Tracing Emergent Structure in Self-organized Citizen Journalism

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Abstract

In citizen journalism, the citizens that used to form the mass audience utilize IT artifacts such as smartphones and social media to inform each other and the broader public. Previous research has highlighted how citizen journalism published on independent web-based platforms can substitute (or complement) traditional news publishing, and illuminated the challenges of integrating elements of citizen journalism into mainstream news organizations. Still, less is known about how self-organized citizen journalism processes emerge and evolve. The paper draws on complexity theory in a detailed analysis of an online forum thread in which users collaboratively investigated and published detailed information about a local murder case. The paper makes two main contributions to the literature on citizen journalism. Firstly, it demonstrates the efficacy of using a complexity perspective. Secondly, it illustrates and theorizes the ways in which IT-based citizen journalism was self-organized via a specific online forum through sequenced interaction themes.

1. Introduction

The rapid evolution of information technology (IT) has spawned a new form of news production – citizen journalism [6; 1]. Here, the citizens that used to form the mass audience utilize IT artifacts such as smart phones and social media to inform each other and the broader public [9]. The potential of citizen journalism became particularly evident during the Iranian post-election demonstrations in 2009, when protesters used social media to produce and distribute uncensored reports to the rest of the world [20]. A recent example of the pervasiveness of IT-based citizen journalism is the Reddit-thread created during the Boston marathon bombings in 2012. The thread gained massive traction as collective posting provided fast-paced and largely accurate information about events as they unfolded [37].

An emerging body of research has generated valuable insights into the blurring of boundaries as traditional news organizations integrate elements of citizen journalism into their practices (e.g., [34; 28; 20; 33]). A limited number of studies have investigated the phenomenon of citizen journalism per se – that is, when it is carried out without the involvement of professional journalists. This research has highlighted how self-organized citizen journalism can substitute (or complement) traditional news publishing, through publications on independent web-based platforms that provide alternative and extended accounts or reports about events and regions neglected by mainstream news publishers (e.g. [14; 12]).

While citizen journalism has potential to radically challenge established conceptions of what news journalism is [1], less is known about how IT-based self-organized citizen journalism processes emerge, and the patterns through which they evolve. Citizen journalism is, indeed, a radically different breed from traditional journalism. Therefore, established models have limited potential to explain the phenomenon. However, in this paper I argue that a complexity perspective (e.g., [2; 4; 27]) provides opportunities to generate a rich understanding of the emergence and evolution of self-organized citizen journalism processes.

Complexity theory builds on the assumption that social systems encompass dynamic processes and structures that are analogous to those of biological systems [32; 3]. Capturing both social and technical connections, scholars have fruitfully applied complexity theory to analyze interactions and relationships between users and IT in organizing processes (see, for example, [5; 23]). In this paper, complexity theory provides a vocabulary for analyzing the self-organizing behaviors that arise as agents in a social system interact with and through IT, and the surrounding environment. It is used to identify and conceptualize emergent patterns, order, and structure [4]. Against this backdrop, the paper addresses the following research question: How does an IT-based self-organized citizen journalism process emerge and evolve on an online forum?
In addressing this question, the paper presents an interpretive study [38; 39] of Alpha (fictionalized name), a Swedish online forum. I analyze in detail a particular thread in which distributed users collaborated to uncover the details of a local murder case. The study builds on web-based qualitative data [30], analyzed retrospectively [16], through content analysis [24; 19].

The study identifies five emergent interaction themes: place, identity, relations, chain of events, and biography. Despite the absence of centralized control, structure emerged as the users (240) sequentially traversed these five interaction themes, while drawing on both online and offline sources in their investigation. The findings are presented in two models: (1) a process model timeline that visualizes the varying intensity of the interaction themes over time, (2) a complexity diagram that conceptualizes the key relationships between the IT-system, the users, and the environment. The paper makes two main contributions to the literature on citizen journalism. Firstly, it demonstrates the efficacy of using a complexity perspective. Secondly, it illustrates the ways in which IT-based citizen journalism was self-organized via a specific online forum through sequenced interaction themes.

The paper is structured as follows. Section 2 reviews the relevant literature on citizen journalism and complexity theory, highlighting a set of key theoretical constructs that inform the study. Next, section 3 describes the research approach, while the findings are reported in section 4. Finally, section 5 discusses the findings, considers their implications, and suggests directions for future research.

