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# Crowdsourcing as Bricolage: A qualitative study of journalists enlisting and using crowdsourcing in social media

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CROWDSOURCING AS BRICOLAGE:  
A QUALITATIVE STUDY OF JOURNALISTS ENLISTING  
AND USING CROWDSOURCING IN SOCIAL MEDIA

by

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Schaefer, Daniel (Ph.D., Communication)

Crowdsourcing as Bricolage: A Qualitative Study of Journalists Enlisting and Using

Crowdsourcing in Social Media

Thesis directed by Associate Professor Michele Jackson

The borderline between professionals and crowds of amateurs is blurring with crowdsourcing. In 2006, Howe observed the phenomenon of professionals outsourcing work to crowds of amateurs online. In the time since that observation, researchers have enthusiastically researched crowdsourcing as outsourcing. However, the wide adoption and increased interactivity offered by social media has further blurred this borderline for professionals and amateurs. This qualitative study used in-depth interviews with professional journalists to explore their accounts of the process of enlisting and using their audience to produce news reports. This data set provided a perspective to generate a more comprehensive theory of crowdsourcing and a better understanding of this blurring borderline that embraces the complexity of this communication phenomenon. This research study examined crowdsourcing in social media and discovered an important alternative view of crowdsourcing as organizing.

## CONTENTS

CHAPTER I INTRODUCTION.....	1
The Bricoleur and the Engineer .....	4
Introducing Crowdsourcing .....	7
Crowdsourcing in the context of Journalism .....	9
Summary .....	19
CHAPTER II REVIEW OF THE LITERATURE.....	20
Brief History of Crowdsourcing Research.....	20
Theoretical Frame .....	22
Summary .....	30
Application of the Frame to Crowdsourcing Research.....	32
Summary .....	59
CHAPTER III METHOD, SITE, AND DATA .....	61
Data Collection .....	61
Data Analysis .....	66
Summary .....	76
CHAPTER IV FINDINGS .....	77
General Observation of the Data.....	77
Findings .....	78
World Element.....	79
Roles Element .....	86
Process Element.....	96
Outcome Element.....	106

CHAPTER V CONCLUSIONS .....	121
Summary of the Study .....	122
Interpretation of Findings .....	123
Limitations of the Study.....	131
Suggestions for Future Research .....	132
Summary and Conclusion.....	132
REFERENCES .....	134

## TABLES

## Table

1.	Differences between Engineer and Bricoleur.....	31
2.	List of Main Themes.....	73
3.	List of Final Themes.....	74-76

## CHAPTER I

### INTRODUCTION

This dissertation examines the changing relations of professionals and amateurs. In many ways, a clear distinction or borderline exists between the two. Professionals, possessing formal training, education, and expertise, perform paid labor within an occupation or industry.

Amateurs, meaning ‘lover of’ in French, on the other hand pursue passions or interests without formal training and education, and are rarely paid for their efforts. This borderline is evident in every profession or industry from plumbers, journalists, electricians, car mechanics, to lawyers.

However, developments in Internet-based technologies of the past decade are blurring this borderline. The Internet’s Web 2.0 technologies have the right kind of interactive technological conditions creating crowds of people plugged into the Internet. These online amateurs need have no formal training, education, or expertise, yet are doing the labor that used to be in the professional domain by acting in aggregate, as a “crowd”.

When Jeff Howe (2006a), observed this blurring of the line between professional and amateur, he argued it was possible because this new “crowd” of amateurs can sometimes equal a professional in certain contexts. Howe argued that while the crowd of amateurs may not have formal training, they make up for that deficiency with diversity and numbers. Howe pointed out that organizations are outsourcing tasks to online crowds of amateurs, often in order to avoid the expense of the professional and to pursue cheap labor. Howe called this dynamic, “crowdsourcing,” combining two words “crowd” and “outsourcing”.

Crowdsourcing has extended its reach over the seven years since Howe coined the term. Many industries, governments, non-government organizations, companies, and organizations have used crowdsourcing to do a wide range of work. In the film industry, filmmakers have used

crowdsourcing for films by asking amateurs to submit film or other creative work rather than using professional scriptwriters. Examples include archival film contributions to *The American Revolution*, *Nerve.tv* (crowdsourced TV production), *Life in a Day* (a film from selected YouTube clips showing the world on a single day), *Userfarm* (a global crowdsourcing platform for clients sourcing video content), and *Netflix Prize* (a prize offered by the Netflix video streaming company for amateurs to improve the accuracy of movie predictions).

In the advertising, design, and marketing industries, crowdsourcing has emerged as an inexpensive alternative to hiring professional designers. Businesses like Crowdspring, CoContest.com, and Chooosa.net offer clients affordable design for any kind of advertising, design, and marketing needs. Brands also use crowdsourcing to market on their behalf, such as Pepsi's "Do Us a Flavor" campaign, which asked fans to come up with a new flavor; Oreo's Daily Twist, which invited its public to come up with a winning cookie design; Patagonia, which created a Tumblr blog and asked its fans to fill the blog with customer stories about the Patagonia gear; or Budweiser, which solicited its beer drinkers to pick a new brew.

In the Financing sector, there are crowdsourcing (crowdfunding) businesses that turn to the crowd for money such as Kickstarter. In the mining industry, one company, GoldCorp, released all of its geological data to the public to analyze in order to find where to dig for gold. Police departments and governmental agencies often use crowdsourcing, such as SeeClickFix to fix different city problems like potholes, or as in the case of different Defense Advanced Research Projects Agency (DARPA) challenges, the balloon challenge, and the shredder challenge. The police use crowdsourcing to find different suspects, such as after the Stanley Hockey Riot in 2011 or the Boston bombings in 2013. There are even citizen crime-fighting crowdsourcing efforts, such as the Blue Servo video feeds for drug smugglers on the

Mexican/United States border or SpotCrime, which asks people to report instances of criminal activity. In education, MentorMob, Duolingo, Sophia, and CourseHero are all crowdsource sites for education and learning. In non-profit sector, the Red Cross monitors social media using crowdsourcing to find victims and connect first responders.

An ideal site to examine crowdsourcing and understand it with an organizational communication lens is the journalism industry where crowdsourcing has made the biggest impact. There are now many popular journalism businesses and websites offering collaborative real-time crowdsourced news, restaurant reviews and traffic reports, including such websites as Yelp, Waze, Scout24, The Guardian, Ushahidi, Digg, AllVoices, Newsvine, Demotix, and Yelp. At the center of all of these crowdsourcing efforts in the journalism industry, is the use of social media to connect journalists and their audiences, which has made a tremendous impact in the journalism industry and tightened the relationship between journalists and their public. As journalists cover the news of a trial, for example, they bring their audience along with them to the trial, live tweeting, posting to Facebook little bits of news, pictures, and happenings of the trial. The journalists answer questions from their audience, ask questions of their audiences, and look for sources and stories to pursue among their followers or in memorial pages and tweets on social media. The journalists work hard to balance their professional identity as a journalist in a medium that works to blur the lines between professional and amateur.

This study examines how journalists as professionals use crowdsourcing, in order to better understand crowdsourcing as a new organizational communication phenomenon. In this study, I analyze how journalists enlist or enroll crowdsourcing in their work, in order to discover if our theories of crowdsourcing need to be expanded and revised to incorporate this different

perspective. My aim is to offer a more comprehensive and inclusive theory of crowdsourcing that demonstrates its connection to organizing.

### **The Bricoleur and the Engineer**

There was a popular 1980s and early 1990s action adventure television show called *MacGyver*. The lead character, Angus MacGyver, was a very resourceful secret agent who solved complex problems (usually with his life in the balance) by using readily available everyday items as resources. He used milk-chocolate bars to stop a sulfuric acid leak, or a woman's hairpin and readily available glass of white wine to create a magnifying glass. MacGyver wouldn't have known to say it, but he employed bricolage, a concept that Levi-Strauss (1962) defined as the collection of diverse resources ready at hand that have been made sense by a handyman (a bricoleur) for solving a problem. For Levi-Strauss, the bricoleur stands in contrast to the engineer. For example, the bricoleur organizes by means of events, and the engineer creates events by organization. For this study, another key distinction between the two is sensemaking. The bricoleur makes sense of the world through the process of organizing: solutions are assembled from diverse existing resources. The engineer, in contrast, creates the plan, decides on the organization, and secures the raw resources and labor needed for building. For MacGyver, bricolage was effective (most of the time). He filled his bag with useful items that he was able to make sense of and use when the need appeared.

While this helps to unpack a secret agent's effective secret weapon, we might wonder what is organizational in all of this. The answer is, according to Weick (2005), sensemaking and organization constitute one another. We make sense of the world and then we organize. "The operative image of organization is one in which organization emerges through sensemaking, not one in which organization precedes sensemaking or in which sensemaking is produced by

organization” (p.410). Bricolage is one way that people make sense of the world. Using a bricolage perspective allows us to see that structures created in answer to events and, importantly, in answer as a part of a larger strategic plans.

Further, sense-making is a concern of communication scholars because it is, as Weick (2005) informed us, “The primary site where meanings materialize that inform and constrain identity and action. When we say that meanings materialize, we mean that sensemaking is, importantly, an issue of language, talk, and communication. Situations, organizations, and environments are talked into existence” (p.409). As a concern of communication scholars, we must examine communication in order to gain insights into why people act. Since sensemaking and organizing constitute each other, then to understand crowdsourcing, we must look at how people make sense of crowdsourcing to inform how they organize. For this review, I draw on Weick’s (1993) work in sense-making and bricolage, and the two approaches of the engineer and the bricoleur, to examine current research on crowdsourcing and how it is understood as a resource.

### **Bricolage as a Lens.**

Gabriel (2003) argued the value of using bricolage to understand organizations was found in recognizing how professionals viewed resources. Gabriel’s example was Odysseus, “a paragon of bricolage. Unlike so many of today’s managers, Odysseus never complained of inadequate resources. Making do with whatever resources are available to him, he was capable of redefining useless materials into useful ones and of redefining his objective in line with the resources available” (p.624). Eisenhardt and Martin (2000) supported this and suggested that researchers could use bricolage to develop a perspective of organizations in which organizations make sense of different resources in different contexts. Resources included, “those specific (e.g.

specialized equipment, geographic location), human (e.g. expertise in chemistry), and organizational (e.g. superior sales force) assets that can be used to implement value-creating strategies” (p.1107).

Ciborra (2002) argued that the value of the bricolage approach to understanding organizations was found in the trying different combinations of resources, and adapting those resources to fit solutions as a part of an informal and everyday method of practice that he called the “artistic embroidery of the prescribed procedure; the short cut and transgression of the established organizational order” (p.47). He pointed to the Late Latin word *bricola*, meaning catapult, for flipping through the different combinations of resources ready at hand, to develop the heuristic to solve the problem. Ciborra described bricolage as “leveraging the world as defined by the situation. With bricolage, the practices and the situations disclose new uses and applications of the technology and the things” (p.49). This stood in sharp contrast to rational, systematic and procedural ways of organizing and executing work. Ciborra saw the importance of bricolage for sense making and organizing in the outcomes of serendipity, of finding value in the chance encounter, and of not constructing sense from the outset but rather in the outcome. Of course, this means that there are many unknowns and much uncertainty in bricolage activities. In fact, he saw these bricolage activities as often marginalized, “belonging to the red light districts of the organization” (p.47). While being marginalized to these red light districts seemed negative, it did make sense because the margins offered the liberty required specifically to make sense of the resources, to play, and to employ ingenuity, experience and skill belonging to the individual and his or her community of practice. These liberties existed outside of the organizational system.

The bricolage perspective is valuable as a lens for viewing crowdsourcing because it can identify the world, the characteristics, and the resources of how people make sense and organize with crowdsourcing. The engineer's world contains strategically planned structures and raw resources, while the bricoleur's world is constrained by given events and resources. The characteristics of the engineer's work are reliability, planning, structured creativity, and the creation of resources. The characteristics of the bricoleur's work are adapting, improvising, and overcoming obstacles in resources.

### **Introducing Crowdsourcing**

While the popular literature on crowdsourcing has exploded in the last couple of years, the dearth of organizational communication literature on crowdsourcing is notable, with the exception of Brabham's (2008, 2012, 2013) examination of crowdsourcing as collaboration in strategic problem solving. To understand crowdsourcing, it is helpful to define this phenomenon and give an example.

Brabham (2013) defined crowdsourcing as a model of online distributed problem-solving production that "leverages the collective intelligence of online communities to serve specific organizational goals. Online communities, also called crowds, are given the opportunity to respond to crowdsourcing activities promoted by the organization, and they are motivated for a variety of reasons" (Brabham, 2013, Chapter 1, Section 3, para. 1). Saxton, Oh, and Kishore (2013) analyzed 103 crowdsourcing websites and developed a taxonomic theory of crowdsourcing with nine models of crowdsourcing as outsourcing. They defined crowdsourcing as "a sourcing model in which organizations use predominantly advanced Internet technologies to harness the efforts of a virtual crowd to perform specific organizational tasks" (p.6). Estelles-Arolas and Gonzalez-Ladron-de-Guevara (2012) did an exhaustive study of 40 definitions of

crowdsourcing and synthesized them into a complete definition. As a result, these two scholars claimed that “crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task” (p.197). This study will use Estelles-Arolas and Gonzalez-Ladron-de-Guevara’s (2012) definition because it captures a more comprehensive view of crowdsourcing of both the organization and the individual organizing and outsourcing labor online to an online crowd.

To also help understand crowdsourcing, Howe (2006a) gave an example of crowdsourcing as outsourcing. The giant packaged-goods company, Colgate-Palmolive, was faced with the rather difficult chemistry problem essential to making toothpaste. *How do you get the toothpaste into the tube without it dispersing in the outside air?* To solve this problem, representatives of Colgate posted their problem on Innocentive.com, a crowdsourcing website launched in 2001 by Pharmaceutical maker Eli Lilly to dramatically increase the amount of attention for addressing research problems, by outsourcing problems to the crowd of 90,000 amateurs and experts ranging from hobbyists to lawyers. Anyone from the public who registered with the Innocentive website and was interested could offer solutions to the incentivized research problems facing Colgate-Palmolive, or other pharmaceutical companies. One individual, Ed Melcarek, an electrical engineer, solved Colgate’s R&D problem by coming up with the best answer to Colgate’s research question for getting fluoride into the toothpaste tube. Melcarek was awarded \$25,000 for his simple solution, which involved the application of a positive electrical charge to the fluoride and grounding the toothpaste tube. That meant that the particles would be electrically attracted to the tube instead of dispersing in the air. This was a tiny amount compared to hiring and paying Colgate’s R&D staff for researching and finding the solution, and a really

nice incentive for a non-expert who happened to offer a physics solution to a chemistry problem. That incident demonstrated how crowdsourcing could offer an attractive possibility for organizations and industries to solve expensive problems. According to Larry Huston, Proctor & Gamble's vice president of innovation, many industries and organizations have seized on the potential of crowdsourcing because of the low barriers for large numbers of the public to participate and the high savings for the organization.

### **Crowdsourcing in the context of Journalism**

Because of its unique nature and situation, journalism can offer an enormous opportunity for studying the use of crowdsourcing in communication because it is so deeply embedded in the culture, already has a trajectory of technology-assisted relationship with the public, and self-reflective practitioners (journalists) who exploit the opportunity effectively.

#### **Journalist as Professional.**

To help inform this discussion of this borderline between professional and the crowd of amateurs, it is helpful to trace the contours of journalism as a profession, and what it means to be a professional journalist. Soloski (1989) described objectivity as the most important contour and professional norm for journalists in the United States. He noted objectivity resides in professional journalists' behavior instead of residing in the product of news stories. He argued journalists are not social scientists whose goal is impartiality. Rather, journalists try to present themselves professionally as seeking out facts and reporting the facts fairly with balance. This particular kind of objectivity has a practicality that contributes to the journalism profession. By presenting news as a series of facts, sidesteps the trap of weighing them down as politically significant. Soloski points out this kind of sidestep protects the journalist and establishes the journalist as a professional in two ways: sources and not journalists are responsible for the

accuracy of the facts, and journalists are secure in maintaining a monopoly on news. “as long as news organizations report the news objectively, monopoly control of the marketplace will not be seen as being much of a problem by audiences, journalists, advertisers, and media owners” (p.214). Singer (2004a) extends this with her claim that by maintaining objectivity, journalists serve the public interest. “Journalists believe they work in the public interest and that their primary purpose is providing citizens necessary information” (p.844).

Other contours of professional journalism are the intra-organizational control mechanisms that exist inside the news organization as news policy and the trans-organizational control mechanisms that exist across the news profession, which defines the boundaries of news professionalism, the professional behavior of journalist. Soloski (1989) observed how these control mechanisms don't dictate specific actions but rather provide a framework for the journalists to act as a professional, allowing the journalist the freedom in the reporting, editing, and presentation of news stories, while constraining the journalists actions so the journalist can be trusted to act in the interest of the news organization in the production of news and what is considered to be news. Singer (2004a) agrees, “journalists are socialized not just to feel part of a particular group but also to do things in a particular way and to see that way as a natural and desirable” (p.841). Singer describes how this socialization is key to the professional journalists. “Journalists tend to share professional values and to desire those values in their own work environment, and organizational cultures create patterns of meaning that define appropriate action. The recruitment, socialization, and control of journalists are structured to preserve ‘institutional mythology,’ such as a commitment to objective reporting” (p.840).

Another contour of professional journalists is ‘news making’, the selection of sources and news events. Soloski (1989) describe how sources and news events are drawn from news

professionalism. That is to say, news comes from establishing what is “normal” and what is “deviant”. What is normal is not considered news. Whereas, what is “deviant”, or what differs from the narrative of normalcy is news. Therefore, journalists as professionals support the norms and values of society by concentrating on the deviant, the odd, and the unusual. As a result, the selection of sources and news events tends to be drawn from the existing power structure, supporting the status quo. Further, he argues the selection of news events and sources are also determined by the news organizations efforts to maximize its return on economic investment, which means routines news coverage through the establishment of news beats. Singer (2004a) supports this description of this contour, offering the explanation that news production has to consider the practical needs and realities of the news organization, “the conceptualization of news as bounded by dictates of time and space, creating a ‘news net’ that emphasizes stories easily accommodated within newsroom routines and structures. Space constraints led to organization of print reporters by specialized beats and topic areas such as sports or business”(p.841). This contour is also the site of tension where issues of professionalism arise because of the professional journalists belief that norms of professionals can be compromised by business or entertainment. This contour is also the site of tensions trans-organizationally, which emphasizes and ties the importance of good sources to the value of the journalists as professional. Singer observed how, “many journalists preserve their professional autonomy by jealously protecting their private sources and specialties from others’ encroachment” (p 842).

The ability to construct and build narratives for different media based on norms of neutrality, credibility, and facticity is another contour for the professional journalist. Singer (2004a) points out professional journalists identify with a particular medium, as part of the formative education and professional processes for journalists. As a result, O’Sullivan and

Heinonen (2008) observed with regard to the Internet, “[journalists] welcome the Net when it suits their existing professional ends, and are much less enthusiastic about, and unlikely to promote, radical change in news work” (p.368). While these professional norms generally are consistent, the contours and conventions vary with the medium. Singer (2004a) notes “while all journalists see accuracy as vital, errors in print news stories tend to be of a different sort than in television”(p.842). Further, the ability to construct narratives for different media results in different kinds of styles. She observes, “Professional broadcast news uses short audio and video elements to produce a compact, dramatic story. Print professionalism means longer stories, with the still –prominent inverted pyramid leading to accounts that end with a whimper rather than a bang” (p.842).

The contours of professional journalism are closely tied to the realities of the changing professional work environment dictated by technological change. O’Sullivan and Heinonen (2008) described how professionals, and journalists, are torn between the old virtues of professionalism and the realities of the rapidly changing working environment. “In journalism, increased pressures for profitability, changes in media consumer behavior and changing technology have transformed both practices and values of working life – or at least created expectations towards transformation” (p.357). Further, they point out that technological change in the form of personal journalism, blogs, and crowdsourcing news platforms act as competitors “to and potential critics of mainstream media, in a new inter-textual communication ecology in which news workers, as dedicated paid labor, form but one albeit important constituent and in which the distinction between news producer and ‘consumer’ becomes blurred” (p.368). While on one hand it seems the profession of journalism is threatened by amateur journalism, the professional response from the journalism industry is that professional journalism is move vital

than ever before because of the damage from poorly reported news.

### **Journalism's Relationship with the Public.**

The nearly century-old distinct borderline between newspaper journalists and their audiences, “seems to be blurring” in the Internet age (Domingo et al., 2008, p. 326). This dynamic, observed by a team of journalism industry researchers in their analysis of 16 online newspapers, revealed that the previous sharp resolution of this borderline existed because journalists had enforced and maintained the organizational practices, knowledge, and conventions that sustained professional journalism. This blurring borderline is fundamentally a metamorphosis or re-imagination of the journalism industry. Russell (2011) described this transformation of journalism as the “publics acting as creators, investigators, reactors, (re)makers, and (re)distributors of news and where all variety of media, amateurs, and professional, corporate and independent products and interests intersect at a new level” (p.1). This has meant that professional journalists have found themselves re-negotiating not only their organizational roles, but also their audience's role in the brave new world of digital bits. As Russell observed, these roles indicate a “shift in the balance of power between news producers and news consumers” (p. 2). Journalists' turn to the Internet and its Web 2.0 technologies have created the right kind of interactive technological conditions to change the nature of the relationship between journalists and their audience, I argue this is a move from Lipmann's (1922) view of journalists' role to *inform* a public audience on the workings of democracy, to Dewey's (1927) view of journalists' role as facilitating the *conversation* with the members of the public as participants in the workings of democracy.

Lippmann (1922) described the importance of expert representatives, specifically journalists, to *inform* the public on the workings of democracy, in his seminal work in

communication and journalism, *Public Opinion*. Lippmann argued that every community's complexity is mitigated through the use of special roles that manage the intricacies of the community's organs. The democratic community is not any different, despite the belief in the equality of community members. People still depend on the professional over the amateur to inform them of truth. Of course, this relationship between professional and amateur has extended its reach into many corners of democracy. Lippmann argued that what a democratic community *believes in* differs from the *practice* of dismissing governing hierarchies and handing the keys of the community over to an uninformed public of amateurs. In practice, we place structures to represent and control the effect of uninformed decisions that would derail the community.

The central control structure that was required to retain the belief in the image of democracy was what Lippmann called the "reasonable administrators" who were the professionals who had the skills and the focus to discover truth and to inform the public. The goal of achieving universal freedom for all in the democratic community was made possible by these reasonable administrators. The need for these reasonable administrators was great because the problem of discovering the truth was too much for the individual private citizen busy with her or his private life and work to also embrace and become knowledgeable in the intricacies of public issues and decisions. Additionally, engaging the public in intricate maneuvers would require decisions made on inadequate foundational knowledge related to the substance of the issue, from the loudest or skillful speaker to the most or best means of access to influencing a large easily swayed majority.

Lippmann (1922) argued that there will be occasions when the private citizen, picking up a cause or embracing an issue, will act as an amateur check on officials, but Lippmann emphasized the fact that private citizens simply do not have the time, attention, interest, skills, or

equipment to study documents, make reports, nor become familiar with the nuances of the gears and controls of a democratic community's administration. Rather, Lippmann placed the burden, "on the men inside, working under conditions that are sound, that the daily administrations of society must rest" (p.251).

