in order to share it. In examining the practices participants used, Potts, Seitzinger, Jones, and Harrison (2011) were able to pinpoint issues with the systems available to spread information and showed ways participants negotiated meanings as they sifted through a large volume of data. This study seeks to identify how participants in various social media spaces manage HPV-related information they encounter and leverage it to empower themselves or a group.

2.3 TECHNICAL COMMUNICATION AND INFORMATION SHARING

Like participatory culture, the boundaries of technical communication and what it encompasses have evolved over the decades. In the past, the role of the technical communicator was to provide product support for end users (Carliner, 2010; Johnson Eilola, 2004). Examples include the accompanying how-to guides that come with new software, instruction booklets for a new video game, or the building instructions from an

IKEA product. The result of this role was privileging of commodity work that reduced the technical communicator to a support role. Since the users of a product had little to no voice in the making and the distribution of the product, they had little to no agency (Carliner, 2010; Dicks, 2010; Johnson Eilola, 2004). However, the roles of both the user and the technical communicator changed with the advent of the “read/write web,” which allows people to be both producers of information and consumers of content (Carliner, 2010; Shank, 2008). The transformation to the read/write web aligns with the literature on participatory culture. In a technical communication context, the parallel relationship with the producer and consumer would be professional and non-professional. In the past, technical communication operated under the practice of trained, expert-only distribution of information with little or no user contributions. One example of this distribution model would be game consoles. In the past, game consoles were packaged with manuals. The original Nintendo Entertainment System manual, published in 1998, contained 10 pages of information. Two of those pages were for troubleshooting. If any of those instructions did not work, the person trying to fix the machine was given a hotline number. Nowadays, sites like iFixIt are designed to empower those trying to fix their game machines. iFixIt is a depository for repair advice on anything from game consoles to Mac Products. It consists of questions and answers from a community of like-minded participants. There is no relying on a hotline number or an expert in the field of game console repair, just people who contribute their knowledge to a pool of information from which others can draw. The change in the dynamic between the professional and non-professional yields new relationships that warrant closer examination. Part of this new

relationship considers how the professional or nonprofessional asserts his or her place in the generating and sharing of information in digital spaces.

2.2.1 The Shift in the Professional/Nonprofessional Hierarchy

The historical context of Saul Carliner's work shows a revolutionary shift in the professional and non-professional relationship. The focus is no longer on the production of texts for consumption. Now the focus is directed on the value of participant-generated information (Carliner, 2010). Therefore, the reader is no longer passively receiving information, but instead interacting with and shaping it. Furthermore, the reader has the ability to share information with others, shaping it to express the points he or she desires. It is important to not only look at how the professional/non-professional is sharing and interacting with information, but how he or she is using the tools available to leverage and break apart top-down knowledge work that occurs in digital spaces. How non-professionals bypass the prescriptive, planned information structures that professionals create is also of interest. These sidesteps are the moves that break down established relationships and create new ones. As a result, people are more than knowledge consumers; they are knowledge creators and sharers.

In his writings on symbolic-analytic work, Johndan Johnson-Eilola (2004) examines the place of information in a post-industrial age. He also pinpoints the historical shift, as Dicks and Carliner have, from the value of objects to the information about the object. To show how the object was more valued in the industrial economy, he provides the example of a piece of software. Before this shift, the piece of software itself was the valued object. The information about the piece of software was viewed as an

“afterthought” (Johnson-Eilola, 2004, p. 178). Such a model devalues the work of both technical communicators and users. Johnson-Eilola (2004) notes that technical communication traditionally had a place as a support position, but “by relocating the value of documentation into a post-industrial relationship, we can work to rearticulate technical communication as a post-industrial discipline” (Johnson-Eilola, 2004, p. 177). Symbolic-analytic work, as opposed to support work, is the term Johnson-Eilola suggests to look at the work that technical communicators do, thus giving them more power and more emphasis on social contexts. The former model of looking at technical communication did not give technical communicators much power and agency. The move from an industrial economy to an information economy means that these hierarchies will not be as entrenched. Tracing how these hierarchies break down and the methods people use to organize, manage, and redistribute information gives a clearer picture to how people interact with interfaces and with other people and relevant information. Now, there are more instances where people create and shape information in social spaces. There are also more avenues of online distribution.

2.2.2 Knowledge Work and Online Spaces

Knowledge work is not just for professionals anymore. The knowledge work that non-professionals do is of great value, particularly in digital spaces. Diehl, Hart-Davidson, Grabill, and Iyer (2008) define knowledge work as “analytical activity requiring problem solving and abstract reasoning, particularly with (and through) advanced information technologies and particularly with and through acts of writing (p. 413). The ways participants engage in knowledge work and the reasons they do so are

varied. Seeing the ways that participants engage in knowledge work allows a broader picture of how people interact with technology, issues that may arise in the sharing of information, and how to design better systems for people to use and communicate with it. Identifying the knowledge work that multiple participants with different roles undertake in specific social spaces not only gives insight to how they use social tools to leverage information sharing, but how the information is shaped as it passes through these specific tools.

Grabill (2007) conducted extensive research on the knowledge work done by people outside the workplace. He defines citizen work as knowledge work, placing particular interest in the way people engage with technology in order to carry out their knowledge work. He states that we have only part of the picture when it comes to understanding how the everyday person writes and interacts with technology in his or her life. Examining the ways people do this writing and interacting will open doors in the field of technical communication (Grabill, 2007). He examines the value of the knowledge work carried out by citizens and how it is measured against the work of experts (Grabill, 2007). This research is important because the citizen's word is no longer passive; rather, technologies have allowed people to have easier access to voicing their opinions and concerns. Ultimately, Grabill's work exemplifies a role change between author and audience, echoing the shift in the relationship between producer and consumer. Rather than have an author dictate information to a given audience, the audience becomes the author, while the authors become the audience. This shifting of roles has many implications that need to be explored further in different contexts,

including an examination of the ways the changed roles lead to new relationships with new power dynamics.

The notion of the non-expert and the contributions that he or she makes to an information community are vital because the knowledge work produced by citizens as opposed to solely professional work shows that the non-expert is more than capable of contributing to a knowledge community. Placing the non-expert in this role shows that the information that the non-expert contributes is of value. Tracing this new role, how people assert it, and what new relationships are forged shows the potential of the non-expert to engage with knowledge production. Since participants in social spaces are both consumers and producers of information, taking a closer look at the communication practices these people use provides insight into to what kinds of hierarchies are flattened and redrawn. Acknowledgement of these practices ensures that contributions of the user can be integrated alongside the professionals. When the impact that the user can have is considered more, the role of the technical communicator changes. He or she becomes the one playing a key part in changing existing infrastructures and navigating organizations through those changes. Such a change allows conversations for newer methods of advocacy and service.

Taking into account technical communication's evolution and the changing nature of the value of information, participants have a more important role than ever. How people organize themselves, the presence of knowledge work, and people's interactions with collaborative software become sites of research for technical communicators to pursue. Using several methods to trace these practices reveals how structures of information sharing can be disrupted or remain static.

2.4 PARTICIPANT-GENERATED HEALTH INFORMATION

Previous studies on Twitter pointed to some of the issues and some of the moves participants took to create conversation (Potts, et al. 2011, McNely, 2010). Studies on other social spaces point to interfaces as sites of culture, which in turn influence the shape of information coming from the site (Potts & Harrison, 2013). However, they were done in contexts such as crises, disasters, and small-scale conferences. In the context of participant-generated health information, there are two main topics of study: the relationship between the expert and layperson and misinformation. The topic of expert vs. layperson will be addressed in this study, as it is directly tied to the topic of information hierarchies. Tracing how participants on specific social sites interact with authoritative sources of information and how they disrupt the existing hierarchy between expert and layperson allows communicators in the technical and medical profession to consider the value of the work the non-professional performs and how to design systems for better interaction.

Motoru, Liu, and Johnson (2008) state that more people are turning to the web for health information. They claim that “Web 2.0” has spawned the prevalence of “Health 2.0,” or “Medicine 2.0,” marked by the sharing of experiences of participants as knowledge. Patients, they claim, are informed, collaborate, and pass the information they have learned back to the community. Due to the lack of professional presence on the web, those who read information shared by these patients must critically assess it. Social media is one of the sites where information is shared, and, echoing Bruns (2008), trustworthiness is a key in establishing the quality of information people make available. However, there is much emphasis on the validity of information made available by

participants, suggesting that their engagement with knowledge work concerning health is flawed due to lack of expertise. While it is possible for participants to share incorrect information, the argument of who is wrong and who is right is not the emphasis of this dissertation. The engagement with both participant-generated and expert-generated information and the tools that mediate that information are of importance as well. Misinformation could be better identified and dealt with when better understanding of how participants in social spaces inform themselves and react to the information provided for them. Opening up discussion on how participants create and share information with professionals rather than opposing them relocates the value of their work and makes them participants in the collective whole of information, as opposed to the fringes.

Martin (2008) concentrates on the practices of online health communication, citing topics such as empowerment, consumerism, and information contribution. These topics are directly relevant to the layperson, but also affect the expert. He comments that there is “a representative role for involved publics, and technocratic ideas about the potential ‘expert’ contributions of particular subgroups of the public” (Martin, 2008, p.35). He notes some failings of the practice of sharing information in a participatory space, mainly that some people create information that stands out more than others. The central point of his paper was to “explore technocratic and democratic rationales for public involvement” (36). He mentions “lay expertise” as a significant term in the tension between expert and non-expert, and he concludes that much attention has been focused on the validity of information that lay experts provide. He concludes that individuals have much to offer in terms of information, and that the two extremes can work together to create rather than fight one another for control. Some scholars question the use of the

term “lay expert” (Prior, 2007), but the underlying concern for selectivity and elitism Martin (2008) posits is warranted. The tension between the producer/consumer in participatory culture and the professional/non-professional in technical communication are also within the parameters of health-generated information. The call for collaboration rather than binary oppositions suggests that no one form of information is more privileged than the other, and contributions from both can make for a richer information sharing experience. Tracing disruptive moves allows an exploration of how this co-collaboration between information sources is accomplished.

2.5 A METHODOLOGY FOR TRACING DISRUPTION

For this dissertation, I integrate three research methods in order to create a methodology for the description and tracing of *disruption in social artifacts and spaces*. I use discourse analysis to examine a social artifact, and rhetorical and content analysis to examine two social networking sites. The purpose of these methods is to describe and trace the disruptive moves participants employ to assert empowerment and/or agency. This methodology will explore how participants break apart channels that support top-down knowledge sharing practices and assert their own place in the landscape of information sharing.

Participants create, reshape, and disseminate information with various social media tools, and such tools differ from site to site. In some cases, the tools used are not visible, allowing the social artifact itself to be used for tracing. Acknowledging the practices participants utilize to share information places their work in a more valued position, allowing them to work within existing digital information sharing structures

rather than in opposition. The methodology in this chapter identifies and traces the specific moves participants make to flatten existing hierarchies of information sharing in a collective digital space comprised of many voices. Identifying and tracing these disruptive moves allows researchers to design better systems to further flatten information hierarchies and support collaborative networks. Furthermore, participant-generated work will have a more valuable place in the practice of meaning making and information sharing. In health communication, professionals can integrate participant-generated information in to conversations and discussions so participant voices can be better heard.

Discourse analysis, rhetorical analysis, and content analysis provide a different lens to view disruptive moves. Participatory culture addresses topics such as civic engagement, do-it-yourself (DIY), and media convergence. Technical communication involves topics such as websites, collaboration methods, and locating the value of participant work. Health communication is focused on the value of information and available means of support for doctors and patients. Each method used in this dissertation is applied to one of these fields to investigate different sites of information sharing. Information sharing takes many forms. Tracing the maneuvers participants make within specific sites of information reveals how they become collaborators in a collective space, as opposed to oppositional entities. In some cases, however, this outcome is not fully realized and set structures remain in place.

2.5.1 Data Collection

The methodology in this dissertation uses a variety of approaches to account for the social artifacts and sites traced. Discourse analysis, in the context of images, will be used to assess how information is translated and reappropriated into an image, specifically an online meme. Rhetorical analysis is used to explore relationships in the HuffPost Live chat about HPV. Last, content analysis is used to assess the prevalent patterns and practices present in the #hvp stream on Twitter. Each case study is an example of participant-generated information that helps shape a collective understanding of HPV. Each one contributes to a wider public discussion of what HPV entails and how people express attitudes about it in different online contexts.

2.5.1.1 Online Memes

Chapter 3 begins with an image and traces how it evolves as it passes through different digital spaces among anonymous participants, ending the image macro meme known as Hipster Kitty. This case specifically traces the meme's genesis and evolution to its form as a statement about the HPV virus. Tracing the genesis and evolution of the meme illustrates the ways participants encounter a piece of information, interact with it, make it their own, and send it back into the web for others to interact with. Since there were no specific participants I could identify, the images themselves, which I refer to as *social artifacts*, were used as the sample for this case study.

I drew from methods used in discourse analysis to examine the collected images. In the context of the image, discourse analysis is concerned with "how images construct accounts of the social world" (Rose, 2007, p. 146). Rose (2007) comments that this form

of discourse analysis is focused on the image itself, while also focusing on the production and effects of the image. She cites Foucault's notion of discourse as a starting point: "groups of statements which structure the way a thing is thought, and the way we act on the basis of that thinking" (Rose, 2007, p. 142). Though Foucault's definition is about written text, it is applicable to images because images are an expression of a way a "thing is thought." Johnstone (2002) adds to the use of discourse analysis as image by stating, "To discourse analysis, 'discourse' usually means actual instances of communication in the medium of language" and "Media such as photography, clothing, architecture, and dance are meaningful too, as discourse analysts often need to think about the connections between language and other such semiotic systems" (p. 2). Thus, discourse analysis goes beyond language and into the expression of language through different media, including image.

Fran Tonkiss (2004) expounds on the social aspect of discourse, stating that texts are not objective. They are "a domain in which people's knowledge of the social world is actively shaped" (p. 373). Therefore, the social world is constructed by discourse. Furthermore, these are not static productions; they are constantly reproduced (Tonkiss, 2004). I didn't use a specific method of discourse analysis, but I drew from the work of Fairclough and his work with ideologies and discourse to develop my own method of analyzing the social artifact of the meme. What I refer to as discourse in the context of this dissertation is discourse, defined by Fairclough, as "a category for designating particular ways of representing particular aspects of social events." Furthermore, he states "discourses include representations of how things are and have been, as well as imaginaries—representations of how things might or could be." Van Dijk adds another

dimension with his work on discourse and ideology. Ideology, broadly defined as belief systems socially shared by a group of people, is expressed in these meme representations.

The representations I am interested in are not just words, but images. The images I use in the first case study are of a specific meme known as Hipster Kitty, and I analyze how the image and the text of the meme are iconological representations of ideologies, both in text and image. In doing so, I was able to trace the meme's construction, thus highlighting the importance of participant acts in the shaping of discourse. First, I conducted some web research and collected images of the Hipster Kitty meme in its various phases of construct. Second, after conducting more web research, I created a catalog of hipster culture. A couple of sources were academic, but I consulted texts from mainstream articles and sites as well to determine what has been developed in popular culture. Lastly, I matched the representations in each image to the catalog I had created and determined how the representations were reflective of a particular established ideology of hipster culture. I also noted the shifts in each meme iteration, noting what aspects of the images remained and which ones did not. By analyzing these changes, I was able to trace how the meme's production has been both reproduced and disrupted. I mapped these disruptions and ended with the meme's HPV instance, which is a perception about the virus participants actively shaped. The mapping illustrates how participants build upon existing information and how each step is crucial to meaning-making and knowledge production.

2.5.1.2 Multimedia Chat Room

In Chapter 4, I moved from exploring the social artifact to the social space. Rhetorical analysis is used to explore relationships in the HuffPost Live chat about HPV. Specifically, the concept of the rhetorical situation³ is useful for how information is shared in context and approaching participant work on the site. The approach from Bitzer (1968) and Vatz (1973) concerning the rhetorical situation places the situation and the rhetor in direct opposition to each other: either the rhetor shapes the situation, or the situation shapes the rhetor. Biesecker (1989) urged a viewpoint beyond the binaries that involved Derrida's notion of *differance*. Derrida suggested that since the sign consists of a neverending chain of signifiers, meaning is always deferred. Biesecker (1989) applies this concept to the audience, stating that the audience is not a static entity. Rather, the roles that the audience plays are constantly shifting; they are both the receiver and the applier of meaning. As a result, the audience is constantly in a state of deferment and the rhetorical triangle of the audience, message, and author collapses. This notion of the rhetorical situation becomes central to the exploration of relationships in the HPV chat on Huffpost Live. Approaching the space from the perspective of the rhetorical situation enabled the view that participants are not static entities; rather, they shift with the situation. The exchange between participants, when mapped, acknowledges what kinds of relationships exist in this space and the ways that communication occurs between them.

³ Lloyd Bitzer (1968) defined the rhetorical situation as "a complex of persons, events, objects, and relations presenting an actual or potential exigence which can be completely or partially removed if discourse, introduced into the situation, can so constrain human decision or action as to bring about the significant modification of the exigence" (p. 219). The exigence is the event or situation that brings about the need for a reaction. Therefore, the situation exists first and discourse arises from the situation. Vatz (1973) responded that the situation does not exist first; it goes through personal filters that decide what discourse should be applied to the situation. This new take on the rhetorical situation is the inverse of Bitzer's: those who speak about it, not the situation shaping the discourse, shape the perception of the situation.

Like the discourse analysis, I did not use any particular method but drew from rhetorical analysis and Ludwig Fleck's theory of thought collectives to create a method for identifying, speaker, text, and audience in a mediated environment. I use a broad definition of rhetoric as a starting point: "the study of language and how to use it" and "and effort to understand how people within specific social situations attempt to influence others through language." In other words, I looked at interactions between people in the social space of HuffPost Live and the tactics they used to appeal to one another. While I acknowledge the role of the multimedia in this case study, I focused on the chat content the most. The chat content is comprised of 850 comments from participants that watched the video about HPV.

First, I identified the existing thought collectives, or the community of persons that exchange ideas, present in the space of HuffPost Live. I identified them through the messages they conveyed to one another about HPV from the addressor/addressee standpoint. Once the collectives were identified, I mapped the levels of interaction between the collectives. I paid particular attention to who addressed whom, and who responded to whom (or in some cases did not). I also noted the way messages from one collective to another were conveyed. I moved the focus from the multimedia portion to the chat portion because that is where the most interaction occurred. I evaluated the comments for any rhetorical appeals, significant language use, and conversational tactics that showed any signs of empowerment. I used some existing criteria from a study to identify some characteristics of empowerment present in the chat, but I also used an emergent method to build upon the existing ones and create some newer ones. I noted

instances of each characteristic and placed them in a chart. This chart provided an overview of the empowering, disruptive moves that occurred in the chat.

2.5.1.3 Microblogging

For the last case study, I examine the interactions between participants in the #hvp stream on Twitter. By examining the interaction rates, or how often participants interact with one another, a better picture can be formed of who interacts with whom, how much interaction occurs, and what kinds of interaction occur. To gather data for the case study, I used the site twdocs.com to scrape and export the most recent 900 tweets in the #hvp stream. Twdocs is a third-party site that is used to archive Twitter streams. While it collects only the most recent tweets, the service is of value because it allows the data to be exported into a variety of formats. The program collected the 900 tweets with the hashtag #hvp and exported them as an Excel spreadsheet with the tweet's author, content, time tweeted, and link.

For the last case study, I used content analysis to explore the dominant functions of tools used to communicate in the #HPV stream of Twitter. Content analysis “examines the characteristics of messages” and involves “tallying the number of specific communication phenomena in a given text . . . then categorizing those tallies into a taxonomy from which inferences can be made” (Thayer et al., 2007, p. 268). I was interested in how the site was used specifically in the context of spreading information about HPV and how people used the available tools on the site to communicate.

First, I collected three different samples of 300 tweets on varying dates using the service tw.docs (a program that allows you to grab a limited number of tweets and put

them in a spreadsheet). I used an emergent method to code functions of the symbols specific to the medium (at the time of the writing—now FB uses hashtags), which include the #, @, and the RT. For the # I counted the number of # other than #HPV, for the @ symbol I tallied whether it was used to address or attribute someone else, and for the RT I tallied how many times tweets were retweeted, if at all. I also consider link usage a tool for spreading information, and tallied the number of times a link showed up in a tweet.

Since I had the “what” answer for my research after getting the numbers and percentages from the content analysis, I sought answers for finding the “how” by exploring the Twitter interface from Carnegie’s rhetoric of the interface. Through the modes of multi-directionality and manipulability, I could examine how twitter’s interface both aids and hinders participants in their attempts to communicate the topic of HPV. Such insight into the patterns and practices used by participants shows the attempts participants make to break apart hierarchal structures of information, and how Twitter reinforces them.