2. Related research

The following two sections present a review of the relevant literature on citizen journalism (2.1) and complexity theory (2.2), and introduce the theoretical constructs that inform the study.

2.1. Citizen journalism

The rapid evolution of information technology (IT) has spawned a new form of news production – citizen journalism. This refers to the phenomenon of citizens that used to form the mass audience utilizing IT artifacts such as smart phones and social media to inform each other and the broader public, thereby bypassing traditional media channels [6; 1; 9].

An emerging body of journalism and communication research has investigated the relationship between traditional news organizations and citizen journalism (e.g., [10; 34]). This research has generated valuable insights into the blurring of established organizational boundaries as traditional news organizations integrate elements of citizen journalism into their practices. It has also shown that the sourcing of user-generated content is re-defining the relationship between professional journalists and consumers [28], as demonstrated for example by a recent conceptualization of news content flows in two BBC newsrooms, sourced from both protesters and professional journalists [20].

In such integrations, the gatekeeping mechanisms of the analog era (see e.g., [18; 31]) typically prevail, albeit enacted in new ways. News organizations still need to control coverage, content quantities and quality, to maintain credibility [33]. Thus, to integrate citizen journalism they still require robust control mechanisms that insure compliance with journalistic values and norms, while maintaining the level of trust typically conveyed by an established news organization [33].

While this integration-perspective is a dominant theme in extant citizen journalism research, a limited number of studies have investigated citizen journalism per se – that is, when it is carried out without the involvement of professional journalists. This research has sought to identify the characteristics of self-organized citizen journalism practices, mediated via independent blogs, online forums and social media platforms. To this end, Fico et al. [14] highlighted how citizen journalism websites substituted or complemented traditional news channels (in small and large US cities, respectively) in the wake of local newspaper bankruptcies. Farinosi and Trerè [12] explored a case of such complementary citizen journalism in detail, as vast numbers of citizens self-organized in reporting the situation after an earthquake struck a small Italian city in online forums, blogs, and social media, when mainstream news media coverage was limited. Although IT is at the heart of citizen journalism, extant research tends to black-box technology, remaining silent on the specific role of IT, a study by Veenstra, et al. [35] being one of the few exceptions. Addressing the particular affordances of different social media sites, the cited authors conducted an in-depth study of the use of Twitter as a tool for self-organized citizen journalism during the 2011 Wisconsin labor protests [35].

While citizen journalism has clearly established potential to radically challenge established conceptions of what news is [1], less is known about how self-organized citizen journalism processes emerge and evolve. Scholars have yet to empirically explore in detail, and conceptualize, the ways in which citizen journalism is enacted with the unique properties of IT
2.2. Complexity theory

Building on key discoveries of the natural sciences [27], the case for applying complexity theory to organizing processes in social systems rests on the assumption that certain dynamic processes and structures in them are analogous to those of biological systems [32; 3]. A central characteristic of complex organizing processes is that the elements in the focal system often produce surprising, emergent and nonlinear behaviors [2]. Further, while complex systems may start in a random state, they typically evolve toward order instead of disorder [21]. In contrast to chaos theory, complexity theory "deals with order and what causes order. It is an order-creation science" [4, p. 17].

Capturing both social and technical connections, scholars have fruitfully applied complexity theory when analyzing interactions and relationships between users and IT in organizing processes (e.g., [5; 23]). In this context, distinguishing between the terms complex and complicated is essential. An IT-system is typically composed of many intricate parts, but they interact in predictable fashions. Thus, it can be understood as the sum of these parts, so it is complicated. In an information system, however, agents interact with and through, or even modify the IT-system, so system outputs are hard to predict.

Complexity theory reject, or more strictly subsumes, the reductionist paradigm. Reductionism holds that any system can be understood by fully understanding the individual elements of which it is comprised. In contrast, the complexity perspective views the whole of a focal entity, process or phenomenon as more than the sum of its individual elements [27]. Hence, in this perspective, the overall behavior of an information system comprised of an IT-system and human actors is not predefined, but rather emerges through complex interactions [23].

Studying complexity is challenging [15], involving careful reflection on the units of analysis [2]. In this paper, a complexity perspective is used to trace interactions between agents to identify self-organizing structures that emerged as collective citizen journalism was mediated via an online forum thread over time.