These inside men are trusted experts who did the work of journalism. They carefully note events, research, write and uncover hidden truths to present information for the waiting crowds outside the apparatus of administration. Lippmann (1922) saw the journalist as a kind of searchlight in constant motion that brought truth into the light and then moved on. The role of the democratic crowds outside was limited to making decisions on what to do with these uncovered facts, not—and this was important to this discussion of the crowd—involved in turning on the searchlight or helping the journalist do his job. For Lippmann, the key to a successful democratic community was the well-informed public. If the public can ponder and reflect on information that was properly vetted, then decisions and judgments can be made, once "the fact has to be boiled out of it for him" (p.252).

Dewey (1927) agreed with Lippmann that politics was not the only issue facing busy citizens. However, he points out the public was the essential component of a successful democracy. Therefore, the solution to this problem was not to insert distance between the gears of government and the public by creating "reasonable administrators" to *inform* the public as Lippmann proposed. Rather, the solution was engagement to create more of a *conversation* between the public and government. The journalists' role then shifted from *informing* to opening up and facilitating this *conversation* with the goal of working out the solutions to the public's problems.

Many communication scholars have invested a tremendous amount of thought to understanding the tension between Lipmann's trustee model of traditional journalism and Dewey's public journalism because it worked at loosening the linchpin that was the purpose of journalism. Campbell (2000) argued for a different explanation, that of strengthening journalism by including a role for the public. Therefore, it was not an issue of traditional journalism *versus* public journalism. It was traditional journalism *and* public journalism working together. That is, traditional journalism needed to respect what Campbell called the three tenets of public journalism. The first tenet, *legitimacy*, was understood as treating "citizens as experts in their own lives and aspirations –and therefore legitimate sources of news, information, and context" (p.693). The second tenet, *equality*, was understood as treating citizens equally, as "political actors who can create public knowledge by deliberating together. Some public journalists create space in print or online or in the real world to encourage deliberation" (p.693). Finally, the third tenet, *creativity*, was understood as situating the public into the creative process of producing the news from creating new forms of story telling to enriching and sharing knowledge.

Hermida (2010) observed that the professional journalism news model was changing as the public journalism evolved in ways that helped to blur this borderline between journalists and the public. The social media platform, Twitter, was one of the key platforms that empowered the public to move through these three tenets of legitimacy, equality, and creativity. This micro-blogging service has afforded users with the ability to communicate instantly and to share asynchronous short posts with groups of followers and following other posts. Twitter has over 500 million active members, and in 2012 had 4,000 to 8,000 Tweets (messages) per second grew to 15,358 Tweets per second during the Euro 2012 soccer contest, when Spain scored its fourth goal. Hermida described the usefulness of Twitter as facilitating through "the immediate

dissemination of digital fragments of news and information from official and unofficial sources over a variety of systems and devices” (p.298).

This quick dissemination of news and information from official and unofficial sources raised the key issue of the veracity and validity of messages on social media. Hermida (2010) claimed that journalists were concerned with making sense of the chaotic messages that swamp Twitter during major news events. Journalists did not know whether these messages are truthful statements or rumors and wild inaccuracies. Hermida discussed examples ranging from “the Mumbai bombings to the Iranian protests to Michael Jackson’s death” (p. 298). Even so, many journalists use Twitter despite the unease of using a platform that stands in stark contrast to traditional journalist role’s as the gatekeeper.

Beyond the issues of the veracity and validity of Twitter messages (tweets) was the issue of newsroom culture and work routines shifting from individual to the team. Singer (2004b) argued in her analysis of newsroom convergence that newsroom culture was individual expert based. As a result, Hermida (2010) argued that Twitter represented a direct challenge to journalism culture and work routines because it moved from individual, expert-based to teamwork and knowledge sharing. Further, Twitter also seemed to be enabling a kind of collective intelligence where “millions of people [can] communicate instantly, share and discuss events are an expression of collective intelligence” (Hermida, 2010, p.298). Collective intelligence, she argued, is where journalists balance the need to verify information by recognizing the public journalism’s three tenets: *legitimacy*, *equality*, and *creativity*. All three were found in the emerging communication phenomenon, crowdsourcing.

Hoynes, Croteau, and Milan (2002) noted another form of crowdsourcing, in which newsrooms put out an open call enlisting help from the audience in creating news stories while

also employing journalists who maintain journalism standards and ethics. For example, professional journalists might solicit from the audience ideas about a topic they are investigating. The three scholars gave the example of the Fort Meyers, Florida, newspaper that investigated contractors illegally fixing price for connecting residential homeowners' water and sewer line connections. To investigate this situation, the newspaper asked readers to submit content (stories, experiences, bids, contracts, and blue-prints) to be posted on the newspaper website for mass review, examination, and crowdsourcing. By working side-by-side with a richly diverse readership, these journalists were able to reveal patterns in their research that exposed the illegal price fixing for as much as \$30,000 for a simple hookup and also provided further evidence in contracting bids. As a result, the newspaper established a "Team Watchdog" feature that regularly maintained this kind of collaborative relationship between professional journalists and their readers.

Aitamurto (n.d.) gave an example of another form of crowdsourcing. A woman named Monica wrote, copyrighted and published an online story about an apple recipe. A printed food magazine called *Cooks Source*, based in New England, published the story without her permission, and the editor refused to give her credit. Outraged, Monica posted a blog post about the incident. The blog post became popular, and soon curious Internet citizens were crowdsourcing: creating a Google Doc spreadsheet, collecting and organizing information and links about the *Cooks Source* magazine and researching whether there were any other republished content. They discovered there were, in fact, other copyright violations. The importance of this example, according to Aitamurto, was the crowd's ability to organize itself around a task online without an existing structure that defined roles and strategic directions for

the task. This was something that Vis (2013) observed in her analysis of reporters' use of Twitter while working with citizens and using social media as a reporting tool during the 2011 UK riots.

## **Summary**

This dissertation is structured into five chapters. This first chapter delivered an introduction and overview of the research study, stated the problem, briefly summarized my conceptual framework, my research question, the purpose of the study, and discussed the significance of the study. Chapter two is a comprehensive review of the applicable literature on the perspectives of crowdsourcing. Chapter three will re-introduce the problem, and indicate the methodological approach used and why it was selected. I will state my research question and describe in detail the research procedures, and describe the specific methods used and the justification for them. Finally, I will summarize the potential risks to human participants and ethics precautions. Chapter four will present my findings from the study as summaries of themes derived from field notes and transcripts. Chapter five will begin with a very brief summary of the problem and the main results from the research study. The second part will be the interpretation of the full set of results within the applicable literature and the limitations of the study.

## CHAPTER II

### REVIEW OF THE LITERATURE

For this review, I give a brief history of crowdsourcing research; show the framework that I will use by drawing on Weick's (1993) work in sense-making and bricolage. I will then examine the two approaches of the engineer and the bricoleur in publications from communication, journalism, and other outside disciplines.

#### **Brief History of Crowdsourcing Research**

Jeff Howe (2006a) started exploring crowdsourcing in a Wired article "The Rise of Crowdsourcing". Howe observed the phenomenon of organizations outsourcing tasks to crowds of people online. He argued this was a new kind of outsourcing, which he called crowdsourcing. Over the past seven years, since Howe's article initially identified the crowdsourcing phenomenon, many researchers have studied the application of crowdsourcing as outsourcing. This review identified literally, hundreds of articles either applied crowdsourcing as outsourcing within the context of online communication, Web 2.0, or a wide range of online participation.

Other scholars (Behrend et al., 2011; and Hertzum et al., 2013) identified some of the problems that arise with outsourcing work to the crowd. These included attempts to use adopting crowdsourcing as a research method to outsource survey responses and gather data. Several researchers examined the issue of using crowdsourcing to save costs by the use of this digital labor. These included challenges to crowdsourcing for smartphone users (Gehl, 2011; Feng et al., 2013), crowdsourcing genetic testing (Terry et al., 2013), and using freelancers' digital labor to translate (Kushner, 2013). Fish and Srinivasan (2012) discussed the challenges of using digital labor by executives and freelance workers, plus the ways that labor is capitalized and wealth is accumulated in crowdsourcing, involved in such situations as the global outsourcing firm,

Samasource, and the cable television network, Current TV. Other researchers, such as Silberman, Irani, and Ross (2013), looked at the ethics of participating in crowdsourcing, raising questions about the use of individuals' information to draw conclusions, citing contributions as a part of public discourse, and the work of author or authors without their consent. This study extended Demchak and Fenstermacher's (2009) work on the surveillance state that encompasses crowdsourcing. These two scholars had argued that the innocent pursuit of crowdsourcing could supplant the use of "the tools of community of the Internet that provide knowledge creation for the directed search for individuals by those who can connect fragments of personally identifiable information" (p.787).

Very little research extends our understanding of crowdsourcing beyond viewing it as an online model of outsourcing within the organization communication research literature, with the notable exception of Brabham's (2008, 2012, 2013) examination of crowdsourcing as collaboration in strategic problem solving and a small group of scholars who have tried to circumscribe the definition of what crowdsourcing is (Estelles-Arolas and Gonzales-Ladron-de-Guevera, 2012, Howe, 2006, Saxton et al, 2013).

While this work is important, the starting point of these scholars is narrowly constructed to frame crowdsourcing as outsourcing. Outsourcing is widely understood as the business process of contracting tasks outside the company to a third party. If we broaden our frame and look at crowdsourcing differently through a communication lens, specifically sense making and bricolage, then we may see the usefulness of using sensemaking as a frame for understanding crowdsourcing. In this next section, I will go over the theoretical frame of Weick's sense-making and bricolage frame and the elements of the frame that enable us to see further and deeper into crowdsourcing.

## Theoretical Frame

Weick (1993) has been the central figure in the communication research literature on bricolage as a lens of sense making in organizations. Weick defined sense making within the context “that reality is an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs” (p. 635). When people try to understand their reality within a context and environment and how they fit along with other people within this reality, they have accomplished sense making. Of course, this is an ongoing, constant, process for people and for organizations trying to understand where we are situated and how we are situated within a given context.

Weick (1993) introduced bricolage as an aspect of sense making in his study of the Mann Gulch disaster, an infamous Montana forest fire in 1949 that killed 13 firefighters and has since been used as the key forest fire-fighting lesson. He analyzed why some people were paralyzed and died for the lack of a plan and why a few survived without a plan. What Weick learned was that the process of how people made sense of the world (sense-making) ultimately dictated whether they lived or died. He argued that in sense making, the world was grey, built from vague questions and answers that are attempting to reduce confusion and increase clarity. Weick called this contextual rationality. People tended to rationalize how they fit within a given context and environment. Of course, the problem is that there was a disconnection between making sense of their world and making decisions based on their sense of the world. This need to make decisions, which Weick called strategic rationality, had to do with planned decisions built from clear-cut questions and clear answers that really worked at removing any doubt.

This disconnection is where we will pause and make sense of this vague grey world. In the Mann Gulch forest fire, the firefighters had carefully developed plans for how to fight and

survive forest fires. However, this strategic rationality fell apart when sense-making broke down. In other words, the firefighters carefully crafted plan did not work, so they were unable to make sense both of the forest fire and the situation that had trapped them. Weick argued that firefighters died because they were unable to make sense of the situation. However, one firefighter, Dodge, was able to survive by letting the world help him in the absence of a strategic plan. Dodge and his crew were trapped on a mountain ridge by a forest fire that was going to overrun their position. Dodge as crew chief, recognized quickly they needed to abandon the plan. He abandoned the plan and employed bricolage to survive. That is he recognized that the strategic organizing parameters of the plan failed to account for this particular event. Dodge looked around and made sense of his bounded world and what resources were available to him. He and his crew were in a high grass field. He realized the high grass, which was fueling the approaching forest fire could also be used as a resource to their advantage. The firefighters could burn areas of grass to remove the fuel source for the fire and lay down under their emergency shelters. The fire just might pass over the crew. However, when he ordered the crew to drop their gear and set fire to the grass, the crew thought he had lost his mind and ended up attempting to sprint to the ridge to outrun the forest fire. Dodge survived the fire using the emergency shelter technique, while all but two of the crew died.

This tragic example reveals two approaches to fire fighting. The first approach, adopted by the Park Service at the Grand Canyon, was dependent on the parts over the whole. This “bricolage” approach empowered firefighters to organize and act themselves in the event of an emergency or fire. They use existing available resources in their environment, engage with those resources in a dialogue of what’s possible, switch between roles as needed, and look to their

repertoire for possible solutions, in order to organize and act, based on how they understand the world and the events facing them.

The second approach, “engineer”, adopted by the Forest Service, was dependent on the whole rather than the parts. The Forest service relied on a strategic system of dispatchers, specialization, regimentation, plans, and rules for making decisions. They have to secure and create resources from the world, establish the specialization of roles and authority, execute a plan for a specific solution, in order to organize and act, and based on how they understand the world as and the events facing them.

One approach is not better than the other approach. As Weick notes, “Forest Service people marvel at the freedom of movement among the Park people. [The] Park Service [people] marvel at how much the Forest Service is able to mobilize on a fire” (p.640). Pyne (1989) described the Forest Service as doing operations by the book and the Park Service fire operations as valuing individuals instead of books. Using a bricolage perspective allows us to see the structures, created in answer to events, and those structures created in answer as a part of a larger strategic plan. This process raised a key perspective for how organizations and organizational members make sense of the world and a valuable perspective for understanding crowdsourcing. Specifically, there are four elements that offer clear differences between “the engineer” and “the bricoleur” approaches: the world, roles, process, and outcome.

### **World Element.**

For the first element, the engineer approaches *the world* as containing raw materials. The world is a place for creating resources (systems and solutions to problems) by securing and processing raw materials. The bricoleur approaches the world as an environment already containing resources. The world is a place for working with existing resources to solve problems

or for collecting resources in anticipation of future problems. In the engineer's world, the engineer creates new resources from raw materials, but the bricoleur's world is closed to what is available in the finite resources of the present event. The two approaches understand resources differently. The engineer views resources as raw elemental malleable materials shaped and constructed into structures according to a design. The bricoleur understands resources as a pre-existing diverse range of structures that are de-constructed in the bricoleur's mind to its fundamentals. Further, Levi-Strauss (1962) observed that the bricoleur was adept at improvising, given the closed nature of their world. The bricoleur simply did not have the luxury of conceiving of tools and resources from raw materials. The universe, that is to say, the world within which the bricoleur can operate, is closed to what is available at hand, "a set of tools and materials which is always finite and is also heterogeneous... is the contingent result of all the occasions there have been to renew or enrich the stock or to maintain it with the remains of previous constructions or destructions" (p.17-18).

An example of both approaches, according to Rerup (2001), was the Apollo 13 spacecraft accident. Apollo 13 was the seventh manned mission of the American Apollo Space Program and the third with the objective of landing on the moon. As a mission, Apollo 13 was an engineering accomplishment. Engineers carefully made sense, planned and organized raw resources to engineer a spacecraft to the moon. Yet something unexpected happened when the spacecraft reached the moon. The lunar landing was aborted after an oxygen tank explosion onboard crippled the critical life support systems on the spacecraft and nearly killed the crew on board. Afterward, the crew took refuge in the lunar module section of the spacecraft. The critical problem facing the crew was the incompatibility of cylindrical and cube-shaped lithium hydroxide filters to be interchanged between the command module section of the spacecraft and

the lunar module. These filters were critical for scrubbing carbon dioxide inside the spacecraft. Without a solution, the astronauts would die from asphyxiation. In response, the three astronauts engaged in bricolage, using materials and resources ready at hand to construct the connection for interfacing the two filters. The heterogeneous materials and resources consisted of assistance from ground control, two of the command module's oversized lithium hydroxide canisters, scissors, a roll of gray duct tape, heavy cardboard pages from procedure binders, and thermal undergarments. These astronauts turned desperately creative bricoleurs made sense and organized the resources in their environment, adapted, improvised, and overcame obstacles in a high-stakes, high-risk gamble to save their lives.

### **Roles Element.**

For the second element, *roles*, the engineer is the authority, depending and trusting on pre-established authoritative roles for the success of the system. The bricoleur, in contrast, moves fluidly between roles as needed and does not feel restricted by the roles, profession, or expertise of anyone involved. The engineer creates roles based on a particular project's needs. This means there is a clear understanding of a preference for experts who establish authority over amateurs dabbling.

In the Mann Gulch example, Weick (1993) argued that a major contributor to the disaster was the system of pre-established authoritative roles. It was clear that abandoning the role system for a new role saved Dodge's life. Weick observed that the structure that tied the fire crew together, the role system, while normally valuable for providing leadership and cohesiveness as a team broke down when Dodge told his crew retreating from the forest fire to "throw away your tools!" (p.226).

Since the fireman's tools represented the very things that fulfilled the pre-established authoritative role of fireman. Then throwing their tools away represented a loss of identity to that role. As Weick note, "If I am no longer a firefighter, then who am I? With the fire bearing down, the only possible answer becomes, an endangered person in a world where it is every man for himself" (p.218). As a result, these people were thrust into a new role, being their own boss, at the worst possible moment. And when Dodge final command was to jump into an escape fire was seen as crazy. "Dodge's command lost its basis of legitimacy when the smokejumpers threw away their organization along with their tools" (p.637).

### **Process Element.**

For the third element, *process*, the engineer's process is executing a solution once a problem has been identified in linear fashion. Levi-Strauss (1962) observed the engineer engages with the problem, the purpose of the project, as the interlocutor. By engaging with the problem, the engineer is able to properly create and execute a solution, identifying and creating roles, and define an outcome. The bricoleur engages in a dialogue with available resources independent of a problem. Weick (1993) described the importance of the dialogue process for the bricoleur. This knowledge and understanding drives the adapting and overcoming obstacles of the affordances' relationship and connections to the affordances of other objects, along the systematic cataloguing of elements. Thus, Levi-Strauss (1962) observed objects not "as a result of their usefulness [but] deemed [them] to be useful or interesting because they are first of all known" (p. 9). Comprehensive, thorough observation could result in successful bricolage. Time and the diverse nature of the assembled bricolage reveal the *improvisational* nature of the bricoleur's thinking. Bricoleurs assemble solutions out of necessity, driven by finite resources of time.

It is again useful to refer to Gabriel's (2003) examination of this dialogue process with resources with the Greek literary hero, Odysseus taking a bricoleur's approach in Homer's classical poem, the *Odyssey*. There is the scene in which the giant Cyclops, Polyphemus, trapped Odysseus and his companions in a cave by blocking the entrance with a large rock. After reasoning failed with Polyphemus (who had already eaten two of Odysseus's companions), Odysseus knew that he must get out of the cave or that he and the rest of his group would die. This is the event in which Odysseus had to work within a closed world, employing characteristics of bricolage: adapting, improvising, overcoming obstacles, and looking at resources differently. Odysseus understood the problem that only Polyphemus could move the rock blocking the cave entrance and would only move the rock to let his sheep who live in the cave, out to graze. So Odysseus couldn't kill Polyphemus, or else he and his companions would die a slow death trapped in the cave. Looking around, Odysseus identified, collected, and deconstructed resources in the cave to their fundamental elemental function that might help him: Polyphemus, a flask of wine, a large sharp wood stake fashioned from a club, rope, and the sheep who were in the cave. Odysseus used the flask of wine to get Polyphemus drunk and then blinded him with the stake. Blinded, Polyphemus rolled the heavy rock away to let his sheep out to graze, while keeping his arms outstretched to grab the intruders. However, Odysseus and his men escaped by tying themselves to the sheep's bellies to slip out of the cave.

To use this example with an engineer's process would involve a linear process of executing a solution. If Odysseus were an engineer, he would define the problem, design a plan, secure raw materials for the solution, establish appropriate roles, and execute the plan, with an expected outcome.

**Outcome Element.**

The final element is *outcome*. The engineer's expected outcome of his or her work is a working system, a solution. The bricoleur, on the other hand, does not expect a working system, but instead expects to discover a solution through a trial and error process using available resources and his repertoire. The engineer designs the outcome, but, the bricoleur has to view that world's existing outcomes and results as opportunities or jumping off points for recombining and creating new solutions, while considering his repertoire - a stock of resource elements - that have been collected in anticipation that they might become useful.

Harper (1987) described this difference using the example of building a tractor. Engineers only proceed when they have the necessary raw resources for a project, and the design of a strategic plan. An engineer would design a tractor by identifying imagined constraints, creating blueprints, and gathering raw materials. Engineers only proceed when the plan has been developed coherently and the necessary raw resources have been identified. Additionally, an engineer typically is formally trained for a specific trade and profession in which this is a typical approach. A bricoleur would build a tractor by identifying available resources and what other resource he or she has collected.

In Harper's (1987) tractor example, Willie, a farmer and a bricoleur - as it turns out - assembled a working tractor by making sense and organizing of a pile of junk. What was clear from the orderliness and functionality of the tractor was how Willie looked at this pile of junk and intentionally designed the tractor from the bounded world of only the junk pile's available resources and what repertoire he brought. As Willie encountered odds and ends around his shop and neighborhood, he collected them as an informal flow of parts in the shop. When Willie discovered he was missing an element of a working tractor. Through the process of acting as a

bricoleur, Willie contemplated the new elements he discovered and collected and through a process of trial and error assembled the tractor. For example, if he needed to power his tractor, he would adapt a hay bailer motor so it could power his tractor and solve the problem. Harper notes Willie's repertoire and knowledge of materials, "helps him understand why machines have deteriorated or broken down, and it leads him to see the act of repair as remedying an engineering flaw rather than replacing a part" (p.73).

### Summary

Using these four elements of the bricolage perspective focuses a lens framework for viewing crowdsourcing research. The engineer approaches the world as a place containing raw materials. The world is a place for creating *systems* and solutions to problems by securing and processing raw materials. The engineer depends and trusts pre-established roles of *authority* for the success of the system. The engineer's process is *executing* a solution once a problem has been identified in linear fashion. The outcome of the engineer's work is a *solution*.

The bricoleur approaches the world as an *environment* already containing resources. The world is a place for working with existing resources to solve problems or for collecting resources in anticipation of future problems. The bricoleur moves *fluidly* between roles as needed and does not feel restricted by the roles, profession, or expertise of anyone involved. The bricoleur engages in a *dialogue* with available resources independent of a problem. The bricoleur, on the other hand, does not expect a working system, but instead expects to discover a solution through a trial and error process using his *repertoire*.

These two approaches raised a key perspective for how organizations and organizational members make sense of the world and a valuable perspective for understanding crowdsourcing. As Table 1 illustrates, for each of these four elements there are eight clear differences between

“the engineer” and “the bricoleur” approaches: the world – system and environment, roles – authority and fluidity, process – executing and dialogue, and outcome – solution and repertoire.

The next section, I will apply this frame to a comprehensive review of crowdsourcing research.

Table 1		
<i>Differences between Engineer and Bricoleur</i>		
<u>Elements</u>	<u>Engineer</u>	<u>Bricoleur</u>
World	System	Environment
Roles	Authority	Fluidity
Process	Executing	Dialogue
Outcome	Solution	Repertoire

Table 1

## **Application of the Frame to Crowdsourcing Research**

Applying this frame to a comprehensive review of crowdsourcing research is important to show how researchers and practitioners understand and use crowdsourcing. In this section, I will organize the studies by the four elements of the bricolage frame.

### **The World.**

For the first element, there were two distinct perspectives that follow the engineer and the bricoleur's approach to viewing the world: the system and the environment. The system perspective involved studies that discussed the creation of crowdsourcing systems and viewed the world as containing raw materials. The environment perspective comprised studies that explored existing and engaging factors within the crowdsourcing environments and media and viewed the world as containing existing resources.