2.6 CONCLUSION

This approach entails a variety of methods in order to approach social artifacts and sites. All of the methods in this dissertation describe the moments of disruption that occur in these artifacts and sites. Each method considers a different view of how disruption occurs, and the result is a stronger understanding of multiple participatory practices and interactions. The methodology for tracing disruptive moves uses these mixed approaches to account for how these elements differ, depending if it is an artifact that is traced or multiple interactions on a social site. In some cases, specific participants

cannot be identified, but the specific artifact they are engaged with is traceable. In other cases, the communication occurs in a multimedia format, with clear roles for each set of participants. Sometimes, communication occurs in highly structured formats in which participants have little leverage.

The three means of conversation about health issues highlight three of the ways participants spread information. Each case study is a method for studying how participants disseminate their understanding of the HPV virus. Acknowledging and understanding the different ways participants leverage participatory artifacts and spaces in order to share information provides a wealth of information for technical communication and health communication. Researchers can use this methodology as a blueprint for approaching, mapping, and tracing disruptive moves on other social sites and designing systems for acknowledging the value of participant generated information. Health communicators can use this methodology to focus on how information is shared in participant generated spaces and how to interact with it in effective and meaningful ways.

For this dissertation, *discourse analysis* is used first to examine the evolution of a social artifact, the online meme. Such an approach accounts for the image and the processes associated with the production of the image. Next, *rhetorical analysis* is used to examine the interactions between different thought collectives in a multimedia space. This approach demonstrates how the roles participants play in such a space are constantly in flux, thus achieving the potential for empowerment. The last case study employs *content analysis* to show how roles can remain static in an environment that has the illusion of empowerment. All of these case studies illustrate how disruptive moves occur

across both social artifacts and spaces, and how empowerment/agency is achieved among participants.

CHAPTER 3

“I HAD HPV BEFORE IT BECAME MAINSTREAM”: ONLINE MEMES, RHETORICAL AGENCY, AND BUILDABILITY

3.1 INTRODUCTION

Investigating how people receive and rework information is critical to understanding how they transition from readers to participants in digital spaces. This kind of participation is significant because the methods people use to read, repurpose, and share information can inform us how we can design collaborative spaces and support different kinds of knowledge work (Grabill, 2007). Such spaces can enrich participant experiences both online and off. Furthermore, these spaces can foster participant agency and empowerment (Dohney-Farina, 1998; Harrison and Zappen, 2010; Potts 2014). In some current systems, lack of agency has resulted in people working to disrupt existing structures of information sharing to make them more participatory. However, sometimes disruption cannot be traced in a single space; it occurs in multiple spaces. When disruption occurs across multiple spaces, tracing is done through the object of disruption, which I call a *social artifact*. A meme is an example of a social artifact (Dawkins, 1976). This chapter uses an instance of the Hipster Kitty meme to illustrate how the invention and evolution of memes are an act of rhetorical agency and become a vehicle of expression about the virus, healthcare, and politics.

The word *meme* is biological in origin and can be traced back to Richard Dawkins' text *The Selfish Gene*. Dawkins (1976) calls culture “a new kind of replicator” that is “still in its infancy, still drifting clumsily about in its primeval soup” (p. 192). He

refers to this replicator a meme, defined as “a noun that conveys the idea of a cultural unit of transmission, or a unit of *imitation*” (Dawkins, 1976, p. 192). The “cultural unit of transmission” is the focus when discussing the meme, because it is the meme element that travels between participants. Knobel and Lankshear (2007) augment his theory with the notion that a meme is “a substantial evolutionary model of cultural development and change grounded in the ideas of replication of ideas, knowledge, and other cultural information through imitation and transfer” (p. 200). Knobel and Lankshear’s definition expands Dawkins’ by giving some examples of what encompasses cultural units of transmission: ideas, knowledge, and cultural information. The way these units pass through the public consciousness is through reproduction from participant to participant. In an online context, these units are signified by images.

Online memes are typically comprised of image macros, or captioned images that consist of a picture or drawing and the accompanying text. Image macros signify a cultural unit of transmission with community-specific imagery. Tracing a meme’s origin and evolution reveals how these contributions are acts of *rhetorical agency*, or a demonstration of participants’ communicative skills and reflexive awareness of their actions. These skills and reflexivity are combined in an effort to undertake inquiry and advocacy in a recognizable manner (Green, 2004; Campbell, 2005; Cooper, 2011). In the instance of memes and HPV, participants who aid in the creation of these memes demonstrate reflexive awareness through interaction with meme imagery and text. Ultimately, participants use the HPV memes as a way of sharing information about the virus, trolling other participants, and mocking politicians. This activity is significant because it shows how an anonymous, collective group of participants can interact across

multiple spaces in order to create and share information and ideas about HPV, thus exhibiting rhetorical agency.

When investigating the biological metaphor of the meme, it is interesting to note that the term “viral” reflects the viral quality of HPV. However, in the biological metaphor, human agency is absent (Jenkins, Ford, and Green 2013). When commenting on the use of the biological connotations of the meme metaphor, Jeffreys (2000) notes the metaphor reduces the meme to a disease, and “the social connotations of ‘parasite’ and ‘virus’ are negative . . . only the disease-causing microorganisms are still targets of unrestrained, guilt-free commitments to extermination, eradication, even extinction” (n.p.). Viruses like HPV spread, but they do not demonstrate reflexive awareness of their actions. Viruses do not make conscious decisions in regards to how the disease spreads. Therefore, viruses do not demonstrate reflexive awareness of their actions. “Viral” media, including memes, are not viruses that spread without thought; they spread through a series of conscious decisions participants make (Jenkins, Ford, and Green 2013). These decisions result in a form of advocacy that is entirely participant-generated. Participants are not dependent upon an authority figure to do the communicating for them; participants are in control of the meme’s spread. The result is an altered model of production and consumption. The traditional model of production and consumption is one in which there are three tasks: producer, distributor, and consumer (Bruns 2008). The result of this model is the consumer exercising little to no rhetorical agency over a product. The altered model accounts for rhetorical agency and places the participant in a much more valued role.

This case study explores the online meme as a standalone text and the practices of meaning making that surround it. The focuses for the chapter are to examine the Hipster Kitty meme as an act of rhetorical agency through two means: 1) Its intertextual genesis and evolution, and 2) Its propensity to draw attention to HPV as a form of advocacy. I use discourse analysis, broadly defined as the “study of the ways language is organized in texts and contexts . . . it can investigate features of texts and contexts as large and diffuse as genres and sociocultural world views” (p. 57). There are a number of approaches to discourse analysis, but the approach used in this chapter is critical discourse analysis because its focal point is on the interplay between texts and ideologies (Van Dijk, 1995). I use this method to examine the representations of image and text in the meme and how they reflect particular worldviews. I trace the meme’s construction and evolution through the act of *poaching*, or conscious participant decisions to rework content (DeCerteau 1987, Jenkins 1992). By tracing the meme’s construction and evolution, I am also able to trace the discursive elements embedded in the meme and the ideologies represented through the image. Each time the meme changes, I refer to the change as a *disruptive move*. Tracing and mapping these disruptive moves documents the different ideologies expressed with each change in the meme content, showing reflexive awareness. I refer to this mapping as the *buildable model*. This term visualizes the disruptive moves in a buildable form. Lastly, I use the specific instance of the Hipster Kitty meme and HPV to show how memes have the potential to evolve into insightful, political comments about current cultural issues, including medical and healthcare issues.

3.2 RHETORICAL AGENCY

Given the prominence of rhetorical analysis to this study, it is important to define the term. Rhetorical agency, in its simplest definition, is the capability of a person to act (Geisler 2004, Hoover 2011, Campbell 2005). This definition, while straightforward, does not describe what constitutes the *capability* of a person, or what it means *to act*. Greene's (2004) definition of agency, though rooted in a political context, is still helpful: "Rhetorical agency describes a communicative process of inquiry and advocacy on issues of public importance" (p. 188). This definition provides some insight as to what *action* encompasses: processes of inquiry and advocacy. However, this definition does not provide an explanation for *capability*, as it does not suggest what the communicative processes are. Campbell (2005) provides an answer of what *capability* is: "[Rhetorical agency] refers to the capacity to act, that is, to have the competence to speak or write in a way that will be recognized or heeded by others in one's community" (p. 3). *Capability*, then, refers to the person's skills used to communicate, specifically reading and writing. Cooper (2011) adds a dimension to the definition by commenting that rhetorical agency is "not just conscious mental acts . . . agency instead is based in individual lived knowledge that their actions are their own" (p. 421). Therefore, agency is not comprised of just a mental act, but reflexivity of that mental act.

All of these definitions combined provide a clearer picture of what rhetorical agency is. As a result, a working definition of rhetorical agency in participant-based online spaces would consist of the following: Participants exhibit rhetorical agency when they possess communicative skills and reflexive awareness of their actions. These skills and reflexivity are combined in an effort to undertake inquiry and advocacy in a

recognizable manner. In the case of the Hipster Kitty HPV meme example, participants are exercising rhetorical agency. The ability to poach is indicative of their reflexive awareness, and the ability to create an artifact that makes a statement about the virus is indicative of their ability to enter a discussion on a current topic, whether it is intended or not. They are demonstrating their communicative skills to produce a cultural product that makes a sharp comment about the virus, which is a form of advocacy.

There are many points to consider with rhetorical agency and context. This reworked definition provides a clearer picture of what rhetorical agency is, but it does not take the context in which participants are considering action. Geisler (2004) raises the topic of rhetorical agency and digital spaces by commenting, “What is interesting here is the interplay of audience and media in constructing and being constructed by these images, an interplay that raises questions concerning who has agency—and therefore responsibility—for these repeatedly circulating cultural products” (p. 11). The important component here is not just the audience that receives the text, but the media used to create the text. Interplay goes both ways—the constructions of texts are worth examining, but so is how the audience is constructing them. Geisler (2004) also raises the issue of responsibility, which, for the purposes of this case study, is not just on the individualized level. Given the meme’s environment, we must consider concept of rhetorical agency on the collective level as well. Many individuals who remain nameless or unable to be identified produce texts as a group. Approaching rhetorical agency in this manner assures that both the group and the individual exercise agency. As we will see, the Hipster Kitty meme is an example of this collective group agency at work. Without the group’s actions, the individual would be unable to produce the example of Hipster Kitty and HPV. It is

like a digital game of telephone: it starts with an idea and moves from person to person, changing as it passes through various spaces. This process will be illustrated in the next section.

3.3 MEMES, POACHING, AND BUILDABILITY: THE CASE OF HIPSTER KITTY

As stated earlier, the spreading of a meme is contingent upon a series of conscious decisions an individual makes. However, as the meme spreads, it also has the potential to evolve. The individual chooses what changes take place and to what extent. These conscious decisions are what DeCerteau (1984) refers to as *poaching*. Poaching is a term that describes how texts are constantly re-written by the people who consume them. DeCerteau (1984) likens people to nomadic travelers, “poaching their way across fields they did not write, despoiling the wealth of Egypt to enjoy it themselves” (p. 174). That is, people do not passively consume texts and accept prescriptive meanings, they absorb and re-write texts to their liking. When they re-write these texts, they do so in a manner that is almost playful and ephemeral (DeCerteau, 1984, p. 174). The consumer of the text reads and derives meaning, then use his or her skills to take that meaning and create a new one—one that poses a cultural question and/or advocates a thought on a large scale that others can understand. The act of poaching in the context of this case study is a move that disrupts the relationship between the consumer and the producer. In other words, since the consumer/producer relationship is disrupted, poaching is a disruptive move. Hipster Kitty is an example of the poaching process.

Tracing the evolution of the Hipster Kitty meme through poaching shows how the meme does not undergo changes of text alone. The image also evolves as it travels in a

digital space. Rather than refer to the remixing and evolution of memes as “spreadable,” or “the potential—both technical and cultural—for audiences to share content for their own purposes” (Jenkins, Ford, and Green 2013, p. 3) they will be referred to as *buildable*. The term “buildable” acknowledges the spread of memes and their potential for sharing, but also takes into account their evolution. This evolution embodies “the development of a complex sign of grids that only ‘those in the know’ can decipher” (Shifman, 2004, p. 118). The interplay of image and deciphering constitutes a kind of literacy that participants must be aware of to contribute to the meme’s spread (Knobel and Lankshear, 2007). By referring to meme’s as buildable, participant processes of understanding the intertextual relationship between the image of the meme and the ideologies the meme represents are made clearer. Each change in the construction illustrates how participant ideas were poached and repurposed into the specific HPV instance.

The evolution of Hipster Kitty to its final, recognizable image macro format is Shifman’s (2014) complex sign of grids that requires deciphering. The complex sign of grids includes discourse, or “representations of how things are and have been, as well as imaginaries—representations of how things might or could or should be” (Fairclough, 2012, p. 459). The deciphering of these representations present in the meme constitutes part of the reflexive awareness participants use when encountering memes. They must be aware of what these representations are and how they are used so they can create their own memes. In the case of Hipster Kitty, the meme is based on the cultural unit of the hipster lifestyle. The following section illustrates the processes involved with deciphering the representations of the hipster lifestyle and how they are built into the text.

The Hipster Kitty meme is an image macro of a cat wearing glasses and a hooded sweatshirt, or hoodie. An *image macro* is “a general form of picture with overlaid text” (Shifman, 2014, p. 111). According to Shifman (2014), image macro based memes tend to “represent stereotypical behaviors” (p. 112). Hipster Kitty is a representation of two kinds of stereotypical behaviors: the hipster lifestyle and mocking the hipster lifestyle. The cultural unit present in the Hipster Kitty meme is not the image; it is what the image *represents*. The image of the cat represents the stereotypical ideas of the hipster lifestyle⁴ and is signified by the hoodie and the glasses. In other words, the image serves as the vehicle through which the meme is expressed. The representation of the hipster lifestyle signified by the hoodie and glasses on the cat is passed from participant to participant in image macro format. The image that signifies the meme can remain in the same with textual changes, as is the case with Hipster Kitty, or it can evolve into a completely different signifier that still expresses the same or similar cultural unit, such as Hipster Ariel or Hipster Disney Villains. The relevancy of the meme is based on the decisions of an anonymous group of people with the ability to analyze, poach, and repurpose representations. In some cases usernames are available, but for the most part the identity of these participants remains unknown. Their decisions are what fuel the meme’s spread.

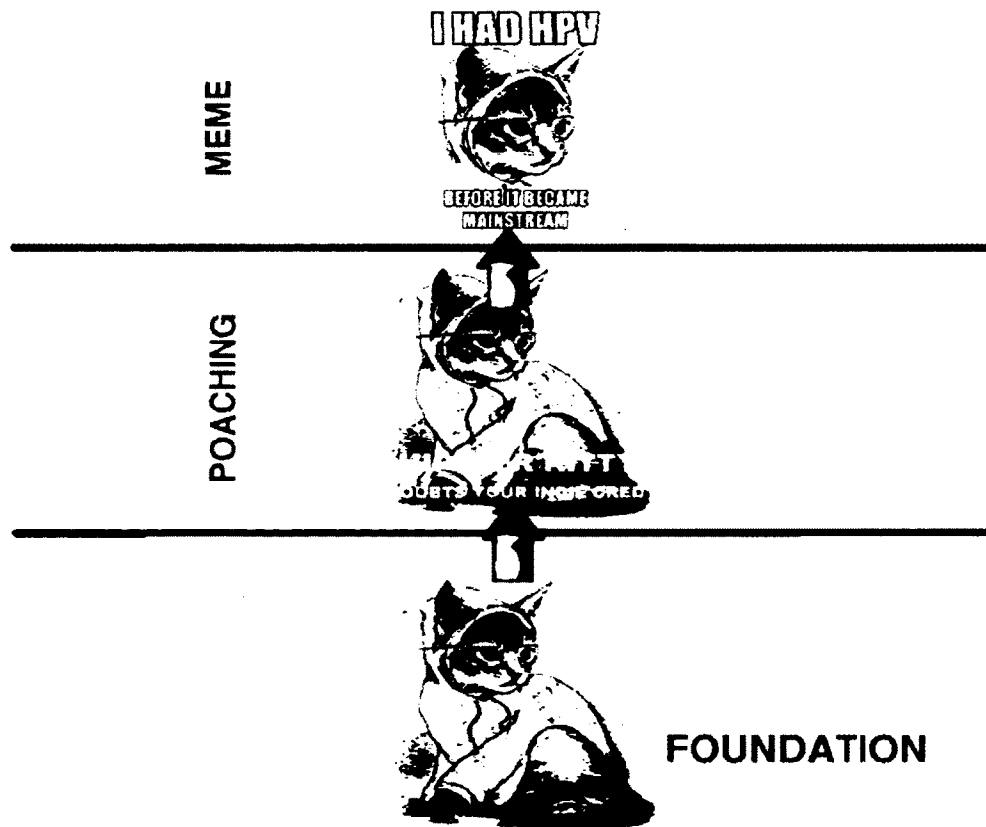
The Hipster Kitty meme has an interesting origin. In the buildable model, the foundation of the meme would be its earliest documented instance. People take this

⁴ The hipster subculture has origins in the 1940’s, but it did not become predominant until the 1990s (Fletcher 2009). A hipster is an individual whose “identity was initially assembled from a collection of things usually associated with white, working-class people (trucker caps, tattoos, aviator sunnies, “wife-beater” singlets), but worn by well-educated, media and technology-savvy urban youth with a heavy dose of irony” (Delaney 2010). They are associated with rejecting the mainstream or trendy and embracing the obscure (Plevin 2008). This rejection is commonly seen in the form of band preferences and the sentiment that a band was liked before it got popular (Haddow 2008). The irony associated with the culture, coupled with an underlying elitism, has made the subculture a target for backlash (Plevin 2008, Fletcher 2009). Therefore, calling an individual a “hipster” is more of an insult than a compliment.

foundation and use it to build their own texts, choosing to build on the existing structure and/or to add another layer of construction. In this case, the foundation is a painting of a cat in a hooded sweatshirt and glasses posted to an artist's Flickr account (Wheat 2008). This painting is represented on the bottom tier of Figure 1. The next tier shows the painting with the words, "Hipster Kitty Doubts Your Indie Cred," which was traced back to a Tumblr blog (Neo Success, 2009). The image macro with the cat head and two tone background eventually appeared on Memegenerator (n.d.). This image appears on the third tier of Figure 1 along with the recognizable Impact⁵ typeface. These three tiers illustrate the meme from its origin to its image macro form.

⁵ Impact is considered the most ubiquitous and recognizable of meme typefaces. This ubiquity is attributed to the typeface's inclusion in early Microsoft applications and its web-safe status (Leopold, 2013). It was suggested that the use of Impact by the widely popular LOLcat memes helped boost its popularity (Leopold, 2013).

Figure 3.1 The buildable model of Hipster Kitty



The buildable model illustrates the conscious shifts in the Hipster Kitty meme. Each tier where the construction of the image shifts is an example of a disruptive move. In each shift of the tier, participants are using their knowledge of the both the hipster subculture to further construct the meme. In other words, they are using their knowledge to construct a view of reality, which frames a specific ideology (Fairclough, 2012). The glasses and the hoodie are signifiers of hipster subculture, and participants draw upon these representations to build new layers of meaning into the meme.

The meme begins with the foundation of an artist's painting posted to Flickr, a photo sharing site (Wheat, 2008). From there, a participant *poached* the painting and

added a caption reading, “Hipster Kitty doubts your indie cred,” thus changing the construction of the original painting. Here, the participant viewed the original image of the cat and added his or her own meaning to it. The participant read the image of the cat as a representation of the hipster, and then wrote her own ideology into it. In this specific instance, that ideology was the cultural moment of mocking hipsters. The poaching continued when participants placed the head of the cat in the painting in an image macro and made it available for more participants to caption and spread on Memegenerator, a site that provides the images and allows participants to create the text on them. Those images are then uploaded and shared. In the instances of the Hipster Kitty meme available on Memegenerator, multiple readers of the meme are able to write in their own interpretations of the ideology reflected in the image of the cat.

The participant work that went into this meme occurred without the restraints of authorship or copyright, which raises questions about how these participant moves are disruptive. They are disruptive in the sense that they change the construction of the original painting, but they are also disruptive because they shift the producer/consumer model. Rather than the producer of the painting try to directly sell or market his work, it was poached and repurposed by nameless participants. The creator of the original painting has embraced the status of his original painting, commenting, “essentially the Internet ate a piece of my art and turned it into an ever collaborating beast” (Wheat, 2010). He acknowledged that his work was poached, but did not attempt to reclaim it. Rather, he showed an understanding of the Internet’s disruptive movements and allowed it to continue. Therefore, with each change in the construct, the participants are not only disrupting the image, but the producer/consumer model. While an individual produced

the original painting, and, as shown on his Flickr account, is copyrighted. However, the “ever collaborating beast” disrupts the structure of original modes of production.