The complexity perspective assumes that while agents in a complex system typically follow simple rules, each agent’s behavior is dependent on the behavior of some subset of all the agents in the system [2]. Therefore they are semi-autonomous entities that come to share a path-dependent history [7; 4]. Observable interaction patterns are generated when multiple agents in a complex system interact [2; 4]. As such patterns are signs of self-organizing behaviors, tracing them can help scholars to identify the emergence of order and structure in the system [3].

A complex system exchanges resources with its environment [2]. In fact, if an open complex system does not import energy from its environment, a self-organized state cannot be sustained [2; 27]. While multiple elements in a complex system co-evolve, the system itself typically also co-evolves with its environment [2; 4]. This process is characterized by recombination of system and environmental elements [2]. Viewing social and technical artifacts as mutually constitutive, in this paper, complexity theory is utilized to examine the temporal dynamics between the IT-system, its users, and the environment [23].

3. Methods

The analysis presented in the paper builds on an interpretive study [38; 39], utilizing web-based qualitative data [30], analyzed retrospectively [16], through content analysis [24; 19]. This particular approach was chosen due to its strengths for collecting rich data and analyzing contemporary phenomena in detail. In this section I first introduce the research setting and discuss the case selection rationale. Then the data collection and analysis process is described. Finally, some of the ethical decisions associated with the research design are discussed.

3.1. Research setting

Founded in 2000, the Alpha forum is one of the most frequently visited Swedish websites. It covers diverse topics including technology, food, politics, sex, drugs, food, and lifestyle. It is designed as a traditional online forum, allowing users to post and respond to questions or commentaries via asynchronous text-communication in a discussion structure [13]. Anyone can register, free of charge, and read the forum threads, but only registered users can start new threads and post messages. At the time of the focal thread Alpha had more than 800 000 registered users and contained over 40 million messages. While accessible worldwide, the contents are written in Swedish.

Alpha has been subject to public debate due to its exposure of personal records, and accused of the distribution of hateful and racist propaganda. In 2002, as a court case ruled that Alpha violated Swedish
privacy and integrity legislation, server hosting was moved abroad. However, despite the controversies, particular forum threads display structured collaborative efforts. Indeed, mainstream media have awarded Alpha for particular investigative journalism efforts conducted on the forum. The Alpha forum was chosen because it is attracting a high number of readers while challenging Swedish journalistic values and norms. As personal data publication is highly regulated in Sweden, mainstream media has historically conformed, taking a restrictive approach.

A thread displaying the enactment of citizen journalism efforts was selected for detailed analysis. In the thread, 240 users interactively discussed and investigated details of a local murder case that occurred in a Swedish town in August 2011. The thread was initiated shortly after a local newspaper reported that the police was sealing off a house in a local residential area. In parallel with the police investigation and mainstream media reporting, forum users collaborated in investigating and publishing detailed information about what turned out to be a murder case. The sealed-off house was the actual crime scene, and one of the male residents was charged with the murder of a female he had met the night before outside a downtown bar.

Activity in the thread was intense during the first six days following the murder, averaging 185 posts per day. The intensity subsequently tapered off, until the public trial three months later generated another surge, but not to the level of activity seen in the first six days. All messages posted in the thread (1198 in total) between the first post and the public trial were coded. However, the analysis focuses specifically on posts during the first six days in tracing the self-organizing process whereby users swiftly researched, agreed on, and published the identities of the perpetrator and the victim as well as details of the chain of events that led up to the murder. The next section describes how the data was collected and analyzed.

3.2. Data collection & analysis

The Internet is both an object of study and source of data for multiple academic disciplines [26]. As noted by Venturini and Latour [36, p. 6], interest in digital media as a source of data when studying social processes is grounded in “the fact that every interaction that passes through them leaves traces that can be easily recorded, massively stored and inexpensively retrieved.” Therefore, it is argued that web-data provides potent new sources of information for social science [25]. Qualitative research historically relied on interviews, questionnaires, and observations as main sources of data. As noted by Hedman et al. [17], these are inherently subjective data sources, as the researcher interacts with the data source at the point of collection, and therefore influences the data. In contrast, objective sources naturally (or spontaneously) generate data that can be collected by researchers without provocation or interference. Examples include artifacts, e-mails, and project documentation [17]. In this paper the online forum thread and its contents is used as an objective data source.