Many existing studies of crowdsourcing adopt the system perspective. One example is research that creates crowdsourcing as an outsourcing system with inputs and outputs. Buregio et al. (2013) researched systems that considered people in the crowd as raw resources, computational units in crowdsourcing. Binh (2013) studied the construction of crowdsourcing systems through the placement of summarizing structured algorithms into a Web Service resource to help people answer Who? What? When? Where? Questions. Massanari (2012) examined the problems of labor for systems constructed for crowdsourcing design contests or competition. Thuan (2013) designed and implemented a crowdsourcing system in business practices. Smith et al. (2013) looked at crowdsourcing motivators. Postma (n.d.) examined the importance of motivations in human computation tasks in crowdsourcing. Erickson and Trauth, (2013) researched crowdsourcing as a part of business process with the crowd, "as a source of on-demand labor for delivering labor- intensive BPO services" (p.135). Aitamurto and Lewis

(2013) explored crowdsourcing in the research area of open innovation, where organizations use crowdsourcing as a resource, which Howe (2006a) described in his example of Innocentive to “tap external pools of heterogeneous knowledge found in diverse innovation networks. Many of the benefits generated from open innovation practices come from the coupled process, through which value and revenue are co-created with collaborators, such as through accelerated R&D and revenue-sharing from the external product portfolio” (p.15). And, Bayus’ (2010) work using organizational learning theory to inform how crowdsourcing can contribute to an organization trying to widen and deepen the resource pool of creative ideas for products. Trompette’s (2008) work on innovation theory regarding crowdsourcing provides new ways to create value in establishing an open innovation process in firms through hybrid organizational forms.

The work done developing crowdsourcing as systems of distributed problem-solution outsourcing is a research area that is receiving increased attention from communication scholars. Brabham (2008) is the leader in this particular research area. His focus is generally a positive review of crowdsourcing as a strategic outsourcing problem-solving system to solve both simple and complex tasks for an organization. He views crowdsourcing as more than a web 2.0 buzzword, because he regards it as a profound paradigm shift in problem-solution models. The crowd, according to Brabham, solves problems that stump corporate scientific researchers, out-analyzes in-house geophysicists, out-designs t-shirt designers, outperforms industry “faster and cheaper than even the top minds in the fields. Such is a profound paradigm shift in our view of the professional, of the corporation, of the global commons, and of the value of intellectual labor in a transnational world” (p.79).

Madianou (2013), Afuah and Tucci (2012), Bloodgood (2013) wrestled with the question of when crowdsourcing might be a better mechanism for solving problems than solving problems

internally or through an external contractor. Jeppesen and Lakhani (2010) researched the role of marginality in crowdsourcing as distributed problem solution. Marginality is important because subject matter experts are often burdened with a particular research area's assumptions. A wide and diverse crowd of people will bring different and often marginal perspectives on a particular subject's problems. These marginal perspectives may often provide solutions because these perspectives do not have to follow the particular conventional approach to solving the problem. Franke et al. (2013) looked at how crowdsourcing participants (the corporation and the crowd) made sense of how fair crowdsourcing contests were. "The Internet has given rise to new organizational forms of integrating users into firm innovation" (p.1). Further, Franke et al., supported the usefulness of systematically integrating individuals external to the organization because "new product ideation is not only a phenomenon of practical importance. Crowdsourcing ideation systems also denote an emerging organizational form of high theoretical interest" (p.24).

For *the environment perspective*, Wang et al. (2013) researched the ecology of crowds and organizations competing for crowds as an existing finite resource in the crowded space of the Internet, in order, to succeed. Several scholars have researched the role of Twitter and crowdsourcing. Meraz and Papacharissi (2013) and Papacharissi and Oliveira (2011) connected crowdsourcing with Twitter as two important co-dependent resource mechanisms of news production. Crowdsourcing gives non-elites the balance of power resources over elites of setting the frame for the news message, through the democratizing distributed power of Twitter. Parmelee (2013) argued that Twitter had a central to news production. "Twitter has the potential to change the newsroom. Twitter gives journalists new crowdsourcing abilities, access to real-time information from many types of sources, and useful marketing capabilities to increase their

readership” (p.5). Further, Parmelee argued that Twitter has the unusual quality for crowdsourcing because it can create an ambient dimension to our understanding of public communication. It is also a free technology that offers a rich set of resources for reporters to take advantage of, which makes it highly attractive to reporters, “Twitter is popular with journalists because it is free, and economic pressures on newsrooms increasingly force journalists to look for cost-saving alternatives for newsgathering and story promotion” (p.5). Vis (2013) in a study of Guardian reporter, Paul Lewis, and The New York Times reporter, Ravi Somaiya, noticed these reporters’ Twitter interactions with the crowd of *producers* (producers and users) during the 2011 UK Summer riots. Vis described how Twitter with its short real-time 140 character updates and diverse crowds of *producers* created an environment that was an awareness system, or ambient system, composed of contributors, editors, and curators who produced content and recombined content, resources, and people. This was especially relevant in the journalism industry and the ways in which Twitter is reshaping journalism and influencing online news production and consumption.

This dynamic is important because these two perspectives help us understand two things. First, these perspectives help us understand that crowdsourcing is viewed as outsourcing by researchers. Second, these two perspectives show that crowdsourcing occurs online in the social media environment as an ambient system with existing resources that people can recombine into new solutions. This indicates that crowdsourcing is both outsourcing: as a planned designed system and organizing: as a process that occurs without planning using resources made possible by social media. One implication for larger research questions is to look at how these two different approaches to resources influence the construction of knowledge. If members of the crowd are viewed as homogenous raw materials selected for narrow tasks, then that would

produce anticipated ideas of knowledge, but, if members of the crowd are selected as heterogenetic existing resources enmeshed in an ecosystem of relationships online, then that would more likely produce unanticipated ideas of knowledge.

### **Roles.**

For the second element, *roles*, there were two distinct perspectives: authority and the fluidity. Researchers that studied the role of the expert perspective discussed the role of the expert and the importance of not making mistakes with crowdsourcing. Whereas, researchers that studied the role of the amateur perspective discussed the fluidity of roles for the amateur and the usefulness of errors in crowdsourcing.

Chadwick (2011) illustrated the expert role perspective, by foregrounding the role of the journalist as continuing to perform the role of the gatekeeper, to influence news agenda and to control the role of gathering information. Hermida (2010) claimed that journalists are concerned with making sense of the chaotic messages that swamp Twitter during major news events. This quick dissemination of news and information from official and unofficial sources raised the key issue of the veracity and validity of messages on Twitter. Journalists do not know whether these messages are truthful statements or rumors and wild inaccuracies. Hermida discussed examples ranging from “the Mumbai bombings to the Iranian protests to Michael Jackson’s death” (p. 298). Despite the issue of verifiability, many journalists use Twitter as an essential part of their journalism work despite their unease of using a platform that stands in stark contrast to traditional journalist role’s as the gatekeeper.

Letting the crowd into the newsroom also means opening up possible challenges by experts about the priority of stories and coverage. Meyers (2010) expressed how the usefulness of crowdsourcing happens when the crowd’s contribution and creativity was reduced to a

challenge that is empirical and narrowly analytical, rather than conceptual and political, and when it makes sense to use a crowd in an attempt to save money on labor. This would mitigate the role of crowd in influencing the priority of projects or even focusing on topics that do not matter to a crowd that is less technically engaged, less mobilized, and less richly skilled.

Additionally, bringing the crowd into the newsroom also can introduce new sources of conflicts of interest, either on an individual basis or in terms of loyalties or obligations that would not exist in traditional journalism but could increase the possibility of making errors that may threaten the credibility of the journalism institution involved. This issue has received a mixed reaction. Some journalism practitioners have admitted that possibility of making errors does increase with crowdsourcing. As Daniel and Flew (2010) observed in their case study of the *Guardian* Member of Parliament expenses scandal, errors did occur, including software errors that incorrectly tallied data. Daniel and Flew claimed that this occurred because the project was so large that the number of errors was not significant or abnormal. Although the number of errors may not be significant or abnormal, the problem exists because news is consumed when it breaks, so errors are harder to correct if these errors influence the news reporting in that instance. In fact, as Waldman (2011) observed, the emphasis on the Web for breaking news is a striking difference from print news, in which journalism has had to get it right the first time. Websites are easy to update so errors can be easily and quickly completed in a post-and-correct process.

Researchers' enthusiasm for the promise of crowdsourcing has been tempered with concerns about the quality of information by a crowd, a point that Simons (2008) described as the key negative factor. Simons claimed that the central negative feature of crowdsourcing is its fundamental idea: that a crowd of ordinary people, non-experts, could do the work of experts. As a result, credibility is a key issue at stake. Using the work of these non-experts could be

regarded as eroding ethical standards, increasing errors and returning to the old tension between traditional journalism and citizen journalism. Scholars raising this as an issue claim that only journalists—experts-- should do journalism and that newspapers find the credibility is the most marketable factor for selling their journalism products. Marsh (2011) observed that journalism only really matters when reports are published on a trustworthy website and distributed on social media platforms. Marsh claimed that Twitter has the disadvantage of being seen as dismissive and not credible. He pointed to credibility as the thin black line that separates what he calls “the mob” and “journalism,” a line that reinforces and underscores the importance of the purpose of traditional journalism. Furthermore, Marsh asserted that credibility is also the thin black line that separates acceptable journalism from ruin. Without credibility, journalists are just part of the mob.

Echoing Lipmann’s (1922) argument for “reasonable administrators”, Folkenfik (2011) noted that because people are busy, it might be too much to expect them to contribute to citizen journalism and crowdsourcing projects. Additionally, Waldman (2011) described the tension between professional reporters as experts, who can use their time and expert status to gain access to places (prisons, war zones, city hall) that the crowd cannot and the participants of the crowd, who can, of course, be in many more places than reporters can get to.

Frost (2010) argued that although journalists can use crowdsourcing to seek content because of their multiplicity, the members of that crowd are fundamentally under-trained and under-prepared for the tasks of an expert, professionally trained journalist. Even beyond their obvious lack of training and preparation, this tension of the non-expert maintains a rather dark cloud. Frost noted that while journalists pursue crowdsourcing, there is always this specter of

hoaxing, issues of copyright, and complicated issues of safety just because of their multiplicity. These issues underscore the need for the expert.

The crowd's lack of expertise weakens the crowdsourcing phenomenon when intersecting with journalism. Indeed, many journalists often dismiss the material that crowd has produced as just tips. In his review of the BBC, Franklin (2010) argued that crowdsourcing contributions are democratizing but lack legitimacy. Franklin's "journocentric" perspective is the opinion that most journalists share. Experts do not want non-experts to tear down the traditional distinctions between producer and consumer, between journalist and audience. These are important distinctions that take the form of a direct threat that strikes deep in an industry already besieged from so many different directions. However, this problem of journalists maintaining a journocentric mindset places the crowd in a very confined role, because that means the value of its contribution has been reduced to an informal fragment of information (a tip) or even summarily dismissed. This bias supports the presumptions about the crowd as "not-journalists" and "not-experts", which discourages any fruitful and creative collaborations and partnerships between journalists and the crowd. As Marsh (2011) put bluntly, "We know, whether we admit it to ourselves or not, that there is a culture of contempt in too many newsrooms: contempt for the public that journalists claim to serve" (p.51). Therefore, Franklin (2010) concluded, although there was a lot of excitement about new phenomena like crowdsourcing, which seemed to promise an evolution of the purpose of traditional journalism, nothing has changed, and journalism has had no radical upheaval in the day-to-day work practices, or any change in the structural organizational roles by those inside and outside of the newsroom.

Fundamentally, there are many widespread doubts in the journalism industry and by journalism researchers that crowdsourcing has the ability to shift in any substantive way the

hierarchy of values in any news agenda or the organizational role of the journalist. What this seems to indicate is the relative rarity of the effective intersections between crowdsourcing and journalism. Lee-Wright (2008) argued that journalists are still journalists, and audiences are still audiences. He pointed to the top-down larger institutional structures of traditional journalism and articulated the need for those structures to change so that the purpose of traditional journalism could evolve. This evolution will not happen from the grassroots level, and until then crowdsourcing would always be marginal and remain a euphemism for, “allowing the public to subsidize the [news] corporation’s newsgathering efforts” (p.164).

The evidence of this journo-centric perspective was evident in Foreman’s (2011) review of *Florida Today’s* crowdsourcing effort. That newspaper put out an open call to its readers to evaluate a tip that homeowners on the east coast of central Florida were being overcharged for storm insurance premiums. The newspaper wanted homeowners to discuss their insurance policies with *Florida Today* reporters and allow them to have their homes appraised by independent appraisers. The effort was very successful. The newspapers leveraged the participation of hundreds of homeowners and the appraisal of 24 homes into a front-page story, which reported that homeowners were significantly overcharged for storm insurance premiums. Foreman (2011) reported that the journalists maintained this journo-centric perspective and reduced the crowdsourcing to tips and sources of information that the journalists checked out. He described the risk in trusting the crowd as high for journalists. In its report on this situation, the Knight Citizen News Network (KCNN) cautioned about the risky nature of crowdsourcing which means journalists should never use anything taken raw from crowdsourcing without verifying. Hidlay, an executive editor of the Asbury Park (New Jersey) Press revealed to KCNN that in an investigation of a major homebuilder, a reporter checking out readers’ tips found that only one in

three was accurate. Frost (2010) also underscored this caution that the crowd is not credible and not to be trusted. In any interactions with the crowd, Frost claimed that journalists should be wary of the crowd deceiving them. Indeed this risk doesn't stop with the crowd. An additional threat also always existed that competing news outlets could pick up a breaking story and scoop the originating news outlet by listening to that outlet's crowd.

These errors do erode ethical standards for journalism. These errors and the casual instant media's connections for using the crowd all contribute to ethical erosion. Farhi (2009) gave an example of how *Washington Post* book critic, Ron Charles, contributed to this erosion. Charles had heard a juicy news tidbit about the *New Yorker* switching publishing frequency. With apparently little thought of the impact, Ron Charles tweeted this out to his crowd: "Frequent contributor tells me the *New Yorker* is considering switch to biweekly or monthly. Recession pains" (p.5). Ethically, Ron Charles admitted this was very bad. In 10 minutes, the juicy news tidbit went rocketing around the Internet through retweets and resulted in an email that informed this journalist he was mistaken with formal full denials from the *New Yorker* editor, David Reminck. Although Ron Charles tried to tweet that he was mistaken, it was too late.

Charles's example underscored the murky gray organizational territory that emerges when journalists attempt to co-exist with a crowd. Where do journalists as professionals draw the lines as experts? On one hand, are journalists seduced by the intimacy of the crowd available just a tweet or click away as a support network? Are journalists not alarmed that these people might act as a massive group of rumormongers? Indeed the issue of credibility and crowdsourcing has been a source of constant agitation in newsrooms. Newman (2009) observed that newsrooms already feel outflanked in their coverage and are trying to corroborate the huge amount of unverified reports before extending credibility by including coverage of a report in ways that

extend journalism into new and ill-advised territory. Newman referred to CNN's iReport, which collects citizen reports and discern credibility through substantiation. During the recent protests in Iran, CNN received 6,000 submissions and approved just 200 for use on television. This flood of data from a crowd waiting for a seal of credibility seemed to indicate the magnitude of the tasks facing journalists who want to sift for information that has "the ring of truth" (p.6).

After all, part of journalism's ongoing value has been its reliability to sift facts from all the white noise in the happenings of the world. Marsh (2011) argued that the purpose of traditional journalism and the role of the journalist is to make sense out of the world, to be the expert bringing people together around salient events, and engage the public in the larger discourse. The work of journalists performing this sense making must be credible. While the Internet medium has seemed to make the work of making sense of information easier by emerging new phenomenon of collaboration, crowdsourcing, aggregating, culling, and curating, it has also increased the difficulty of the work of making sense out of the overwhelming flood of information. Waldman (2011) discussed this issue extensively, arguing that making sense of the information culled from the crowd is both a benefit and a curse. The benefit was enlisting the crowd to dig for information, which has been incredibly useful for journalist. The curse was that this same strategy meant that journalists were giving away degrees of credibility to the crowd undermining the very purpose of that digging, and making sense of all the information.

This conversation model between journalists and the crowd could, theoretically, reaffirm the reputation of journalism as a credible and trust-worthy institution. After all, traditional journalism outlets do have a high credit rating with the public. Indeed, Waldman (2011) observed that traditional journalistic outlets have included public media companies trying to distinguish themselves from the white noise on the Internet and social media by leveraging their

reputation and brands in what he calls “curated crowdsourcing” (p.165). One example of this is with Public Insight Journalism, a project through the American Public Media (APM) funded by the Knight Foundation. This project networked nearly 100,000 sources “who contribute information to a database of topics and stories in order to guide journalists and connect them with resources” (p.164). Waldman (2011) claimed that this model of crowdsourcing has been used for the national programs, *Marketplace* and *On Being*, and was positively received in several major markets, ranging from New York City to Los Angeles.

The crowdsourcing phenomenon seemed to indicate a complexity beyond strategic open calls by an organization. This complexity is evident in how Farhi (2009) described the efforts of *U.S. News* blogger, Nancy Shute, to assemble a community of interest by actively “seeding” and “pruning” her crowd with people (thought leaders, experts, ordinary people) interested in her focus of science and medicine, which also may lead to discussions on breaking news story tips. Farhi claimed that, Shute told a story about a federal employee whom she followed on Twitter. This employee tweeted the announcement that government officials were going to take unprecedented advantage of Twitter to tweet news about the salmonella-infected peanut butter. This became a real scoop for Nancy’s blog. Additionally, Farhi described how some journalists had gone beyond meeting with a crowd over Twitter. In one example, Monica Guzman, a blogger for the *Seattle Post-Intelligencer*, actually physically meets with her Twitter crowd in person over coffee at a local coffee shop, in order to cultivate her crowd. Rusbridger (2009) also supported this claim. He observed journalists at the *Guardian* building cultivating communities of interest and knowledge around their topic, in order to get their thoughts about researching and writing their stories. Once they have written their stories, the journalists alerted their audience about the story.

Indeed, when journalists have alerted their audience about a story, they have gone further by actually leveraging Twitter into a kind of community organizing tool. Farhi (2009) claimed that when big stories break, some news organizations actively worked to channel the conversations, discussions, debates by creating their own Twitter hashtags. Two examples of this surfaced with the Iowa Supreme Court ruling in favor of same-sex marriages. When the big story broke, the *Des Moines Register* was using #iagaymarriage, along with *Gazette* in Cedar Rapids. *The Herald* in Everett, Washington, set up #waflood as a touchstone for the crowd to meet and discuss the news. These examples seemed to indicate the shifting role of a journalist into a community organizer.

An incredible range of diversity has been evident with Twitter followers following journalists. Rusbridger (2009) described *Guardian* Technology writer, Jemima Kiss, as having 14,000 people following her on Twitter and the whole *Guardian* Technology section with nearly a million people (an amount that is about three times the daily paper subscription) following the *Guardian*'s coverage of technology. With such labor power literally a few keystrokes away, the *Guardian* has been able to wield an incredibly effective journalistic enterprise. Rusbridger noted that in one experiment, "it persuaded the "audience" (as we don't call them) to create on Google Docs a table of all the mergers and acquisitions involving the "enterprise computing" companies Sun and Oracle. The resultant chart differed little from a similar exercise created "in-house" by the *Wall Street Journal*" (p. 21-22).

Researchers surfaced the importance of crowdsourcing as an outsourcing process that is now an integral part of traditional news production. Crowdsourcing as a part of doing journalism work has pervaded professional journalism work and succeeded into moving journalism schools toward this technique as an essential part of doing journalism in the twenty-first century.

Waldman (2011) observed, “modern journalism schools are not only teaching the five W’s (who, what, where, when, and why) but also crowdsourcing computer-assisted reporting and a wide variety of digital-era skills” (p.194). This seems to indicate a shift in the journalist’s role to that of a recognizable credible expert who receives tips and sources from a crowd that acts as a support network for the journalist.

For *the fluidity* perspective, McChesney and Nichols (2011) named the crowdsourcing phenomenon, “pro-am”, as in “professional and amateur.” In this kind of teamwork and collaboration, citizens shared with professional journalists on reporting and researching tasks, leveraging sheer numbers to exert enormous labor power to analyze large amounts of data in a short time. Newsrooms tapped their audiences to enlist their help in the pro-am crowdsourcing phenomenon in ways that have taken a number of different forms. Hoynes, Croteau, and Milan (2002), noted one form, in which newsrooms put out an open call enlisting help from the audience in creating news stories while employing journalists who maintain journalism standards and ethics. This can include professional journalists who solicit from the audience ideas about a topic that the journalists they are investigating.

There is a lot of communication and journalism research on crowdsourcing as user-generated content within journalism. User Generated Content (UGC) is now a common crowdsourcing reference point for researchers studying online participatory communication, which involves user-generated content. However, there is a particularly large focus in the research literature on crowdsourcing as a planned structured task that a journalist identifies and outsources to an online crowd. A really popular trend of research is in the intersection of crowdsourcing and user generated content (UGC) within citizen journalism. For example, McKenzie et al. (2012) plus Dylko and McCluskey (2012) studied crowdsourcing in user-

generated content, and Niederer and van Dijck (2010) examined user-generated content within the context of Wikipedia. Pérez-González (2013) looked at how Al Jazeera used crowdsourcing by translating citizen media footage from Arab Spring hotspots and the ways that the project blurred the traditional boundary between media producers and consumers. Amateur sub-titlers would join a website where they would be assembled into collaborative teams to subtitle videos for Al Jazeera global news audience.

Other examples include Reich's (2012) study of crowdsourcing in citizen journalism, and Fröhlich et al.'s (2012) research on crowdsourcing in a German-based hyperlocal participatory journalism portal called MyHeimat. Fröhlich et al. claimed, "on myheimat registered users can actively publish articles and other content (comments, photos, videos) from a local and hyperlocal area and, in doing so, collaboratively establish a media product corresponding to the principle of crowdsourcing and swarm intelligence" (p.1049-1050). In these contexts, there seems to be some confusion from the authors on whether crowdsourcing is being conflated with participatory journalism, citizen journalism, or other forms. Steensen (2011) argued that the literature on assets of new technology on online journalism rely on hypertext, interactivity and multimedia, technology and online journalism and is flooded by a sea of different concepts that describe similar or even the same phenomenon or asset. That raises a question, whether it is a discrete phenomenon separate from citizen journalism. In this example, Fröhlich et al. (2012) doesn't unpack what the principle of crowdsourcing and swarm intelligence actually is, beyond what Howe (2006b) posited. Nonetheless, this is an area that continues to receive a lot of research attention because of quickly changing practices and principles of journalism. As Russell (2011) points out "the trend is real-time, participatory, engaging and growing" (p.366).

This solidification of the crowdsourcing phenomenon in the journalism industry, starting with innovative approaches like the *Guardian* and emerging in journalism education, has received support from prominent media scholars. McChesney and Nichols (2011), in their book, *The Death and Life of American Journalism: The Media Revolution That Will Begin the World Again*” welcomed the emergence of this phenomenon as contributing to the evolution of the purpose of traditional journalism and strengthening credibility and reputation of journalism media outlets. Daniel and Flew (2010) saw this at the *Guardian*. After the *Guardian* applied crowdsourcing to an enormous data set, it became very manageable for the *Guardian* journalists and a key benefit for the *Guardian* to “scoop” other media outlets. No other media entity was set up to replicate the low-level activities of the crowdsourcing efforts, including basic fact checking and the high-level activities of the journalists’ culling, curating, and focusing on verification of questionable claims, analysis, reportage, and conversation. As a result, the *Guardian*’s credibility and reputation for investigative journalism was enhanced substantially.