The buildable model, then, does not only illustrate the reflexive awareness present in the construction of the meme, but how readers become reader-writer hybrids. The term “buildable” suggests building not just outwards, but upwards. Therefore construction can happen in layers, and it is within these layers that the meme evolves. These changes happen because of the individual performance of disrupting moves, thus changing the relationship of the producer and the consumer. This disruption is not negative; the author of the image relinquished the ownership to the painting, even though it was copyrighted. The meme does not remain static, it shifts. In the case of this meme, the participants are the producers and the consumers—the readers and the writers—based on a combination of the cultural moment, a representation of that cultural moment, reflexive awareness of the ideologies within that representation, the and tools available for creating and spreading. There is no mindless spreading of an idea. Rather, there is evidence that the idea is shaped and refined along the way, suggesting that rhetorical agency is reached on a collective level. In this particular instance, the Hipster Kitty meme begins as a piece of art, moves to a piece of art that mocks the hipster culture, then becomes an image macro with a piece of the original art as the centerpiece. A group of individuals contribute to this change, piecing together content to make new content. They ultimately use the meme to make cultural comments and critiques, as seen in the example of Hipster Kitty and HPV in the next section.

3.4 RHETORICAL AGENCY AND HPV COMMENTARY

Memes are, for the most part, not taken seriously. They are born, shared at a frantic pace for a short amount of time, and then more often than not fade into obscurity.

However, research of memes has shown that they have the potential to be more than a cultural fad (Jenkins 2009, Jenkins Ford and Green 2013, Shifman 2014). Specifically, Shifman (2014) comments on the meme as “modes of expression and public discussion” (p. 123). They could even be political, which Shifman defines as “in its broad sense as the societal construction of power and in its narrow sense a system of governance” (p. 119). The instance of Hipster Kitty used in this analysis is an expression of the HPV virus that is, whether intended to or not, a political statement. It is in this manner that the second part of rhetorical agency occurs: undertaking inquiry and advocacy. It is important to point out that this part of the definition occurs on the individualized level as opposed to the group one, but it would not have occurred without the collective group work.

Figure 3.2 Hipster Kitty and HPV (Memegenerator, n.d.)



In Figure 2, the replicated cultural unit of teasing hipsters is used to make a statement about HPV. Figure 2 is also an example of how representation is used to frame a specific ideology. In this instance, the ideology is based on a world view about HPV. It is a screenshot of Hipster Kitty accompanied by the text “I had HPV before it became mainstream.” The use of the word “mainstream” is indicative of the stereotypical hipster disdain for anything well known or popular. In the hipster context, liking something before the masses do is a mark of authenticity (“Modern Hipster,” 2009). Thus, the practice of knowing about something before it became mainstream or popular is a mark

of superiority, suggesting that only liking something after the masses do is not genuine. Here, the structure of discourse—the cat with the hoodie and glasses—is married with two an aspect of social structure: the idea that “mainstream” is apocryphal. This structure is altered further when the meme becomes the background for a serious topic: HPV.

It is not possible to ascertain for certain what the writer of the text meant when creating this meme instance, but as DeCerteau (1984) and Jenkins (1992) have both pointed out, there are multiple readings to texts and those meanings constantly shift. Jenkins (1992) has issued a warning about absolutes, serving as a reminder that absolutes are not a given in studies of culture, and that meanings are constantly shifting. The consideration of multiple readings provides a multitude of viewpoints for consideration. These particular readings of the Hipster Kitty meme are, whether intended to or not, making a political statement about HPV in a playful medium.

One possible reading is that it is a statement of how HPV has become much more visible in our culture than it was even a decade ago. The New York Times first mentioned HPV and its connection to cancer in 1985 (Bakalar, 2011). Though HPV research existed before and after the *Times* article, it was not in the public spotlight (Diana, 2012). HPV did not become more prevalent in the mainstream media until the development of Gardasil in 2006 and FDA recommendations for girls to get the vaccine (National Conference for State Legislatures, 2013). Now it is considered the most common sexually transmitted disease in the United States (Center for Disease Control, 2013). In other words, it has become “mainstream.” The participant that created this instance of the Hipster Kitty meme is possibly making a comment on the fact that HPV did not become mainstream until fairly recently. He or she used the representation of the

cat as mocking the hipster lifestyle and poached it to create a comment about the sudden ubiquity about the HPV virus.

There are several alternative readings. One reading is that it highlights the skepticism surrounding the HPV vaccine. Since the rise of attention on the virus is correlated with the vaccine development, the meme instance is a possible commentary of the vaccine as the cause of the mainstreaming. Another reading is that HPV is just a medical fad, meaning that, like the obscure bands that hipsters have shown a preference for, HPV used to be an underground virus that not many people knew about. Now that it is in the mainstream, it may or may not disappear from the public spotlight in a few years. Yet another reading is a kind of superiority for knowing about the virus before its rise in mainstream media. Though numbers are not available for HPV rates before 2006, as of 2013 it has infected approximately 79 million Americans (Center for Disease Control, 2013). The virus is also a topic of discussion in mainstream media, from the vaccine to its connection with cervical cancer. Now that a large percentage of the public is aware of the virus, it cannot be considered underground anymore. In all of these readings, this instance of the Hipster Kitty meme serves as a cultural artifact about an attitude towards the virus, using the image as a the signifier to make a point.

Shifman (2014) defines political memes as “about making a point—participating in a normative debate about how the world should look and the best way to get there” (p. 121). I would like to add some criteria to this definition, adding that it is also a debate on an event or topic in the past and the feelings associated with it. Memes are ephemeral. They are not long-lasting statements that are dwelled upon. Shifman’s definition, while applicable to timely events, does not apply to events in the past. Though memes become

historical artifacts fast, they still provide snapshot of cultural attitudes and expressions towards events and topics. The HPV instance of the Hipster Kitty meme is a statement about the virus and becomes a point of inquiry. There are multiple ways to read this meme instance, but every one shows rhetorical agency at work: the participant that made the meme was able to decipher the cultural unit associated with hipsters and rework it into a statement about the virus that could be read many ways.

The effort to “undertake inquiry,” as Shifman (2014) calls it, is significant for a number of reasons. One is that it shows engagement with a complex set of ideas. A chain of participants contributions led to the development of the image macro. The individual that made the HPV instance also demonstrated reflexive awareness by deciphering what the image of Hipster Kitty signified. From there, she created a meme instance that contains multiple readings, all of which make a commentary about the virus. All of this work is based on a type of literacy that is required to understand and contribute to the meme. Another point is that this process—the individual’s contribution—is significant because the individual moved from reader to writer seamlessly. Once the individual deciphered the cultural unit in the meme, she was able to create her own and share it for others to see. Lastly, this meme instance is an example of a new kind of inquiry—one in which a younger generation can add their voice to debates about current issues (Shifman 2014). It is unlikely that the health industry will take memes like these seriously, since they are largely seen as a form of tongue-in-cheek humor as opposed to serious statements and arguments (Vickery, 2013), but the presence of memes such as the HPV Hipster Kitty example push the boundaries of collective work and political inquiry. They

provide snapshots of the public attitudes about the virus, a rhetorical action that should be taken into consideration.

3.5 CONCLUSION

Memes are not just silly pictures and funny quips. A deeper reading of memes and meme invention suggests that there is much more at work. Memes are not “viral” because human agency is at work in both their evolution and content creation. Examining the generation and evolution of the Hipster Kitty meme shows that rhetorical agency is present on the group level. An anonymous group of individuals undergo the process of poaching to piece together content across different spaces in an act of collaboration. The result is a new piece of content that can be worked and reworked at will. These processes are disruptive moves, meaning that they alter the relationship between producer and consumer. These disruptions are accounted for in the buildable model, showing the specific moves that were present in each shift of the meme.

In the case of Hipster Kitty, the meme arose from ideologies of hipster culture both going mainstream and being widely resented. The act of attributing meaning to the original image, or the foundation of the meme, and repurposing it into another artifact is an example of both poaching and reflexive awareness. The attribution of the meaning and the application of the meaning to the artifact, thus creating a representation, is a communicative skill. The poaching of the reworked image by another individual and making it an image macro is another example of both communicative skills and reflexive awareness. These disruptive moves make the participants that poach and rework the meme not just readers and consumers, but writers and producers. They are contributing to

the spread of a social artifact that has the potential to keep evolving. The result is a new structure of the producer/consumer relationship that places more value in participant work.

Rhetorical agency does not occur on just the group level. It also occurs on the individual level. One instance of the Hipster Kitty meme makes a statement about the HPV virus. The cultural unit of teasing hipster culture is recognized and built upon. This is an example of individual reflexive awareness because the meme is built upon based on past instances, which are made available through the process of sharing on meme generators and other social media sites. The Hipster Kitty HPV instance shows how one meme instance can also be an example of rhetorical agency, not just because the individual was contributing to a meme built by a group, but because he or she has demonstrated a mode of inquiry. The creator's feelings about the virus are established, suggesting that the surge of information and recent attention paid to the virus is subject to speculation. This sentiment can be easily shared and spread across a variety of social media formats, thus creating the capacity for disrupting not only a structure that surrounds the meme, but with a current social topic. The individual, then, has also made the transition from the reader to writer.

This work is significant because it is serious work in a playful medium. In this specific case study, the information encountered is a social artifact. Understanding the processes that go into the construction and the evolution of a meme are worth examining because they show the ways participants encounter and rework information. These reworkings are significant because they are disruptive moves that place the power of meaning-making into the hands of participants. Accounting for these moves give insight

into the ways participants make work their own, relinquish ownership, and allow others to make it their own. A never-ending process has the potential to become a means for advocacy and inquiry, as seen in the Hipster Kitty HPV example. Designing systems that consider these disruptive moves and allow the seamless integration from readers to writers place value in participants' contributions and may encourage further participation.

CHAPTER 4

“LAST MONTH I WAS TOLD I HAD HPV, WHAT’S NEXT?” HUFFINGTON POST LIVE, INTERACTION, AND EMPOWERMENT

4.1 INTRODUCTION

Scholarship on health communication has addressed information sharing on spaces such as health-oriented web sites (Cline & Haynes, 2001), online support groups (Cline & Haynes, 2001), YouTube, Facebook (Jessen, 2008), Wikipedia, blogs, and podcasts (McLean, Richards, & Wardman, 2007), and discussion boards (Macias, Lewis, and Smith, 2005). Research on health web sites has tended to focus on the quality of information available and the ways such sites should be evaluated (Cline & Haynes 2001, Baron 2008). Research on these health sites is focused on issues such as information overload, misinformation, and privacy (Baron, 2008; Hughes, Joshi, & Wareham, 2008; Jessen, 2008; Scanfeld, Scanfeld, & Larson 2008). Other research has concentrated on the delivery of information through various media and its effects on those who interact with it (McLean, Richards, & Wardman, 2007). Yet another site of research concerns whether or not people are empowered by the information they find online (Macias, Lewis, and Smith, 2005). All of these points of inquiry are important, but most of them tend to question the value of participant-generated health information by focusing on information quality. The focus of the chapter is not on information quality, but the methods people use to share information and produce knowledge. Understanding how people share information and present it as knowledge can potentially aid in studies of misinformation

by not only pinpointing what information may not be correct, but in understanding why the information was shared in the first place.

While the previous chapter examined the passage of information through a social artifact (a meme), this chapter examines the way participants share information in a multimodal social space⁶. When information was shared through the social artifact of the meme, the meme evolved through a series of disruptive moves, or moves that altered the binary relationship between producer and consumer. The disruptive moves that participants carried out were acts of rhetorical agency. The result was a constantly shifting social artifact that was eventually used to make a cultural statement about HPV. This chapter builds upon that work to examine how participant interjections occur in a social space. There are many participants across a variety of media in the space of HuffPost Live. The participant interjections that occur in the space of HuffPost Live alter the expert/non-expert structural relationship. The chapter will examine an existing structure of information sharing, how participant knowledge work⁷ is integrated into this structure, and how the disruptive moves that are present in the social site are acts of empowerment in an online context⁸.

HuffPost Live is a “live streaming network that connects to the Huffington Post universe—the stories, editors, reporters, and bloggers—as a real time script” (Huffington

⁶ Wysocki (2013) defines multimodal as “a way of naming our ability to easily mix pictures, sounds, animations, video, and alphabetic text on digital screens” (p. 433). I call HuffPost Live a multimodal space because it is a mixing of several types of communication modes into one space.

⁷ Knowledge work is “analytical and thus requires problem solving and abstract reasoning, partly with (and through) advanced information technology” (Grabill 2007, p. 16-17).

⁸ In digital spaces, people interact with information in significant ways to express their ideas, create communities, share information, and complete tasks. The reasons for these interactions vary from disasters and crises (Potts 2014) to annotating live events while watching television (Diakopoulous and Shamma 2010). Whether in the workplace or in a crisis, people do not passively receive information, they receive and rework it where there is an issue with the infrastructure.

Post, 2013). The live network airs online Monday through Friday from 10 AM to 10 PM, and it consists of a series of programs that run approximately 30 minutes. Some of these programs address topics related to health information. Several elements of media—video broadcasting, informational sites, and chat—are combined into one interface (Figure 1). HuffPost Live provides an in-depth look at specific topics by broadcasting information from experts via video. The running chat alongside the video encourages interaction from participants.

Figure 4.1. The interface of HuffPost Live



The dataset for this chapter consists of two kinds of media: video and text. The video portion of the HuffPost Live program runs 32 minutes and 32 seconds. It contains a broadcast discussion from a mix of participants that include two doctors, two moderators,

and two everyday people. The chat is on the right side of the interface. The chat dataset consists of 850 participant comments. The chat and the video ran simultaneously, so the people in the chat were commenting on the content in the video as it ran in real time. Since there was such a small window of chat time, the dataset stops at 850 comments. Brought together, the elements of video and chat are dependent on one another in the act of information sharing. The focus for this chapter is not on the differences between facts and opinions expressed in this space, but on how fact and opinion are constructed together in one space (Dombrowski, 1994). The connections—and lack of connections—between participants are emphasized to show how participants assert their place in the landscape of information sharing and empowerment occurs in acts of co-collaboration.

In order to identify and trace the disruptive moves that occur in Huffpost Live, I use Fleck's (1935) notion of *thought collectives*. A thought collective is a community of persons exchanging ideas. I modify Fleck's notion in order to identify the different groups that are present in the space. I identify these groups by analyzing the methods they use to communicate their knowledge of HPV. After the thought collectives are identified, I examine the rates of interaction between them. I show these rates in a series of lines between the collectives. Lastly, I analyze the interactions between addressors and the addressees in the chat. I pull specific phrases and comments from the chat and evaluate the participant tactics and appeals that are made in the expression of knowledge about HPV. These tactics and appeals are recognized as disruptive moves. Mapping the information flow between the collectives and identifying the disruptive moves shows

how the expert/non-expert hierarchy is broken down and how these disruptive moves are instances of empowerment⁹.

4.2 THOUGHT COLLECTIVES

Before naming the thought collectives present in the HuffPost Live space, it is necessary to define the concept of thought collectives. Before 1935, studies on the public's conceptions of medicine were treated as separate structures; that is, folk and holistic medicine were considered separate entities from medical knowledge because they were not based on scientific knowledge (Löwy, 1988). The work of Ludwik Fleck (1971) explored the relationship between the public and the production of medical knowledge. Fleck (1971) believed that medical knowledge was an organic process that many actors contributed to. In other words, medical knowledge was a social construct that was not only in the hands of one group, but a collective group comprised of people from many different backgrounds. To explain how this process works, he brought forth the notion of *thought collectives*. Thought collectives were comprised of individuals who shared specific thought styles¹⁰ and were the avenue through which scientific facts were constructed (Löwy, 1988). These thought collectives, in part, adhere with Fleck's notion that it is not possible for any one person or organization to contain all medical

⁹ Patient empowerment is defined by medical researchers Funnell and Anderson as "Empowerment is a patient-centered collaborative approach where professionals and patients are equals . . . An empowered patient is one who has the knowledge, skills, attitudes and self-awareness necessary to influence their own behavior and that of others to improve the quality of their lives" (n.p.).

¹⁰ Thought Styles are both produced and used by thought collectives, defined as the "readiness for directed perception, with corresponding mental and objective assimilation of what has been so perceived" (Wojciech, 2012, n.p.).

information (Löwy, 1988). The exchange of information between different thought collectives, in turn, influences one another in the spread of medical information.

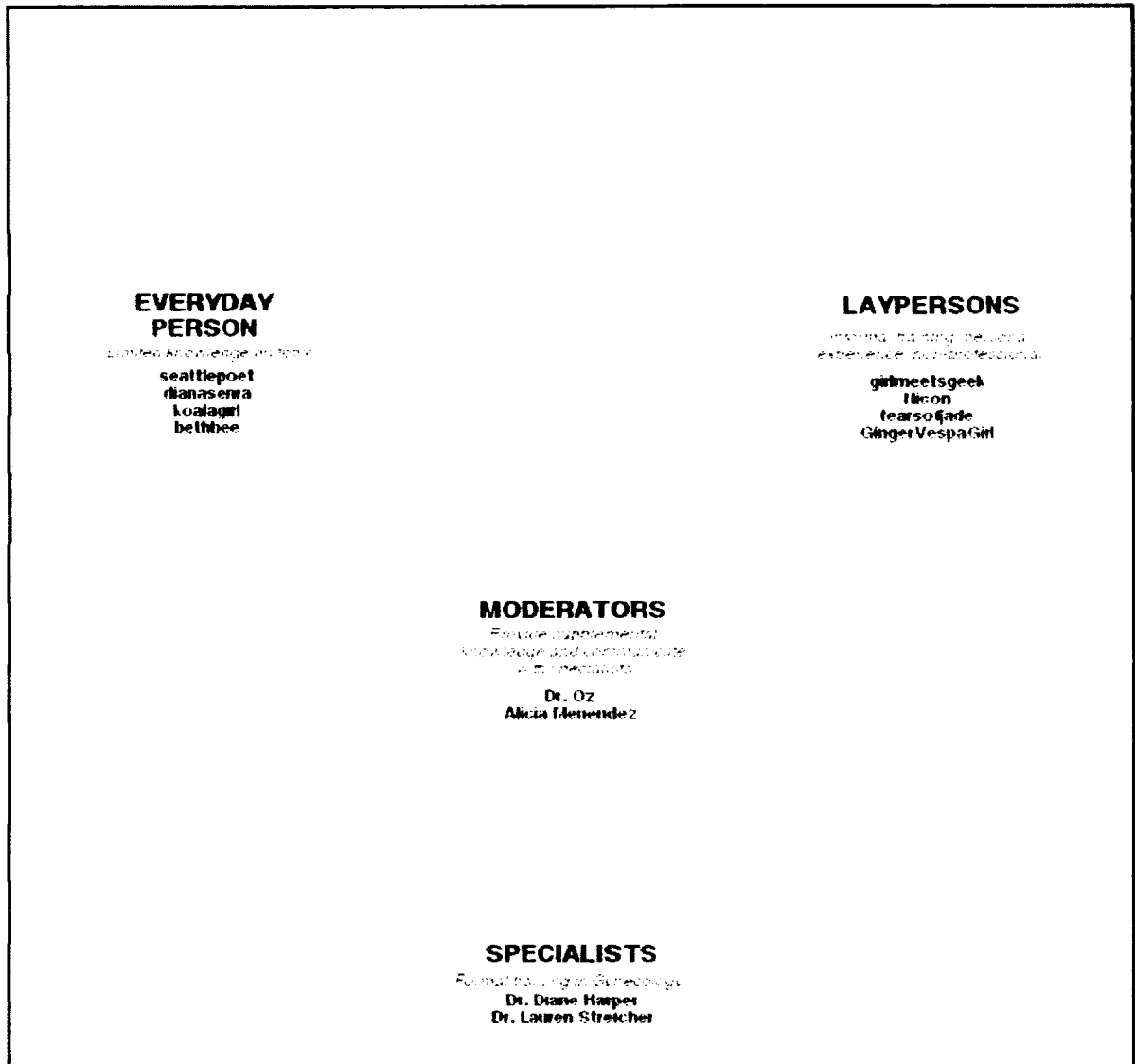
Thought collectives differ from groups because they are comprised of individuals that “adopt certain ways of perceiving and thinking” and “also continually transform it” (Wojciech, 2012, n.p). Therefore, the individuals that make up each collective are contributing to an understanding of a specific topic. Thought collectives are also ephemeral—they can last for an extended amount of time or for the duration of a conversation (Wojciech, 2012). The participation of multiple sources of knowledge into a collective pool of information is key. While a collective group may be working towards a common goal, thought collectives remain separated. They may contribute to a wider pool of knowledge, but they do not necessarily form a cohesive group to do so. Once the discussion is over, the structures collapse and may or may not re-form in another space.