<table>
<thead>
<tr>
<th>Coding approach</th>
<th>Code name</th>
<th>Code description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic</td>
<td>User</td>
<td>The registered username of the user posting a message.</td>
</tr>
<tr>
<td></td>
<td>Time</td>
<td>Date, hour, and minute the message was posted.</td>
</tr>
<tr>
<td>Manual</td>
<td>Source</td>
<td>References to online sources such as social media and news websites and offline sources such as personal contacts and public conversations.</td>
</tr>
<tr>
<td>Thematic</td>
<td>Topic</td>
<td>Subject(s) covered in the posted message.</td>
</tr>
</tbody>
</table>

The first steps of data collection were merging the entire contents of the thread, initially in HTML format, into a single 300-page PDF-file and exporting it to Atlas.ti Qualitative Data Analysis (QDA) software. Each forum post contained two types of data: log information (including username and time stamp) and the message body text. Initial coding of each post involved the application of four codes: user, time, source, and topic (Table 1). While user and time were auto-coded, coding the sources involved identifying both online and offline sources referred to by users and manually coding those segments. Finally, the contents of each post were thematically coded to identify the topics it covered.

<table>
<thead>
<tr>
<th>Code name</th>
<th>Code description</th>
<th>Coded segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place</td>
<td>The location where the crime was committed.</td>
<td>89</td>
</tr>
<tr>
<td>Identity</td>
<td>The identities of the perpetrator and victim, including their current names, ages, occupations,</td>
<td>498</td>
</tr>
</tbody>
</table>
Thematic coding was conducted employing an open-ended and grounded approach [8]. Here, the first step involved reviewing and analyzing all 1198 forum posts. Clearly similar codes were then merged and definitions were created for each remaining code. If two or more codes had overlapping meanings, additional merging was done. Codes that were not meaningful in isolation were renamed or subsumed with other codes. Using a bottom-up approach, code categories were then created. In this process, coded segments, codes, and code definitions were reviewed, after which five main categories emerged: place, identity, relations, chain of events, and biography (see Table 2). In addition, off-topic posts were coded as a separate theme. This code was applied to segments dominated by jokes, mockery, and personal insults between users. In total, this code was applied to 172 segments.

Although the Alpha forum is designed to promote and protect anonymity, the study spawned a number of ethical considerations. Although Internet-services might claim anonymity, it is not really guaranteed in any online context [26]. While Alpha is available to the public, it is important to remember that real people, with varying privacy concerns, post the messages. Thus, I heeded the guidelines presented by Ess [11] to make informed decisions regarding ethical aspects of the research design. In the paper, the name of the online forum and all user names are fictionalized in order to protect users’ privacy. In addition, where forum posts are quoted identifiers such as names of streets, persons, and organizations that are mentioned have been fictionalized.

### 4. Findings

This section traces the process whereby users swiftly researched, reached consensus, and published the identities of the perpetrator and victim, as well as details of the events leading to the murder. More specifically, it presents the users, the environmental elements they drew upon, and the themes they interactively explored.

User 6 (U6) initiated the thread in August 2011. U6’s first message included a URL for a short article published 27 minutes earlier on a local newspaper’s website, reporting that police were sealing off an area in a local neighborhood. In addition to giving the URL, U6’s message asked:

“Well, does anybody know anything about this? I’m from near here. This is actually in the middle of a fairly affluent neighborhood.” (U6)

In the next section I describe users’ participation in the thread by zooming in and highlighting key examples of behaviors.

![Figure 1. Complexity diagram](image)

### 4.1. Users

As already mentioned, 240 users contributed to the thread, but their level of activity strongly varied. For example, 96 posted a single message, while the five most active users posted between 41 and 92 messages. The two most active users – User 1 (U1) and User 2 (U2) – both expressed familiarity not only with the city, but also with the specific local neighborhood. However, in other respects (including the roles they adopted when posting) their behavior substantially differed: U2 recurrently posed open questions, while U1 frequently encouraged other users to investigate specific issues regarding the case. On several occasions, this involved concrete tasks – such as utilizing offline environmental sources by making a phone call (Figure 1 illustrates the key relationships between the IT-system, the users, and the
environment). She also confronted other users who provided information about the case with counter-questions, for example:

"Your credibility is high. You registered in 2008 and this is your first post... but you know, we're curious in here, so come on and tell us what you know about this. Sure enough: It's unfortunate when innocent people get drawn into this, but that's unfortunately the way it works in here: People will speculate!" (U1)

Both U1 and U2 repeatedly referred to personal sources when sharing new information about the case, claiming that they had received direct messages from Alpha users who did not want to post messages in the thread themselves. While the information disclosed in these posts was often novel, other users questioned whether U1 and U2 had really received these direct messages, arguing that they could have just made everything up themselves, seeking attention.