Two examples of journalists asking for help in sorting through mountains of data occurred with the news events of Ian Tomlinson’s death and the release of classified information by Wikileaks. Rusbridger (2009) described how a man named Ian Tomlinson died during the London G20 protests in the United Kingdom during 2009. Tomlinson was a newspaper vendor swept up on the periphery of the protests. The police attacked him without provocation, and he died after being pushed to the ground. The police maintained their innocence until Paul Lewis, a *Guardian* journalist, tapped his Twitter followers who were videotaping the protest that day to review and send him any video recordings that they may have had of the incident with Ian that day. The results were stunning. Christopher La Jaunie, a New York-based fund manager, discovered that he had captured the moment when a policeman struck Tomlinson (*Guardian*,

April 7, 2009). This collaboration resulted in the police officer being charged with manslaughter. Paul Lewis was awarded the Bevens Prize for outstanding investigative journalism and was named Reporter of the Year at the British Press Awards in March 2010 (*Guardian*, November 19, 2009).

The second example of crowds sifting through mountains of data is with the unprecedented WikiLeaks website. This whistleblower website was set up in 2007 as a non-profit media organization with the goal of bringing important anonymously leaked information to the public. Since it opened, Wikileaks has exposed mountains of data for public consumption and analysis. In November 2010, Wikileaks gained global attention when they released 251,287 U.S. State Department diplomatic cables. These cables were from U.S. consulates and embassies around the world. Since this mountain of data contained extensive reports that required complex analysis, professional journalists and newsrooms quickly determined this task was too much for their staff and resources. As a result, they turned to the crowd for help reviewing, reading, and identifying what news worthy material was there in each cable. Baack (2011) claimed that this collaboration forced traditional media to re-think their purpose. The amount of large data sets required resources beyond what any individual journalist or news organization could handle. It was too time-consuming. Instead, journalists leveraged the crowdsourcing phenomenon so that the stories could surface. This arrangement between professional journalists and the crowd to discover the truth and let it emerge helped to evolve the purpose of traditional journalism to emerge.

This relationship between the audience and the journalist demonstrated how leveraging their different strengths could allow journalists to overcome obstacles like mountains of data. This relationship also indicated the evolving role of journalists that could move easily between

roles in different trades and professions as needed. Daniel and Flew (2010) described traditional journalism as needing this evolution into a new form, in order to problematize the twenty-first century techniques required to produce acceptable journalism. For example, they observed that with all this information available online, journalists needed to transform their organizational roles of journalists into database managers, data processors, data analysts, and curators.

Journalism news media advocates have argued that the crowd provides a needed feedback loop to the journalist and have noted that the inaccuracies and errors of 10,000 citizens were ultimately more effective and less damaging than those of two trusted reporters or editors. Yet, Waldman (2011) described one study by the journal *Nature* that found that the crowd-sourced Wikipedia had 32 percent more errors, a higher average number of mistakes (3.86 mistakes) than *Encyclopedia Britannica's* (2.92 mistakes per entry average).

This point is important because these two perspectives on roles help us understand three things. First, it helps us understand the importance of the role of experts as professionals in industries that utilize crowdsourcing. Second, the engineer perspective shows us that errors are a widespread issue for crowdsourcing, especially in social media, although, the bricoleur perspective shows that errors can also be opportunities. Third, these two perspectives show the need for a “role,” or defined function both for professionals and amateurs. Online, we are so connected in so many different ways, and our interests and passions can be leveraged to help in areas and industries far outside our professional roles in generating content, in analyzing data. The main insight in this particular element is to understand that crowdsourcing does contain distinct roles, despite the fluid movement of participants moving in and out of roles in which they participate. On one hand, the distinct roles might offer opportunities, in ways that appeal to the crowd and thus attract interest. And on the other hand, these roles may be reinforced through

the dynamics of crowdsourcing itself. One implication for larger research questions is to look at how these two different approaches to roles change the borderline between professional and amateur roles. Can the professional reinforce the role of the expert through the use of crowdsourcing as a means to organize members of the crowd, or will the roles of the amateur always be too generalized and undefined or overwhelming for the expert to understand and respond with adequate precision?

### **Process.**

The third element, process, involves two distinct perspectives: executing and dialogue; corresponding to the engineer's and the bricoleur's approaches to viewing how they engaged within the world. The executing perspective included studies on executing a crowdsourcing system. The dialogue perspective focused on crowdsourcing studies that examined participation in a conversation to resolve a problem.

For the *executing* perspective, Evans et al. (2013) and Buregio et al. (2013) describe crowdsourcing executed as a social machine. The idea of social machines derives from the part of computer science called social computing. This umbrella idea connects the social aspects of humans with computers. Schuler (1994) describes social computing as "any type of computing application in which software serves as an intermediary or a focus for a social relation" (p.29). Social media technologies, Twitter and Facebook are examples of social computing. Dourish (2001) described social computing and social machines as a human computer interaction (HCI) design approach that designs systems to fit into our social practices and work.

Evans et al. (2013) gave several examples of social machines. These include, ReCaptcha, where people identify a jumbled set of letters in order to log into a website. Those jumbled set of letters also helps to digitize books, newspapers. The humans are members of a crowd helping to

digitize creative works through their online activity. Another example of a social machine is a website that crowdsources crime reporting (Crime Reporter, 2013). Evans et al. (2013) also described the DARPA balloon challenge, the Obama election campaign (using crowd clicks to determine and track opinion), and Ushahidi (crowdsourcing information on violence or conflict). The site <http://duolingo.com/> enables learning new languages while translating texts on the web. <http://fold.it/portal/> enables citizen science contributions for protein folding. <http://www.galaxyzoo.org/> crowds of citizens classify large datasets of galaxies. Each of these successful social machines was designed to offer the right balance of motivation for members of the crowd and task properties. Organizations have to weigh the motivations of the crowd in the task properties and user interface designs of social machines. Lee et al. (2013) discussed how designers have to craft carefully the right combinations of techniques in order for the executing of these social machines to be successful. Crowds are people after all.

Recognizing the importance of social computing is also evident in what Prince (2013) described as the rise of the social web and the creation of new kind of digital consumer. Prince argued that not only has the number and digital content of social machines have exploded as organizations and industries try to engage online audiences, but the participants' roles are also evolving. Prince claimed that the term 'produser' has been coined to describe the transformation of audience members, who are now crowdsourced workers, into contributors, editors, and curators of content. Further, he argued that turning these audience members into participants who can leverage social media means that they interact more directly with organizations. This results in organizations rethinking traditional communication and engagement strategies. Kerle et al. (2013) wrestled with this issue in their analysis of produsers as volunteer mappers who participate in crowdsourced collaborative mapping in emergency crisis communications. They

noted that there is “little is known about the actual information needs of the users. We also identify problematic assumptions about the capabilities of the volunteers” (p.97).

For *the dialogue* perspective, Frost (2010), in his introduction to journalism textbook, described crowdsourcing as a means of taking part in a conversation with other sources to track down unusual sources. Frost noted, “crowd sourcing is a way of tracking down unusual sources who you may not know. If you are working a story and want to get contacts, then issue a plea on your Twitter or Facebook page. You can ask people about their experiences or knowledge” (p.57). Frost claimed that the purpose of the crowd moved beyond acting on small slivers of information to exploring a support network ready-at-hand via a smartphone, thus maintaining this hierarchy for credibility. Frost stated “the whole thing becomes a support network . . . bigger than just crowd-sourcing. It is vital to get this fed through to your phone – you need to be in constant touch with your contacts to make the best of Twitter” (p.58).

Aitamurto and Lewis (2012) described how journalists are gathering information from their audience through crowdsourcing efforts that as a conversation can, “harness the collective intelligence of the audience” (p.15). Other researchers, such as, Kperogi (2013) have studied, the major corporate media organizations in the United States using emergent alternative journalism practices which have inaugurated and embraced, “crowdsourcing platforms on their sites” (p.58). He describes crowdsourcing in a journalism context as entailing “the solicitation of news, video, photos, and audio clips from people who are not affiliated with any news organization and who may not be professional journalists” (p.58). Kperogi gives the example of USA Today in 2006, “America’s most widely circulated newspaper, embraced the principle of crowdsourcing of in-depth investigations into government malfeasance” (p.58).

Waldman's (2011) work identified the challenge for journalists wading through the incredible volume of online information. It was clear; from Waldman's assessment of the situation facing the 21<sup>st</sup>-century journalist that understanding the available affordances and possible adapted affordances from technology to willing volunteers was difficult. Journalists needed help to make sense of this data by culling, curating, and packaging quality content, an incredibly valuable activity for the journalism industry, and there are simply not enough professional journalists to meet the demand for sorting through all this information. That poses a key challenge, that crowdsourcing can address: the affordances of the medium itself. Adapting these affordances' relationships and connecting them to those of other resources, along with systematic observation, will prove essential for journalism and require the necessary knowledge plus understanding that must be coupled with creativity and innovative thinking to shape this adaptation. Waldman stated that the Internet could make large organizing tasks very manageable. Then he argued, digitized information then becomes very easy to aggregate, manipulate, organize, reorganize, and very affordable to quickly publish, display, and distribute across multiple platforms. "Whether the task is performed by editors, computer algorithms, crowdsourcing, or social media, the media system has already created a variety of means for 'smart aggregation'" (Waldman, 2011, p.243). Lee-Wright (2008) agreed, noting that the affordances of the Internet medium have allowed traditional media to have a greater level of interactivity. In fact, Lee-Wright claimed that the traditional news media eagerly troll for user-generated content and that investigative reporters embrace the time and resources saved by tapping these communities of interest made possible through crowdsourcing. Lee-Wright claimed that doing this could supply huge resources of raw data that "once would have take ages of phone-bashing or yards of shoe leather, very quickly" (p.44).

The need to understand the huge resources of audience-provided raw data, provided by the audience, in terms of the available affordances and possible adapted affordances from willing volunteers, could quickly exhaust a newsrooms' ability to manage this data and the journalists' ability to cope with the change in their role from reporters to curators. Daniel and Flew (2010) demonstrated this important shift in their case study of the *Guardian* Member of Parliament expenses scandal reporting. Daniel and Flew noted that an incredible amount of data was reviewed and curated in the reporting of the scandal. "As of June 2010, about half of the 460,000 claim documents were reviewed by 26,774 registered readers. 170,000 documents were reviewed in the first 80 hours" (p.3). Gilmor (2004) agreed with this idea of characterizing a crowd as a support network or feedback loop. Gilmor used the early form of blogs as a feedback loop for his audience to contribute to his reporting. Farhi (2009) went beyond feedback loops in describing the crowd as a "living, breathing tip sheet for facts, new sources and story ideas...[with]... instantaneous access to hard-to-reach newsmakers, given that there [was] no PR person standing between a reporter and a tweet to a government official or corporate executive" (p. 2). He gave the example of the *New York Times* putting out an open call, in a similar fashion to an All Points Bulletin (APB), to its Twitter crowd, asking for eyewitnesses to a building collapse in Lower Manhattan. Gilmor speculated how useful this process would have been, if the crowd had been able to contribute in this fashion on the morning of September 11, 2001.

This point is important because these two perspectives on roles help us understand the importance of the differences between the processes of executing and dialogue as professionals in industries that use crowdsourcing. Further, the main accomplishment of this particular element is to understand the bricoleur perspective, which shows us that professionals engage in a

dialogue with the crowd. These professionals also work with and organize the crowd toward a solution, instead of designing and executing a more simplistic crowdsourcing solution.

**Outcome.**

For the fourth element, outcome, there were two distinct perspectives - the solution and repertoire. The solution perspective included studies that discussed crowdsourcing as a solution. While, the repertoire perspective comprised crowdsourcing studies exploring the usefulness of the crowd as a repertoire – a stock of resource elements – that have been collected in anticipation that they might become useful for crowdsourcing.

For the solution perspective, Camacho et al. (2013) looked at crowdsourcing as a solution for researching, monitoring, and analysis of ‘Big Data’ streams of heterogeneous content. Shapiro et al. (2013) looked at the possibility of applying crowdsourcing to medical research in psychopathology by identifying participants with psychiatric symptoms, specific risk factors, or rare demographic characteristics can be difficult to identify and recruit for research. Seltzer and Mahmoudi (2012) applied crowdsourcing for city planning and public policy making. Weaver et al. (nd) designing systems for crowdsourcing in crisis. Tajedin and Nevo (2013) researched systems of successful software development accomplished through crowdsourcing.

Kittur et al. (2011) also used solution-focused research for designing and developing a prototype crowdsourcing solution called *CrowdForge*. Historically, the name “Mechanical Turk” refers to a fake chess-playing machine built in the mid-1700s that gave the illusion of a machine playing chess against a human opponent, when there was really a human hidden inside operating the machine (Standage, 2002). A “turker” is a euphemism for Amazon’s Mechanical Turk crowdsourcing platform that facilitates doing crowd-sourced work. These scholars partnered with two professional journalists interested in whether science journalism could

develop a crowdsourced solution. The *CrowdForge* solution moved beyond a simple crowdsourced input by an audience to adapting to the very complex tasks of the decision-making and article writing.

The goal of Kittur et al. (2011) was to turn an article published in academic journal into a newspaper article for the general public. To design the prototype, they selected an average scientific research article published in the journal *Science*. This scientific article was both complex and moderately technical. Despite its nature, these scholars thought that the prototype would work. They worked with professional journalists to identify the organizing structure and tasks for writing a popular science journalism article. These included “creating a news lead, describing what scientists did, what they found, getting a quote from a relevant expert and an author of the study, and describing implications and future work” (p.7). The journalists then broke all of these tasks into small slivers of work and distributed them to a crowd of online workers. The success of this approach surprised the professional journalists, whose role in the crowdsourcing process was really limited to identifying the types of tasks necessary to transform a scientific academic paper into a popular science news article. The author of the science paper, who was just as surprised, said that “it was a bit below what you would see in a high-quality publication like the NY Times, but the best were not totally different (although the worst were pretty bad)” (p.8). The journalists agreed with the author of the paper. They also described the quality as not Pulitzer Prize (prestigious journalism award) material, but still pretty good, given that the online workers did not have any training in this kind of expert writing. They noted that the editor did not require polished copy but needed sufficient quality to be considered acceptable journalism. This presented a definite qualification: If groups of “turkers” produce copy through

whatever means, that copy still needs to be in an acceptable form of journalism for an editor to review and edit.

Kittur et al's (2011) research indicated the value of professional journalists in assembling and processing, with the proper coordination of a workflow, the crowd-sourced work into "highly complex artifacts of surprisingly good quality" (p.8). Kittur et al. (2011) suggested that even though journalists have demonstrated the feasibility of a crowd-sourced journalism platform, letting crowds of ordinary un-trained busy individuals "into the newsroom" to produce acceptable journalism would only underscore their lack of expertise, limits of time, effort, and context. They discovered that just reviewing an academic article required a level of expertise beyond any single individual. The work of writing is equally out of reach. A professional journalist must use synthesizing and critical analysis to make sense of an academic article before writing about it. The problem is that a science journalism article has a uniquely particular structure that the crowd must follow. This structure creates palpable constraints on creativity that may require more expertise than what may be available in a specific crowd.

For the *repertoire* perspective, Chadwick (2011) observed that there was a greater and more routine engagement by journalists with their audiences in an organizational form that he called, "loosely coupled assemblages" (p.19). Chadwick argued that this organizational form was definitely not the kind of crowdsourcing as Howe (2006b) defined or the kind of "wisdom of crowds" described by Surowiecki (2004) described as outsourcing to crowds. Rather, for Chadwick (2011), these loosely coupled assemblages were unstructured collaborations around events, characterized by the process of organizing as resources around news and driven by "conflict, competition, partisanship, and mutual dependency, in the pursuit of new information that will propel a news story forward and increase its newsworthiness. Much of this activity is

episodic and it occurs in real time as a story unfolds” (p.19). Chadwick observed these loose assemblages in his work in political journalism. He also noticed that the composition of these loosely coupled assemblages included elite experts who focused on either online activism or political journalism instead of traditional notions of crowd as amateurs posited by Howe (2006b) and Surowiecki (2004).

Other researchers observed the process of people engaging and participating in crowdsourcing relationships. Using Latour’s (2005) actor network theory, Hemetsberger (2013) identified what she called, “action nets”, where the crowd and the organization, plus organizational members were actors who engaged and participated with each other in a collaboration net as a collection of resources. Another researcher, Haythornthwaite (2009) observed two patterns of engagement in peer production: the crowd and the community. The crowd pattern was crowdsourcing as unstructured process with anonymous and independent contributions and the community pattern was an identifiable and co-dependent structured process whose contributors participated decision-making, agenda setting, and co-constructing of production.

These insights and alternate structures are important because these two perspectives on outcomes help us understand two things. First, they help us understand that the outcome of crowdsourcing can be described as both a solution and a repertoire. Second, the bricoleur perspective showed that the outcome of the process was not structured by the crowd as the initiator of the crowdsourcing, but in terms of the relationships and engagement of the crowd. The main insight for this particular element is to understand that crowdsourcing is a process of finding the solution. Viewing crowdsourcing as a process of finding the solution addresses the issue of how people organize patterns of engagement and involvement in crowdsourcing.

## Summary

It is clear that Weick's (1993) lens of the engineer and the bricoleur and its set of elements offers a heuristic to interpret how people enlist and use crowdsourcing. As I have shown through this review, this heuristic reveals four clear distinctions, the difference between raw materials and existing resources, the difference in roles, the difference between executing and dialogues, the difference between designing a solution and organizing a solution. This clear distinction surfaces a clear distinction between viewing crowdsourcing as outsourcing and viewing crowdsourcing as organizing. Researchers have attempted to understand crowdsourcing as a special kind of outsourcing online. Yet, these studies also have revealed that professionals use crowdsourcing not as mere outsourcing, in which the crowd functions as a cog in the wheel of a crowdsourcing system. But rather as something else, that is more dialogic, more about process and organizing with a crowd of people as diverse resources, a view of the crowd as, what Chadwick (2011) called 'loosely coupled assemblages' organized around events.

This clear distinction speaks to a practical direction for research that can bridge this gap between research and practice, based on listening to professionals describe how they enlist or use crowdsourcing to help in their work. What is happening here? Journalists as professionals, certainly enlist crowdsourcing in their work. As this review demonstrated, professional journalists construct crowdsourcing systems for specific stories or projects. Researchers also know that these journalists use social media in ways that blur the relationship between professional and amateur. In the *Guardian* example, when Paul sent out a tweet on social media asking if anyone had footage of the newspaperman during the protest, he did not expect to get anything, although he did. Therefore, there is a practical need to study this area, not simply because the phenomena is poorly understood, but also because a better understanding may offer

a new direction for researchers to examine ways that can contribute to the literature in communication studies. The important question is: “How do professionals describe the process of enlisting or utilizing crowds of amateurs to help in their work?” To answer this question, I conducted in-depth interviews with journalists regarding how they use crowdsourcing.

## CHAPTER III

### METHOD, SITE, AND DATA

The study examines how journalists as professionals use crowdsourcing in order to better understand crowdsourcing as a new organizational communication phenomenon. In this study, I analyzed descriptions from journalists on the process of how they enlisted or enrolled crowdsourcing in social media as a part of their work, in order to discover if our theories of crowdsourcing need to be expanded and revised to incorporate this different perspective.

In this chapter, I will describe and discuss my method for collecting and analyzing journalists' descriptions of how they enlist and use crowdsourcing in social media. I will first describe the procedures for data collection: defining my research question, describing my sampling strategy and how I collected my interviews, and describing the interviews as my data set. Then, I will describe my method for data analysis: reviewing my technique for analysis, and my process for analyzing the interview transcripts. Selecting the right method, site, and data source for this study was important for revealing insights into this phenomenon.

#### **Data Collection**

##### **Overview.**

The data collected addressed my research question by opening a window into the daily work practices of journalists working at newspapers along the Front Range. From this window, I was able to ask questions that allowed journalists an opportunity to describe their experiences enlisting and using the crowd in social media. The formal data collection for this research extended over eight weeks, from the beginning of September of 2012 to the end of October 2012. I conducted 18 semi-structured in depth interviews with journalists in five small, medium, and large-sized newspapers, with a minimum of three interviews per newspaper. To solicit

interviews, I reviewed each newspaper's staff list as posted online, and then contacted each journalist by telephone, email, voicemail, and social media asking for an interview.

### **Research Question.**

RQ: How do professionals describe the process of enlisting or utilizing crowds of amateurs to help in their work?

### **Sampling.**

The sample from which the data drew for this study was a *convenience sample*. Leedy and Ormrod (2005) describe convenience sampling as selecting “people or other units that are readily available” (p.206). This sampling strategy was selected because of the challenge to participant selection. Enlisting professional newspaper journalists from the five newspapers was very difficult because according to those interviewed they were especially busy with local tragedies and national news with the presidential elections. I had initially started with a snowball sampling strategy, confident that one interviewee would lead to other hidden interviewees. When I contacted editors, they referred me to reporters they thought would be helpful. Over eight weeks I contacted reporters by phone (typically leaving voicemails), email, and through social media. Most solicitations went unanswered. I consulted with local media contacts and colleagues in the University of Colorado Journalism department for advice. In the end, the data collected had sufficient variation in terms of participant response and in terms of the newspapers represented to indicate a good sample. These five newspapers were in markets along the Front Range of Colorado. The newspapers were a variety of different size, including very large, medium, and small newspapers. A large newspaper was the *Denver Post*. The Alliance for Audited Media reports shows the most recent total print and digital circulation for the Sunday Denver Post at 618,571. Medium and small newspapers had much smaller staff from six to 14

reporters and much-smaller scale coverage (for example, the Daily Camera has 113,400 consumers) area within a town or city. Local examples of medium and small newspapers were the *Daily Camera* and the *Longmont Times-Cal*. It's helpful to describe a basic newspaper newsroom structure. In this kind of newsroom, reporters sit at desks, gather information, call contacts, research stories, and write articles on computers. Stories are submitted through an online newsroom management tool that coordinates the work. Editors review and edit stories, write headlines, and coordinate news coverage. Different types and levels of editors exist for a range of functions. There are web and social media editors, who manage the online newspaper web or social media presence. The news editor, assesses the stories and how and where it should be published. Depending on the size of the newsroom, there might be other editors who may focus on the print publication and writes the headlines for stories.

Leedy and Omrod (2005) do an excellent job pointing out the pros and cons of convenience sampling strategy. The pros to using the convenience sampling strategy are the ability to gather a data sample when it is otherwise not possible and the readily available. The cons to using the convenience sampling strategy are that it cannot generalize because it is not a representative subset of a population. Nonetheless, the aim of this study was not to generalize, but to articulate an alternative model for crowdsourcing. Future research should consider pursuing a more comprehensive sampling strategy taking into serious consideration ways of overcoming the challenge of participant selection.

### **Interviews.**

The interviews were semi-structured, in-depth interviews lasting from about 30 minutes to just under 90 minutes. All of the interviews were with professional journalists, many were reporters, one was a columnist, and another was an editor.

I worked with the journalists to set up the time and place for the interviews. The interviews were constrained to the following cities located in the Front-Range Colorado area: Boulder, Denver, Fort Collins, Longmont, and Colorado Springs. When in-person interviews were not possible due to logistics of time, I interviewed the journalists over the phone. I interviewed 14 journalists over the telephone and met four journalists in person at the journalism school, coffee shops, or the bar.