4.2.1 Thought Collectives in HuffPost Live

For Fleck, the structure of thought collectives in the creation of medical knowledge was based on an “esoteric centre made up of scientific specialists and exoteric circumference composed of both educated and uneducated laypersons” (Arksey, 1994, p. 448). Fleck’s structure of the exoteric and esoteric suggests that there is still a binary present in the formation of medical knowledge. There is a collective of specialists and a collective of non-specialists. This binary, it is important to note, cannot be entirely erased. The tension between the expert and the non-expert is a popular topic in health communication, especially in online spaces. In the context of health information, it is often referred to as the doctor/patient relationship. Heaton (2008) notes, “Physicians who

are more accustomed to an authoritative or expert role may have difficulty collaborating” with a patient who has gathered information online and “may be perceived as a threat to medical authority” (p. 220). However, the relationship has shifted due to the presence of communities of collective intelligence and knowledge spaces. With the goal of creating understanding of the virus, each thought collective contributes its knowledge work. The collective quality of this space aids in the empowerment of participants. The chat portion of the HPV discussion on HuffPost Live is an illustration of a transparent, ephemeral knowledge space that redefines what the notion of an “expert” is when sharing medical information. Figure 2 shows the thought collectives present in the Huffpost Live Space and who is included in them.

Figure 4.2. Representation of the thought collectives in HuffPost Live



In the above figure, the speech bubbles represent the collectives with an *i* inside of them. The *i* stands for “information,” and it represents the information that each thought collective possesses. Each thought collective’s repository of information is different, as shown in the diagram. While each collective has knowledge on the topic of HPV, the kind of information differs. For example, a specialist thought collective will not

communicate its knowledge about HPV the same way the layperson thought collective would. Therefore, each collective and the information it shares are represented as its own bubble. The following sections outline what each thought collective is in the HuffPost Live space and their rhetorical characteristics.

4.2.2 Specialists and Moderators

In the above figure, the *specialist* is the exoteric center of sharing medical information. That is, specialists are a small thought collective that has expertise on a topic that many do not possess. In the case of the HPV video on HuffPost Live, the specialists are experts in the field of Gynecology and have the expertise to speak about topics such as HPV. The first specialist is Dr. Diane Harper, a “leader in the field of HPV research” (HuffPost Live, 2012). The second specialist is Dr. Streicher, an Assistant Professor of Obstetrics and Gynecology at Northwestern University (HuffPost Live, 2012). Their positions are emphasized through rhetorical tactics based on rhetorical appeals made through reasoning and evidence. Dr. Harper and Dr. Streicher both make a number of appeals based on data, studies, and trials to back up their claims. For example, when Dr. Harper claims that the vaccine efficacy is limited, she cites data to show how limited it is. Dr. Streicher, when commenting on why girls should have the vaccine before 12, cites a study that shows 40% of girls in the United States have had sexual intercourse by 16 (HuffPost Live, 2012). As specialists, the appeals they make need to be grounded in reasoning and evidence because they have had the education and training to speak as an authority on the topic of HPV.

While the placement of the specialist in the center of the diagram suggests that they are the center of the information-sharing universe, I opt to view it as the authoritative locus of information sharing. Previous research on medical information suggests that information from authoritative sources is a benchmark for information quality (Cline and Haynes 2001, Eysenbach 2002, Diaz *et al.* 2002, Baron 2008, Jessen 2008, Motoru, Liu, and Johnson 2008). The emphasis on authoritative sources for informational purposes in health literature suggests that the expert/non-expert binary is still in place. However, the presence of other thought collectives and the way information travels between them shifts this binary and creates a newer model of information sharing. The specialist remains a hub of information sharing, especially in the mapping for HuffPost Live.

The *moderator* is outside the exoteric center but is able to engage the specialist thought collective. A study by Huh, et al. (2013) defines the moderator in an online health context as one who assists “patients with emotional support, links to resources, medical knowledge, and ways to communicate with health care providers” (n.p.). Dr. Mehmet Oz and Alicia Menendez are the moderators of the HPV chat. Dr. Oz has the credentials for expertise, such as holding multiple degrees from Harvard and University of Pennsylvania, serving on several hospitals in matters related to cardiology, and publishing extensively (Specter 2013), but he is not a specialist in the field of gynecology. However, he also uses rhetorical tactics such as statistics and personal knowledge as a doctor to create conversation with the specialists. Menendez, the other moderator, plays a similar role: she is not a doctor nor a specialist, but she also provides rhetorical appeals to participants in the chat, commenting at one point, “Just talking about

scraping cells off my cervix is making me a little dizzy,” and “I’ve had the vaccine and I am a proponent” (HuffPost Live, 2012). Here, she is using her lack of expertise to connect to the audience in the chat, appealing them to sympathize and listen because of her personal experiences with pap smears and the virus. In other words, she is playing the part of the moderator to the audience in the chat, while Dr. Oz is playing moderator to the specialists. These two thought collectives are present in the video portion of the site.

4.2.3 The Layperson and Everyday Person

The next thought collective is the *layperson*. A layperson is knowledgeable about specific topics, but does not have the formal training such as college courses or certifications to be a specialist. Defining the layperson is a site of contention in medical literature, specifically the term “lay expert.” Lindsay Prior (2003) questions the usage of this term and examines the terms “layman” and “expert” in depth, concluding that they are in direct opposition to one another. She concedes that the layperson does have information worth sharing, but the layperson’s expertise stems from experience more so than skills or training. Furthermore, she points out that information from these sources can be harmful, since the experience from the layperson is limited to the individual or someone the individual knows and could potentially be misleading (Prior 2003).

I have chosen to use the term “layperson” as opposed to “lay expert” for this case study because the parameters of expertise from skill and training differ from expertise from personal knowledge and experience. That is not to say that the information the layperson shares is not of value. The layperson is knowledgeable about a given topic, but it is characterized by different criteria than formal training. However, Prior’s assessment

places the layperson in a negative and potentially harmful role when placed against the value of the specialist. The key to placing more value in participant work is to alter the expert/non-expert binary. The layperson is the key actor when discussing empowerment, because it is this thought collective that permeates the other thought collectives and changes the boundaries of information-sharing hierarchies.

The final thought collective is the *everyday person*. Though Fleck (1935) uses the term “uneducated layperson,” this term is reductive because it assumes that a person may know nothing about a topic. The everyday person may have general knowledge about the topic, but does not know as much as the layperson. The everyday person uses rhetorical tactics like asking questions, telling personal stories, and contributing to a basic understanding of the virus through these questions and stories. The difference in these thought collectives can be seen in the following exchange between *islandtime1* and *GingerVespaGirl*:

I'm suppose [*sic*] to have the LEEP procedure tomorrow. Has anyone else had the procedure? (*islandtime*, 2012)

I had a LEEP about 6 years ago. The procedure wasn't very painful but you'll have a discharge for a while afterwards. (*GingerVespaGirl*, 2012)

In the above exchange, *islandtime1* is asking about a LEEP¹¹ procedure and what it is like. This question illustrates that *islandtime1* is not “uneducated” about the virus or topics related to it, but does not have the background or experience to know the specific details of the procedure. *GingerVespaGirl* replies that she has gone through the procedure and recounts her experience for *islandtime1*. The personal experience about the testing

¹¹ Loop Electrosurgical Excision Procedure. Used to treat abnormal cervical cancer cells (Planned Parenthood 2014).

and procedures is what places *GingerVespaGirl* in the layperson thought collective as opposed to the everyday person. The tactical appeal of using personal experience in this exchange suggests that she is more knowledgeable about the procedure and is in a position to educate another participant about it.

Another point to make about the everyday person thought collective is that, although the collective may not be adding to scientific knowledge, they are still contributing to a greater public perception of HPV. For example, participant *gigalindo87* (2012) asks, “Dr Oz, how can I protect my husband from getting it since condoms [*sic*] are not 100% safe? Also how about when we plan on having a baby?” By asking how she can protect her husband and future child, she is expressing a concern about the virus that is echoed in other comments in the chat. This concern is not brought up directly by the specialists and moderators, yet more than one participant raises this concern in the chat. The concerns and the questions these participants raise are important keys to the public perception of HPV. They have the potential to provide valuable insight to health professionals about the public perceptions of the virus.

4.3 MAPPING THE INFORMATION FLOW

Now that the thought collectives have been identified and explained, the next step in this framework is to map the information flow between the thought collectives from the addressor/addressee standpoint in the HuffPost Live interface. The information flows at varying degrees of interaction between the thought collectives. Analyzing the exchanges between different participants will show how the expert/non-expert hierarchy is still maintained, but the non-professional participants make specific disruptive moves

that subvert the hierarchy and transform it. The analysis shows that these specific disruptive moves contribute to a shift in the definition of what constitutes an “expert,” and the everyday person and layperson become co-collaborators with the specialists.

In the traditional model of the doctor/patient relationship, the doctor is viewed as the authoritative source of information and the patient passively receives it (Goold and Lipkin, 1999). The patient is then expected to act upon the received information. This action is known as *compliance*. A term that emerged in the 1970’s, compliance is defined as “the extent to which a person’s behavior . . . coincides with medical or health advice” (Haynes, Taylor and Sackett, 1979). This term illustrates the hierarchal relationship between doctor and patient, showing that the patient is expected to submit to the command of the doctor. Luftey and Wishner (1999) challenge the term compliance and propose an updated term: *adherence*. Adherence is characterized by the acknowledging the patient as more than a passive audience that is expected to obey commands and notes that they assume “more active and voluntary roles in defining and pursuing goals for their medical treatment” (Luftey and Wishner, 1999, p. 635). This term fares better than compliance, but it is still problematic because it implies that issues with the patient’s behavior would be consequential (Wentzer and Byghom, 2013). The problem with the traditional doctor/patient relationship is that the hierarchy present in the relationship allows no room for patient empowerment. However, online spaces subvert this relationship and help empower patients to take on new roles when discussing care. The HuffPost Live chat about HPV is a prime illustration of how empowerment occurs when subverting hierarchal relationships through disruptive moves.

Figure 3. A mapping of the information flow in HuffPost Live

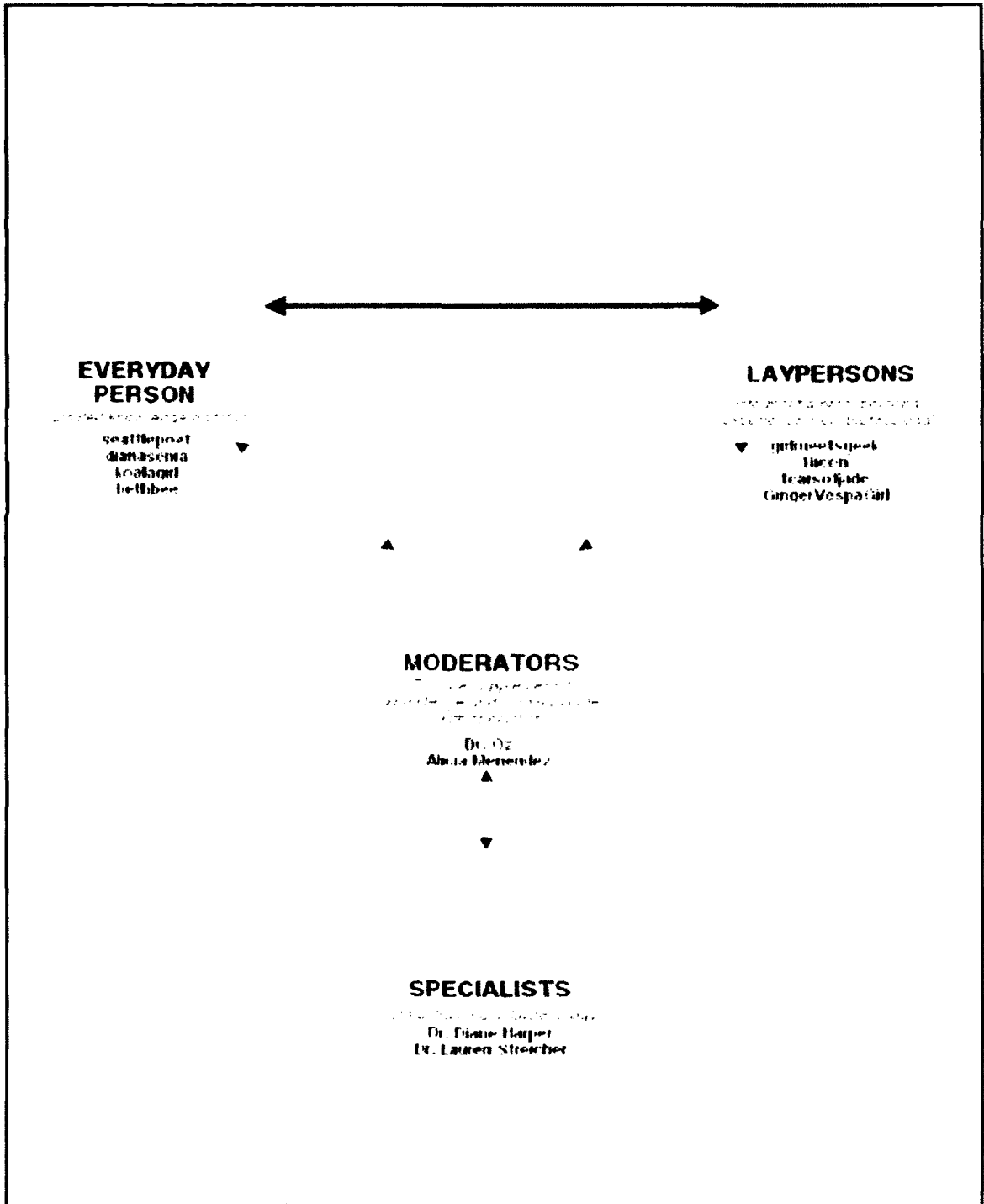


Figure 3 shows the four established thought collectives of the specialist, moderator, layperson, and everyday person. The arrows represent the flow of information between the collectives. The lightest lines are between the moderator, layperson, and everyday person. These lines are the lightest because there is minimal interaction between them. Minimal interaction means that there was some interaction present, but it was not at a high intensity. In the 32 minute, 32 second broadcast, participants *bethbee* and Alex (no username given) ask two questions on-air. The airtime they receive for asking questions is exactly five minutes. The moderators also pull six comments from the 850 and presented to the audience, which takes up a total of 1 minute and 21 seconds of airtime. In all, the participant-centered focus is in effect for 6 minutes and 21 seconds, which makes the remaining 26 minutes and 11 seconds left for the experts.

The line between the specialist and moderator is of medium length because there is a fair amount of communication between the two. The moderators are the conversation drivers, and they interact with the specialists by asking a couple of questions and commenting on the information the specialists give. For example, Dr. Oz appeals to Dr. Streicher and Dr. Harper to confirm his statement that HPV does not necessarily mean infidelity. In this interaction, he is demonstrating that he is aware that they are an authoritative source of information and they can verify his claim, thus making his action a rhetorical appeal. In another instance, Menendez asks what Dr. Harper and Dr. Streicher's takes on the vaccine are. Once again, a moderator is appealing to another collective in order to get authoritative information from the specialists. However, the rate of interaction between these two thought collectives is not as high as the one between the everyday person and layperson thought collectives.

The final line, the one between the everyday person and the layperson, is the darkest because the most communication happens between these two collectives. A high number of questions and responses between participants were noted. For this case study, a *Question* is defined as an inquiry specifically addressing another participant, Dr. Oz, or to the entire group in general. *Response* refers to a participant addressing another participant by his or her username and responding to a comment or question. Of the 850 comments, 284 of the comments, or about 33.41% of the dataset, asked questions, while 566, about 66.59%, did not. For the responses, 371 of the comments were responses to other participants, accounting for about 43.65% of the dataset. 479 of the comments were not responses, accounting for about 56.35% of the dataset. These numbers show a high rate of interaction between the layperson and everyday thought collectives, so the line between the two indicates the intensity of the interactions. Examining the participant acts that occur in these interactions through paying attention to tactics such as rhetorical appeals, phrases, and word choices determine how the layperson and everyday person become co-collaborators in a conversation instead of just consuming the information the specialists provide.

4.3.1 The Layperson Thought Collective and Disruptive Moves

The thought collective that primarily subverts the traditional doctor/patient relationship is the layperson thought collective. As stated before, the layperson is not an “expert” in the same sense that the specialist is. The specialist has a wealth of knowledge on particular topics based on years of study and training. The layperson and the everyday person have a wealth of knowledge as well, but it is not based on skills and formal

training. First, the layperson and everyday person are knowledgeable about the virus from personal experiences, either directly or indirectly. For example, two participants from the HPV chat, *girlmeetsgeek* and *tearsofjade*, use their personal experiences as rhetorical tactics for speaking out about the virus. *Girlmeetsgeek* states she is a “cervical cancer survivor” and an “activist-speaker” on the topic, and *tearsofjade* comments about the testing process, saying “at some point the test WILL come back abnormal-I know that from sad experience” (*girlmeetsgeek*, 2012a; *tearsofjade*, 2012a). In both of these examples, the participants cannot back their assertions with expertise from formal education, so they use the expertise they are more familiar with: their own experiences. By doing so, they are performing a disruptive move. They are making appeals for the audience to see them as credible characters to speak about HPV, even though their authority is not on the same formal plane as the specialists’. While this move does not directly undermine the authority of the specialists, it provides alternative viewpoints for other participants to consider.

Personal experience, however, is only one of the tactics of the layperson. One study conducted by Lewis, Macias, and Smith (2005) sought to characterize the ways participants in public health spaces exhibited empowerment when sharing information. They conducted a content analysis of message boards¹² from 24 different sites, accounting for 11 different illnesses (Macias, Lewis, and Smith, 2005). These researchers then coded the posts according to specific criteria, notably the type of illness, emotions expressed concerning the illness, topics discussed, and kinds of advice given (Macias, Lewis, and Smith, 2005). They found that there was a high rate of giving advice and

¹² Online forum where messages are left and replied to (Rouse 2011).

encouragement, expression of concerns with family and personal issues, and sympathy/empathy (Macias, Lewis, and Smith, 2005). These are all tactical moves that reflect an emotional appeal. Taking these criteria, I applied them to the HuffPost Live chat by examining words and phrases that suggest an emotional approach to information sharing. Comments in the chat reflecting this appeal are shown in Table 1 below:

Table 4.1. Characteristics found in the HuffPost Live chat dialogue

Characteristics	Comments
Giving advice/encouragement	<p>Never be scared to ask your doctor whatever questions you might have. IT'S [sic] YOUR BODY, and the Doctor WORKS FOR YOU! (Nicon, 2012)</p> <p>salmex01, I don't think you need to be scared, just wise...read and learn all that you can about HPV and talk to other women...just like you are doing here...inform your husband...keep your doctor appointments...take care of your health...eat right and get rest... (belz123, 2012)</p> <p>rachelmullen60, Rachel, you need to find an EDUCATED doctor. I think your's [sic] must have gotten into medicine back in the 1940's! (tearsofjade, 2012b)</p>
Expression of concerns with family and personal issues	<p>I'm 40, am confused...I was diagnosed with the HPV virus in 2000, but no matter how many times I ask, I feel degraded by doctors who do not really answer for me what my risks are. I have had several abnormal paps, but most recently normal ones. What is my risk for cancer? (seattlepoet, 2012)</p> <p>I'm very interested to know whether you agree, Dr. Oz. I've heard horror stories about girls developing serious issues with the vaccine. So far I'm listening to my OBGYN, and tell my daughter to use condoms. I'm relying on herd immunity right now, should I reconsider the vaccine? (bethbee, 2012)</p> <p>My doctor prescribed the HPV vaccine for me but I'm not sure if I should take it. Is the vaccine safe? Im 31, married and planning on having a baby soon (dianasenra, 2012)</p> <p>Dr. Oz., Can you talk about men getting cancer from oral sex from this HPV - I'm a worried mother thinking about her two 20 something sons (JFord22, 2012)</p>
Sympathy/Empathy	<p>Jillturk, So sorry on your daughter... But compartive [sic] the vaccine to cancer related infections/death, I believe the cancer related infections and death... (juguissepl, 2012)</p> <p>Tearsofjade, sorry to hear that and wish u luck (pbmd, 2012)</p>

These actions, while they are not specifically under the realm of “formal medical knowledge,” still contribute to the conversation. One of the criteria, giving advice and/or encouragement, is clearly present in the chat. For example, *tearsoffjade* (2012) and *Nicon* (2012) encourage other participants to get new doctors if they are unhappy with the ones they have. They use specific commands such as “never be scared,” “read,” and “need to find,” both phrases that suggest the urgency to take some kind of action. *Belz123* (2012), aside from giving tips on living a healthy lifestyle, provides encouragement through commands, using words like “I don’t think you need,” “read and learn,” and “inform your husband.” The layperson, and, in some cases the everyday person, provides the medical information that the specialists and moderators do not, therefore subverting the authority of the specialists and the moderators. In no way does this advice replace the advice of the specialist. Rather, the participant advice supplements the specialist information. While the specialists maintain some objectivity, cite statistics, and give some medical advice, but they do not express much encouragement, concern, and/or sympathy. The moderators try to bridge the gap between the thought collectives by giving advice and encouraging check ups while citing their own personal experiences with the virus. All of these factors serve as a way to boost morale for the participants, which the specialists are unable to do. These moves disrupt the doctor/patient hierarchy. It is participant-generated knowledge working alongside—as opposed to against—the specialist knowledge. The result is a co-collaboration between all of the participants. All of the thought collectives educate one another. Furthermore, they encourage and empower one another while dealing with the virus.

