Hollaback!: The Role of Collective Storytelling Online in a Social Movement Organization

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ABSTRACT

CSCW systems are playing an increasing role in activism. How can new communications technologies support social movements? The possibilities are intriguing, but as yet not fully understood. One key technique traditionally leveraged by social movements is storytelling. In this paper, we examine the use of collective storytelling online in the context of a social movement organization called Hollaback, an organization working to stop street harassment. Can sharing a story of experienced harassment really make a difference to an individual or a community? Using Emancipatory Action Research and qualitative methods, we interviewed people who contributed stories of harassment online. We found that sharing stories shifted participants' cognitive and emotional orientation towards their experience. The theory of "framing" from social movement research explains the surprising power of this experience for Hollaback participants. We contribute a way of looking at activism online using social movement theory. Our work illustrates that technology can help crowd-sourced framing processes that have traditionally been done by social movement organizations.

Author Keywords

Social Movements; Emancipatory Action Research; Feminist HCI; Social justice; Activism; Storytelling

ACM Classification Keywords

H.5.m. Information interfaces and presentation (*e.g.*, HCI): Miscellaneous.

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--P7

INTRODUCTION

The CSCW and HCI communities are beginning to examine the role of technology in social justice issues. Researchers in CSCW have moved beyond the workplace and have started to engage with social issues such as the experiences of marginal users [60], health [26,43], the environment [17,44], and international development (ICTD) [12,33]. Movements such as the Arab Spring and Occupy Wall Street, that have taken advantage of social

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media, have piqued interest within the HCI research community [54]. But there is little work within HCI that examines activists who contend with issues of social justice and are using collaborative information communication technologies (ICTs) to do so. Furthermore, there is little work that positions activism within the context of social movements. By social movements, we refer to Tarrow's definition that distinguishes social movements from political parties and advocacy groups. He states social movements are contentious and "better defined as collective challenges, based on common purposes and social solidarities, in sustained interaction with elites, opponents, and authorities" [57]. Examples of social movements include the civil rights, anti-globalization, and feminist movements.

Storytelling and narrative have long played a part in social change and social movements [4,13]. According to scholars of social movements, storytelling is how people learn and exercise agency, shape identity, and motivate action [19]. In this paper, we examine the role of collective storytelling online in the context of a social movement organization, Hollaback. Hollaback uses collective storytelling online to draw awareness to a newly named, but old phenomena, called street harassment. This term refers to harassment in public spaces directed towards traditionally marginalized groups such as women, nonwhites, and LGBTQ (Lesbian, Gay, Bi, Transgender, and Queer) people. Specifically, this paper examines the role of storytelling using technology in a social movement organization. We investigate how the social movement concept of framing can help to explain participants' experiences of sharing stories on Hollaback. We explore how sharing stories of harassment online has impacted those who have shared them and examine if these stories have influenced what the organization focuses on in terms of activism.

More broadly for the CSCW community, this work contributes, first, a model for a CSCW system that embodies the values of feminist HCI [3]. Second, it is a model for the use of CSCW technology by activists, where the software architecture supports a transnational decentralized federation of activists who coordinate globally and do actions locally. Third, this work is an example of the power of storytelling in a social movement organization supported by collaborative software. For more detail on all of these focuses, see [15]. For this paper, we focus on the connections between social movement theory and storytelling online, and the ways in which CSCW tech-

nology makes a new kind of meaning making possible for social movements. First we examine street harassment in more detail and further describe the organization we have been working with called Hollaback.