I encouraged interviewees to discuss topics and introduce issues that they felt were important. Although I prepared a standard set of questions, different techniques of research interviewing were utilized to collect data, from asking informal questions on newspaper stories, what memorable interactions the journalist had with audience members, and asking a question after the “official” interview seemed to have concluded. Each of the interview questions were tied to my research question and describing how they used social media and used the crowd. The interviews were an excellent means of understanding day-to-day work processes and practices.

### **Interview Guide.**

The interviews were guided in the following ways:

1) *Researcher Introduction and Overview*

After the researcher introduced and greeted the interviewee, there was an overview of the research project’s purpose.

2) *Interviewee Name and Introduction*

Interviewees were asked to provide their name and a brief introduction as to their role as journalist, and which organization they work for.

3) *Interviewee Background*

Interviewees were asked to describe their background as a journalist.

4) *Interviewee Notable Work*

Interviewees were asked to discuss any notable stories they'd written or produced.

5) *Interviewee Current Work*

Interviewees were asked to discuss current stories they have finished working on and their interaction with their audience. As the interview question proceeded, issues and topic areas emerged, and questions were asked to develop clusters of data around particular topics and issues. The questions were asked in broad, non-directional terms such as, "Tell me about how you and your audience worked together" and "How does your audience get involved with a story?"

6) *Researcher Conclusion*

The interview concluded with the researcher thanking the interviewee for their time and inquiring as to the possibility of a follow-up interview.

**Interview Questions.**

The interview questions were planned and constructed to get at the sense-making aspects of how they enlisted and used crowdsourcing. I designed the questions so the journalists would reflect on the process of how they used crowdsourcing.

The interview questions were as follows:

1. When did you start using social media?
2. How did you produce a story before and after social media?
3. Do stories initiate from social media platforms?
4. Could you describe the process of how you verify facts gathered from social media?
5. How factual have you found the tweets from your followers and from whom

you are following?

6. Do you interact with your followers online or offline?
7. Do you see your social media followers as sources?
8. Do you ask questions or queries for help on social media?
9. What typically happens when you pose a question to your followers?

### **Data Management.**

I recorded each of the interviews with an audio recorder and took hand-written and computer notes during the interview. Following each interview, the interview was transcribed and notes reviewed, corrected, and annotated in order to make them clear and comprehensible, and accurate as possible. All of the transcripts were kept safe on a secure computer in a secure location.

### **Human Participants and Ethics Precautions.**

In accordance with the guidelines of the University of Colorado regarding the protection of human participants, a request for review was submitted to the Institutional Review Board for approval to interview approximately 25 potential participants for this study. After receiving IRB approval, I proceeded with participant recruitment and data collection.

### **Data Analysis**

#### **Overview.**

To analyze the data collected, I gathered the complete transcripts from these journalists describing their work practices and started analyzing the data. The data analysis extended from the beginning of November of 2012 to the end of September 2013. I used the thematic analysis method and completed each of the six phases: I immersed myself in the data by listening and

transcribing the interviews, generated initial codes, searched for themes, reviewed themes, defined and named the themes, and then developed the report on the data.

### **Introducing Thematic Analysis.**

The method I used to analyze the data was thematic analysis. Boyatzis (1998) describes thematic analysis as a search for prominent themes that emerge as important to the description of a phenomenon. This method was selected for several reasons. First, this method is widely used in research studies for its usefulness as a conceptual framework in exploring phenomenon by developing theory inductively with emerging patterns or deductively with patterns viewed through a theoretical framework, in qualitative data such as interviews. Bernard and Ryan (1998) argue the greatest strength of thematic analysis over many qualitative methods “is its pragmatic focus on using whatever tools might be appropriate to get the analytic job done in a transparent, efficient, and ethical manner” (p.18). Further, the tools of thematic analysis can be applied to any number of kinds of qualitative data from audio interviews to songs to life histories or personal letters or, “transcripts from conversations; and historical documents, such as songs, literature, folktales, hymns, children’s readers, art, films, memos, and personal letters” (p.12).

Boyatzis (1998) describes this process by defining the parts of the methods: the code, the theme, and the codebook. The “code” is a list of themes, or, “a complex model with themes, indicators, and qualifications that are causally related; or something in between these two forms”(p.vi-vii). A “good code” is one, which captures the richness of the phenomenon. A “theme” is a pattern, “found in the information that at the minimum describes and organizes possible observations or at the maximum interprets aspects of the phenomenon” (p.vi-vii). Boyatzis describes themes as identified as directly observable in the information. What he calls the manifest level. Or they may be at the latent level, underlying the phenomenon. Further, he

notes, the themes may be generated inductively from raw information or generated deductively from theory and prior research. Finally, the “codebook” is the “compilation of a number of codes in a study” (p.vi-vii). Braun and Clark (2006) do an excellent job describing each of the six phases of thematic analysis.

Bernard and Ryan (1998) describe the positivist approach to qualitative data analysis as involving, “the reduction of texts to codes that represent themes or concepts and the application of quantitative methods to find patterns in the relations among the codes” (p.596). Boyatzis (1998) claims that these recurring themes are patterns “found in the information that at minimum describes and organizes the possible observations and at maximum interprets aspects of the phenomenon” (p. 4-5).

Boyatzis identifies three major obstacles or threats to using thematic analysis effectively in research. They are the researcher’s (a) projection, (b) sampling, and (c) mood and style. These three obstacles present the challenge for the qualitative researcher using thematic analysis to be wary of the researcher flattening the rich data by reducing the insights to a trivial level, “for the sake of consistency of judgment” (p.14).

### **Thematic Analysis Six Phases.**

Braun and Clark (2006) describe the process of thematic analysis starting when the researcher starts to observe patterns in the data, which could happen as early as during data collection. The process of thematic analytic is a constant rigorous movement, between the entire data set, coded excerpts, and the analysis of the data through six clear phases. The process of thematic analysis concludes with the reporting of the content and meaning of the patterns (themes) in the data.

### ***Phase 1 – Immersion.***

For the first phase, *immersion*, Braun and Clark (2006) describe the vital importance of immersion in the data, in order to become very familiar with the data. To immerse in the data requires repeated review of the data actively. “It is ideal to read through the entire data set at least once before you begin your coding, as your ideas, identification of possible patterns will be shaped as you read through” (p.16). They advise transcribing verbal data into written form to start this phase. They note that transcription of verbal data does not require the same level of detail as conversation, discourse or narrative analysis. They advise, this phase requires a transcript, “retains the information you need, from the verbal account, and in a way which is ‘true’ to its original nature” (p.17).

To accomplish this phase of *immersion*, I immersed myself in the data, listening to the interviews, and transcribing the interviews to capture what was ‘true’ to its original nature, and reading through the entire data set. I formatted each transcript, adding page numbers. Then I printed off each transcript and organized them into separate folders. Once they were each printed off and organized into separate folders, I read through each interview, again to become familiar with the data.

### ***Phase 2 – Generating Initial Codes.***

For the second phase, *generating initial codes*, Braun and Clark (2006) describe this phase begins once the data has been transcribed, read, reviewed and organized. In this phase, the researcher generates an initial list of ideas about what is in the data and what is interesting in the data. This list of ideas is the production of initial codes from the data. “Codes identify a feature of the data (semantic content or latent) that appears interesting to the analyst” (p.19).

Importantly, the codes represent the most basic element that can be assessed in a meaningful way

regarding the phenomenon. They point out that this process involves generating initial codes that are organizing the data into meaningful groups, which can mean individual excerpts of data could be into several different themes.

To accomplish this phase of *generating initial codes*, I reviewed each interview for interesting features in the data, scribbling a code in the margin of the printed interview at the site of the interesting feature, and keeping an ongoing list of initial codes. To organize the order of themes in a particular theme, I identified a number sequence formatted to the number of the interview and the order, which the excerpt followed in the interview. For example, the number sequence as cited (1-10) would identify the first interview and the tenth excerpt from that interview. Occasionally, if I thought a code needed to be split, I would identify a letter after the number sequence (1-10a) or (1-10b). This was an effective strategy for helping to organize the order of the codes and made going back to a particular interview and specific data excerpt very manageable and efficient. Once I completed one review of the interviews, I re-reviewed each interview three times, testing and weighing whether the initial codes and features were worth noting, rewriting codes that were not absolutely clear, and reviewing whether I had missed any interesting features in the transcripts. Once, I felt confident that I had properly reviewed each interview and generated a complete list of initial codes I moved to the next phase.

### ***Phase 3 – Searching for Themes.***

For the third phase, *searching for themes*, Braun and Clark (2006) describe that once all the data has been initially coded and collated, and there is a long list of the different codes identified across your data set, the third phase begins. This phase is about shifting the analysis to the broader level of themes instead of codes. This involves sorting the codes into potential themes and, “collating all the relevant coded data extracts within the identified themes” (p.19).

To do this, they advise writing the name of each code on separate pieces of paper and organizing the codes into separate piles that might represent themes. Through this process, the researcher starts to consider the relationship between codes, between themes, and different levels of themes. And the codes will start forming main themes and sub-themes, or be discarded. They note creating a pile that contains miscellaneous codes, is worth doing because they will likely be codes that do not fit into the main themes. The goal by the end of the phase is a collection of what, Braun and Clark (2006) call candidate themes, along with sub-themes, their extracts of data that have been coded, and the sense of the significance of the individual themes.

To accomplish this phase of searching for themes, I first made two complete photocopies of the whole data set of transcribed and coded interviews. I wanted to make sure that I had two master copies that I could refer back to. I then moved those to special folders for safekeeping. Then I used scissors to cut the printed sheets of transcribed interview into the individual data excerpts. I made sure that each code was properly identified with a readable number sequence. Once the interview sheets were cut apart and put into a big pile, I picked up each code, considered its meaning, and its relationship to other codes, possible themes, sub-themes, and whether it needed to be discarded, then moved each code into different piles that represented themes or sub-themes. At the end of this process, I was left with many theme-piles, of varying size, including a pile of codes that did not seem to fit anywhere. I was also confident that I had accomplished the goal of assembling a collection of candidate themes, sub-themes, their codes, and the sense of significance of the individual themes.

#### ***Phase 4 – Reviewing Themes.***

For the fourth phase, reviewing themes, Braun and Clark (2006) describe that once you have accomplished the goal of phase 3, the set of candidate themes. The next step is refining

those themes, discovering the themes that don't have enough data to support the themes, data that was too diverse, themes to collapse into one another, or themes to break apart into multiple themes. They recommended employing Patton's (1990) dual criteria for judging themes based on their internal homogeneity and external heterogeneity. "Data within themes should cohere together meaningfully, while there should be clear and identifiable distinctions between themes" (p.20). Further, they discussed this phase is more intense, in that it involves two levels of reviewing and refining the themes. The first level reviews at the level of the coded data extracts. "This means you need to read all the collated extracts for each theme, and consider whether they appear to form a coherent pattern" (p.20). If the candidate themes do not fit a coherent pattern, then considering whether the themes are problematic or whether the codes simply do not fit requires reworking your theme or creating a new theme. "Once you are satisfied that your candidate themes adequately capture the contours of the coded data...you are ready to move onto to level two of this phase" (p.21). The second level moves to a higher level in the data, considering the validity of individual themes in relation to the data set and whether your map of themes "your candidate thematic map 'accurately' reflects the meanings evident in the data set as a whole" (p.21). The goal at the end of phase 4 is to have a good idea of the different themes, how they fit together and the story they describe and tell about the data.

To accomplish this phase of reviewing themes, I reviewed all the codes for each theme and considered whether they fit coherent patterns. I tested the codes to see if they cohered together with internal homogeneity and whether they were distinct from other codes in other themes with external heterogeneity. I repeated this process three times, each time tightening the number of codes that were valid into coherent main themes and sub-themes, along with tightening the number of themes that were valid in relation to the data and made a faithful

thematic map that captured the data. I had started this Phase with 39 main themes and sub-themes. Those 39 themes were reduced to eight themes. I placed a particular piece of data in one theme or another by carefully considering how it demonstrated characteristics of a particular element within my heuristic. For example, the data excerpt that described adapting had clear characteristics of a bricoleur's ability to work with existing resources, adapting them to fit his or her need.

Table 2		
<i>List of Main Themes</i>		
Age	Improvising	Risk Taking
Adapting	Echo Chamber	Savvyness
Affordances	Gathering Data	Self Conscious
Celebrity	Interpersonal	Sensemaking
Changing Work Practices	Journalist Role	Strategic questions
Comfort Level	Listening Posts	Telephone
Continuous Filing	Mandate	Temporal
Creativity	Old School	Tinkering/Experimenting
Credentials	Organizational change	The Crowd as the Other
Crowd as resources	Organizational requirement	Tools
Crowdsourcing	Personal vs. Public	Training
Cultivating crowd	Promotion	Verifying
Digital First Paper	Reliability	

Table 2

***Phase 5 – defining and naming themes.***

For the fifth phase, *defining and naming themes*, Braun and Clark (2006) describe this phase beginning once the goal from Phase 4 (having a satisfactory thematic map of the data) is completed. The activity of this phase is to define and further refine themes by identifying the essence of each theme and determining which aspect of the data each theme captures. Then, for each individual theme, the next step is conducting and writing a detailed analysis and identifying the story that each theme tells and how a particular theme fits into the broader overall story about your data in relation to the research question. The goal at the end of this phase is to the definition of what the themes are and what they are not. They described how researchers could test if this goal has been accomplished by being able to describe the scope and content of each theme in a few sentences.

To accomplish this phase of defining and naming themes, I defined and reviewed each theme, writing a few sentences about each theme’s scope and content. Then I wrote and conducted a detailed analysis of each theme, and how it fit within the story of my data and the broader research question.

Table 3	
<i>List of Final Themes</i>	
Theme	Description
System	Based on journalists’ excerpts that reflected the use of social media as constructed as a system from raw materials, a tool in a journalist’s “toolbox” to be picked up when needed to do crowdsourcing or

	consult with their audience.
Environment	Based on journalists' excerpts that viewed social media as an environment where they looked for existing resources, such as sources, listened to the crowd chatter on social media for opportunities to do stories, and asked the crowd for help.
Authority	Based on journalists' excerpts in which they discussed their role in social media as the authority on verifying leads. This authority is a work requirement by news organizations, requiring journalists to establish themselves as authorities in social media.
Fluidity	Based on journalists' excerpts that discussed their fluid expertise in donning different roles in social media, in order, to relate to the crowd and use their help.
Executing	Based on journalists' excerpts, in which they described crowdsourcing as an obstacle to the process of managing and executing their work.
Dialogue	Based on journalists' excerpts that describe how they engage in a dialogue with their audiences as resources to do their crowdsourcing work.
Solution	Based on journalists' excerpts, in which they described the use of social media as a crowdsourcing solution.
Repertoire	Based on journalists' excerpts that viewed the crowd as a repertoire –

	a stock of resource elements – that has been collected in anticipation that they might become useful.
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Table 3

### ***Phase 6 – Producing the Report.***

For the sixth phase, producing the report, Braun and Clark (2006) describe as the final analysis and write up of the report. They advised the importance of embedding the best excerpts of the data into an analytic narrative, “that compelling illustrates the story that you are telling about your data, and your analytic narrative needs to go beyond description of the data, and make an argument in relation to your research question” (p.23).

To accomplish this phase of producing the report, I identified the best excerpts from the data and wrote an analytic narrative that illustrated the story from the data. This was a time-consuming process and involved several revisions, each of which slowly and carefully tightened the argument with the best evidence.

### **Summary**

This chapter first outlined how I collected my data through semi-structured interviews, with a convenience sampling strategy. Then this chapter described the thematic analysis method for analyzing my data, and the six different phases, which I completed for analyzing the data. In the next section, I will describe phase six of completing the analytic narrative of my findings.

## CHAPTER IV

### FINDINGS

In this chapter, I will describe and discuss my findings from my study of journalists' descriptions of how they enlist and use crowdsourcing in social media. I will first give general observations of the data set. Then, I will identify the prominent themes from the transcripts and offer insights and analysis as to why these themes appeared.

#### **General Observation of the Data**

In general, the data set provided a robust set of themes to analyze, providing interesting differences as well as similarities. Journalists used a wide range of experiences to describe how they work with their audiences. Yet patterns also emerged across the interviews. I reviewed the interviews multiple times for different layers of codes, drawing tighter and tighter relationships between the excerpts. This allowed me to focus my efforts and also view the data from different perspectives.

Three general patterns related to the demographics of the participants. The first pattern indicated the importance of the participant's age. Time and time again, the age of the journalist played into how they described their relationship with crowd. Older journalists described how they used social media largely because it was a requirement of the job. A requirement that older journalists felt went against the grain of what being a journalist was about. This, in some ways, could be expected. The younger reporters were expected to be fluent, by their editors, in social media and to feel at home seeking out opportunities to make an impact with it in journalism. One young reporter described how she was familiar with social media for personal use and to gather news but how she noticed during her print internships that many news outlets had not yet made the transition to social media. This turned out to be a huge asset for her, as she commented: "I

found out as a young journalist [that] it was actually a really big asset to know how to use it, and I started using it to collect news” (12-1a). The second general pattern indicated the importance of the participant’s gender. The journalists who were women described how they fostered and cultivated a relationship aspect to crowdsourcing in social media. In contrast, men typically described a more strategic angle to using social media. They described situations where they could enlist help strategically or find a way into someone’s social media space. A final pattern was skill level. Many respondents described how they were comfortable operating social media and spoke openly about how they used it and how they tried to engage the crowd. A notable few journalists’ experience using social media suggested they were social media experts. Other journalists whose limited experience using social media suggested they were not comfortable or especially skillful operating social media also spoke openly about how they used it, but used self-deprecating humor or spoke self-consciously about their use. Many described how they just saw themselves trying to use it to the best of their abilities, time and effort. The sample that was gathered seemed to capture a range of skill levels with regard to social media.

## **Findings**

In this next section, I go through specific excerpts that shaped the data into eight themes, which followed the four elements of Weick’s (1993) engineer and the bricoleur’s approaches presented in Chapter 2. Specifically, I looked for how elements of “world”, “roles”, “process”, and “outcomes” were constructed in the journalists’ descriptions of enlisting and using the crowd in social media. For the “world” element, there were two themes “system” and “environment”. For the “roles” element, there were two themes, “authority” and “fluidity”. For the “process” element, there were two themes, “executing” and “dialogue”. For the “outcomes” element, there were two themes, “solution” and “repertoire”.

### **World Element.**

For the world element, two themes - system and environment –describe crowdsourcing in social media. The *system* theme corresponds to the engineer’s worldview, and reflects the use of social media as constructed as a system from raw materials, a tool in a journalist’s “toolbox” to be picked up when needed to do crowdsourcing or consult with their audience. This conceptualization contrasts with the bricoleur view of social media as an *environment* look for existing resources (such as sources), listened to the crowd chatter on social media for opportunities to do stories, and asked the crowd for help.

#### ***Theme: System.***

The *system* theme manifested it in how some journalists described social media as a tool, a system they use to find information. One journalist bluntly summed up her view of social media and crowdsourcing: “It’s just a tool” (4.15). Social media and crowdsourcing happens to be one of the tools in her system for finding people. She said that she had constructed different ways of finding people and that each of these systems has its own benefits and disadvantages. Search engines were another tool, another system for finding people. However, she noted search engines could be a faulty tool and an inefficient system, because of how they were constructed. She concluded that using crowdsourcing through social media is simply more efficient, especially when there are highly visible events like tragedies that caused people to post memorial pages. She thought this apparatus allowed journalists to reach people and meet them in person. She cautioned that she had constructed this particular system just to find sources and not as a reporting tool: “I don’t use that as a reporting tool except to find sources” (4.10). After reflecting, she added that she had used social media as a means of collecting information on a

handful of occasions. She also admitted that her organization's commitment to place digital information "first" meant that journalists were "using social media as a means to distribute information" (4.10). She carefully placed certain parameters on her use of information gathered from social media. She indicated that she would seek to find people using social as a tool in her toolbox as a reporter but that should not quote a source on social media "blindly" (4.10). If she did quote this kind of source, she that she would couch it in such terms as, "this comment was left by a person identifying themselves on a social media site by this name" (4.10).

Other journalists agreed with this view of social media and crowdsourcing as a system. Several journalists revealed the recognition of the system's adoption by the industry but seemed uncertain how it was actually useful in their work. One journalist wondered how the tool fit within the toolbox, noting, "I think it [is.] I don't know if I need another tool[,] but I need to pay a little bit more attention to where this tool fits" (12.19). Another journalist agreed that using social media was a good tool but also wondered about the rules of using that kind of tool to construct systems of doing work. This journalist described how the challenge to using the tool was constrained by the other demands of journalism work, "where you're pushing to get everything on line as fast as possible and produce more content" (5.21). This leaves little time to properly construct social media as a good system. She wondered at how future journalists would use social media and imagined they would construct new systems and new tools for doing journalism work, even as far in the future as ten years from now. She believed that it was proper to view social media as "just another tool in your toolbox" (5.21). For there will always be new systems and new tools that will continue to be built. The challenge for journalists is trying to keep pace with learning about these new tools and new resources and how they can be

constructed as new systems. She said, “I think it’s one additional tool that you can have to try and keep up with everything else that’s going on” (5.21).

If the social media tool did not work, journalists described how they looked for other tools or systems in their toolbox, often picking up more traditional tools of journalism. One journalist described a situation of getting ready to follow up on a story on the long-term unemployed. He tried to get a response from the crowd through the social media but got nothing. So he went through a traditional method of calling the local office of the workforce center, “So it’s much more of a traditional cultivation of sources I’ve done through DIO and the workforce center. I need four people who have been out of work for a while” (14.8).

***Theme: Environment.***

The *environment* theme manifested in how other journalists described social media as a place. A journalist summed up his view of social media and crowdsourcing, bluntly, “Twitter is where everything is at, that’s where I find everything out. It’s my front page” (9.22). For this journalist and other journalists, social media is more than a tool in their toolbox. Social media is a tool that opens the door to the place where journalists go to work, where they get news and conversation, talk to friends, colleagues, push out stories, find stories. Twitter is the environment where he finds resources, “I can’t imagine doing my job without Twitter. To me, Twitter is the absolute most important tool for my job, there is just nothing comes close to it. Facebook’s great because there’s lots of people[,] but Facebook’s not a place where I follow news or conversation unless I’m talking to friends or pushing something out” (9.22).

Viewing social media as an environment to find existing resources was clearly evident for another journalist. She described how she and her fellow reporters went to Twitter during the Aurora movie theatre shooting and viewed it as a place to search for any clues to what had

happened, for sources, and people tweeting online about the shooting. She described how people working the night shift searched Twitter for evidence of the shooting in tweets, and came across people interested in sharing their story. Beyond finding sources, the reporters were also able to come across other information and clues from the tweets that indicated information they could report on, “we found out through Twitter maybe the first clues about the first person identified that was killed” (7.8).

Some of the journalists described social media, as the place that you might find resources and other times might be a place that doesn’t bear fruit. One journalist described two examples trying to crowdsource through social media. First, she posted on Facebook that she was looking for people living in houses that would hold seven or more people because she was doing a story on shrinking household sizes. The next morning she had two responses. One of the responses was excellent and a very informative with a great story about the person’s family. In the second example, the journalist was doing a story about first time voters in October and invited people to come watch the debate and observe how they were making their decisions. She said, “I took it out on Facebook and Twitter. I only ended up getting two responses, and neither of them really panned out, so sometimes [social media as a source] works and sometimes it doesn’t” (16.14).