Another rhetorical tactic is expressing concern for family and personal issues. In

the HuffPost chat, there is no shortage of sharing personal and family information. *Seattlepoet* (2012) states that she feels degraded by her doctors and is unclear on what her risk for cancer is. She asks, “what is my risk?” By using the word risk, she is exhibiting concern about her personal position and using an emotional appeal to ask for another opinion. *Dianasenra* (2012) wonders if the vaccine is an option for her since she is 31 and married, asking, “am I safe?” By using the word safe, she is also displaying concern about her personal life and is appealing to others through her story. *Bethbee* (2012) asks about the vaccine as an option for her daughter, and *JFord 22* (2012) expresses concern about throat cancer since she has two sons in her twenties. Like *seattlepoet* and *dianasenra*, *bethbee* and *JFord 22* are sharing personal, intimate details in order to ask pointed questions about the vaccine and cancer risks. These are disruptive moves because they are using their concerns for the self and the family as a springboard for understanding the virus. The objective viewpoint that the specialists and the moderators provide is not enough to inform the participants, so they try to use their own experiences to further inform themselves.

In the last of the criteria for empowerment, participants provide sympathy for others and offer condolences for situations and/or experiences. For example, *jguisepl* (2012) offers sympathy for another participant’s daughter. Participant *pbmd* (2012) offers condolences and luck to *tearsoffjade*. The specialists and the moderators discuss many topics, but do not offer any sympathy or empathy other than Dr. Oz’s “calm down” (HPL 2012). The act of reaching out and showing sympathy and/or empathy is a disruptive move because like the sharing of personal stories, it breaks the objectivity wall. In many cases, specialists are unable to show sympathy or empathy (Halpern 2003). However,

participants are not under that constraint and can take on a more nurturing role, thus establishing mutual trust and respect for one another. This role can fill in the gaps where specialists cannot show emotion, which is another example of how the thought collectives can work alongside one another as opposed to against one another.

4.3.2 Newer Forms of Disruption

While some of the characteristics of empowerment in other studies can be identified in the HuffPost Live chat, I have identified three more: defiance, changing topics, and clarification. These characteristics are identified in Table 2:

Table 4.2. More participant characteristics found in the HPV Chat

Characteristic	Comment
Defiance	<p>That's bull, you should ALWAYS insist on a test to see if it's a high-risk strain. (girlmeetsgeek, 2012b)</p> <p>The interval for screening is NOT 5 years. It's 3 years. And you should ALWAYS know your risk, "doctor." (girlmeetsgeek, 2012c)</p> <p>No one deserves to suffer from cancer that could have been picked up at a much earlier point had she been screened. That's why I'm not a fan of the current screening guidelines - too many cracks for women to slip through! (faith11, 2012)</p> <p>Thanks for scaring people Dr. Oz.. This was a talk more about the vaccine than the virus itself. Why is [sic] Huffington have a Cardiologist talk about std's [sic]. This is not exactly his background. (corpsman069, 2012)</p>
Switching Topics	<p>I love some of the solution [sic] that are being offered for protection but I'm deadly allergic to latex . . . So what do you do in that situation? (Kathleen_Trice_Jenkins, 2012)</p> <p>I was recently diagnosed with pre cervical [sic] cancer and have no insurance any resources you can suggest? (Koalagirl, 2012)</p>
Clarification/Explaining	<p>My question is does it go AWAY or not?? I have read so many different answers when I ask this... (gigalindo87b, 2012)</p> <p>I have HPV. My gyno said that since my pap was negative for two years straight, I don't have to have paps every year. Does this mean I still have it but it's not a 'live' virus? (lisacutting, 2012)</p> <p>On the show, it was said that 90% of women will shed the virus. Does this mean that they have the virus and the body expels it, or does that mean that it goes into remission? (LaurieLF, 2012)</p> <p>Clear means not there anymore or dormant? (Phlook, 2012)</p>
Trolling	<p>Magnum works well (Tom_Servo, 2012a)</p> <p>Dr. Oz, if I sent you a photo would you tell me what it is (Tom_Servo, 2012b)</p> <p>Republicans want to limit birth control (Tom_Servo, 2012c)</p>

In the first set of examples, participants outright question the information given by both the specialist and moderator thought collectives. *Girlmeetsgeek* (2012c) questions the advice given by both the specialists and Dr. Oz that pap smears and screenings for HPV should be done every five years. *Faith11*(2012) also mentions that she “is not a fan” of the current guidelines. Both *girlmeetsgeek* (2012c) and *corpsman069* (2012) also question Dr. Oz’s credentials, with *girlmeetsgeek* sarcastically calling him “doctor” and *corpsman069* asking why a cardiologist talks about STDs. By questioning his authority, they also question how the expression of his opinions on the topic can be considered expertise. Therefore, they are resisting the information he provides and essentially asking others to question it as well. As a result, the layperson and everyday person not only shows that she is able to provide a different type of expertise than the specialist, but can also subvert the doctor/patient hierarchy by questioning the specialist. This does not mean that the layperson can replace the specialist, but such questioning allows more options for the everyday person to consider when it comes to her own health care, and thus empowers not only the layperson, but has the potential to empower the everyday person as well.

The second set of examples shows the deviation of topics from the pre-determined program decided upon by producers. One participant, *Kathleen_Trice_Jenkins* (2012), comments, “I love some of the solution [sic] that are being offered for protection but I’m deadly allergic to latex . . . So what do you do in that situation?” Participant *tearsofjade* (2012) answers, “There’s something on the market called a ‘dental dam’ for just that purpose. Google it-it’s available in your own pharmacy, I’m sure.” In another instance, participant *koalagirl* (2012) asks what options she has for care after a diagnosis of pre-

cervical cancer and no insurance. *Girlmeetsgeek* (2012) answers, “Check out Planned Parenthood, or your state’s medicaid program. They can help.” *Koalagirl* then thanks *girlmeetsgeek* for the information and says she will call Planned Parenthood. In both of these instances, participants asked questions that the specialist and moderator thought collectives did not address. The specialists and the moderators mentioned safe sex briefly and using condoms for protection, but did not specifically address safe oral sex or methods of practicing it. Also, the moderators assumed that the viewers of the program would have health insurance, as they stressed regular check ups and asking doctors for information. Other participants, by answering these questions, manage to cover topics that the specialists and moderators do not. The result is a collective question and answer, where specialists and moderators provide some answers and participants provide others. These moves are disruptive because they illustrate examples of co-collaboration. Rather than the specialist dictating a predetermined set of topics and the audience passively receiving it, the audience also becomes the information-provider and is able to answer questions about the topics the specialists and moderators do not address. In the absence of the specialist, the lay and everyday person becomes his or her own sources of information.

There were also instances of participants asking for clarification of terms or language specialists were using. One of the phrases was that HPV “clears up on its own” (HPL 2012). Many of the participants in the chat express confusion over this terminology, and the specialist and moderator thought collectives never address the confusion. However, the thought collectives present in the chat work together to clear up the terminology and make it more understandable, with comments such as “[HPV] can

hide in the body and return” (*girlmeetsgeek* 2012), and “Sometimes, a low-grade strain of HPV can be fought off” (*girlmeetsgeek* 2012). In these instances, a participant provides a different answer to the question, explaining an ambiguous term. Another instance where a participant asks for clarification is the following from *jny1978* (2012): “Can u still get hpv without having sex?” Several other participants answer that it is possible to get HPV without intercourse, and *jny1978* asks how. The other participants then explain the transmission of HPV through skin-to-skin contact. *Jny1978* (2012) replies with, “ok that stinks,” demonstrating that she understands the answers. These exchanges show, in both the questions and the answers, disruptive moves. Asking for clarification is disruptive because its presence shows the assumptions the specialist and the moderators have about what the audience may or may not understand about the virus may not be correct. In this instance, *jny1978* was unsure of a seemingly fundamental concept about HPV transmission, and the other participants worked together to make sure she understood. The collaborative quality of the environment allows the layperson and everyday person thought collectives to boost empowerment by working with one another, not just the specialist and moderator thought collectives.

The last set of examples shows the disruptive move of trolling. Trolling is the posting of “deliberately incendiary content to a discussion forum or other online community . . . for no other reason than to stir up chaos and outrage” (Dibbell, 2009, n.p.). The participant *Tom_Servo* is a troll. For example, he or she asks, “Dr. Oz, if I sent you a photo would you tell me what it is,” or comments, “Republicans want to limit birth control” (*Tom_Servo*, 2012b, 2012c). The comments *Tom_Servo* makes are trying to reach empowerment of a different kind: not to advocate or to educate, but to gain

attention. By posting comments that are off topic or political in nature, *Tom_Servo* is trying to reroute the conversation into a direction that has little to nothing to do with the topic of HPV. As the definition for trolling suggests, it is done for no real tangible reason, just to create chaos. While the act of trolling is negative, it is also an act of empowerment, as attention gained from the act of trolling creates power.

The other participants in the chat dealt with *Tom_Servo* in two ways. They either ignored him, or they did not take him seriously. For example, he responded to a comment about condom preferences by saying, “Magnum works well” (*Tom_Servo*, 2012a). *WTEffington* (2012), the participant that posed the question, replied, “Too tight :/” By responding to *Tom_Servo*’s comment in a non-serious manner, *WTEffington* indicated that he did not take the comment seriously and did not interact with *Tom_Servo* again. As a result, *Tom_Servo*’s attempts at trolling failed and the conversation resumed without incident.

4.4 CONCLUSION

This chapter described HuffPost Live as a rich space for online empowerment. Disruptive moves transform the doctor/patient binary into a new relationship structure that accounts for participant work in this space. Breaking the participants into thought collectives identifies the contributions each group makes to the pool of information about HPV.

By analyzing the participants’ interactions with each other, disruptive moves from the thought collectives of the layperson and everyday person emerge. The disruptive moves in the context of HuffPost Live subverted the hierarchy between the expert and

non-expert. This subversion is important because the relationship between doctor and patient is no longer a binary, but a complex web of communication in which each collective gives contributions. The hierarchy is not entirely dismissed, as the expert remains the authoritative source of information, but the hierarchy is not in direct opposition with the non-experts; that is, each thought collective contributes its own style of information sharing to the collective space of HuffPost Live. These contributions lead to the co-collaboration of all participants; that is, all of the participants provide information of value in the form of rhetorical moves, whether it is a statistic, a clarification of terms, or asking a provocative question.

All of the information provided has the potential to benefit the entire group. Further study of the layperson thought collective, mapping information flow, and the role of the everyday person thought collective in social media spaces would be beneficial to both the medical and technical communication professions. In the future, systems could be developed to serve these thought collectives better and aid the information flow.

CHAPTER 5

“I SEE YOU’RE TALKING #HPV”: TWITTER, BROADCASTING, AND THE ILLUSION OF CONVERSATION

5.1 INTRODUCTION

The previous chapter discussed the passage of information through the social site of HuffPost Live and how, through disruptive moves, the interactions between participants led to the breaking down of established structures of information sharing. This chapter examines Twitter, another social site, and illustrates how disruptive moves may not always lead to agency or empowerment. Twitter is an online microblogging service that debuted in 2006 (O’Reilly and Milstein, 2009). As of July 2012, there were over a half billion registered accounts on the site, but the number of active users remained unclear (Lunden, 2012). While many people do use the site for connecting with people they already know or have just met, they are also using it to share experiences with current events, such as TV shows, books, music, and passing thoughts (O’Reilly and Milstein, 2009). The multitude of uses suggests Twitter is a versatile service, and the various ways it is used are gaining more attention in both the mainstream media and academia.

Twitter has been highly publicized in the mainstream media for its uses in disasters such as the earthquakes in Japan (Hosaka, 2011; Taylor, 2011; Winn, 2011) New Zealand (MacManus, 2011; Seitzinger, 2010). It also has been cited for its use in crises such as school shootings (Fitzpatrick, 2013) and plane crashes (Beaumont, 2009). Aside from disasters and crises, it played a vital role in the spread of information

concerning the deaths of Osama Bin Laden (Hernandez, 2011) and Whitney Houston (Kelly, 2012). In all of these scenarios, people are not connecting with people they know or making new friends, but sharing information with virtual strangers. The uniting thread between all of these scenarios is a shared experience and/or event. While the exploration of how people maintain relationships in online spaces is significant, so is how people spread information. Academia has produced some studies that explore how people use the tools available to them in social media to have conversations, collaborate, and organize information (Potts, Seitzinger, Jones, & Harrison, 2011; boyd, Golder, & Lotan, 2010; Honeycutt and Herring, 2009). By exploring how people participate in the exchange of information about a topic using the tools available to them, aspects of technical and humanistic communication in this space can be identified. After these aspects are identified, people can be trained to use these tools effectively, and technical communicators such as user experience and information architects can design systems in the future that will meet the needs of the people.

As illustrated by the 2008 special issue of *Technical Communication Quarterly* dedicated to health information, the subject of online health communication includes a wide variety of topics from creating online ethos (Spoel, 2008) to developing multimedia interfaces for patients (Kim, et al., 2008). The breadth of topics in this issue show not only that online health communication is a topic exploding with research possibilities; it suggests that the field of technical communication and the health profession can benefit from one another. Even so, there are limited studies on the impact of social media and the spread of health information (Chew & Eysenbach, 2010; Scansfeld, Scansfeld, & Larson, 2010; Motoru, Liu, & Johnson, 2008). Most of these studies are centered on topics such

as misinformation, the safety of health information online, and how professionals are reacting to it (Heaton, 2011). Specifically, only Chew and Eysenbach (2010) and Scansfeld, Scansfeld, and Larson (2010) have done research on Twitter and how it is used in the realm of health communication. All of these studies, while insightful, are focused on what tools are available to them, and, in some cases, how they are used. However, they do not discuss how participants negotiate meaning as they navigate through this space and interact with one another.

This chapter examines a sample of 900 tweets from the #hvp stream, which is a collection of tweets that contain the hashtag with HPV attached to it. HPV was chosen as a topic because it is a current health concern with many subtopics, such as the Gardasil vaccine, cancer, and circumcision. First, a content analysis was conducted in order to produce empirical results from the large sample (Thayer, et al., 2007). Content analysis is defined as “the systematic, objective, quantitative analysis of message characteristics” (Neundorf, 2002, p. 13). For this case study, the message characteristics focused on were directly related to the tools of communication available on Twitter. The specific tools included links, the @ symbol, the retweet (RT), and the hashtag (#). While it could be argued these are symbols and not text such as phrases or words, they are in the composition of the tweet and thus make up part of its message. I tallied the presence of these tools and the ways they were used. The results were used to determine any visible communication patterns and practices from participants.

Next, the results were analyzed using the rhetoric of the interface (Carnegie, 2009). Since participant tool usage is applied through the interface, the rhetoric of the interface is used to examine “the site’s coded ability to steer and direct users” (Van Dijk,

2009, p.46). That is, the rhetoric of the interface is a means through understanding participants choices for the tool usage and what the implications of these uses are. While rhetoric and new media have had an uneasy relationship, Carnegie (2009) states that scholars ought to consider “an expanded understanding of how rhetoric functions in new media” (p. 165). She proposes looking at the interface as exordium, which contains three modes for interactivity: multi-directionality, manipulability, and presence (Carnegie, 2009). Two of the three modes, multi-directionality and manipulability, were used in order to assess how the interface of Twitter may or may not impact the spread of information about the virus. While the previous chapter shows the shifting of the speaker and audience roles, this chapter shows how these roles remain rigid, mainly due to the use of tools within the Twitter interface.

5.2 PATTERNS AND PRACTICES

The sample for this case study consisted of 900 tweets. Of the 900 tweets, 748 of them were in English, accounting for roughly 83.11% of the dataset. 152 of the tweets were in languages other than English, accounting for 16.89% of the dataset. The vast majority of the non-English tweets were in an Indonesian dialect. The rest of the non-English tweets were minimal, but represented a wide spread of languages such as Dutch, German, French, Italian, Arabic, Spanish, Portuguese, and Slovenian. The wide variety of languages present in this stream point to HPV as a worldwide concern. The presence of the other languages also suggests that researchers who are proficient in these languages and cultures may consider analyzing the tweets in order to see if any practices and

patterns can be identified in order to consider how participants spread information about the virus across cultures.

3.1.1 Links

The majority of tweets in this case study contained links, or the addresses to other websites. Of the 748 English tweets, 652 contained a link, accounting for approximately 72.44% of the tweets. 96 did not contain a link, which is about 10.67% of the dataset. 152 tweets, or about 16.89%, were exempt because they were not in English. The use of hyperlinks is a common practice in this sample of the #hpv stream. For now, the high number of links in the stream is worth noting, but it shows English participants of the stream as highly likely to have links embedded with the content of their tweets.

3.2.2 Uses of the @ Symbol

The @ symbol is used for a variety of reasons. The most prominent use of the @ symbol in this dataset was attributions to other participants. 314 tweets, or about 34.89% of the tweets, were attributions. 169 tweets, or about 18.78%, were addressing another participant. Seven, or 0.78% of tweets, used the @ symbol as an “at” sign to signify location. 5 tweets, or 0.56%, contained an unclear usage of the symbol. 152 tweets, or 16.89%, were exempt.

The majority of @ symbols are attributions and very few were used to address another person. This finding suggests that conversation about the virus were not prioritized in this space, nor is community building. The high number of attributes suggested a leaning towards sharing information, but more in a broadcast fashion than a

conversational or community-based one. This finding is consistent with Levine's (2012) statement that Twitter has become more of a "broadcast medium than social network."

3.2.3 Retweets

A retweet is "the act of reposting someone's cool or insightful or helpful tweet and giving them credit" (Milstein and O'Reilly, 2009). The majority of tweets in this dataset were not retweeted. 620, or 68.89% of the tweets were not retweeted. 128 of the tweets, or about 14.22%, were retweeted. 152 tweets, or 16.89%, were exempt. Aside from the fact not many tweets were retweeted, of interest is the high number of tweets that were actually retweets in some form or another. Of the 14% retweeted, 204 of those tweets were retweeted verbatim, meaning reproduced exactly like the original tweet. Nine of them were quoted tweets, meaning that they did not have the RT symbol in front of them, but did have quotation marks around the content. There were 3 modified tweets, or MTs, which were slightly altered from the original tweet but contained the same essential content. 8 of the retweets were partially or wholly retweeted and contained some kind of response before the retweeted material.

3.2.4 Hashtags other than #hvp

The hashtag is a way to organize material on Twitter. It is constructed by a pound sign following a term or short message. When the hashtag is clicked on, all of the tweets that contain the hashtag are organized into a stream. Most of the tweets in this sample contained hashtags other than #hvp. 624 tweets, or about 69.33%, had more than the #hvp hashtag. 124 tweets, or about 13.78%, did not contain other hashtags. 152 tweets, or

about 16.89%, were exempt. Table 1 shows the 3 principal hashtags that are visible in the #hpv stream and the number of instances in which they appeared.

Table 5.1. Prominent hashtags other than #HPV

Hashtag Name	Number of Instances
#pathogenposse	141
#cancer	134
#vaccine	83

The three most prominent hashtags other than #hpv in this dataset are #pathogenposse, #cancer, and #vaccine. #Pathogenposse, the most common hashtag, was used 141 times in the 748 English tweets. This hashtag is the result of a *bot*, which will be discussed in the next paragraph. The second most common hashtag, #cancer, was used 134 times in the sample. The third most common, #vaccine, was used 83 times. The usage of these two hashtags suggests that most of the information tweeted about HPV is related to cancer and the Gardasil vaccine.

The hashtag #pathogenposse is more of a playful hashtag than a serious one. The tweets containing the hashtag #pathogenposse in this dataset were uniform, each one reading, “Hey, @username I see you're talking #HPV, here's some facts: <http://t.co/36WGmGoI> #pathogenposse” (Hpapillomavirus, 2012). Given the frequency and uniformity of the tweets from @Hpapillomavirus, it is highly likely that the tweets came from a *bot*, or “computer programs that watch each and every public tweet on Twitter for popular keywords “ and “either sends a pre-written response that may *sort of*

look like it came from someone” (Sumner, 2011). The high probability that this participant was a bot accounts for the high number of hashtags in the sample.