HOLLABACK

Hollaback (http://ihollaback.org) is a social movement organization whose mission is to end street harassment. Street harassment is a new term to describe gendered harassment in public. Yet, there is not a unified definition amongst scholars and activists because it is so newly named. According to Hollaback, street harassment can be anything from verbal harassment to groping, stalking, leering, flashing, and sexual assault. Although this term is fairly new, early studies indicate that street harassment is very common and harmful globally, yet rarely legislated against. Research shows that 80% of women in Canada experienced harassment in public, which had a detrimental impact on their perceived safety in public spaces [36]. In Egypt. 83% of women reported experiencing harassment and half said they experience it daily [32]. In Delhi, India, 80% of 3,816 women surveyed said that they experienced harassment and their mobility was restricted as a result [30]. In the US, there are no population-level studies. However, in Indianapolis, 100% of their 293 sample had experienced harassment [20] (for more information on other community and city level studies see [32].) Yet, each of these studies independently defines what street harassment constitutes. Defining the boundaries and extent of street harassment is part of the work that Hollaback is trying to accomplish.

Hollaback started as a blog in New York City in 2005 as a way to share stories of street harassment, calling attention to this phenomenon as well as providing a way to understand its boundaries and pervasiveness. Hollaback is about storytelling and generating awareness of street harassment. Since then, Hollaback has developed iPhone and Android apps to collect stories, and has developed a web platform to support local Hollaback organizations, which at the time of writing represents 50 cities, 18 countries, and 9 languages around the world (shown in table 1 and figure 1.) Hollaback has collected over 3,000 stories of harassment worldwide and is an organization that is part of the anti-street harassment movement. Since the term street harassment is new and the behavior is not necessarily problematized or even recognized as a phenomenon, it is not surprising that Hollaback has not collected more stories. Diagnosing street harassment as a problem is part of the work that Hollaback is trying to accomplish. For this paper, we focus on the experiences of women in the United States and the United Kingdom.

Hollaback Cities/Locale				
HOHADACK CITIES/LOCAIE				
Argentina: Buenos Aires	Honduras: Tegucigalpa			
Belgium: Brussels	India: Chandigarh, Delhi, Mumbai, Chennai			
Canada: Ottawa, Alberta, Winnipeg, Halifax, Mon- treal	Israel			
Chile: Santiago	Mexico: Mexico City, Queretaro			
Colombia: Bogota	New Zealand: Wellington			
Croatia	South Africa			
Czech Republic	Turkey: Istanbul			
France	United Kingdom: Birmingham, Bristol, London, West Yorkshire, Gwynedd, Portsmouth			
Germany: Dresden, Ber- lin, Duesseldorf	United States: Atlanta, Berkeley, Baltimore, Boston, Chicago, Co- lumbia MO, Des Moines, El Paso, Houston, New York, Philadelphia, Portland, Puerto Rico, Richmond, SoCal, San Jose, Twin Cities			

Table 1. List of Local Hollabacks Organizations as of June 2012





Figure 1. iHollaback.org and Hollaback Buenos Aires

RELATED WORK

We position our work within research in CSCW and HCI that examines storytelling and social movement theory.

Storytelling and Technology

In CSCW research, there have been many systems designed to support collaborative storytelling for different contexts and end-goals. In the area of education, collaborative storytelling systems help children [7] learn programming [41], develop creative projects [8], and preserve their cultural heritage [35]. Other collaborative storytelling systems support families and organizations in building and sharing collective histories [48] and archival digital artifacts [11]. There is also research that examines how collaborative storytelling systems can promote healthy eating habits [25]. In non-western contexts, storytelling systems have been designed to support different technologies such as radio [55] and mobile phones [18]. These systems have also been used to support post-conflict reconciliation [51].

Storytelling is also used as a method to inform and position design [16]. This technique has been used in different contexts such as in international development [6]. Some of these applications have been inspired from "digital storytelling," a particular technique and kind of storytelling that uses video [34]. However, there is little work concerning storytelling in the context of activism, and in particular that use the theory of social movements. We position our work in this gap.