In addition, U2 claimed to live in the same neighborhood as the sealed-off house, and verified some rumors about the tenants at the address, but other users repeatedly questioned his overall credibility. On one occasion, U2 became involved in a prolonged discussion about trustworthiness that eventually generated a series of off-topic posts, including ironic remarks and personal attacks.

Unsurprisingly, the posts by the 96 users who only posted one message varied heavily in terms of content and topic. Notably, however, a handful of them provided very specific information indicating that they lived close (or had social proximity) to the victim or perpetrator. One sign of social proximity is a claim by User 3 that he had just spoken to the alleged perpetrator’s brother, while describing details about the chain of events, some of which subsequently proved to be consistent with the description in the court verdict. Having disclosed this information, he urged the other Alpha users to show respect for the perpetrator’s family and friends by not further discussing their identities, relations, and history. Other examples are comments by User 4 (U4) about a potential perpetrator mentioned by name earlier in the thread, including ironic remarks about his personality and past indicating that he was unlikely to be the perpetrator. A sign of geographic proximity is a description, provided by User 5 (U5), of very specific details about the sealed-off house, including the street number, its owner, and current residents:

"I don’t think that 22 Main Road is one of the ‘fancier houses’. It has been sublet to a bunch of people in their twenties..." (U5)

These excerpts and reflections are intended to illustrate some key examples of the nature of the 240 contributors to the thread. The next section explicates the environmental elements that the agents drew upon.

4.2. Environment

While most users solely discussed contents of previous posts, others contributed information about the case drawn from a multitude of environmental online and offline sources. When online sources were cited, URLs to external websites were typically included. In terms of social media, Facebook was the most frequently searched and cited source. It was used to investigate identities of possible victims and perpetrators as well as mapping relationships between them. To this end, status updates, comments and likes were analyzed. Mainstream media websites were also frequently cited, and typically whenever a news article covering the case was published on the local newspaper’s website, a post with a link to it soon appeared. Other cited mainstream media sources included websites of national evening newspapers and local TV stations.

On several occasions when trying to establish the identities of the victim and perpetrator, users suggested names to investigate, sparking efforts by other users to use online databases to scrutinize the suggested people. These databases included sources of personal information, such as telephone directories, car owner registries, and credit records. In addition, online map services such as Google maps and similar Swedish services were used to establish geographical locations.

Several users also contributed information from offline sources that was difficult for other users to validate, including information purportedly obtained from personal conversations with friends, neighbors, relatives and colleagues who had claimed connections to the crime scene, victim, or perpetrator. Other key offline sources were phone calls. Users encouraged each other to make phone calls to verify identities of the victim and perpetrator, by checking whether a certain person answered. Further, some users reported overhearing public conversations that were related to the crime. Examples include a conversation in a supermarket, and another on a bus. A few users posted information they claimed to have obtained through direct interaction with the victim, perpetrator, or authorities associated with the case. Additional examples include users describing being called in for interrogation as witnesses. On a few occasions, information obtained through online sources was triangulated and verified through physical visits to a certain address.
4.3. Interaction themes

The analysis identified five main themes that the forum users interactively addressed: place, identity, relations, chain of events, and biography. These five interaction themes persisted throughout the entire process, but varied in intensity over the course of the first six days of the thread (see Figure 2). In what follows, the themes are presented and discussed, each in turn.

The first identified theme involves user interactions focused on establishing a geographical place. The article published on the local newspaper’s website included a photo showing a number of residential houses, but it did not specify any addresses or the exact neighborhood. In fact, Swedish news media rarely publish such details. However, several forum users recognized the houses in the photo and reached agreement about a rough location. Using this information, other forum users joined the discussion and collaboratively established the exact address. While the photo was analyzed and discussed in detail, environmental sources including personal information directories and maps were used to check possible locations and triangulate information, while visits to the location were encouraged:

“Have a look at one of the photos in the local paper; there are four big trees in a row on the right side beyond the roadblock. If you compare it with the picture on Google maps you will see that the trees are located roughly around 21 to 23 Main Road. Therefore, I believe that 10 or 11 Main Road is sealed off. But of course, anyone who passes by can check and verify whether this is correct.” (User 7)

Recombining existing system elements (the messages posted so far), and new environmental elements, allowed users to triangulate sources and eventually converge on a particular street number. Still, at this point, the local newspaper had not published any information about why the particular house was sealed off. One of the key reasons, however, for the users settling on the particular house was a rumor that an ex-convict was sub-letting it. This information initiated an investigation into whether this person could have been the perpetrator or victim in a criminal act, and whether this place was actually the crime scene.