The next section will analyze the findings in the content analysis using the rhetoric of the interface, specifically Carnegie’s (2009) modes of multi-directionality and manipulability. These modes answer questions of why tools such as the @ symbol, the retweet, and the hashtag are used in the manner reflected in the content analysis findings. Furthermore, the implications of these findings will be discussed.

5.3 RHETORIC OF THE INTERFACE

Twitter proclaims itself as “the fastest, simplest way to stay close to everything you care about” (Twitter, 2013). By addressing the user of the site directly, the statement implies that he or she has the power to choose what to read, follow, and interact with. Such a statement also implies that the site is what gives the user the power to do so, thus creating a relationship between the participant (user) and system. As seen in the data sample for this chapter, the participants in the #hvp stream range from recognizable, professional accounts such as the Center for Disease Control and *The Washington Post* to individuals with an agenda such as @Gardasil_Truth. Twitter allows the chance for all of these participants to become sharers of information in the same space, which warrants a closer look at how they use the tools available to them to share knowledge and how the interface of Twitter both helps and hinders the ways they communicate.

The first section of this chapter was a content analysis of particular tools in Twitter’s interface and the various ways they were used, which answers the question of what patterns and practices were present in the sample. The second part of this section

will employ the use of two of Carnegie's (2009) modes for examining the interface, with some slight changes in order to make them more conducive for participatory practices. These two modes, multi-directionality and manipulability, will be used in order to interpret the findings of the content analysis. The third mode, presence, is not directly relevant to this study and will not be used in the analysis.

5.4 MULTI-DIRECTIONALITY

Carnegie (2009) states that there are “three modes of interactivity as the available means for preparing and engaging the audience . . . Through these modes, we can begin to build more effective ways of talking about and analyzing the interface” (p. 165). The first mode she mentions is multi-directionality. She defines multi-directionality as “a node of interactivity associated with systems that have networked and nodal points of contact and interaction,” (p. 166). She bases her assessment of multi-directionality on the amount of control a user has when interacting with the interface. She identifies the roles an individual may have: receiver, sender, or both. The receiver-only role has the lowest level of multi-directionality since he or she may read a message but does not have the means to respond to it. Examples of this role include reading webpages or viewing videos. In some cases, an individual may be able to act as a sender by posting comments or reviews, but responses to those acts are not expected (Carnegie, 2009). In the highest levels of interactivity, messages are sent, received, and responded to (Carnegie, 2009). Examples of this role would be instant messaging and other forms of chat.

This criteria is relevant to this study, but since the #hvp stream is a participatory space, the benchmarks Carnegie provides need to be more nuanced, which will allow a

clearer analysis of how the participant and the interface work together in the space of Twitter and how they may influence one another. For the purpose of this study, the specific points chosen for study were the ability to choose roles and the specific tools used to navigate within the space.

5.4.1 Roles and Visibility

The first point of multi-directionality I propose for examining participatory practices is the choice of roles the participant may assume within the space. Carnegie (2009) mentions roles users may be able to perform, but they are limited to the sender, receiver, or both. The roles in a participatory space are more distinct. According to Nielsen (2006), there are three kinds of users in online communities: users that create the most content, which accounts for 1%; users who contribute casually, accounting for 9%; and lurkers, which account for 90%. The most visible users, the 1%, are the ones that create content and create it often, dubbed “power users” (Suster, 2010). The “casual contributors” are the ones who simply contribute based on personal experiences and are not interested in status (Suster, 2010). Lurkers simply take in the content and never contribute anything (Suster, 2010). This model of categorization is significant because it contains a continuum instead of a binary. Rather than have two separate camps of users that may have characteristics of both, there are three kinds that take into account the actions of the user. However, this criteria does not quite work within the #hvp stream. Suster’s (2010) categorizations break the participants into a hierarchal model. That is, the use of the word “power” suggests that power users are somehow the ones in control of the exchange of information, whereas the more “casual contributors are somehow in the

middle, and the lurkers, who produce nothing that can be seen visibly, are somehow on the bottom.

Rather than create a hierarchy based on the content production, it would be more conducive to categorize participants by visibility. Categorizing participants by visibility allows the participants to assume more roles than simply sender, receiver, or both. As Figure 1 shows, the visibility criteria is determined by the level visibility that the participants have, as opposed to status. What level of multi-directionality the interface has depends on the ability of the participant to choose what role he or she wants to be within a space, based on the visibility that he or she decides to have. In the case of Twitter, however, the data collected suggests that choosing the role may not be as easy as it appears.

Figure 5.1. Continuum of visibility

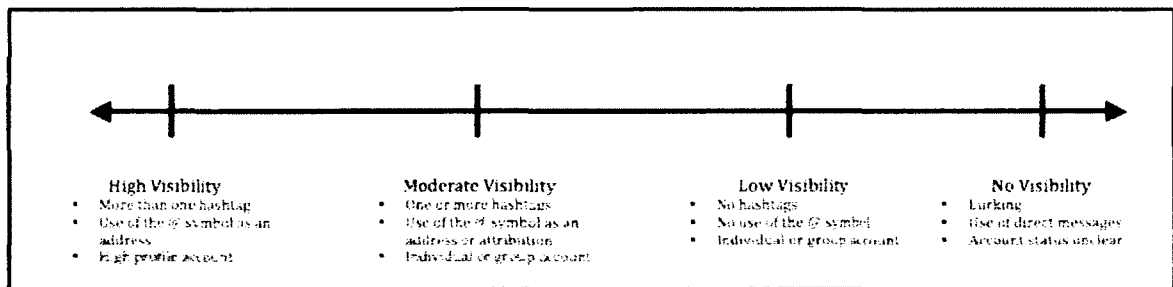
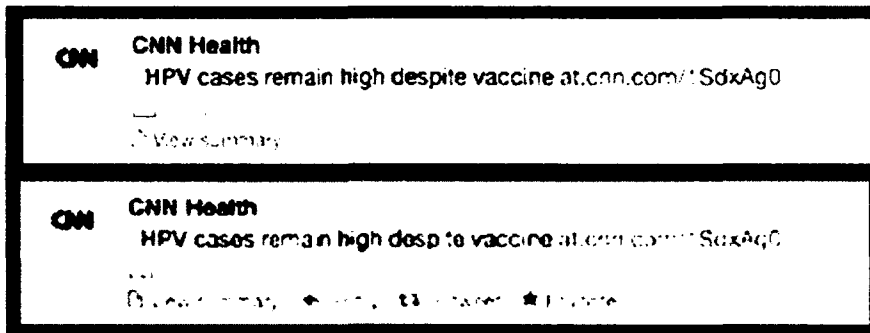


Figure 2 is a screenshot of a tweet made by CNN in the #hvp stream. The top screenshot shows what the tweet looks like to a participant simply viewing it. The participant has the option to view a summary which, when clicked on, provides a blurb about the link, any available photos from the link, the number of times it has been retweeted, the number of times it has been favorited, and details such as the date and

time. When the tweet is simply hovered on, however, the look of the tweet changes. Once hovered on, a small variety of options appear that include “Reply,” “Retweet,” and “Favorite.” Essentially, choices are given as to whether the participant can address the composer of the tweet, retweet it, or save it.

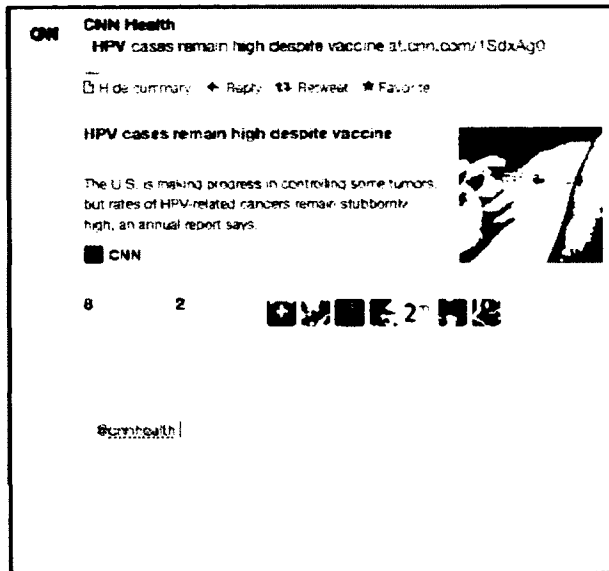
Figure 5.2. Screenshot of CNN tweet and its interaction options



The changing of the screen is an example of what Johnson-Eilola (2005) refers to as learning through cues in the interface (p. 45). In this case, the screen proves a clue as to how the participant can interact with the tweet. The participant can choose to attempt conversation, spread the message, or save the tweet for later viewing. Essentially, the participant can choose what level of visibility she would like to assume. While there is some multi-directionality at work here, it is constrained by a limited number of choices. The numbers in the content analysis clearly reflect those choices, and which choice was preferred over the other in the sample: low to moderate visibility. There is no way to account for the lurkers.

Another point of interest is that the participant does not have the option to both retweet AND address another participant. Figure 3 shows what the interface looks like once the option of “Reply” is chosen:

Figure 5.3. Screenshot of interactivity choices on Twitter



Here, the view is the same as the one when the “summary” option is selected. At the bottom is a window in which the reply can be composed. The options that the participant has at this point are to either compose a tweet with the reply @ symbol in it, to erase it and compose a tweet from scratch, or not do anything at all. The participant has the choice of what visibility level she wants to operate on, but the potential for being visible is stymied by the interface options. Rather, the participant is driven to compose an all-new tweet rather than work directly with what is available. This action ensures that the participant remain in a specific spot on the visibility continuum.

5.4.2 The @ Symbol

The @ symbol, as shown in the continuum in Figure 4, shows the @ symbol as a tool to aid visibility. The uses of the @ symbol have been explored by Honeycutt and Herring (2009). Also, 91% of @ signs were used to specifically tweet another person, and

the second most common use was to refer to another person (Honeycutt and Herring, 2009). Honeycutt and Herring's (2009) study noted some interactivity in their data sample: of the "785 public English tweets that used the @ sign to direct the message to a particular individual that were posted in that half hour, 245 messages (31.2%) received a public response" (p. 6). They also noted that the instances of conversation in their sample were "dyadic exchanges of three to five messages sent over a period of 15 to 30 minutes" (Honeycutt and Herring, 2009, p. 7). They concluded, based on these findings, that conversation does exist on Twitter. However, they did acknowledge that there were drawbacks to using Twitter for collaborative purposes and that tracking conversation was hard to undertake.

Honeycutt and Herring's (2009) sample was not focused on a particular stream of information. Focusing on a specific stream of information allows a picture of how people within a specific space on Twitter communicate. In this sample, there is very little conversation or collaboration going on. The lack of conversation present in the stream suggests information is rarely interacted with, and in the few instances where a participant did interact with the information there was usually no reply. For example, participant @kendraedits retweeted the @washingtonpost tweet that read, "For #HPV vaccine to work, girls need 3 shots. But fewer girls get all 3 shots: <http://t.co/yKefpbKv> #Cancer" and added the comment "defeats purpose." @washingtonpost did not reply to this tweet, nor did anyone else. While a large, highly visible account such as *The Washington Post* can hardly be expected to reply and/or take a stance on the topic, there are other opportunities present for other participants to take up this thread and start a conversation.

In one case, participant @devin_moos tweeted, “I want to do something to promote #HPV and #cervical #cancer awareness, within #Boston, or everywhere. Who’s got suggestions for me? :)” This participant was asking a direct, social action-driven question that could have spurred any number of responses, but not a single participant responded to this tweet. The high number of hashtags the participant used suggests that the tweet appeared in a fair number of streams, and yet it did not solicit a single public reply. The lack of conversation and collaboration in this stream is surprising, as HPV is a topic with many subtopics attached to it. While there is interesting information being broadcast from a variety of sources, it is highly likely that the participants in the stream interact minimally with the information.

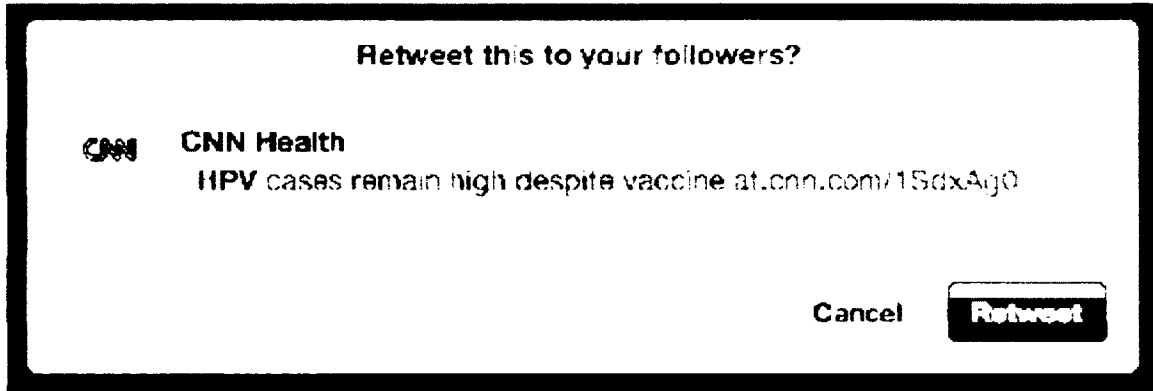
At a glance, it seems as if Twitter should be a conversation machine. When the participant decides to compose a new tweet, he is given an empty window to compose in, with the prompt “What’s happening?” across the top. Thus the interface is leaving another one of those clues as to how the service should be used: the participant should tell his followers what is happening in his world at that very moment, prompting the start of a conversation. A participant has the power to initiate conversation, both via a brand new tweet or the @ symbol addressed to another participant. However, the participants choose not to start a conversation. As a result, the #hpv space becomes more of a space for broadcasting information as opposing to creating conversations about the virus. While the participant may have a number of choices as to what role he can take and the level of visibility he wants to achieve, the opportunities become lost in the interface.

5.4.3 *The Retweet*

The retweet is another tool that aids in multi-directionality. When a tweet is retweeted, it is shown multiple times in a stream of information. Depending on how much it is retweeted, it may show up in a continuous row in the Twitter feed. Readers may be more likely to read something that takes up that much space in a feed and shows up repeatedly. For example, an @CDCSTD tweet about how the HPV vaccine is available for males was retweeted twenty times in a three-hour period on the 25th of May 2012. During that time, only two tweets were not retweets of the CDCSTD one. Since this tweet was retweeted many times and dominated the visual space of the #hpv stream for a large amount of time, it is possible that it is one of the factors as to why this tweet was so visible. The fact that @CDCSTD is a highly recognizable name may help as well.

A previous study conducted by boyd, Golder, and Lotan (2010) examined the practices of retweeting. They found that the reasons that people retweet were varied. In this sample, the majority of tweets were retweets of other tweets as opposed to tweets with original content. However, a substantial number were retweeted. boyd, Golder, and Lotan (2010) suggested that a couple of the reasons for retweeting include spreading tweets to larger audiences and/or validation. While the reasoning for retweeting cannot be certain, it is most likely that in the instances of retweeting verbatim the purpose for doing so was to spread the information to a wider audience and/or retweet as a sign of validation for the content in the tweet. However, it may also be because the interface only allows this form of retweeting. Figure 4 shows what the options of the interface look like after clicking on “Retweet”:

Figure 5.4. Screenshot of the interface after selecting “retweet”



This screenshot shows that the only option available to the participant is to retweet the original tweet verbatim, without any opportunity to edit, reorganize, or comment on it¹³. In this sample, the number of tweets retweeted were low, but the samples consisted mostly of retweets of those tweets as opposed to brand new ones. This phenomenon suggests several points for consideration. One is that since the interface does not allow the easy editing of a tweet, that is the reason that most tweets are retweeted verbatim. In the cases that they are retweeted verbatim, there may be an underlying reason for the retweet, such as validation or spreading to another audience. However, it is also possible that it is done that way because it is the easiest way, which is consistent with Johnson-Eilola’s notion (2005) that people follow clues in the interface without really taking the time to understand what works and what does not.

boyd, Golder, and Lotan (2010) noted that the “practice [of retweeting] contributes to a conversational ecology in which conversations are composed of a public interplay of voices that give rise to an emotional sense of shared conversational context”

¹³ For more information on how third party tools such as Tweetdeck and Brizzly allow the editing of tweets, please see Potts and Jones (2010).

(p. 1). However, the practices of retweeting in this dataset do not indicate a “conversational ecology.” The majority of the tweets are not retweeted, and there are few instances of participants using the retweet as a way to enter conversation. The heart of boyd, Golder, and Lotan’s argument is:

retweeting can be understood both as a form of information diffusion and as a means of participating in a diffuse conversation. Spreading tweets is not simply to get messages out to new audiences, but also to validate and engage with others.

(p.1)

In this case study, there is little participation going on but a fair amount of information diffusion. Based on the findings in this sample, the reasons for retweeting include getting messages out to new audiences and validation, but not engagement with others. The act of retweeting itself, without any commentary or editing attached to it, does suggest a form of participation, however. It does not initiate conversation, but signals that the reader in some form has considered the information in the tweet, at the very least. While Carnegie’s (2009) heuristic does consider the roles of sender/receiver, she does not account for more roles and largely depends on levels of interactivity as a benchmark for the interface. The retweet, even if it verbatim, shows an action. It allows the potential for more interaction because it may or may not be referenced in a conversation or conversation starter, but it could also be considered a point for more moderate levels when retweeted verbatim.

5.4.4 The Hashtag

There have been relatively few studies done of the role of the hashtag in the spread of information, but one from Potts, Seitzinger, Jones, and Harrison (2011), explores hashtag usage in times of disaster. One point they raise is the amount of information overload that occurs in a crisis. When there is a large volume of tweets in the event of the disaster, the responsibility falls on the participant to sort through the information and make meaning of it. Another point is brevity. When tweets and hashtags are too long, they are not easily spread. Though the findings in Potts, et al.'s (2011) paper are directly related to times of disaster, they are relevant to the findings in this stream.

The #hpv stream has a fair amount of traffic, but it is not as active as others. While it may not be as active as a stream in the event of a disaster, there is still a large amount of information to sort through. For example, some believe that the number of hashtags available in a tweet will make it more visible because they allow the tweet to show up in a multitude of streams. One example would be this tweet from @GardasilNews “@nyenati <http://t.co/wLnQUibO> #Gardasil deaths #hpv #vaccine #girls #boys #woman #health #family <http://t.co/JmhX3jC3> 4 info #Merck #FDA” (2012). This tweet contains 10 hashtags and 2 links. This tweet was also ignored, as were all of the tweets from @GardasilNews. Twitter suggests that “Hashtags are most powerful when you use them judiciously. **Including more than two in a Tweet is probably overkill,** and you only need to tag the most important word that represents the theme of your Tweet” (2013). Twitter emphasized that using more than two hashtags in a tweet was too much, and suggested that using too many will turn readers off to the information in the stream. @GardasilNews' tweet is a perfect illustration of how using too many hashtags in

one tweet is both confusing and aesthetically displeasing. While the participant @GardasilNews may have thought she was getting much more information out to multiple streams, her plan would surely backfire in the sea of information. A few well-placed hashtags may have worked much better. Also, the link, the @nyenati, and all of the hashtags are the same color, so sorting through them visually is also a problem. Not mentioned by Twitter is the notion that a message with too many hashtags may not easily be retweeted.

5.5 MANIPULABILITY

The second heuristic Carnegie (2009) outlines is manipulability. She states it is “defined by the degree to which users can influence or manipulate the form or content of new media communication” (p. 167). She creates a hierarchy of interactivity again, identifying the lowest level as when the user cannot change the interface at all, and the highest as when the user can change the interface and the methods through which information is accessed (p. 67). While she identifies the lowest and highest levels of interaction, she does not provide any examples of any that would fall in between these two opposites. She refers to McMillan’s (2006) packaged content and on-demand content model to make these assessments. A packaged content model encourages reading and basic navigation, whereas an on-demand content model allows customization and information retrieval (Carnegie, 2009). Both of these points are relevant to this study because they are involved with assessing how the tools available to the participant may or may not impact the spread of information. Though manipulability is not as micro-level as

multi-directionality, manipulability allows a macro-level analysis of how information is spread and, in many cases, stays stagnant.