However, there were several reporters who viewed social media as a fertile environment for finding sources and information about sources. One reporter described the value of searching for tips and sources on Facebook. She noted that with Facebook, she could find out so much about people she was writing about. She noted that there were so many existing resources available on Facebook from contact information to an efficient means of messaging them and for sources to send messages. Sometimes journalists will discover tips through different Facebook pages that the crowd has put up. In one case, a journalist was covering a trial and discovered all

sorts of tips from a Facebook page that the defendants' family had posted. "You know this court case that I have been covering was a trial that ended this week. The defendant's family had put up a Facebook page, so I got all sorts of tips off of that" (3.7).

Other journalists echoed the usefulness of social media as an environment for finding sources, but, importantly, it was not just a system or tool for finding sources, it was an ecosystem, a community of people interacting in the social media platform. One that she was part of. One journalist described how this ecosystem could produce sources for stories. "Of course. Everyone who you pass virtually or physically contains a well of information that could enhance your job in some way. The trick is putting the puzzle pieces together" (8.11). Importantly, this journalist observed how she was a part of this ecosystem. She often asked her social media followers if they knew someone who might be a good person to interview for a story. She noted, "I see myself as a member of this community, not something higher and mightier" (8.11).

The idea of the journalist as part of the ecosystem was suggested as prevalent in many of the excerpts. There were journalists who weighed which ecosystem was more fertile, Facebook or Twitter; one journalist found that she usually found more resources through Facebook because of how it generates more interest and more of a conversation (13.3). Another journalist described how she used this ecosystem as a place for experimentation to try out how different story ideas would engage with the crowd. This often produced better quality stories written for a more interested audience. The reporters would come up with an idea for a story, and need to find people to help with the story. They would consider conventional sources, but then recognize they have a lot of luck crowdsourcing the idea and seeing what kind of response they get from their readers. These included even ideas on how to shape the story idea to make it more successful.

Other journalists noted how they were part of this ecosystem, in which, the crowd does a kind of reverse crowdsourcing, telling the journalists to go check something out that they (members of the crowd) were seeing. One source described how when she covered Hurricane Sandy, the crowd would let the journalists know what they were seeing and hearing because they had smartphones, they had ready access to Twitter and thereby the journalists. In fact, this reporter commented that when there is a power outage, they get a tremendous response from their social media crowd alerting them to the outage. This is a departure from what used to happen which was if there was a power outage, nobody would know. She observed, “there’s a lot of interaction now with people who are in a power outage because people are using [social media with] their smartphones” (16.17).

Journalists described how they viewed social media as an environment where they could listen and monitor the chatter from the crowd. Many journalists use social media to monitor the crowd. One journalist described this technique as similar to using a police scanner, which might not be anything, but could be very important. (10.10). Another journalist noted how unreliable social media can be but how it, like a scanner, can still be used to pursue stories. This source stated that scanner traffic could often be so “raw,” unreliable, and “inaccurate” that a news organization wouldn’t “tweet directly from the scanner”(9.35). This source claimed that a news organization has “the responsibility to pass on accurate information as best we can.” This journalist said that a reporter may ask as a personal query, “Hey, we’re hearing this on Twitter, can anybody verify this...[or] we don’t have this confirmed, can somebody call us?” (9.35).

Other journalists frequently monitor the crowd and key agencies for breaking news in newsgathering. One source emphasized the importance of “monitoring them [the crowd members] for things” (17.2). This source also noted that the biggest problem for newsgathering

was that many agencies used them so inconsistently that reporters could not rely on these media for this purpose. A police department may use Twitter for a while to talk about the science of a crime or accident, but additional checking of blogs or updates may reveal that the agency may indicate that the agency has “not been doing that” (17.2-3). Other journalists indicated a much more extensive use of the social media. These journalists will “tweet out links to stories, breaking news, traffic alerts, if it’s major highway not a residential street but a major highway is closed, [all of] that kind of information” (17.2-3). One source noted the use of the “tweet deck” software to monitor incidents and the extensive use of lists of sources used more for gathering information than distributing. This source noted the use of a “will-call list” of news sources for breaking news, such as the fire department, utilities for water main breaks, and that “all those kinds of agencies [are on that] list” (17.2).

One journalist acknowledged now how many news items come from businesses, agencies, and organizations. This feature writer pointed how she pursued monitoring individual personal tweets from her crowd: “the Longmont mom who might say something that might be a trend story for us or it might be a food story or a health story or a lifestyle story” (5.17). This source said that she did think that using social media “could be helpful for features writing” (5.17). Politically, journalists noticed the advantage of candidates exploiting the media’s watchful eye in this environment. One journalist had observed that a political candidate had made a funny YouTube video, so this journalist then put up a quick brief feature on the video, giving that candidate perhaps an advantage over other candidates who weren’t as knowledgeable about social media and the crowd. This source said that, “People knew that we’re all watching Twitter feeds and expect our news to come that way, so when [we receive] traditional media

packages not supplemented with social media I feel as though they have put themselves at a disadvantage” (15.4).

### ***Summary.***

System and environment represent two views of crowdsourcing in relation to the world. This seems to indicate that they have helped reveal three aspects about crowdsourcing in social media. First, the *system* theme helps us understand that social media is described as a tool and crowdsourcing can be used strategically as a system constructed by journalists to find sources and information. Second, the *environment* theme helps us understand that social media is described as a place that journalists work and crowdsourcing is the means of participating in an ecosystem where people interact as a community to communicate, to look for sources, to share and experiment with different story ideas with the crowd, to monitor the interactions in this ecosystem for news. Finally, the *environment* theme helps us understand that crowdsourcing is described as the means for the crowd in this ecosystem to interact with journalists in “reverse” crowdsourcing, asking the journalists as a “crowd” to go check something out that they were seeing.

### **Roles Element.**

For the roles element, two themes emerged. The *authority* theme corresponded to the engineer view, and represented the journalist as the authority. Authority is a work requirement by news organizations, requiring journalists to establish themselves as authorities in social media. This conceptualization contrasted with the bricoleur theme of *fluidity*, of donning different roles in social media, in order to relate to the crowd and use their help.

***Theme: Authority.***

All of the reporters expressed the importance of being professional within social media (12.12). And being a professional in social media means establishing an authoritative role as a journalist. One journalist described how a journalist must present her or himself very carefully, examine information thoroughly, and use social media and crowdsourcing in appropriate ways, to protect herself or himself, the readers, viewers, and listeners, “I mean you have to couch things very, very carefully and being professional means knowing the difference [between good information and bad information]” (4.12). To establish yourself as a journalist with the role of authority who is professional means observing those procedures and principles learned in journalism school, “about what is considered to be good information [versus] you know can you use it. Yes, you can, but you had better know how to put it, so are you protecting yourself and your readers” (4.12).

Another journalist stated the role of authority for a journalist in social media required an understanding of the absolute importance of getting the facts right and sticking to journalism principles. She claimed that just one bad tweet, one that was not fully factual, was no different than a sentence in the lead of a report that wasn't factual. The result would be some kind of disciplinary meeting with the editor that could conclude with a disciplinary action, including termination. She said that she thought a reporter would “definitely need to sit down with her or his editor to talk about, why didn't you slow down' before tweeting out 'a really big error' and, what should be your journalistic sense to confirm that?” (12.9). She noted that in her news organization, when people tweet “something inappropriate” the whole newsroom gets a letter saying “watch what you tweet” (12.9). Reporters were reminded that they “have to maintain [their] standards, [that] everything [they] put out there on [their] Facebook [and] Twitter [pages]

represents [them] but [also] the [newspaper] or whatever news organization [they]’re with and it’s really important.” She said that reporters “have to stop and think a little bit longer than someone who’s not in that line of work” (12.9).

This kind of trust for the role of journalists as an authority is so important and so fragile. One journalist described an example about breaking news on Twitter about Governor Hickenlooper calling a special legislative session. She broke the story and tweeted it out, then several people called the governor’s spokesman to confirm her tweet. When he said yes, that built the kind of trust that can be invaluable for establishing that journalist as the expert, someone to be trusted (18.10).

As a result of this fragile trust, some journalists maintain a professional distance from the crowd on social media. They never confirm sources as Facebook friends and only use Facebook for work. One interviewee said, “I never [designate a source as a friend on Facebook] and the only time I ever [have] used it [was] for work” (5.4). Several journalists said that they have separate personal and professional Facebook pages in order to maintain professional distance (4.18). Another source said that maintaining professional distance and the role of the authority was a part of being in the vanguard for “making sure we’re putting out good, verified information on those platforms and that’s how we’ll maintain people need to have sources of getting reliable information. No matter where we put it, we need to be that source” (17.12).

The role of being the authority in the vanguard of reporting is at odds with citizens who might mask who they are and their agenda. One journalist gave an example of a contact she made on Twitter, a contact that seemed sketchy. She checked this person out through traditional offline methods of verifying people. Although he was who he claimed to be, there were facts that didn’t match up. As a result, she observed how journalists using social media and

crowdsourcing are especially skeptical of leads and tips from social media. She captured what many journalists feel in their view of crowdsourcing in social media.

Because we're that filter, we're that gateway to everything [that people] read on Twitter, whether it's fake news about a celebrity dying or breaking news or anything else. I know that [people] need to be able to trust me. If they lose that trust, what's to keep them from going [to] Twitter to follow their news or from going to the blogs or anything like that? I think that trust and that vetting process is what keeps a kind of a by-the-book journalist set apart from the everyday blogger (2.9).

As a different journalist noted, the best and most reliable way of checking out something or someone out is by talking to them (10.11). Otherwise journalists run the risk of passing along bad information. This is the tension that is palpable for journalists when they encounter new information that they can't easily verify. One journalist said, "you have to weigh the risk, asking questions like how important is the information? Is it worth the risk?" (9.36). That journalist described how in his use of information from the crowd, he weighs the quality of the information versus the risk of breaking that fragile trust, "[when] somebody was saying the seven year old involved in the pepper spray in Occupy Denver turned out not to be true, none of the news organizations ran with it, couldn't verify anything at all, so we didn't go with it. Finally, [I] ask how urgent is it?" (9.36).

Establishing the journalist as the role of the authority in social media is something that news organizations have identified as important. Some news organizations mandate that journalists use social media and crowdsourcing. For example, Digital First Media requires all journalists working for them to be "digital first, print second." This means embracing social

media and figuring out new ways to network, including crowdsourcing. Even though some journalists feel that it's not a mandate, they nonetheless follow this requirement. One journalist described how he didn't feel like it was a mandate, "Nobody from corporate said this is something you have to do, but we are now a part of Digital First Media," which "obviously" embraces "social media and figuring out new ways to network and [sharing] our stories and [finding] stories. Yeah, so we just decided to go all in and have all of our reporters make separate work Facebook pages and do the same with Twitter but it's by no means a mandate. Our newsroom decided it's something we need to do" (5.2).

Other journalists definitely understand the use of social media as a mandate. When one journalist was asked if news organizations were encouraging their journalists to establish their role in social media, this journalist replied, "Encouraging is the wrong word, [more] like forcing" (10.25). This journalist did not regard this as a "negative" task but "just a job requirement to use social media and to crowdsource through social media" because it was a way to "involve" and "talk to" the audience "in some way" (10.27).

Because news organizations are employing social media and crowdsourcing through social media as a job requirement, some newsrooms have to train staff on how to use social media. The *Denver Post* created courses called *Denver Post U*, where *Denver Post* journalists sign up for training on how to use Twitter and what things journalists should put up on Facebook. As one source noted, "Some people have worked here for a long time and are technically savvy and have been a reporter for 20 years or whatever, [but] that's not how they're used to doing things. [It] might seem intuitive, but it was required for some people to have the classes" (7.2).

Several reporters revealed how their editors and corporate administrators used periodic surveys to ensure their newsrooms were using social media frequently. These editors and administrators even tested them on their social media literacy. One recent survey required newsrooms staff to post links to their social media presence. Her fellow newsroom reporters thought they would be in trouble if they did not use social media or have a Twitter account, for example (15.19).

The drive to be social media proficient was evident in several reporters' descriptions of two competing organizational mandates. Digital First Media, the corporate owner of 75 daily and Sunday local newspapers nationally push the first mandate, called "Digital First, Print Second". Other newspapers owners push the second competing mandate, "Print First, Digital Second". However, depending on the owner, a particular newspaper might push forward a different mandate. For example, one reporter described how the *Longmont-Times Call*, a family-owned newspaper under the Lemans' communications corporation, pushed the "Print First" mandate, but when the newspaper was purchased by the "Digital First Media", the mandate changed to Digital First (16.11). According to these reporters, all of the top-level ownership changes have made it confusing in their newsrooms.

***Theme: Fluidity.***

The *fluidity* theme manifested in how other journalists described how they donned different roles in social media in order to relate to the crowd and use their help. It wasn't the case that these journalists eschewed their role of authority. Rather, for some journalists, Twitter and Facebook were informal casual media that encouraged journalists to shape personalities for themselves. These personalities were roles that gave depth to the journalist beyond one of just an

authority, fleshed out print journalists that were never possible before social media, and made them approachable.

*Celebrity.*

Journalists described how important it is to be fluid among different roles as needed. One role was *celebrity*. All of the journalists interviewed commented on the value of increased visibility that print journalists acquired as a celebrity when they were on social media. Print journalists were never visible and never celebrities, according to several reporters. Now, these “nerdy” print reporters are now “big celebrities” because they are on social media and because everyone follows them for their work and their personalities. One interviewee said, “Think about how insane that is. Print reporters were never celebrities. But now they are. I saw people bump into a guy at the beer fest and [said,] like, ‘Oh, I love your stuff.’ How do they even know what he looks like? He’s a writer, you know, why? Social media” (10.24). The audience is following the reporter because of the celebrity role, so everyone knows who is funny and has a dog. Most importantly, members of the audience see the reporter in pictures, videos, and social media posts. A reporter commented about how she tries to build her celebrity identity on social media. She had posted about dressing her dog up for Halloween and included photos to let her audience know that reporters are ordinary people. This work of constructing her identity has allowed her to relate with the multiplicity of identities in the crowd and find leads for stories. This resulted in finding out a lead on a costume contest (15.1).

This attention to social media has made some reporters well known inside and outside the newsroom. Within one newsroom, one reporter had been given the half-serious title, “Queen of Social Media,” which only echoed how reporters see their visibility within the regional media. Some media outlets “do formally recognize journalists for their social media prowess based on

their tweets” (18.1). The celebrity role visibility of a journalist can also result from journalists breaking news on social media outside of their beat but using the memes or hashtags from another beat. One legislative reporter chuckled at how she tweeted about the Denver Broncos playing in a football playoff game and used the hashtag broncos. Instantly she had new followers following her stories but she noticed after a few weeks this flocking pattern of followers stopped following, once they noticed her beat was the legislature and politics. Because not everyone moved on, she found that this technique of gaining visibility through the celebrity role had resulted in the growth of more followers.

*Exhibitionist.*

Another role was the *exhibitionist*. One reporter talked about how building this visible journalist presence involved sharing the process of newsgathering on social media, which provided a behind-the-scenes voyeuristic peek at how the reporter came up with the story idea or outtakes that didn't make the published story, in order to build her personality brand and raise her visibility: “I’ll, say, put a Facebook post with the story and indicate, ‘well “here’s how I came up with this story idea’ or, ‘here is an interesting side that didn’t make it into the story’—that kind of thing to kind of give my Facebook account some personality” (3.6). Other reporters have tweeted humorous observations, insights, or descriptions of things that they see or encounter on a daily basis as a blend of personal activity and work (6.2). The goal, according to one reporter, was to raise the visibility of the reporter and to make her or him as more than a byline and an actual person. That allowed the reporters to reach deeper into the crowd, interact with new and more different sources, and develop a quasi-interpersonal relationship with people in the crowd that would ultimately allow the journalist to consider them as future sources or resources because they would be more likely to talk and to share. Another goal, described by

several reporters, is the “live” feel that Twitter gives news, the sense that you there with the reporter watching news happen, which is very close to the same “live feeling” of being there with a reporter as in live television (13.6).

*Friend.*

A third role, *friend*, which is distinct from the role as an authority by closing the professional distance between the journalist and the crowd, can result in much closer interpersonal communication and relationships between the crowd and the journalist. One reporter described a situation in which she and her husband had gotten off work in Denver and were heading home to Westminster, when they hit a traffic jam from an overturned asphalt truck, which effectively closed the turnpike. Sitting in traffic, she thought maybe one of her followers might be in the area, so she tweeted on her personal account and on the *Times-Call* account, donning the “friend” role, noting that the exit ramp from I-25 to US36 was closed and that traffic was backed up on I-25. It was something that someone like a friend would do and reflected the interdependency of social ties. Within a few minutes she got a tweet from one of the librarians in the school district who followed her on social media. This person thanked her and reported that she was stuck in the same kind of traffic mess and didn’t know of an alternate route. The reporter exchanged direct messages with the librarian and helped her work through alternative directions to get back home to Longmont. For this reporter’s efforts, she received a tweet that said, “Thanks for letting me know. I really want to get home” (16.13).

Other examples of this role include how reporters described their followers updating them on their situation, such as during Hurricane Sandy. Interestingly, the formality of the telephone book and the business card has been replaced by Facebook and a hug and is now a part of the everyday means for journalists to help the many people they encounter everyday.

“Facebooking” or “Facebook me” is now standard protocol for journalists working out in the field trying to make themselves visible. One interviewee remarked, “People still ask for my business card, and I rarely bring it. I say, ‘Just Facebook me’” (10.29). And very frequently, the audience member does use Facebook to contact these journalists. Sometimes the audience has been part of a story and wants to connect with the journalist in meaningful interpersonal ways to see the reporter as both a celebrity and as an ordinary person. One reporter captured this idea well: “I’m the journalist [who] gets the hug at the end of every story...[bec]ause then later this person felt comfortable enough to Facebook friend you. They didn’t feel like you were a member of the media. They felt like you were just a cool person and then later on it might come in handy” (10.19).

*The expert.*

Another role is the expert, which is distinct from authority because the role allows the journalist to demonstrate his usefulness and experience with how journalism works for the crowd. (For example, confirming and verifying sources.) One journalist observed how people still look to journalists to verify facts. He gave the example of the social media platform, Reddit, versus the *Denver Post* newsroom. In this role, the crowd digs for information that journalists can verify. He observed how the power of 100 people in a *Denver Post* newsroom couldn’t simply match the power of thousands of people on social media platform like Reddit. He was impressed with what the crowd was able to find out and dig up. In fact, the crowd members didn’t care about verifying the information or where it was coming from or whether it was confirmed. They looked to the journalist to do that. One source said that it was “fascinating [that] it doesn’t actually have to be confirmed. They’re putting it out there and saying, ‘Okay,

community, confirm this for me.’ Sometimes things get knocked down, and they say, ‘no, this is not true.’” (9.19).

***Summary.***

As I have shown here with these two themes of authority and fluidity, journalists’ description of how they use crowdsourcing in social media has helped suggest an aspect about roles in crowdsourcing. Journalists’ descriptions seems to suggest that successful crowdsourcing is dependent on establishing trust and rapport with the crowd. In order to accomplish this trust and rapport, we saw there are two different approaches. In the *authority* theme, journalists establish a role professionally distant from the crowd, safeguarding the crowd’s fragile trust in journalists using crowdsourcing in social media. The *fluidity* theme described the second approach, where journalists don different roles as needed in order to get closer to the crowd, in order to establish a relationship to build a variety of different ways of establishing trust and rapport with the crowd.

**Process Element.**

For the process element, the two distinct themes are executing and dialogue. In the engineer’s perspective, executing reflects crowdsourcing as an obstacle to the process of managing and executing their work. This conceptualization contrasted with the bricoleur’s dialogue theme, in which crowdsourcing is an advantage to their work, because they were able to leverage the crowd as a part of the work process.

***Theme: Executing.***

Journalists described how their work has changed with the adoption of social media. When they were originally hired, they expected to work in a linear process of news gathering, writing, and filing stories, what I identify as a work process of *execution*. However, they soon

discovered with the adoption of social media and the use of crowdsourcing, this linear process of executing new stories has been disrupted with their relationship and work with social media and their audience. Many journalists described the work expectations for journalists as a constant non-linear process of newsgathering, tweeting, Facebook posting, and writing and filing stories. One reporter described her work coupled with social media, as “spinning plates” that should be spun as long as possible until some of them stop or “sometimes in the newsroom it’s appropriate for someone else to come and grab [a] plate” (12.25).

One reporter claimed that the reason for the “spinning plates” was due in part because of two relatively new demands put on newsrooms. One demand was limited staffing, because newspaper editors are struggling with balancing reduced staffing. The second demand was the increase in the expectations of their audience to interact and receive the news many different ways, through the newspaper website, and through different social media platforms. This reporter observed how her newsrooms tried to strike a balance between these two demands, but added her biggest fear was that this balance would fail and that the industry would forget to protect its workers from the demands of the job. She observed how her editors work hard to make sure she and her reporter colleagues aren’t overwhelmed, “The reporters look out for each other in that sense too. You ask, do you need help? I have 20 minutes, can I pull a court file for you? Can I do [a] search? That’s just the camaraderie you’ll find in any newsroom” (12.26).

The increase in demand from social media has revealed how much like live television news work is now. All the participants commented on how the spinning plates were so very much like live television, with reporters trying to cover a live situation with up-to-minute updates and tweets. The challenge from one reporter’s perspective is that it is very difficult to keeping both the spinning plate aloft and pay attention to what is being said or happening, taking

notes on everything that is happening, “tweeting out updates on a regular basis, and responding to questions from the crowd of people hanging on your tweet”(1.23).

For some reporters, the spinning plates represented just so much extra work to execute. When a big story breaks, as in the big fires and the unprecedented presidential visits, there was a lot of activity on social media that was almost completely consuming. The problem, according to one reporter, was all of that was extra work because at the end of the day, they still had to do file a story for the newspaper. One journalist remarked that “when the president was here a couple weeks ago, that was another big deal where I wasn’t covering the event but sitting, watching Twitter, listening to the police scanner, and actually tweeting some of the information I was hearing on the police scanner. It was an interesting experience. Then, of course, at the end of the day, we’re sitting there going, ‘Okay, what’s going to go in the paper tomorrow?’ What was going to actually be produced? So that’s another side of the social media you see. It’s interesting to the people who use it, but we still have to do what we traditionally do, so it’s more work” (1.25). This was a new change for news reporters and pushed them to always be alert. As a result, for some reporters interviewed, social media was noise or interference to the real work of journalism. One said, “It’s such a time suck. I just get drawn into it, and before I know it, I have been looking at stuff [social media] for an hour and haven’t accomplished anything [that] I am actually supposed to be doing. Facebook is the same way, so I actually have to turn [the social media] off sometimes just so I can do what I supposed to be doing which is producing stories, writing copy” (1.24).

All of the reporters talked about the new reality that the work of journalism has sped up. Journalism just is faster because of the rapid ways that the news and information come into the newsroom through social media. As one source said, “Reporters are still expected to carry the

burden of the principles of journalism while understanding and making sense of that news and information at a much faster pace” (16.4). Before social media, there were more journalists in the newsroom; journalists had more time to write and fewer stories to cover. Now the work is keeping those plates aloft by spinning them faster. In the end, many reporters felt the pressure of keeping those plates spinning, especially since they must fulfill expectations that are exacerbated by smaller staff, additional duties, and constant, never-ending deadlines. One reporter summed it up nicely. She said that she used to be a writer with “daily deadlines,” but now she has “constant deadlines” (4.3).