Around lunchtime the first day, the police authorities published a press statement on their website, saying that a man had been arrested on suspicion of murder. Local news media verified that the sealed-off house was a crime scene and that the man had been arrested nearby. Therefore, the second interaction theme involved user interactions focused on establishing the identity of the victim and perpetrator. In terms of the perpetrator, when one user suggested a name to investigate, Facebook became a key environmental source for assessing the suggestion’s validity:

“I can’t find this guy on Facebook. Is it John Doe or John Doh? Stop censoring the name: Spell it out in its entirety!” (User 8)

A group of users suggested that one of the residents living at the address was a likely perpetrator. Others, who claimed to know the person, disagreed. They argued that he was currently a law-abiding citizen, holding a steady job. As the credibility of this information was heavily questioned, the name was further investigated. In addition to continued use of Facebook, offline sources included rumors about a police arrest at the named person’s workplace. The message in which this name was initially suggested was posted less than three hours after the thread was started, but interactions around this theme continued until early on the second day, when users converged around this identity as an established fact. However, identifying the victim was a longer process, involving prolonged and heated disagreements and discussions between groups of users until agreement was finally reached during the afternoon of the third day.

The third interaction theme involved efforts to map social connections – relations. The key concern here was to establish relations between the victim and perpetrator. On the second day, local and national mainstream media had published articles stating that the victim was a middle-aged woman. Investigating the victim’s identity initially involved exploring the perpetrator’s social and professional relations. Having used Facebook to map the perpetrator’s family relations, several users explored the hypothesis of a particular family member being the victim. After offline sources including phone calls and visits failed to verify whether the family member was alive, the discussion was settled via a direct message:

“I am in touch with someone who does not want to post in the thread. We were discussing that this relative
could be the victim, but he says that the relative is alive and has nothing to do with it. The suggestion that the perpetrator and the victim did not know each other seems to be correct’’ (U1)

While the victim’s identity was eventually established on the third day, as illustrated by Figure 2, the theme reoccurred on day 3 and 4. In this iteration, the continued effort to map the victim’s relations seems to be driven by a need to get an explanation and overall understanding for how such a tragic event could take place.

As a number of forum users voiced support for U1’s argument (above) that the perpetrator and victim did not know each other, an alternative strategy to establish the victim’s identity emerged. This involved investigating the perpetrator’s whereabouts during the day of the crime. Thus, the investigation of the victim’s identity continued through exploring a plausible chain of events. At this point, fragmented rumors about the circumstances at both the crime scene and arrest had surfaced in the thread. Meanwhile, the police had told a national tabloid that the presence of the victim and perpetrator together at the crime scene was puzzling. Using this information as a starting point, users attempted to trace the perpetrator’s whereabouts earlier during the night of the crime. Online sources did not provide any documentation of the perpetrator’s whereabouts that night. Therefore, the different scenarios presented are highly hypothetical, while any new information originated in offline conversations:

‘‘Sorry, I can’t provide any names, but I’ve heard from reliable sources that the perpetrator left the pub accompanied by a woman. The reason that her name has not surfaced yet is because she isn’t from here’’ (User 9)

User 10 (U10) entered the thread early on the third day. Without citing any online or offline sources, she presented a detailed account of the chain of events, then after verifying and answering questions asked by other users in two additional posts left the thread, but subsequently revealed the victim’s name in a direct message to the third most active user in the thread. Users used the information to triangulate and reach a consensus on the victim’s identity.

The fifth and final identified interaction theme involved getting background information about the victim’s and perpetrator’s biography. As the frequencies of posts decreased during the fifth and sixth days this became the most intensive theme, as users seemed to seek explanations, and perhaps closure, by consolidating detailed information about where the victim and perpetrator had (inter alia) lived, studied, and worked.