5.5.1 Customization

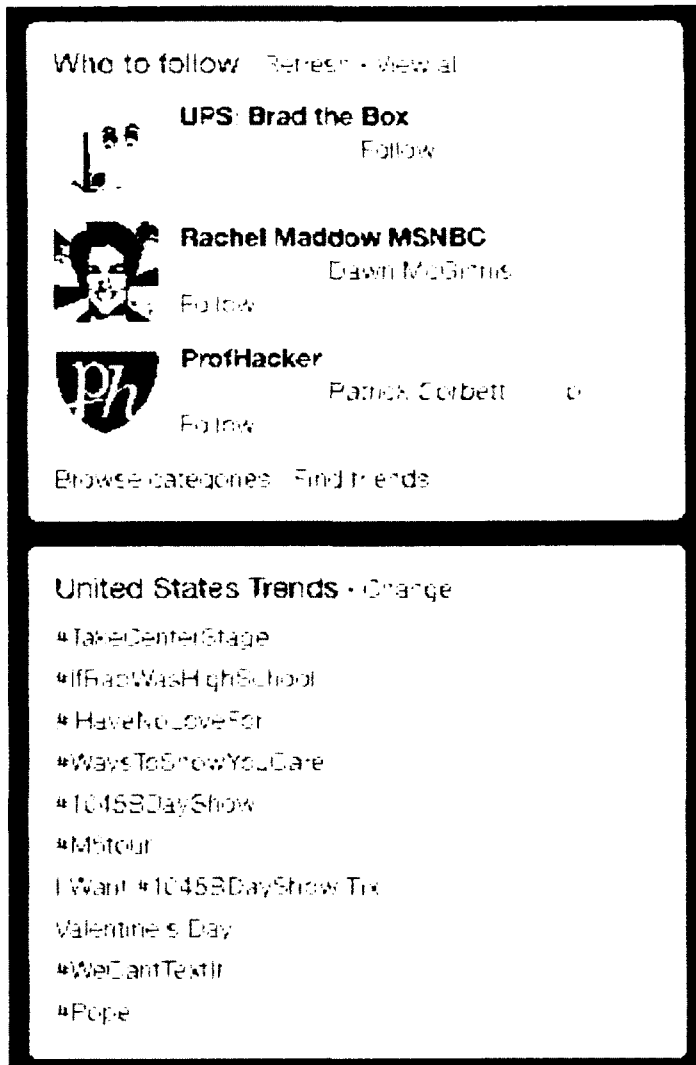
Carnegie (2009) cites customization as the most common form of manipulability. Specifically, she draws upon MyYahoo! as an example because it allows changes in both the design and structure of the interface (p. 168). However, she notes that these changes are limited. For example, while the user of MyYahoo! has many options on how to customize the design of the site (i.e. backgrounds, colors, etc.), he or she does not have as many options on how to change the site's structure. The user may be able to add or remove content boxes, but the choices of what to place within the content boxes chosen is predetermined (p. 168). This limited version of customization is likely to make the user of the site feel like he is in control of the way the site looks, which, to a degree, he does. However, he is not in control of how he receives information.

Twitter's interface is even more limited than the MyYahoo! one. The design of Twitter's interface is highly customizable on the design end, but practically uncustomizable from the structure end. The participant of the site has a selection of options on how to change the background, the color of text, the placement of the background, and the overlay. A third-party site called Themelon is linked to the Design page, which allows even more options for design customization. However, all of these design choices are cosmetic. It is true that some knowledge of web design may be beneficial when choosing backgrounds and color palettes, but there are also many pre-determined palettes and backgrounds that make choosing what the interface will look like

easy. None of the options allow changes to the arrangement or structure of the Twitter interface.

Figure 5 shows a screenshot of two windows to the left of the tweetstream when the homepage is viewed. One content box is a suggestion of who to follow, and the other is trending topics. These boxes cannot be moved, but the content within them can be manipulated. The “Who to Follow” can be refreshed to new people/accounts and has a browse/find option, and the “Trending Topics” can be changed to worldwide or regional trending topics. However, these choices are constrained by a number of factors. The first is that the “Who to Follow” window, aside from being small, does not have people who are likely to interact, as shown by the first two accounts in the box. When the “Refresh” option is chosen, at least one of the accounts is a high-profile one. While some suggestions may be relevant based on who the participant follows, they are not always relevant to the interests of the participant. The “Trending Topics” choices are relegated to what Twitter decides are places worth seeing Trending topics in. For example, “WorldWide” has a sublisting of 35 countries and contains further sublistings of provinces, depending on the country that is chosen. When “United States” is chosen, the participant is offered 48 cities. When “Tailored Trends” is chosen, the options are based on whom the participant follows and where she is located. None of these options are based on interest, and the participant truly does not have the power to tailor it at all.

Figure 5.5. The “who to follow” and “trends” boxes in the Twitter interface

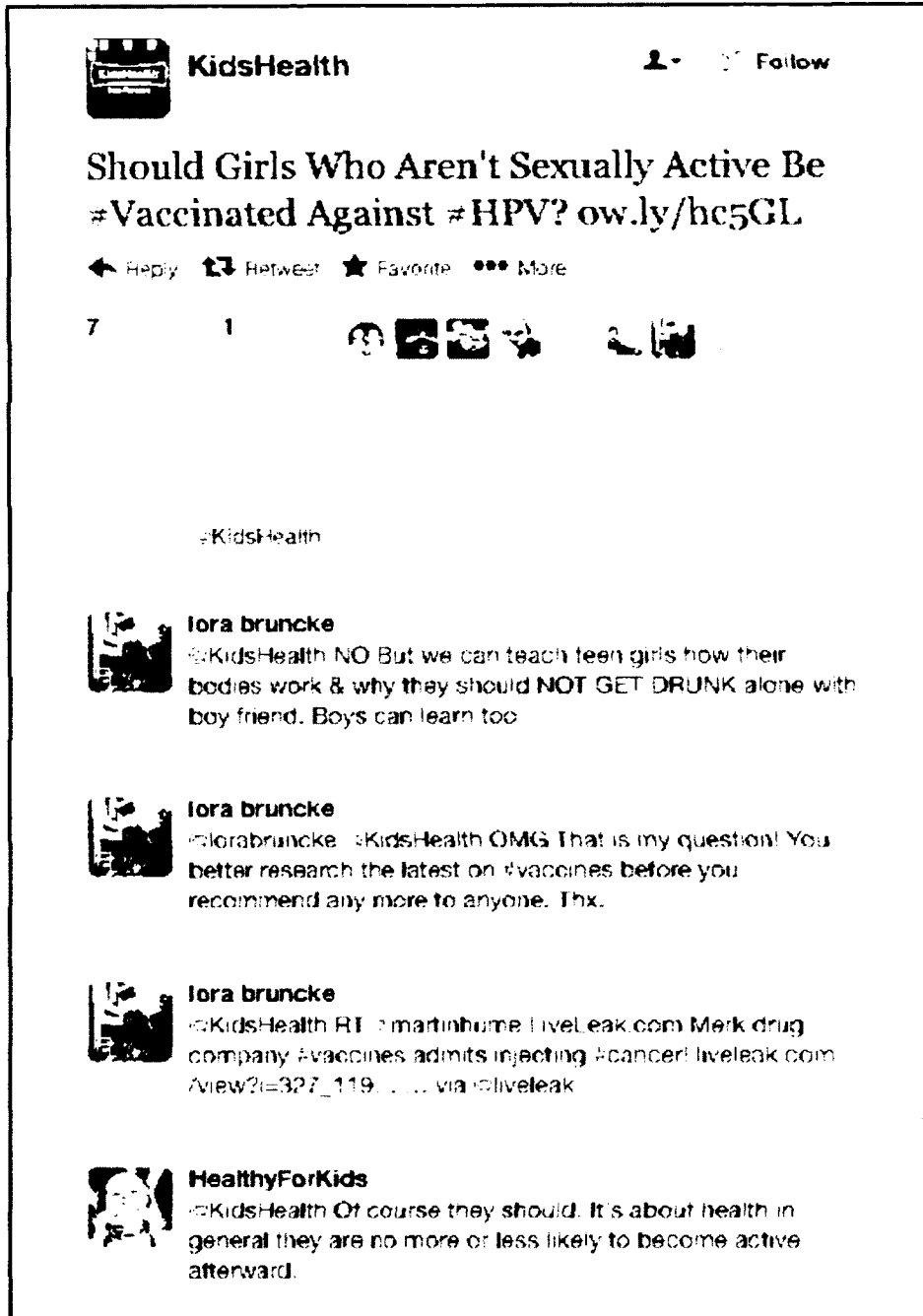


Another note about customization is that the information in the tweet stream is not easily customized. As shown in the previous section, there are some options available to spread information, but not many. Third party tools accomplish this aspect of customization much more effectively, but the main site of Twitter guides the participant into certain routes of action that are not conducive for spreading information or conversation. These are the prescribed actions that Twitter encourages. However, some participants show evidence of getting around these prescriptions. The biggest example is

a participant retweeting an existing tweet as context for a reaction. The following tweet from participant @egalarita illustrates this action perfectly: “thank you for info min!! ‘@Hpapillomavirus: Hey, @egalarita I see you’re talking #HPV, here’s some facts: LINK #pathogenposse” (2012). In this tweet, participant @egalarita has retweeted the original tweet from @Hpapillomavirus verbatim, and added commentary. The commentary is placed before the original tweet as a way to provide context for what she is responding to. This action, however, is noted as occurring only 8 times in the 900 tweet sample, suggesting that it is not a particularly easy method of having conversation.

Figure 6 shows an example of a “conversation,” or string of related threads. When a participant sends an @ reply to another participant, the conversation is created so that context is created. However, this is a messy method of creating context, and it does not work as prescribed. The only time that an @ reply is archived in a conversation is when the @ reply is chosen while viewing the original tweet. If a participant chooses to reply to another tweet while the original tweet is not expanded, the tweet will not be included in the conversation. One way around this problem is illustrated by @egalarita’s tweet: proving the context within the tweet itself, thus eliminating any extra steps to read and understand the information presented.

Figure 5.6. The “conversation” window in the Twitter interface



This finding is significant to the #hpv stream because the lack of customization options. This lack of options do not allow participants to stay on the cutting edge of information based on her interests, or on a topic of her choosing. A participant may be

able to make her information stand out more through savvy color palate choices of link text, but customization for both sharing and reading information is restricted. How information is spread also depends not just on the interface itself, but the knowledge of the practices that surround Twitter. The content analysis findings clearly reflect the default usage of participants. The next section explores the ways that the participant can create content within the interface.

5.5.2 Content Creation

Carnegie's (2009) second subset of manipulability is content creation. She states, "within the mode of manipulability, the ability to add and create content is the highest level of interactivity" (p.169). She sites Wikipedia and other wiki sites as "exploiting" this mode of interactivity (p.169). The reason this is so, she continues, is because Wikipedia is public, proclaiming that anyone can access and create content. However, this is not true because it is contingent upon a number of factors, including access to the Internet, specific reading and writing skills, and knowledge of MediaWiki and how it is used (Carnegie, 2009). As a result, not just anyone can create content.

In the space of Twitter, content creation, for the most part, is easy. There are some literacy skills required to use Twitter, specifically how to squash a message into 140 characters. A participant also needs working knowledge of the @ symbol, the # symbol, and the RT and all of the options that are associated with it. However, as seen in the previous section, people are more likely to go with the most convenient choice to get information out as opposed to the best choice. As a result, the creation of the content may be easy, but the know-how is needed on how to get that content noticed.

5.6 CONCLUSION

In this chapter, a content analysis was conducted on a random sample of 900 tweets in the #hvp stream of Twitter. The 900 tweets were broken into three sections of 300 and taken during random times in the spring of 2012. The content analysis was done in order to identify any specific patterns of usage with link usage and with the tools available in the interface, specifically the @ symbol, the RT, and the hashtag. 72.44% of the tweets not excluded from the sample contained a link, whereas 10.67% did not. The @ symbol was used primarily to attribute another participant in the stream, accounting for 34.89%. 18.78% uses of the @symbol were to address another participant. Only about 14% of the tweets in the samples were retweeted, and the majority of them were retweeted verbatim. Hashtags other than #HPV were common, with about 69.33% containing at least one extra hashtag. These findings show that participants in the #hvp stream are using the site primarily to broadcast information, with very little conversation going on. The participants are also more likely to glean the information in the tweets from other sources and are more likely to retweet a tweet verbatim more than expand upon an existing tweet.

While the patterns found in this sample are interesting and answers questions of what patterns and practices are prevalent in the stream, the content analysis does not answer questions of how these patterns emerged. Carnegie's (2009) notion of the rhetoric of the interface effectively answers questions of the reasons these patterns and practices exist. Specifically, two of the three modes, multi-directionality and manipulability, were used in the analysis. In the case of multi-directionality, the findings were that participants have the option to choose the roles they would like to have in the #hvp stream, but certain

hierarchies still make some participants more visible than others. The interface itself encourages conversation through several cues, but, as shown in the content analysis, the participants do not respond to these cues. The RT, while not used commonly to create conversation, is still an action, whether it is verbatim or with commentary attached to it. The interface makes it easier for the participant to retweet verbatim as opposed to with commentary. The hashtag is a powerful tool for spreading information, but can also be abused in some cases. When it is misused, it may give the illusion of reaching many readers, but the cluttered overload of information deter people from reading information attached to the tweet rather than encourage it. As a result, the cues for disruption were present but rendered ineffective by a combination of the interface and the participant choices made within it.

Carnegie's (2009) second mode, manipulability, is grounded in the ways participants can manipulate content within the interface. On the surface, it seems that Twitter allows high manipulability options, but it does not. Rather, the options are superfluous or severely limited. Customization of the interface is mostly limited to design options and little to no structural options. As a result, the participant is forced to read specific tweets and follow specific accounts, which is provided in the interface. Content creation is just that: content *creation*. Creating content is easy enough, but having the power to manipulate or curate it is not. The illusion of having the power to customize the interface and manipulate information is a driving factor as to why the model encourages broadcasting as opposed to conversation and collaboration on information about the virus. As a result, the #hpv stream in Twitter is more likely to be a site of broadcast than

interaction, thus giving the illusion of conversation and keeping rigid information sharing structures and hierarchies in place.

CHAPTER 6

DESIGNING FOR DISRUPTION

6.1 INTRODUCTION

The case studies in this dissertation participate in an ongoing conversation about participant-generated information and knowledge work in health care and technical communication. In particular, the goal of this dissertation is to provide an in-depth study of the different methods for identifying and tracing disruptive moves, or the participant moves that divert and reroute established channels of information sharing in digital social artifacts and spaces. Over the course of three case studies, I describe and analyze how these participant activities call into question hierarchal power dynamics in discourses about the HPV virus.

Understanding these activities and processes of disruption not only emphasizes the value of participant-generated knowledge work, it highlights how systems can be modified so participant work is not undermined. The work participants do in both artifacts and spaces is empowering because this knowledge work alters binary relationships that impose hierarchies of information sharing. As a result of this empowerment, participants are brought into conversations instead of watching them unfold. Recognizing and understanding these processes will not only show the support and value of such work, it provides understanding of how participants achieve empowerment across a spectrum of information sources.

Disruption is one of the methods through which empowerment can be attained. Empowerment in online spaces is important because it is a demonstration of participants'

ability to make an impact on their surroundings and alter power relationships.

Furthermore, participants are able to work together to achieve a goal or find a solution to a problem. The case studies in this dissertation examine two examples of issues that empowerment helps to resolve, and one example of the consequences that occur if empowerment is unrealized. Disruptive moves, or the participant actions that interrupt the established lines of information flow, alter the processes of meaning making. These alterations lead to the creation of new information and the construction of new relationships among participants in a space. Furthermore, these alterations have the potential to create knowledge. In some cases, disruptive moves may not alter these entrenched lines of information. Recognizing where disruption occurs leads to insights about how entrenched lines of information remain unchanged—insights which could inform design choices in the future.

To explore the concept of disruption, I focused on three central research questions, which are provided below in Table 6.1:

Table 6.1. Dissertation research questions and case study focuses

Chapter	Research Question	Case Study Focus
Chapter 3	What practices do participants exercise in the construction and progression of a social artifact? How do these practices disrupt the producer/consumer binary?	The tracing of a social artifact and the ways meaning is poached and repurposed in order to create new information.
Chapter 4	How do participants of varying expertise levels share information in a collective space? What participant moves break down the hierarchal structure of expert/nonexpert and what new structure replaces it?	How participants establish relationships in a collective space and engage in information sharing practices, allowing the creation of a new structural relationship that puts the nonexpert in a higher position of authority.
Chapter 5	How are structures of information hierarchies enforced? What are the consequences of this enforcement?	The ways that hierarchal structures of information still exist in interfaces, even when disruptive moves are present.

Each case study focused on the movement of information within a social artifact or social space and each one's disruptive moves. Chapter 3 showed how information started with a particular social artifact and evolved as it moved through various digital spaces. Chapter 4 illustrated how participants, through their own contributions, restructured the relationships between themselves and experts. Chapter 5 showed details of how existing top-down structures of information sharing, while, not completely static, remain entrenched within interfaces.

This chapter identifies and discusses the goals and challenges for disruption, provides a vision for disruptive design, and concludes with further considerations of how disruption can be applied in different contexts.

6.2 GOALS OF DISRUPTION

As the case studies in this dissertation show, the movement of content and experiences between participants across spaces is key to approaching disruption. Specifically, what participants do in order to create, shape, and share information is vital to analyzing how structures are disrupted and rebuilt. Over the course of three case studies, I identified two goals for disruption, which include 1) Using content as a means to advocate and 2) The emergence of the participant as collaborator.

6.2.1 Using Content to Advocate

The ability to use content for advocacy is a goal for disruption. Advocacy, in its broadest definition, is “is one person or a group of people sending messages for the purpose of persuading or influencing others (Thackeray & Hunter, 2010, p. 576). Two case studies of this dissertation show how content can be used to advocate HPV awareness. The Hipster Kitty case study illustrates how an unconnected and primarily anonymous participants group can work together to invent and shape a social artifact. They demonstrate rhetorical agency by successfully communicating an idea that runs throughout the meme—the signification of the hoodie and the glasses on the image of the cat. As the Hipster Kitty meme traveled through several channels, the signification of the hoodie and the glasses remained a referral to hipster culture. The cultural moment of teasing hipsters became coupled with a statement about HPV. In the HPV instance of the meme, the cultural moment merged with a comment about the virus. The result was a statement that advocated a position about HPV and its place in current culture. Disruption served as the method through which advocacy occurred.

The second case study demonstrates how content becomes a means for advocacy through the word and phrase choices of participants in a chat context. The chat began, more or less, as a reaction to the video provided on the site. Eventually, the chat took on a conversational quality, with several participants establishing themselves knowledgeable about HPV using personal stories and anecdotes. Their new positions as authorities on the topic allowed them to advocate for HPV awareness. In other words, these participants were able to completely restructure relationships between participants in the chat through disruptive moves. They interrupted the broadcast nature of the video and began to talk amongst themselves, using the video as a guideline for conversation topics. Thus, participants advocated for HPV awareness from multiple angles as opposed to the expert-only approach. The result was a richer information sharing experience.

These two case studies are instances of how disruption establishes the potential for content to have an impact on participants. In both cases, the participants of the Hipster Kitty meme and the HuffPost Live chat were able to shift their positions from readers of content to writers of content, making them reader/writer hybrids. They were able to express their ideas and thoughts into meaningful statements about the HPV virus. The ability to become a reader/writer and express ideas into a format that suggests advocacy is empowering. Researchers can examine how participants make these disruptive moves to shift their positions into a place where they can discuss advocacy. They can also gain a better understanding of the methods people use to advocate and the implications of such tactics. Health professionals can benefit because they can examine and understand how participants share their own thoughts and ideas with others, how they assert their positions, and how they advocate in an online context.

6.2.2 Participant as Collaborator

The need to move beyond content and into experience is more urgent in current environments due to the fast-changing nature of technology (Potts, 2014). Thus, it is not enough to focus exclusively on the content participants produce when they disrupt structures of information sharing. It is crucial to also examine the actions they take to produce and remediate content. Placing these actions in context with the artifact they are engaged with or the space they are acting in leads to a greater understanding of how they make specific choices to communicate.

At the heart of disruption are participant actions and choices. As a result, participants become more than participants; they become collaborators. While I am not the first to suggest that participants are collaborators (Potts, 2014), my findings suggest that one method of collaboration is through disruption. For example, participants in the generation and evolution of the meme collaborated on its image, text, and cultural message. These collaborations were achieved through the act of poaching, which led to the construction of a reader/writer hybrid. When disruptive moves are removed from the equation, the only artifact left is the original art that served as the focus of the image macro. Thus, the production of content is one step in a series of steps that lead to the creation of meaningful texts and new structural relationships. These experiences warrant more attention, as they are evidence of the participant becoming more than a person playing a part in the act of information sharing. The participant becomes the creator, reader, and collaborator of information all at once. Learning how these roles are accepted and used successfully in tandem with one another yields more opportunities for

empowerment. As shown in the case with the HPV Hipster Kitty instance, disruption can open lines of political inquiry and advocacy.