***Theme: Dialogue.***

The *dialogue* theme emerged from a perspective of social media as a dialogue with an audience that can help journalists with their work. So although on the surface social media seems like more work, the *process* of doing work has shifted from balancing the spinning plates to higher processes of engaging, cultivating, and organizing their audience to help as a resource. Without this change in perspective, the reporters commented that they would feel that they are pulled in many different directions.

One reporter described how he sees the crowd on social media as a goldmine of resources. By engaging with the crowd members with their public status updates, he can consider possible story ideas. He checks frequently over the course of a day, testing to see if someone forgot to post something private and if it was public, it could result in a story lead or stories. This journalist said, “A lot of sifting through social media is sifting through the junk and finding the good stuff. It’s like going on a gold mine.” (9.6). Often this required engaging with the audience and retweeting out valuable information: “The whole point of this account is to retweet

not only stuff from our own staffers but other people who might be giving valuable information” (9.31).

The value of digging in this gold mine, and engaging in a dialogue with these resources is the unexpected breaks. A reporter recalled an example of a journalist covering a robbery of a RadioShack store in Denver. The situation escalated to a six-hour hostage situation when the cops surrounded the store and called in the SWAT team. Local media picked up the breaking news story and sent reporters to the scene. These reporters followed the standard approaches for covering such a news event. Of course, there was not much to report. The cops had established a perimeter and were not talking to the media. One reporter back in the newsroom, a social media native, suggested the unconventional approach of finding out the name of the suspect and making him a friend on Facebook. The newsroom shifted focus and turned to what seemed to be the daunting task of doing research in the social media by asking the crowd for help on Twitter and Facebook. Within an hour of the six-hour standoff, the reporters sent the suspect a request to be a Facebook friend. As the reporter recounted, “What the heck, this guy, one of the suspects, let me try to friend him on Facebook” (9-1-5). The extraordinary fact was that this suspect accepted this request inside the RadioShack store, with a gun to the manager’s head, while surrounded by the SWAT Team and reporters outside. Even more incredible, to verify who he said he was, the suspect made his hostage take a picture of him in the store. The newspaper suddenly had a bonanza of a story” (9-1-5).

Several reporters described how they write what they know through the process of newsgathering and engaging with available resources. They aren’t waiting for the end of the day to write for tomorrow’s paper. With fresh information coming through social media from the crowd, the reporter has actually lightened the traditional principled burden of getting the facts

straight the first time. By writing what she or he knows and then revising later, the story becomes a process of dialogue by engaging with social media sources, revising, and reposting. One reporter described how a reporter writes what she or he knows, and then rewrites and reposts and reposts in similar fashion to the wire service model, spinning plates until she or he moves onto to another story. For example, the Associated Press story on Hurricane Sandy story in the *Times* was rewritten 41 times, which the wire service has always done, but now every newspaper has to operate this way “because you’re not writing for tomorrow’s paper, you’re writing for right now” (16.8-9). Sometimes, when time or resources are unavailable for a full story, reporters just turn to social media and “just tweet it” (8.3). In this way, this process draws the audience in and engages them in a dialogue with the story. They are interested because they can see the story taking form and being shaped over the course of a breaking news situation. Reporters observed how their audiences are so hungry for information that they don’t care when they get it or in what order. Any information was really ok for reporters to “blast” their social media feed three times in an hour when they have information (hopefully that is important). As one reporter described it, “Twitter, we usually put out like between 3 and 6 posts an hour, which for a lot of people is a lot, but you know Twitter for a lot of people who are news junkies who follow this kind of things, that’s okay” (9.29). Of course, the result is that this information is not very polished. Another reporter used to only put polished stories out on social media, but now she puts everything out there on social media immediately for the newspaper, driven by the pressure from the crowd: “I want that to be out there immediately for the newspaper. For my followers I prefer that they just saw the more polished version that I put out later after that. But it’s something that I kind of feel that I have to do” (10.21).

Another journalist thought that the value of this process of engaging with the crowd was to make journalists better at their job. They could sharpen their focus with the constant flow, work to discover new opportunities that would extend the story and make it better. She said, I'm always looking for the [angle] of that story I thought I was done with at 10:00 yesterday morning. Do they have something new? And I think it's taken the news flow, which you're right, it used to be, 'here's your assignment,' [then] you report, write, file, [and] you're done. It's not like that [now]. It's your news flow. It's a stream. I mean, it's constant. You're updating it. I will update an online story umpteen times throughout the day, even if it's just changing the tense. I mean, I'll update a weather story six times in a day. (12.24)

In the past, reporters were limited to conventional methods of reporting. As one reporter described how, when someone was arrested, she used to have to wait to find out the criminal history, or for the police report to see who was there and who to talk to. Now, with social media and journalists' ready access to the crowd, reporters can find it all on Facebook. As one reporter said,

You knew [that] if was 6 o'clock and somebody got arrested, you couldn't find out the criminal history. Now it's all on the Internet. You can do all sorts of background research through Facebook and all sorts of things. Criminal histories are all on the Internet so you have to have information right then. You [don't need to] wait until the next day to do it. (16.6)

The descriptions of this new process seem to indicate that it is changing newsrooms. As recent as the Old Stage Fire in 2009, reporters described how journalists were concerned with updating the webpage with fresh content, not the social media. News organizations would have reporters calling into the office to coordinate with other editors and reporters to update the

website. As one source noted, “Even stuff, like with the Old Stage Fire... there was [a reporter] on scene who was calling into the office and to update the webpage. We didn’t have Twitter, and I don’t think we had Facebook even then” (16.7). Social media has changed journalists’ work practices. Now, journalists put the situation up on the website, on Facebook, on Twitter from the scene, which has resulted in all this extra work to get stories updated as quickly as possible. One reporter commented: “These extra steps, there’s a lot of extra work to keep these sites up to date. You’re re-writing constantly, and you’re posting, and you’re reposting” (16.7). In some cases, two reporters are assigned to the field, so one could tweet and other could do the work of journalism. “We often staffed two reporters to one so one could tweet and the other could really pay attention, take notes, watch what else is going on so that that information was getting out really quickly” (17.5).

This level of demand for the reporters’ attention both on social media and on the developing story, requires reporters to often step back to organize and delegate the crowd. One reporter talked about the importance of stepping back and looking a situation from at a bird’s eye view. He described how crucial organizing and delegating in the newsroom was to controlling the spinning plates. In many ways it was more important to be back in the newsroom taking an overview of the spinning plates.

You need to be out in the field of course, but you also need to be back in the newsroom, organizing, understanding, synthesizing, looking at the bird’s eye view... Someone has to be there to pull it all together. If I’m the editor in the newsroom, and I’m doing work, you can’t constantly be watching Twitter and other social media. I’ve tried it. You get so far, but you can’t possibly watch everything. (9.20)

One large advantage to tapping into social media is the new reporters' notebook, the smartphone, which makes newsgathering tools readily available at hand. For many reporters, the smartphone was also the virtual newsroom, where work was accomplished because that phone allows interacting with fellow reporters and audience members on Twitter, which could keep the spinning plates aloft. Everything in a smart phone was there, right at a reporter's fingertips. One reporter described how important the smartphone was with a funny anecdote. She was covering a protest, and the only spot she found that had cellphone data coverage so she could coordinate all her functions and have a bird's eye view of the protest and of the online crowd on social media, was to stand on top of a porta-potty to get a signal. This worked very well until she had to sit with other reporters in a press conference later that day, and no one would sit by her (because of the smell she had acquired from the porta-potty). This reporter keeps her smartphone running Twitter when she goes to sleep, so when she wakes up, she can quickly get the updates that she needs. Her smart phone also allows her to post multiple updates as often as she needs to do that. She said, "The smart phone is an awesome thing in journalism. I can move fast[, and] I've got everything at my fingertips[, even when I go home at night[,]] so I always on twitter, I am always on email, I wake up and I look at Twitter" (12.23).

Having the crowd available at your fingertips means reporters are also more aware of who their audiences are, and frequently cultivating them as friends and potential resources. One reporter described how the process has changed with engaging in friendships with her crowd.

I interact with my followers on Facebook a lot[, ] and often they're people who aren't in media and follow my work[, so] they'll be very honest and be like, why didn't you report this or why does your article go this way and I'll write them back, here are the facts and my email and my direct phone line. (12.14)

She saw it as important to act as a human being [because] maybe later that friendship will come in handy:

It's helpful to go and act like a human being when you're on a story. [Bec]ause then later, then yeah you're on Facebook, this person felt comfortable enough to Facebook friend you. They didn't feel like you were a member of the media. They felt like you were just a cool person and then later on it might come in handy. (10.19)

She would write them every once in a while on Facebook, and ask, "hey, what's going on in your life right now, remember when we talked about this, what do you have going on right now?" (10.14). Sometimes, this process meant cultivating relationships with the crowd, starting with going to memorials for those news stories that were tragic and viewing the crowd not as a faceless mob, but as people. "I would go out to the memorial at night and that's when all the family members would go. And I would just go hang out there and so that's kind of what I did. I did a lot of stories on family member and less of the crime aspect of it and more of the other side, the family members, the victims" (10.16). This was especially evident during the Aurora Theatre shooting. This reporter messaged the family member through Facebook and asked for help: "I ask them for help all the time. Especially again, the Aurora shooting thing, I met a lot of people on that, and I [friended them on] Facebook or they [did the same with me]"(10.15).

These contacts might start with sharing coffee. Several reporters cultivate their crowd by inviting them out for coffee informally, telling their crowd, "hey, I'm over having coffee, stop by with story ideas" (15.15). From those coffee sessions, friendship develops, "A lot of them become friends after we've met face to face. I'll talk to them as a source for a story, and then they'll either find me or I'll find them, and we'll become friends that way" (13.9). One reporter made it a point to always respond to Twitter messages from her crowd and to make it a point to

cultivate her crowd by working in the community and announce her community presence informally online once a week. She created a sub-group of her crowd, which she called her advisory board. She met with them weekly for story ideas, and tips. Instead of working from a newsroom, she made it a point to “embed” herself in her crowd, learn what resources and what opportunities were available. (8.10). Using social media to accomplish was the main reason why she used Twitter: “community engagement and connection” (8.4).

***Summary.***

As I have shown here with these two themes of executing and dialogue, journalists’ description of how they use crowdsourcing in social media has helped indicate, that there might be a shift in process from executing to dialogue as crowdsourcing scales up. As the executing theme surfaced, executing crowdsourcing as it scales is difficult because of the demands of the crowd on one person, and as a result, requires a different level of process by the journalist. The executing theme talked about the demands on the journalist to keep the spinning plates in the air. Therefore after a certain point with frequent crowdsourcing, there has to be a shift is to higher level of management level of work process, engaging, cultivating, and organizing and delegating the crowd to work for them.

**Outcome Element.**

For the fourth element, journalists gave two distinct themes of how they viewed social media outcome - solution and repertoire - that followed the engineer and the bricoleur’s approach to viewing the world. The solution theme described a view of crowdsourcing that was a planned solution. While, the repertoire theme described the view of journalists finding a solution through the process of assembling the crowd as a stock of resources.

***Theme: Solution.***

The *solution* theme reflected a view of crowdsourcing as a solution that was planned and designed. Journalists enlisted their audience into specific, structured crowdsourcing tasks, such as a focus group to watch the first presidential debate. One source described how they setup an online forum to gather responses from voters watching the recent presidential debate.

We used a Google forum. We were looking for 20 undecided voters to watch the first presidential debate in our newsroom on a TV... When we showed this all on social networks...and we got 297 responses for like 12 slots. We had lots of people to choose from. (9.33)

Other examples of specific structured crowdsourcing solutions included finding leads on sources, updates on stories, and specific data collection. With the Aurora Theatre shooting, journalists described how they enlisted their local crowd for specific tasks in order to gain an “on the ground local perspective” at the theatre over national media outlets, whereas national media outlets were “parachuting in reporters” and trying to gain a perspective on the ground at the theatre. Crowdsourcing provided an incredible advantage because he and his newsroom had the best information, far ahead of the pack of other journalists. People, who had never before tweeted, started working with him, tweeting that day and providing valuable information.

***Theme: Repertoire.***

In the *repertoire* theme, the crowd is a repertoire – a stock of resource elements or puzzle pieces –collected in anticipation that they might fit together and become useful in the future. The repertoire theme emerged far more often than the solution theme. Since the crowd might come in useful, journalists have to view the crowd not as a solution but as part of a repertoire when confronted with a problem. What resources can an audience offer? One journalist described this practice very well by identifying the audience as both a puzzle and a well of information, that if

she figured out how the puzzle pieces went together, she could solve the puzzle and release a well of information (8.11). Journalists take stock of their audience and assemble the puzzle pieces in different ways depending on the problem.

This process involves people in many different ways. I identified 5 distinct ways members of the crowd can be a resource: “the Mavens,” who answer questions; “the Creatives” those people who are story idea generators, “the Connectors,” the observers, readers, plus groups of people, who connect reporters with sources; “the Swarm,” who search for information on broad unstructured tasks, usually around enormous data sets produced during disasters and big news stories; and “the Curators,” who curate the news chatter.

Journalists enlisted some of their audience members as Mavens. These members sought to answer questions. The journalist assembled a knowledge base of mavens, or “experts,” who were people whom they could ask when they had a question. The kinds of questions ranged in type. As one reporter noted, these experts could help, “when we have a question ... [that] we can’t answer by ourselves [but] have the resources, the sources, [or] the connections” (5.10). This journalist also noted that this is often used “to see if that’s a story that people are even interested in. You know if you put it out there, and you don’t get any response, you know that people aren’t super jazzed about it and maybe you shouldn’t be writing it” (5.10). Other questions performed the role of a litmus test. As one reporter described, to her it was really about a focus group of experts testing her ideas, “to me it’s almost like a forum of sometimes taking the thoughts and hypotheses that I have about what I think is going on in my beat and putting it to the test. It is kind of my scientific method that I use, I guess” (2.3). One reporter was at a debate and found it easy to ask her audience, about the meaning of a word. This journalist said:

I was at a debate, and I think the word was sequestered or sequestration. They kept talking about sequestration, and finally I tweeted, what is sequestration. Several people tweeted back; this is when all these tax things go into effect January 1<sup>st</sup>. I guess I could have looked it up [be]cause I had my laptop with me, but ... it was just easier [be]cause I was on Twitter to say you know what is this and have people explain it to me. (18.17)

Journalists enlisted some of their audience members as “Creatives”. These journalists described how they used their audience to generate creative ideas for the newsgathering process. One reporter described how she shaped her audience into an idea generator of creative people: “They like pitching stories to me on Facebook” (10.5). Another reporter said;

If you’re just engaging them in conversation, all I’ve ever use that for is to generate ideas. For instance, if people are commenting on stories, sometimes you can find holes, like if they want to know something that you didn’t report on. The other day I did a story on disputes between bicyclists and motorists on the road, and one of the things I realized in the initial coverage of the incident that sort of triggered this story was that people had questions about the law and what was okay and what wasn’t. You know, [if I heard] ideas about what was okay and what wasn’t, I would put in a little effort to answer the questions on that story. You know [that] by going to real sources. (4.16)

Another reporter noted,

I’m a very big believer in not just turning on one method of finding things, so I’d say some of the stories come from my own observations on my community. I’ve had quite a few instances, particularly during the big fire we had up here, the High Park fire, where I would just say, ‘Hey, are we missing something besides how fast this fires growing and how many people there are? Are there stories we should know?’ We actually ended up

getting quite a few responses to questions like that and stories that. There's no way I would have ever known about things going on our community if people hadn't seen that.

(2.4)

For "Connectors", journalists used their audience's base tendency to connect socially in order to connect to sources. For example, a journalist might ask healthcare people in their social media network for sources. As one reporter described, "I see nothing wrong with asking followers if they know someone who might be a good person to interview for a story" (8.11). Obviously, asking for sources is one of the principles of journalism. What is different here is that the practice has changed and evolved, given the scale and intimacy of social media. Everyone in social media is connected. A reporter looking for available resources can ask Twitter followers or Facebook friends and will easily penetrate deeper into the layers and web of matrices of social connections. The audience here has been deconstructed into the means of connecting and laying bare the connections of its social world. The journalist is free to select (even to gorge) from this exposed rich buffet of sources and resources and to create an understanding of individuals who have been illuminated by the news spotlight.

A key part of using the audience as Connectors is cultivation. Several reporters described how they made sure to cultivate relationships with their audience through Facebook, knowing of the potential benefit to the news organization. "I'll send a private Facebook message to a this or that source and Facebook friends ... because they know something or they know someone or have a story to tell about something" (11.7). This involved going to events that emerged out of news coverage of a crime, such as a memorial, and meeting the family members and taking stock of who was there, who knew of other people involved, and then doing stories on these people with whom their audience connected them. Later, these journalists often stay in touch with their

audience, writing them every once in a while on Facebook, to reconnect and see what they are up to. These reporters described how useful these cultivated connectors were to the news-gathering process: “It’s useful and then you build up an audience and you become more comfortable [with them] and once people feel more comfortable around you they’re more likely to give you news tips” (13.10). A few reporters described attempts to cultivate these relationships off-line for coffee.

Often the audience just has an incredible reach that can connect reporters to sources far beyond what is possible for a reporter chasing a story with a deadline. In one case, a reporter described how she was looking for a source that had experience as a child abuse caseworker. She turned to her audience through the Facebook network and connected with a woman who had been a child abuse caseworker. The interview was great because this woman went into depth about how hard this job was, how she had ended up quitting her job, and how much she was paid. This reporter commented about how different this was to calling child welfare services department and asking, “Can I talk to one of your case workers about how hard their job is?” This reporter said, “I mean, doing it that way, [people] tend to give you [someone who] is going to say the most positive things you know maybe that’s not what you’re looking for, so it worked out well” (7.14).

At times, journalists use their audience as individual information-gathering worker bees or locusts, assembled into the “Swarm”, a super organism singularly hungering for information and the big story. One reporter described the speed and power of 100 dedicated journalists in a newsroom being unable to scale to match, as a resource, the incredible power of thousands of audience members transformed into a newsgathering swarm. “Their ability to find things as an aggregate community is always [going to] be more powerful than 100, [or] 200 [reporters]...

there's no way that we can match the scheme and scale of this" (9.19). Some stories, like large disasters, which are so big and the amount of work so much, [reveal that] the swarm's power is very evident with the singular focused purpose of covering the story. When wild fire came over the ridge in Colorado Springs, everyone from journalists to the crowd pitched in to cover the story, take pictures, and share what they knew on social media. One reporter remembered how the crowd grew from local residents to regional, national, and international participants. People as far away as New York City and Europe were asking questions, following the play-by-play, trying to make sense of what was happening in Colorado Springs (11.14).

The newsgathering process for the swarm is so effective and efficient in producing so much information, always with insatiable hunger of locusts, that they don't care where the information is as long as they can collect it. It does not have to be confirmed or verified. One journalist that it was "fascinating" because the information did not "actually have to be confirmed," that the crowd provided it and said, "'okay, community, confirm this for me,' and sometimes things get knocked down and they say, 'no this is not true'" (9.19). As a result, the journalist's role is to organize and verify all of the information for the swarm.

The value of it is to curate or aggregate through that stuff and find the good stuff and put it off and publish it like this. That is where the value really comes in. I talk about that there's so much imagery, so much tweets, Facebook posts like everything, you can bring value back to the public if you're editing that stuff, putting the best stuff out there. (9.14)

This journalist noted that tweets and press releases could include information such as "a full list of the addresses for damaged homes," even though the news organizations would not "necessarily publish in full in a story," but provide "powerful pictures" (9.14).

What was interesting was the unexpected power of the swarm overwhelming the newsroom and flipping the crowdsourcing dynamic back and forth, so that in some instances, the crowd seemed to be “crowdsourcing” work to the news reporters. For example, many of the reporters described how their audience would report an accident and ask the reporters to check it out. One journalist said the crowd would say, “Hey, you know there’s an accident near this intersection. I see smoke or hey there were lots of fire engines, so then, he would cover it”(6.4). This journalist said she would start making calls and looking into it, because people were seeing something.

A “pandemonium” is a flock of wild parrots. The word also means a noisy, chaotic din, which is what a flock of wild parrots would sound like and which is what social media “sounds” like. For journalists, “Curators” help filter through this chaos, acting as a truth filtration systems for the journalist.

Since journalists sometimes can’t verify the information directly or immediately, journalists report what they hear and ask their audience to verify. As one journalist commented, “We as a news organization have a responsibility to pass on accurate information as best we can. I’m saying personally, ‘Hey, we’re hearing this on Twitter, can anybody verify this?’ But we’re putting it out there, saying, ‘We don’t have this confirmed, can somebody call us?’” (9.35). As a result, reporters update what they know and what they confirm based on the evolving process of discerning what is fact over the course of the coverage (4.9). Reporters described how they will search Twitter to see if they confirm the news: “I will [research Twitter], if you know I see something that looks like, if I think something’s going on, I’ll search to see if anyone else is talking about it” (6.15).

People with the best intentions want to help journalists find their way by reporting and repeating what they hear or know or retweeting with comments. The reporters were very skeptical of their crowd but used the information as a means of making sense of what was happening on the ground. The reporters described how the information might not be totally accurate because reposts were from people who are not reporters after all.

I think people [will] tweet what they see and that might not necessarily be 100% accurate as to what the big picture about what's really going on" (5.15). Or report what they think is accurate: Well, somebody will report on their first day that "hundreds are laid off, and it turns out to be less than a dozen. (14.9)

Obviously, there are instances of audience members without the best intentions who have agendas or who want to pull hoaxes on journalists.

I mean that is a huge concern because obviously there are trolls; people can say or do whatever they want on a social media. Just because you have a Facebook page doesn't mean everything on it is accurate. So, yeah, I think we take it with a grain of salt. (5.11)

Although the reporters were skeptical, parts were accurate and could help reporters make their way through the fog of social media based on the curated information from this bricolage.

### ***Summary.***

As I have shown here with these two themes of solution and repertoire, journalists' description of how they use crowdsourcing in social media has helped suggest three aspects about crowdsourcing. First, the solution theme helped corroborate the general understanding that crowdsourcing in social media is used as a solution for journalists to gather information from the crowd. Second, the repertoire theme show that crowdsourcing in social media is also used by journalists as a means of organizing the crowd into a stock of assemblages, a repertoire, for

doing crowdsourcing. Third, the repertoire theme shows that crowds can self-organize around events independent of journalists organizing them.

### **Profiles of the Journalists**

It is important to note that all of the journalists shared aspects of ‘engineer’ and ‘bricoleur’ depending on the crowdsourcing situation and their use of social media. The respondents’ descriptions divided the journalists into four profiles that revealed whether the engineer or bricoleur aspects were dominant traits, or whether they were some hybrid, which had a tendency to tilt toward engineer or bricoleur depending on the surfacing of their organizational role in the crowdsourcing process. Those two dominant trait profiles of journalists were the “social media natives” – those journalists who were clearly bricoleurs who felt comfortable crowdsourcing on social media, and who employed a bricolage strategies with a multiplicity of practices and perspectives for covering a news event—and “social media visitors” – those journalists who were clearly engineers and felt pressured by the organization mandate to use social media. The two hybrid profiles were the “social media immigrants” - those journalists who exhibited both engineer and bricoleur aspects but had the tendency to tilt to the engineer- and the hybrid “social media residents” – those journalists who exhibited both engineer and bricoleur aspects but had the tendency to tilt to the bricoleur.