To summarize, in this section I have presented my findings, tracing the processes whereby users swiftly and interactively researched, reached consensus, and published detailed information about the location of the crime, the identities, relations and histories of the victim and perpetrator, as well as the chain of events leading to the murder. The analysis has included consideration of the users, their sources of information, and the themes they interactively explored. In the next section I discuss the findings.

5. Discussion and conclusions

The paper demonstrates the usefulness of applying a complexity perspective when studying self-organized citizen journalism. Citizen journalism research tends to focus on the integration of elements of the phenomenon into mainstream news organizations (e.g., [34; 20; 33]). This provides scholars with well-established theoretical foundations and models that can be fruitfully applied to generate an understanding of the new challenges confronting such organizations. In contrast, massive distributed online collaborative efforts can seem chaotic and directionless at first glance, as in the focal thread, since the posts typically only contain a few lines of text. Thus, it is difficult for any new visitor to elucidate the processes involved, or the status of the discussion at a given point.

Clearly, IT-based self-organized citizen journalism, mediated through independent web-based platforms is a highly fluid object of study that is very different from traditional newsgathering and dissemination. Control is distributed among numerous users, and there is no set hierarchy or purpose to anchor analyses of the phenomenon. While traces generated through social interaction in digital media is a promising source of data for studying self-organized citizen journalism [36], the inherently messy nature of such traces cannot be stressed enough. Although interpreting digital traces is associated with major challenges, the paper shows how a complexity perspective can support scholars in identifying interactions between disparate agents in order to elucidate the emergent self-organizing properties of this new breed of journalism.

Although the study identifies a high number of off-topic posts (often including mockery and personal insults), the case of Alpha showed how diverse users spontaneously took on complementary roles, thus facilitating collaboration. In doing so, users displayed a surprising persistency in contributing to the investigation. The grounded approach adopted in this paper identified and conceptualized interaction themes as the key origin of emergent order in this case of citizen journalism. In a way, it reveals how news production is manifested in a highly content-driven form. Thereby, what is essentially a single news story
emerges as an entity through a high number of complementary fragments contributed by a large population (240 users contributed to the thread). This suggests that the persistency and motivation of users to continue and contribute might originate in a desire to produce a “complete” news story. In contrast, traditional news organization structures are often based on the logic that each reporter works on her own story as an individual project.

The paper also adds to the emerging literature on IT-based self-organized citizen journalism (e.g., [14; 12]). More specifically, it contributes by identifying and theorizing the main characteristics of such a process. In the case of Alpha, and the specific thread studied, the system started spontaneously. The first post did not have any specific stated purpose or goal; it only included a few open questions. However, the study shows the ways in which the system evolved toward order; structure emerged as increasing numbers of agents entered the system, interacting around emergent themes. The paper conceptualizes the overall pattern by which agents traversed the themes. When failing to reach agreement on a set of facts regarding a specific theme, interactions shifted to another theme. In order to sustain this self-organized state, energy was imported from the environment in association with each interaction theme.

When the phenomenon of citizen journalism is discussed, examples typically include the use of social media services such as Twitter and Facebook during large-scale public events of global concern. In contrast, this study focused on a news story of very local concern, on a less refined technological platform. In the case of Alpha, rather than raising the public’s awareness on a particular topic, users were driven by the collaborative investigation, to the point where it seems that they rather wanted to satisfy their own curiosity than exposing and directing the world’s attention to an important issue. Given the court rulings against Alpha and the high number of hostile off-topic posts identified in the thread, the study, in part, reveals a “dark side” of citizen journalism.

At a time when traditional media firms are facing disruptive effects of IT, resulting in dramatic decreases in printed newspaper sales, it is important to generate new knowledge about emerging new logics of news production carried out on novel IT-based platforms. While this paper focused less on prescriptive advice regarding the integration of such logics into traditional media firms, I argue that it generates some new insights of importance to such actors. To this end, the study revealed some of the potential of IT-based self-organized citizen journalism to rapidly investigate and publish detailed information on a current event. In this respect, the paper contributes to practice by hopefully inspiring traditional news organizations to seek new ways of organizing collaborative and distributed journalistic efforts.

While the paper identified a number of key characteristics of an IT-based self-organized citizen journalism process, it builds on interpretive analysis, so I do not claim that these are general characteristics. Further research on this exciting phenomenon is needed to develop generalizable models.

6. References

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