Technology and Social Movements

Although there is an increasing amount of work in collective action and activism more broadly, there is less work within social movements. Social movements are a specific kind of collective action that happens mostly outside of existing political structures and are contentious [57]. Thus, they are different from civic participation, voter mobilization, or other actions that seek to reform rather than fundamentally change existing political, economic, or societal structures. Some have expressed skepticism about the possibility of a true social movement mediated by the Internet [24]. Online participation with low time commitment has been labeled "slacktivism" [9,42,47]. The study of social movements, such as feminism and the civil rights movement, is an area of research in sociology that examines "organized collective contentious activity that usually happens outside of political structures" [52]. As part of the social movement literature, there are three concepts that are prevalent within this field, across many theories: mobilizing structures, opportunity structures, and framing processes [38]. These ideas help to explain the strategies of Hollaback, and build on previous research. We will define each of these concepts as it relates to work in CSCW.

Mobilizing Structures

According to Garrett, information communication technologies (ICTs) present a new way to mobilize people by creating a collective identity [21]. One example of how ICTs can be used in this space is Voz Mob, a text message blogging platform that gives immigrant communities a voice, who may not have regular access to smart phones or computers [1]. Another example is Turkopticon, a way

for Mechanical Turk workers to hold employers accountable, and as a way to organize around worker's issues within crowd sourcing digital work [50]. In 1994, the Zapatista movement in Mexico used the Internet to build a transnational solidarity network [22]. More recently, the Arab Spring and Occupy movements have also used social media, such as blogging and social network sites, to mobilize and provide a collective voice [27,54,58]. While ICTs present a new ways of organizing traditional contentious activities such as protests, they also provide a new method for conducting contentious activities, such as specific technical acts or "hacktivism" [31]. Examples of this include hacking and denial of service attacks on websites, easily distributing leaked information as in the case of Wikileaks, and the Occupy Movement [10].

Opportunity Structures

Opportunity structures are resources and climates that social movements can take advantage of [38]. Technology can help gauge particular moods and climates. There is much work in this space outside of social movements, particularly regarding natural disasters and the stock market [23]. For example, the use of mobile text messaging donation campaigns after a natural disaster takes advantage of the technology and immediate emotions of the event, as in the case of the Haiti earthquake and wildfires [49,53]. Resources, such as ICTs, can also be examined to look at the diffusion of information within the context of social movements. Meier examined whether the diffusion of ICTs as a resource predicted anti-government protests. His results suggest that ICTs do empower resistance movements, but possibly at the expense of regimes with high levels of access to technology [39]. Within social media such as Twitter, there are many large scale studies that examine how information propagates through out these networks, but fewer (such as [14,46]) apply their analysis to a specific context where the results could suggest certain effective tactics useful for social movement activists in particular.

Framing Processes

We use the concept of frames, commonly used to study social movements, to analyze the impact of storytelling on Hollaback. The concept of a frame is derived from Goffman, who defined a frame as a "schema of interpretation" that enables people to "to locate, perceive, identify, and label" their individual experiences within the experiences of society [38]. Frames help individuals to interpret individual experiences, and then to guide action. Within social movement theory and related to social movement organizations, collective action frames are "actionoriented set of beliefs and meaning that inspire and legitimate the activities and campaigns" [5]. Rather than a fixed set of beliefs, collective action frames are the outcome of a negotiated shared meaning. Frame alignment processes are the ways in which individuals and social movement organizations link or align their frames.

Benford and Snow identify frame alignment processes as the process through which individual frames become linked with collective understandings [5]. In our work we focus on two of these: frame transformation and frame extension. Frame transformation is a process that produces a change in the individual level specifically "in cognitive orientation and emotional sensitivities." People shift from one way of seeing and understanding an issue and oneself to a different way. For example, there is research that looks at how Black feminists worked to transform the frame of sexual violence within Black communities [59]. They were seeking to transform the common understanding that sexual violence was a result of racism; they wanted to shift that understanding to also incorporate sexism and classism. As a result of this frame transformation, women in the Black community were able to stand up and speak out against sexualized violence in their communities.