#### **Social Media Natives.**

Many of the reporters in the “social media natives” group felt comfortable using social media. They understood the value of social media and used it to seek out opportunities for pursuing stories. An informative quotation from one social media native reporter described the social media, particularly Twitter as “the frontpage of my newspaper” and “absolutely the most important tool in journalism” (9-1a). These reporters felt secure in engaging with Twitter for a

variety of reasons. Their primary reason was because they saw it as the “next step,” simply another tool that has come along with the “change is normal” mantra of online communication (6.1). They quickly had seen the benefits of social media. They understood the value of establishing themselves as an authority with a social media presence could turn into actual page views for their stories, plus improve the ability and ease of communicating and interacting with the crowd.

Most of the social media native reporters commented that many other reporters in their newsrooms were not comfortable right now with social media but that they saw the progress as more and more reporters became acclimated to this new environment and the new ways of doing journalism. These social media natives might try conventional and unconventional approaches to verify sources. One of the clearest examples of this is the role of the telephone. For older generation journalists, the telephone was the gold standard for accomplishing journalism work, such as interviewing sources and verifying information. Of course, in-person interviews would be considered even better, but in-person interviews also seemed rare.

When this newer generation of journalists try to use the telephone, they might find that very difficult to do because cellphones are usually not included in a telephone directory. It is actually really hard to discover the telephone numbers to call people. As a result, this new generation of journalists pursues social media platforms, either Twitter or Facebook. What was revealing was that while they often would have a purpose in mind as they pursued a source, they often did not know what they would find when that contact was a member of the audience. So they have improvised and constructed a variety of different techniques and strategies to gain access to that source.

### **Social Media Immigrants.**

The journalists in the “social media immigrants” group felt mostly comfortable using social media. These journalists exhibited both engineer and bricoleur aspects but had the tendency to tilt to the engineer depending on the surfacing of their organizational role in the crowdsourcing process. As one reporter described, she was relatively new to social media but had grown comfortable on Facebook and Twitter crowdsourcing. She found them really useful environments for finding sources and story leads, and understood the ways of speaking and working in these environments. But she and other journalists balanced this usefulness with the kind of wariness that an outsider, an immigrant, has in their newfound country. This kind of wariness surfaced with the recognition that she was a journalist and had a role to perform. She described how she was always calculating, gauging how mentally stable people were online, or the quality of the story leads that people would offer. She always erred on the side of caution.

I always gauge particularly on Facebook and also on twitter... How mentally stable someone is, if it's something that you know even seems a little bit off then is absolutely critical to my story I usually air on the side of caution when it comes to it because we have a really high quality as journalists and it's a completely different age and I know that I was trained in a completely different way than [older reporters]. (2.9)

Another reporter considered how she leveraged this wariness by using it as a preliminary step to sketching out a direction for her to pursue a more coherent designed step in the newsgathering process. “It can be something kind of vague that gives me an idea of something to look into, have some direction for what I want to look into when I talk to say law enforcement [for example]” (3.10). This group clearly described how it was so important to learn the language and customs of crowdsourcing in social media,. Yet, they never seemed at home on social

media, always surfacing the importance of imposing the journalists' organizational role for building trust and the gateway for filtering on the crowdsourcing process (2.9).

### **Social Media Residents.**

The journalists in the "social media residents" group felt more comfortable using social media. These journalists exhibited both engineer and bricoleur aspects but had the tendency to tilt to the bricoleur depending on the surfacing of their organizational role in the crowdsourcing process. Further, these journalists recognized their organizational role was still important and widely viewed as important by their audience for trying to discern what was true. But, these journalists didn't cling to the aspects of engineer. They recognized that when their organizational role surfaced, they didn't need to be wary of the people in the social media environments. Instead they understood that depending on the crowdsourcing situation they could trust their neighbors. That somehow the crowd would help them create the filter, the gateway for the best news. As one reporter described, social media has changed everything and given the crowd agency. It used to be the case, if there was a tragedy, the people affected by the tragedy would have to beg the newspapers and the TV stations, to print or broadcast the news about setting up a fund for those affected by the tragedy. Now, people create their own fund and tweet it out themselves. "Then the press would see that and they'd try to get a hold of that person so it's been Twitters really changed the way you cover things" (18.16)

Other reporters in this group described how they balanced their organizational role with the relationships they fostered online. So when a woman needed help finding her way home through a traffic jam, one journalist described how she helped her using social media, because of their relationship. (16.13). This kind of interaction helps journalists stay connected and relevant to their readership. (15.18).

Another reporter talked about the importance of recognizing that people had the means of helping journalists with their job. They are equipped with smartphones with cameras and a connection to social media. “We can rely on the fact that if something’s going on they’re going to tweet about it” (17.4). Leveraging this kind of resource is critical to modern day journalism. Sure, one reporter noted that the quality may not be the best. But, he pointed out that focusing on just the quality misses the point. This reporter gave the example of Zapruder’s recording of the JFK assassination. He was there and got the footage, nothing else matters. (11.12). Therefore, this group of reporters understands that they are not giving up anything by trusting the crowd. They are at home on social media, always surfacing their role for helping and leveraging the crowd in the crowdsourcing process.

### **Social Media Visitors.**

For the last group, social media visitors, one of the most descriptive quotations of this concept came from one of the many phone call attempts to journalists at different newspapers. When I asked this reporter if she would like to be interviewed for a research study examining how journalists use social media, she responded, “Social Media? No! We’re a newspaper,” and declined to be interviewed. This sentiment echoed with many of the reporters whom I interviewed and who disclosed the heavy encouragement from the news organization for adopting social media. This heavy encouragement of journalists to use social media was clear to many reporters. One interviewee said that he used Twitter at first “because they told me to,” although now he used it “a lot more” and is “getting more used to it and more comfortable with it,” sending about 3 tweets a day” (7.4). Other reporters noted how, at any news organization now, social media is a job requirement. “With any news organization I know, whether it be print or broadcast, it is a job requirement. You have to be involved in social media. You have to

involve the audience on social media, in some way. You have to involve your audience; you have to be able to talk to your audience” (10.27).

An older reporter reflected on how his newspaper was one of the first to go online in Colorado and how the demands of the industry and the pace has only seemed to increase with the passage of time. He worried about the difficulties of trying to keep pace and falling behind, resigning himself to the mandate, the imperative, to keep up. “I move kind [of] slow[ly]. [I’ve been] slow to [use] Facebook [and] Twitter, but I think with the demands of the industry, we have to keep up with these kinds of things, all these other platforms as we call them now” (1.22).

One reporter described how it threatened his role as an authority and found it frustrating to use social media and saw it as shouting into a hole. “I don’t use it as much as other reporters here use it. I find it frankly kinda like shouting in a hole. Nothing comes back” (1.3). Another reporter reflected on the danger of losing the off-the-cuff quotations, which is a lost art in journalism, to “carefully worded quotations from social media” (19.12). That source said, “I feel that ‘speaking is becoming kind of a lost art in journalism, as is getting people that are off the cuff as opposed to those who are prepared ‘canned quotes’” (19.12).

## CHAPTER V

### CONCLUSIONS

This dissertation examined the blurring borderline between professionals and amateurs. Specifically, I studied the online phenomenon of crowdsourcing, where professionals who need help with their work enlist crowds of amateurs. Given the size and diversity of the crowd, crowdsourcing has become an effective strategy to do work, even overcoming the crowd's innate deficiency of formal training. Using the crowd is also cheap. As Howe (2006a) observed, organizations in pursuit of cheap labor are often the ones working to help blur the distinction between professionals and amateurs. One of the keys to understanding the blurring borderline is pointing out the current research focus on crowdsourcing as 'outsourcing', which privileges an organizational top-down view of crowdsourcing as a strategic process. This raises the question of how do professionals using crowdsourcing understand and make sense of the process. The industry where crowdsourcing has had arguably the biggest impact is journalism. Journalists enlist and use the crowd as a part of their daily work practices, because the crowd shares the journalists' interest in the daily news and events.

This study examined how journalists as professionals describe using crowdsourcing for two purposes: first, in order to better understand crowdsourcing as a new organizational communication phenomenon and, second, to discover if our theories of crowdsourcing need to be expanded and revised to incorporate a different perspective. My aim is to offer a more comprehensive and inclusive theory of crowdsourcing that demonstrates its connection to organizing and its implications for journalism in particular. The themes I uncovered from journalists' descriptions of how they enlist and use crowdsourcing in social media revealed that the crowdsourcing as an organizational communication phenomenon is more complicated than

what current research understands it to be. In this chapter, I will summarize the study, interpret my findings, develop a theory based on these findings, describe the limitations of the study, and offer suggestions for future research.

### **Summary of the Study**

A primary objective of this study was to formulate a theory of crowdsourcing derived from my analysis of eight themes drawn from journalists' descriptions of how they enlist and use crowdsourcing.

Weick's (1993) lens of the engineer and the bricoleur provided a heuristic for studying the crowdsourcing phenomenon. This heuristic provided differences between the engineer and the bricoleur in four distinct areas: the difference between raw materials and existing resources, the difference in roles, the difference between executing and dialogue, the difference between designing a solution and organizing a solution. The heuristic maps well onto the current research on crowdsourcing, revealing a clear distinction between viewing crowdsourcing as outsourcing and crowdsourcing as something that was not outsourcing. A primary motivation for this study, then, was to help explain these two views based on listening to professionals describe how they enlist or use crowdsourcing to help in their work.

I crafted a research study that used semi-structured in depth interviews to listen to how journalists describe using social media. Since social media is the primary way that journalists and audience participate in the crowdsourcing relationship, I was curious how they used social media in their work as a way of gaining insights into how they enlist crowdsourcing. The interview questions asked participants to discuss how they used social media as a part of their journalism work and newsgathering. The questions also inquired about stories initiated from social media, the process of verifying facts gathered from social media, and the ways that these

journalists interacted with followers online and/or offline. Other questions sought to understand whether the journalists asked questions or queries for help on social media, and what was the typical reaction when they posed question to their social media friends and followers.

After the interviews phase of the study was completed, I transcribed the interviews. Then I proceeded to code the interviews, employed the six phases of thematic analysis: becoming familiar with the data, generating initial codes, searching for themes among the codes, reviewing themes, defining and naming themes, and finally producing my findings. When all the data had been coded and analyzed, I had generated categories that helped to explain how journalists enlisted and used crowdsourcing. The prominent themes from these interviews then were organized into the framework's four elements: the World, the Process, Roles, and Outcome. The following section briefly summarizes the themes that emerged.

## **Interpretation of Findings**

### **World Element.**

It is helpful to review the *world* element as a component of the heuristic's framework. For this first element, the engineer approaches *the world* as containing raw materials. The world is a place for creating resources (systems and solutions to problems) by securing and processing raw materials. The bricoleur approaches the world as an environment already containing resources. The world is a place for working with existing resources to solve problems or for collecting resources in anticipation of future problems.

Journalists described two distinct themes - system and environment – drawn from how journalists approached the world to crowdsource in social media that followed the framework. The *system* theme reflected the use of social media as constructed as a system from raw materials, a tool in a journalist's "toolbox" to be picked up when needed to do crowdsourcing or

consult with their audience. This contrasted with that of the journalists who viewed social media as an *environment* where they looked for existing resources, such as sources, listened to the crowd chatter on social media for opportunities to do stories, and asked the crowd for help.

I discovered in my examination of the two themes of *system* and *environment* from journalists' description of how they view the use of crowdsourcing in the world. They have helped indicate three aspects about crowdsourcing in social media. First, the *system* theme suggests that social media is described as a tool and crowdsourcing can be used strategically as a system constructed by journalists to find sources and information.

This aspect was important for confirming that journalists do crowdsourcing and some may view crowdsourcing as a system where they secure raw materials to construct a solution. This contributes to the blurring of the borderline between professional and crowds of amateurs. As Brabham (2008) literature points out crowdsourcing as a solution, represents a "profound paradigm shift in our view of the professional" (p.79). This is also interesting because it supports what O'Sullivan and Heinonen (2008) argue is the tension between the old virtues of professionalism and the realities of the rapidly changing working environment for the professional journalist. However, it also contributes by reinforcing the view that crowdsourcing is outsourcing.

The second aspect for the *environment* theme presented an alternate view of crowdsourcing. This alternate view is exciting and significant. This alternate view suggests that social media is described as a place that journalists work and crowdsourcing is the means of participating in an ecosystem where people interact as a community to communicate, to look for sources, to share and experiment with different story ideas with the crowd, to monitor the interactions in this ecosystem for news. Parmelee (2013) supports this finding, arguing that

Twitter has the unusual quality because it offers a rich set of resources for reporters to take advantage of. Papacharrissi and Oliveira (2011) also supports the significance of this finding, arguing that crowdsourcing in social media also upsets the power balance further blurring the line between the professional and the crowd of amateurs. The crowd is able to even out the playing field.

Finally, the third aspect found in the *environment* theme indicates that crowdsourcing is described as the means for the crowd in this ecosystem to interact with journalists in “reverse” crowdsourcing, asking the journalists as a “crowd” to go check something out that they were seeing. This surfaces an unusual aspect that was not expected and is a good indicator of the complexity of this phenomenon. I knew that the professional, the journalists, frequently send out requests, tasks, questions to the crowd. The crowd would, in turn, fulfill these requests in this kind of outsourcing relationship. What was unexpected is the frequent degree to which the crowd asks the journalist to send out requests to check something out, tasks, or questions. This finding is important because it indicates that the professionals and the crowd of amateurs engage in crowdsourcing because the environment is so fertile for doing work. As Wang et al. (2013) observed it is an environment full of crowds of amateurs and professionals interacting and doing work. This is interesting because it still keeps sees the professional journalist as important to the process of newsgathering.

### **Roles Element.**

For the second element, *roles*, the engineer is the authority, depending and trusting on pre-established authoritative roles for the success of the system. The bricoleur, in contrast, moves fluidly between roles as needed and does not feel restricted by the roles, profession, or expertise of anyone involved.

The authority theme was based on journalists' view of their role as the authority on verifying leads. This contrasted with that of the journalists who discussed their fluid expertise in donning different roles in social media, in order to relate to the crowd and use their help.

I discovered in my examination of these two themes the importance of trust and rapport with the crowd. I argue that there are two different approaches to achieving trust and rapport with the crowd. In the first approach, journalists establish a role professionally distant from the crowd, an authority safeguarding the crowd's fragile trust. This is interesting because it supports Soloski (1989) argument that objectivity is the most important professional norm. In this relationship between the journalist and the crowd, the journalist, needs the crowd as a resource. And while there may be secret contempt for the crowd, as Marsh (2011) described, "contempt for the public that journalists claim to serve" (p.51), the crowd helps the journalist accomplish work that would not be possible otherwise.

For the second approach, where journalists describe donning different roles as needed in order to get closer to the crowd, shows another path journalists use to cultivate their relationship with the crowd. It also shows that crowdsourcing is not always strategic. As Rusbridger (2009) described, Paul Lewis a reporter with the Guardian, asked his crowd for help not because he thought he knew there was a result. It was the other way around: he asked the crowd because he had no alternative but the relationship with his crowd. He hoped someone had seen something with the London G20 protests and captured it on film. It turned out he was right.

### **Process Element.**

It is helpful to review the *process* element as a component of the heuristic's framework. For the third element, *process*, the engineer's process is executing a solution once a problem has

been identified in linear fashion. The bricoleur engages in a dialogue with available resources independent of a problem.

This study found that the two themes for the process of crowdsourcing in social media were executing and dialogue. In the executing theme, crowdsourcing is an obstacle to the process of managing and executing work. This conceptualization contrasted with that of the dialogue theme, where crowdsourcing in social media was perceived as an advantage to their work because they were able to leverage the crowd into their work process.

I discovered in my examination of the two themes, that as crowdsourcing scales up, the perceptions shift from executing to dialogue. Maintaining the executing theme at large scale is difficult because of the demands of the crowd on one person, and as a result, requires a different level of process by the journalist. The executing theme revealed journalists trying to keep the spinning plates in the air. At some point, there are too many plates and the journalists are forced to outsource and delegate work to the crowd.

Indeed, delegating work to the crowd was not consistent with the current research on crowdsourcing executing as social machines. A good deal of current research describes the usefulness of executing as a process for the social machine. For example, Evans et al (2013) gave several examples of social machines. Prince (2013) described the explosion of social machines as organizations try to engage online audiences. However, my findings showed an alternative view, that if crowds are not carefully structured into an outsourcing machine with specific instructions-- like the example of ReCaptcha (Evans et al. 2013\_, or during crises (Kerele et al. 2013)--then the problem of scale quickly surfaces. As a consequence, successful crowdsourcing changes to become organizing through engaging in a dialogue with what resources are available and what is possible. As Waldman (2011) noted, the challenge for journalists is understanding and

organizing the potential resources from the crowd. This significance of this finding is that it surfaces the problem of viewing crowdsourcing as outsourcing and offers an alternative way of viewing crowdsourcing as organizing. This also confirms what O’Sullivan and Heinonen (2008) observed, how the contours of professional journalism are closely tied to the realities of the changing professional work environment dictated by technological change.

### **Outcome Element.**

The engineer’s expected outcome of his or her work is a working system, a solution. The bricoleur, on the other hand, does not expect a working system, but instead expects to discover a solution through a trial and error process using available resources and his repertoire - a stock of resource elements – that have been collected in anticipation that they might become useful.

Journalists saw crowdsourcing as either a solution for a known problem, or as a repertoire or a stock of resource elements collected in anticipation that they might become useful.

One important finding here indicates the corroboration of the perspective of crowdsourcing as outsourcing. Kittur et al (2011) supports this finding, the outsourcing of tasks to the crowd. The repertoire theme suggests an important alternate view of crowdsourcing in social media as a means of organizing the crowd into a stock of assemblages a repertoire for different situations. Similarly, Chadwick (2011) observed the “loosely coupled assemblages” that came together around events, characterized by the process of organizing as resources. Haythornthwaite (2009) found in her study of anonymous and independent crowd contributions a community pattern was an identifiable, co-dependent structured process whose contributors participated in decision-making, agenda setting, and co-constructing of production.

A final significant contribution is the suggestion that there is support for the argument that crowds are not required to be organized by a professional (Chadwick, 2011). Crowds can

self-organize around events independent of journalists organizing them. This is significant because presents an alternate view to crowdsourcing as outsourcing, suggesting that the outcome of crowdsourcing can also be the process of assembling the solution.

### **A Bricolage Theory of Crowdsourcing**

The results of this study support an alternative theory of crowdsourcing, a bricolage theory in which crowdsourcing is a kind of organizing. Journalists organize the crowd as existing resources in the fertile environment or ecosystem of social media. They move between different roles instead of maintaining one fixed role in order to better relate to the crowd. Journalists often use dialogue to discover available resources and information. Journalists collect members of the crowd as resources that may come in handy later as a part of their repertoire. In the following section, I discuss each feature of this alternative view, as it is manifest in the four elements, and conclude with a summary of the theory constituted by these elements. Then I will compare this theory with traditional features of crowdsourcing.

Repertoire, the final characteristic described in the previous chapter, serves as the base from which an alternate theory of crowdsourcing can be developed. Repertoire is the element that connects and makes sense of the other three features. Crowdsourcing is the process of organizing a stock of resources to employ for some indefinite need. Journalists go to social media as an ecosystem full of existing resources, donning different roles to draw together a crowd, and engaging in a dialogue with the crowds as resources and with their repertoire to crowdsource. While there might be occasion to construct a crowdsourcing system, there is usually not the time and raw materials to do this frequently. Only by enlisting a strategy of bricolage with the crowd, the journalists are able to crowdsource consistently.

A strategy of bricolage helps the journalists work with existing resources, assembling, constructing, and recombining the crowd as a bricolage, keeping the bricolages as a repertoire to significantly enhance the limits of what would be possible. The theory of crowdsourcing as bricolage developed from these four elements, then, identifies four primary features of crowdsourcing: an ecosystem – an environment with existing resources and people interacting, fluid roles – appealing to the crowd requires professionals to adopt different roles, dialogue process – the size of the crowd requires the professional to engage in a dialogue with available resources, repertoire – solutions as resources are collected for when they come in handy.

This theory differs from traditional notions of crowdsourcing identified as outsourcing. The four major elements of the traditional definition of crowdsourcing can be contrasted with the view of crowdsourcing I have formulated. It is helpful to review, Estelles-Arolas and Gonzalez-Ladron-de-Guevara's (2012) definition of crowdsourcing as, "a type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task" (p.197).

First, the *world* element in the traditional definition of crowdsourcing, assumes the world is full of raw materials to create and assemble a crowdsourcing system. It is clear that the nature of the medium, in this case, social media creates an ecosystem or environment, which is full of existing resources for professionals to use.

Second, the *roles* element in the traditional definition of crowdsourcing, the roles are pre-established and authoritative. Even for small tasks, the roles are pre-defined. In such an intimate media, the journalists had to work to establish a "virtual" professional distance, opening more than one Facebook or Twitter account in order to separate their personal and professional lives.

For this alternative view of crowdsourcing recognizes the importance of fluidity of roles. After all, the crowd is diverse and appealing to diverse groups means working to establish and don different roles.

Third, the *process* element of the traditional definition of crowdsourcing is *executing*. However, it often is unclear what the task is, or even what resources could be brought to bear to accomplish the tasks. It is through the process of dialogue that the problem is discovered and available resources brought to bear.

Finally, the *outcome* element of the traditional notion of crowdsourcing – can be contrasted with the view of crowdsourcing offered in this study. The outcome of the traditional definition is the solution, in this case, the completion of a task. Yet, they are asking questions and relating to their followers in ways that make the relationship more intimate and casual. Describing it as tasks fails to properly capture what is happening and tends to flatten the relationship as a work relationship.

### **Limitations of the Study**

One limitation of the study was that the sample size was small. My goal was to enlist 25 participants with 5 per newspaper. However, after months of multiple attempts to contact nearly every professional journalist at these newspapers, my sample resulted in 18 interviews with a minimum of three participants per newspaper. I believe that, although the sample size was small, here was enough variance to properly capture this population. It is worth noting that newsrooms have shrunk considerably in size due to massive layoffs. For example, the Daily Camera has seven news reporters. The Times Call has six news reporters. The Fort Collins Coloradoan has 12 news reporters. The Gazette has 14 news reporters.

A second limitation is the generalizability to other news media. Newspaper journalists represent only one branch of journalism. There are also broadcast journalists, radio journalists, freelancers, Internet bloggers, and so on. Therefore, the scope of the study represented a very small population to generalize from about such a big industry. While I believe the findings of this study are generalizable across the newspaper journalism industry, this is nonetheless a limitation of the study.

Another area of concern has to do with the limits of my expertise in subject areas that are pertinent to this study. Although I do have some experience working as a student journalist in college, I am not a professional reporter and lack deep expertise surrounding daily journalistic practice.

### **Suggestions for Future Research**

The focus on newspaper journalists' use of crowdsourcing provides a direction for a more comprehensive theory of crowdsourcing. More journalists describing how they use crowdsourcing could be analyzed in order to validate and elaborate on this theory. A second proposed recommendation for future research would be to look carefully at the analysis of the tweets and Facebook posts of the journalists. That could provide more information on how they enlist and use crowdsourcing.

### **Summary and Conclusion**

This qualitative study explored how journalists described enlisting and using crowdsourcing in social media. The theoretical framework proposed that there could be two different ways to approaching the world. The literature implied that there were alternative views of crowdsourcing. According to the 18 participants interviewed in this study, both perspectives are valid for doing crowdsourcing. While themes varied as to individual use, the underlying

conclusion of the interview data in this research study is that there is alternate view of crowdsourcing, one that shifts our research gaze to the importance of viewing crowdsourcing as an organizing resource (which could be strategic or could be self-organizing).

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