In the HuffPost Live space, participants became collaborators with health experts through the rhetorical moves they used to express their knowledge about the virus. Thought collectives served as a way to show how different groups with similar ways of communicating remained in their own groups, but crossed paths with one another in a collective space. While the specialist thought collective had no direct interaction with the other two thought collectives, the layperson and everyday person collectives filled that gap through inquiry and advocacy. The layperson and everyday person thought collectives do not have the same formal training the specialist one does, but through a series of disruptive moves, they inserted their own knowledge into the conversation. In some cases, the information shared was a series of commands and/or suggestions. In other cases, information was expressed through defiance at the information the specialists provided. In those cases, the layperson and the everyday person used the content to advocate positions or supplement the information provided. Disruption, then, is a driving force behind the fissuring of the doctor/patient binary. By sharing information, the layperson and everyday person thought collectives become more than participants in a conversation about HPV, they became collaborators with the specialists.

The ability to divert channels of information sharing and create new ones suggests the participant has the ability to empower their own processes of meaning making and knowledge work. Once disruption is identified and mapped in specific artifacts and spaces, we can focus efforts on building newer structures that support participant work and create new ways of integrating participant information into conversations about

topics that build and improve upon the concept of collaboration. Likewise, health professionals can learn to understand the conversations built within these systems and integrate them into conversations about health and wellness.

6.3 CHALLENGES OF DISRUPTION

As shown in the above section, disruptive acts have the potential to empower participants because they can be used to advocate a specific idea or position. They can also be used to place the participant in a co-collaborative role. However, several scholars identify the challenges associated with incorporating participant-generated information to web content, which include abstaining from participation and participants with nefarious purposes (Halvorson and Rena, 2013; Rueping, 2009). These concerns are also challenges for disruption. If participants do not participate, there is no content to work with. If participants do not interact with content in ways that advocate or contribute to the current conversation, they can do more harm than good.

6.3.1 Lack of Visibility

The third case study is an example of how disruption was not successful in the space of Twitter. The reasons why the space became more of a broadcast medium as opposed to an interactive one are tied to the tools available for use on the site and how the participants used them. Successful communication on the site is contingent upon its visibility. A number of conversational cues occurred within the stream. However, due to participants not acting upon these cues, opportunities for discussion were lost. Even then, visibility can backfire. Boosting the number of hashtags within a tweet does make the

tweet visible in more streams, but the clutter of tags may drive people away from reading the tweet as opposed to engaging with it. In addition, the site's interface makes content creation easy, but it does not allow for easy manipulation of content. As a result, rigid information structures remain in place, and only the most highly visible of accounts, such as The Center for Disease Control, can garner attention. This lack of visibility is a challenge for disruption, as disruptive moves do not have the power they might have in other contexts. Understanding visibility and making participant moves more easily seen ensures that participants can engage with content in ways that are more meaningful.

6.3.2 Disruption Backlash

The power associated with disruption may not always be for honorable purposes. Some information texts warn about the dangers of putting power fully into the hands of participants, as the situation may spiral out of control at the hands of those with nefarious purposes (Halvorson and Rach, 2013). While these case studies show how disruption is used in a positive context, it is important to note that disruption may not always have such a positive outcome. Being aware of situations where disruption occurs and the ways it may go awry are important for designers and health professionals so they can anticipate the potential for conflict and work to resolve it.

The second case study included an example of an attempt to use disruption for negative purposes. The participant *Tom_Servo* interrupted the chat several times, usually with an outrageous request or inflammatory comment. His act of trolling was a failed attempt to take the focus of discussion off of HPV and onto another topic. Dibbell (2009) remarks, "In trolling, as a rule, the more people you piss off, the better; what matters are

the lulz—the laughs you get from trashing someone's peace of mind” (n.p.). The challenge to disruption, then, is that some participants want more power, and the way they get it is through nefarious means. They may want to just make other participants angry or ruin someone’s day. Trolling is prevalent in comment logs, so much that *The Huffington Post* banned anonymous comments all together (Landers, 2013). It is important to consider that these disruptions may occur and how to handle them. In some cases, like the HuffPost Live chat, the other participants successfully dealt with the trolling behavior. In others, like the reaction of *The Huffington Post*, the ability to create participant-generated content could be erased. Understanding the act of trolling and how it disrupts may lead to better methods of handling such disruptions in the future, so that the choice to participate cannot be taken away.

6.4 RESPONSES AND SOLUTIONS

Given the goals and the challenges of disruption, how do we go about designing for disruption? While the answers in this dissertation cannot be exhaustive, it is possible to start with a couple of suggestions 1) Rethink Content Strategy and 2) Incorporate Resilience.

6.4.1 Rethinking Content Strategy

One response to the challenges and goals outlined above is the rethinking of content strategy. Content strategy is a plan for the “creation, delivery, and governance of content” (Halvorson and Rach, 2012, p. 28). To be more specific, Kissane (2011) points out “it also includes the tactical design plans for creating and revising content and the

design of tools and processes for long term management of content” (p.39). Therefore, content strategy is not confined to the realm of the content itself, but the experiences associated with the content. Engagement with content is, as the case studies of this dissertation have shown, an important part of the information sharing experience. It is not enough for content to exist and for participants to read it. Participants should be able to engage, adapt, repurpose, and remix content in ways that create meaningful experiences. Disruption is one of those methods that allow such actions to become visible and tangible. When disruption becomes visible, researchers and health professionals can use these movements as a starting point for creating richer online experiences among a wide variety of backgrounds.

When discussing participant contributions to conversation, one of the key phrases used in content strategy is “user-generated content.” User generated content is considerably different from the content provided by strategists and workplace content, because it does not come from the same standards as professional writing. One distinction, which is somewhat harmful, states that user generated content “usually doesn’t follow a workflow process based on editing and writing. Users just submit or upload whatever they want to contribute using the mechanisms the site offers them” (Rueping, 2009, sect. 4.6.4.). The harm in this comment is threefold: it suggests that participants that contribute content do not engage in processes of writing, it assumes that they do not think about the content they create and share, and it views the user as someone who simply uses the technology in front of them as opposed to engaging with it. While it is possible that users do may not understand the technical constraints of a site (Rueping, 2009), this viewpoint does not treat the engagement with technology as an

experience. Disruption is an example of participant engagement and experience. The first two case studies show how disruption of top down structures of information sharing result in the empowerment of the participants involved, and the last case study shows how these structures remain in place. All three of these cases make clear that not only do participants edit and write, but rewrite, reshape, and restructure information in meaningful ways, even when the disruption does not alter structures of information sharing. The user-centered approach considers these experiences, but not in a social context. I suggest that we move away from the concept of the “user centered” approach, and, echoing Potts (2014), move to the “participant centered approach.”

In order to move to a more participant-centered approach, it is necessary to understand the experiences participants encounter in social artifacts and spaces. The way these experiences can be better understood is through embedding researchers and professionals in the spaces where participant work occurs and immerse themselves in the artifacts they study (Potts, 2014). For example, as a researcher immersed in the artifact of the meme, I was aware of the processes involved with the meme’s genesis and evolution. The creation of Hipster Kitty began in Flickr, moved to Tumblr, and ended up in Memegenerator. Along the way, image-editing software was used to add text and change the composition of the image. Understanding the concepts of poaching and buildability can lead to better design of spaces that encourage and participant work and lead to deeper experiences with content across multiple spaces and a variety of tools. This information can also be of use to health professionals, as they can gain a better understanding of how attitudes, values, and beliefs of illnesses, diseases, and viruses are addressed in different contexts and can create conversations based around them.

The other two case studies were focused on social sites. I embedded myself in HuffPost Live and Twitter to experience firsthand how conversations about the HPV virus unfolded. Doing so allowed me to “understand the participants’ experience, negotiating often-broken systems and manipulating tools to communicate as effectively as possible” (Potts, 2014, p. 107). In the HuffPost Live space, a conversation occurred in the chat that was separate from the one happening in the video, though they did intersect at times. The system was not broken, but it was designed to separate the health experts from the nonexperts. As a result, participants navigated through this design and subverted the expert/nonexpert hierarchy through the process of disruption. Identifying these moments of disruption are solutions to designing more sites that can fully integrate both participant generated and expert submitted content. Potentially, these two kinds of content can work in harmony instead of opposition to one another. Health professionals can learn of topics and concerns that are of interest to the community and integrate those into conversations about health-related matters. Disruption can also lead to demonstrating how participants interact to seek empowerment in the doctor/patient relationship.

The final case study, Twitter, shows opposite conclusions of the HuffPost Live space. While the HuffPost Live space provided successful examples of disruption, Twitter shows how disruption does not always lead to empowerment. Identifying the moment where disruptive moves were employed and did not work serve as models of how interaction can fail, and they are useful in the exploration of how tools can constrain relationships when they are not used in specific contexts. However, by being sensitive to these moves, it is easier for professionals to support disruption and empower participants in spite of barriers. Health professionals, in turn, can become more cognizant not only of

the information shared in such spaces, but how they can enter conversations in these spaces in a way that will make an impact.

Reconsidering content strategy from the viewpoint of the participant as opposed to the user provides many opportunities for designers and health professionals to improve participant experiences. As Potts states, “we are in need of frameworks that can allow us to improve how we architect experiences, how we build for participation, and how we can do so based on evidence from observing, experimenting, and participating” (p. 108). Disruption, one of the participant experiences that has the potential for agency and empowerment, is one of the experiences we can identify and build upon in order to enhance participant activities.

6.4.2 Incorporating Resilience

Resilience is a heuristic of pervasive information architecture outlined by Resmini and Rosati (2013). They give the characteristics of resilience below:

Designing a resilient information space means conceiving an adaptable environment flexible enough to support different seeking strategies, directed and undirected, active and passive; providing it with enough push to inject a sufficient degree of serendipity; and making it capable to restructure itself according to the changing and heterogeneous interactions, actions, and needs of its users . . . Making it capable of weaving stories. (p. 127)

The adaptability of an artifact or space is tied to the amount of freedom participants have to both work within and around it. Disruption is a prime example of how participants

both work within and around structures of information sharing. If resilience is a heuristic designers should consider when creating spaces, I assert that disruption should be considered in design as well. By designing with the ability for participants to disrupt, the structures that support top down knowledge work are more easily dismantled and reformed so participants may have more control over the content they create and how they share and reshape it.

In order to design for disruption, it would be beneficial to use a similar approach to Resmini and Rosati's (2013) approach for designing for resilience. They "combine user patterns with built in structures" and make them communicate with one another (p. 130). This approach ensures that the structure to contain information is provided, and the user patterns dictate the direction of the content that fills it¹⁴. Therefore, the emphasis is not on the content itself, but the experiences that are associated with its creation and spread. Resmini and Rosati (2013) provided an example of this approach from the British Broadcasting Corporation (BBC). In this example, the BBC had issues integrating metadata into the system for better visitor site navigation. The information architects had trouble keeping up with the controlled vocabularies associated with the metadata, so they opened the site up to visitor tagging, or a participant-generated keyword or term that serves as metadata (Mathes, 2004). The BBC added mediators to work between the two layers. By combining the top down approach with a user-centered approach like tagging, the site was able to welcome participant contributions and give them a voice in the construction of the site.

¹⁴ This concept is known as *pace layering*, which Resmini and Rosati (2013) explain in the text *Pervasive Information Architecture*. I use the concepts of the top down and bottom up approach as the starting point for talking about design.

The structural characteristics of a top down approach include taxonomy, ontology, controlled vocabulary, and navigation. These characteristics are professionally designed for the organization of content. They are the “built in structures” of a site. Bottom up characteristics are actions as opposed to structures, and they include sharing, conversation, collaboration, and folksonomy. There are tools available for these actions, which include tagging, hashtagging, geolocation, mob indexing, commenting, linking, and modifying. All of these tools have the potential for allowing participants to make decisions as to what content they want to share and how to share it, particularly in the context of organization. In all three case studies, some form of these actions was implemented in order to enhance participant contributions. The meme example showed how participants across a variety of sites pulled contrasting pieces of content together and remixed it into a statement about the world around them. The sites pieces of content originated from were the products of top down designed structures such as Flickr and Tumblr, but participants bypassed these structures to link meanings together and create something new. In the HuffPost Live example, the design was integrated as a multimedia experience that allowed participants to comment on the information that was broadcast to them. The result of allowing the comments was the breakdown and successful restructuring of the expert/nonexpert binary model of sharing information. In the last example, hashtagging and linking were both used as methods to disrupt, but the constraints and misuse of these tools led to many dead-end avenues of communication. Examining how these avenues were not successful allows the reconsideration of the technological constraints that may be in place with the top down structure.

When researchers consider disruption as a possibility for design in informational structures, the result is a greater awareness of participant interactions and the ability to give them more control over the content they create and share. However, participants cannot have absolute control because the outcomes of absolute control may not be what is desired. Working towards a harmony of these two will ensure that more sophisticated information structures can emerge (Campbell and Fast, 2013). For health professionals, integrating this approach means that participants on health-related sites could potentially contribute more to conversations about health.

For instance, if *WebMD* set up a participant-generated hashtagging system, more insight could emerge not just to health professionals, but also to other people searching for information about the common symptoms and concerns that emerge from the public over a course of time. Integrating a tag cloud on the site's homepage could inform other viewers to the site of what trending tags are available for a specific moment in time and potentially create a sense of unity, while heightening the chances that visitors to the site may click on a tag to get more information on a topic that interests them. In turn, visitors may add their own tags and contribute to the pool of participant generated information. These adaptable structures enrich participant experiences and lead to a more informed, empowered public.

Disruptive design does not offer solutions to all of the problems associated with participant-generated information. It takes careful planning and a small amount of risk-taking. It can provide a façade for traditional information development patterns that disenfranchise the participant, or it may restructure the patterns entirely. On the other hand, disruption can serve as a correction to the “business as usual” or “best practices”

mentality and encourage participant interactions without erasing the expert/knowledge construct.

6.5 FURTHER CONSIDERATIONS

Disruption is contingent upon the actions participants take to create, rework, and share information. Their engagement with content is underpinned by two factors: their experiences with technology and their experiences with established information structures. Content is an aspect of their experiences, but the technology they work with and the relationships they establish within those spaces are aspects that form a cornerstone of participant work. The examples shown in this dissertation underscore all three of these factors and their connections with one another. Considering all three of these components when expanding the concept of disruption leads to better ways of understanding participation in social spaces and the cultures that surround them.

Researching and designing for disruption is based on an understanding of participant experiences that arise when they interact with content and negotiate meaning. The case studies I provided in this dissertation are only a small slice of the artifacts and sites that can be researched for disruption. Since no two spaces provide the same experience, studying more sites of participant interaction and disruption can contribute to a broader understanding of what disruption is, how it occurs, and what its implications are. We can build upon the foundational idea of disruption and provide a broader definition for it that goes beyond the boundaries of this dissertation. A couple of scenarios I am interested include 1) Third-party applications as disruption, and 2) The ways disruption can work across several channels of information sharing.

6.3.1 Third Party Applications and Disruption

Third-party applications are built by developers that are not affiliated with the developers of a website. These third-party applications are used to alter a site's interface, in many cases improving it for better organization and content interaction (Potts and Jones, 2011). Examples of these applications include Tweetdeck for Twitter and SocialFixer for Facebook. Tweetdeck, though acquired by Twitter in 2011, provides a different interface for experiencing Twitter. It displays side-by-side columns of information streams, all of which are participant-chosen. The application also provides tools for easier participant interaction, such as the option to edit tweets in a retweet pane or include all participants when replying to a tweet. The changes in this third-party application are designed to be more vibrant for participants and provide a more interactive experience as opposed to the one Twitter provides on its main site (Potts and Jones, 2010). SocialFixer is a third-party application designed to give the participant more control when interacting with Facebook. For example, when a participant views a Facebook feed, he or she usually sees the "News Feed" by default. To see recent status updates, he or she must manually check "Recent Activity" every time the site is visited. SocialFixer places "Recent Activity" as the default setting so the participant does not have to constantly check it. SocialFixer also implements the use of filters by keyword, so posts that contain any participant chosen keywords are automatically taken out of his or her feed. In both examples, third-party developers have disrupted the prescriptive, top-down approach of site developers and created an interface that allows participants to have more control over the content they see and share. Examining the use of third-party

applications and how they disrupt yields important information for exploring agency and empowerment and how such systems can be integrated for use in the future.

Third party applications are not relegated to social networks alone; they also appear in gaming. For example, *World of Warcraft* is a Massive Multiplayer Online Role Playing Game (MMORPG) developed by Blizzard. Players in this game choose a class such as Hunter or Healer and level characters up through an experience points system. Blizzard provides the interface the game is played through, but sometimes this interface tends to hinder players more than guide them. The result of these participant frustrations is modification, or “mod” for short. A *mod* is defined as

a third-party AddOn that alters or enhances some aspect of the game's interface. Mods can perform a wide variety of tasks, including adding new buttons to the screen, altering the built-in player and party frames. In extreme cases, mods completely supplant the standard game's interface, usually offering more advanced functionality. (“Add On,” n.d., para. 3)

In the construction of the *World of Warcraft* interface, developers chose to allow third party mods. People that play the game develop them. Some mods include timers for spell duration, making items in the inventory easier to locate, or signaling when another players needs to be healed (Taylor, 2008). Such mods make the game easier to play and are not provided in the infrastructure of the game. By allowing these third party creations, Blizzard has permitted players to also become developers, blurring the role between the producer and consumer (Taylor, 2008). The actions carried out by these participants “involves the active production and revision of content” (Sherlock, 2009). In other words, the game developers designed for disruption. The content, the technologies available, and

the relationship between the game players and the game developers are all keys for consideration. Researching this occurrence can allow researchers to gain insight into the reasons participants decide to modify the existing interface, the prevalence of certain kinds of mods over others, and how these mods shift the relationships between other participants. It can also provide opportunities for game developers to enhance the original game interface and make gameplay easier for all players of the game instead of those who have mods.

6.3.2 Disruption Across Multiple Spaces

Another way the concept of disruption can be furthered is through the examination of disruption from one site to another. As the web becomes more of an ecosystem (Resmini and Rosati, 2013), it is important to consider how these linkages occur and how they disrupt structures. A prime example of how disruption occurs across spaces is the site 4chan, an imageboard created in 2003. The imageboard known as /b/, or the Random imageboard, is notorious for its content, ranging from “the mundane to the disturbing—everything from bike-shorts recommendations to found footage of people getting hit by cars” (Lipinski, 2012, n.p.). Content aside, /b/ is also known for disrupting structures on sites outside of its own interface. The site itself is chaotic, reflecting its own chaotic culture (Potts and Harrison, 2013). It is a hotbed of disruption, marked by its anonymity and ephemeral interface (Bernstein et al., 2011). In some cases, such as the campaign to send Justin Bieber to North Korea, false rumors that Steve Jobs had passed when he had not, and the hijacking of the Google Trends system (Cha, 2010), disruption spills from the site and into other structures of information sharing. Researching how

disruption travels from one site to another and how these groups mobilize to disrupt is of value. While the outcome may be negative, these actions have much to offer in the realms of online coordination, execution of tasks, and crowdsourcing, to name a few. In some cases, such as the campaign to send a World War II veteran birthday cards and the tracking of a girl who threw puppies into a river (Chen, 2010), the outcome can even be positive. Once again, the content, technologies used, and the relationships between those who make and provide content are key components in understanding disruption, why it occurs, and potential lessons it can teach about participatory spaces.

For researchers and health industry professionals, mapping the evolution of a social artifact or the communication patterns of exchanges on a social site gives insight into the ways participants create, distribute, and repurpose information. In understanding practices participants use in these artifacts and spaces within their contexts, knowledge work takes on another dimension in the social web. Grabill and Hart-Davidson (2007) posit that knowledge work “is typically understood as ‘analytical’ and thus requiring problem-solving and abstract reasoning, particularly with (and through) advanced information systems” (p. 163). They qualify that definition by adding, “When visible, we suspect that knowledge work looks like writing (indeed is writing) or is substantively supported by writing. Writing is how knowledge work carried value in organizations” (Grabill and Hart-Davidson, 2007, p. 163). From their viewpoint of knowledge work, the work of participants is the constructions of texts. These texts have value in the social web, whether they are memes, comments to other participants in a chat, or creating programs that enhance game playing.

Understanding disruption, or how participants carry out these acts of writing, rewriting, and sharing in order to express their needs, values, and beliefs, is important for both researchers and health industry workers. Researchers have the potential for better design of information sites; newer designs can implement participant-generated information in ways that do not reproduce top-down, rigid information structures. Instead, they break down these structures and support participant knowledge work. For health industry professionals, better techniques for engagement online can be discovered and observed. Some techniques include how to advocate, how to negotiate relationships with the layperson, and how to create sites that allow participants to move through established information structures and easily use the tools provided to create and share information.

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