Frame extension occurs when social movement organizations expand the boundaries of what is considered part of the frame. Using the same example as above, the Black feminist collective extended their frame to include the criminalization of Black men; specifically, they expanded their efforts to also focus on rehabilitative justice within and outside of the prison system [59]. The collective's reason to extend their frame to include criminalization was to incorporate concerns within the community about addressing sexual violence with out sending more men to prison. By doing so, the collective was able to frame sexual violence as part of a larger issue within their community.

Bedford and Snow identify the specific actions or core framing tasks that social movement organizations use to try to invoke these different framing processes. Core framing tasks include diagnosing a problem, proposing a solution, and eliciting a call to action or providing a rational for action [59].

METHODS

In working with Hollaback, we employ methods both from emancipatory action research and feminist methodologies as described by Bardzell and Bardzell [2]. In order to position and describe our participation with Hollaback, we will provide researcher self-disclosure and reflexivity. Subsequently, we describe our data collection processes and analysis.

Emancipatory Action Research

Action research or participatory action research is an "orientation of inquiry that seeks to create participative communities of inquiry" [45]. Rather than separate the researcher and subjects of study, action research is a practice of participation that starts from working with others towards change, rather than changing others. Within the many definitions of what exactly constitutes action research, four major themes exist: empowerment of partici-

pants, acquisition of knowledge, collaboration through participation, and social change [45]. Furthermore, action research projects typically engage in systemic cycles from action phases, where members can try out new methods and techniques, to reflection phases, where members can then try to make sense of data to inform new action phases. Although the explicit use of action research is new to HCI, Hayes argues that there are many methods and issues within action research that are familiar to HCI researchers, such as fieldwork and iterative design [37], but there are also some key differences. For example, in action research, the researcher is often positioned as a "friendly outsider." Research questions and interventions are also co-constructed with members of a community or group that the researcher is working with. That is, the position of the researcher with respect to the people they are working with is changed.

However, there are different strands and types of researcher participation that can disrupt the role of the researcher as a "friendly outsider" such as emancipatory action research. Although we do not delve into all of the different strands of action research and researcher participation here, our research constitutes this specific kind of action research along with methods from Feminist HCI. Emancipatory or liberation action research has its roots in radical social movements of Marxism, anarchism, feminism, anti-racism, environmentalism, and liberationist movements in Latin America (e.g. Paulo Freire [28].) In addition to co-constructed research and action, this approach also works towards ending intersecting layers of oppression such as racism, sexism, and classism, and seeks to unravel dominant epistemologies and structures. That is, emancipatory action researchers take a political stance and become aligned with those whom they are conducting research with---they are not necessarily outsiders [29,37]. The purpose of doing action research with Hollaback is to work towards ending street harassment and continue to grow and support the organization. This research study was co-constructed with the Hollaback "mothership" (the leaders in New York City) because we wanted to understand how storytelling impacts those who share.

Researcher Self Disclosure and Reflexivity

A method used in feminist social sciences and action research is researcher/practitioner self-disclosure and reflexivity [29,37]. For researcher self-disclosure, in action research and feminist methodologies, the researcher must disclose his/her position in the world, goals, and intellectual and political beliefs [2]. Accordingly, we describe our involvement and position within Hollaback. The first author started working with Hollaback as a volunteer. Previously, the author was doing research in domestic violence and ICTs, and was interested in working with an organization that was using technology to address violence, rather than studying how technology was implicated in violence. The author initially learned about the or-

ganization through Twitter, and contacted them in the spring of 2010 to see if there was any technological help needed, and to get involved. At that time, Hollaback was a group of people who had been administrating a blog since 2005 to share stories of harassment in New York. One of the people from the group, Emily May, decided to run the organization full-time and to expand it beyond New York. At the time the first author contacted her, they were planning on making an iPhone app to collect stories of street harassment. The author had experience in Android and offered to make an Android app as well to help launch the iPhone app. The first author then subsequently developed, with other technical volunteers and the third author, the Hollaback web platform, which included a network of Wordpress sites, geocoding, story submission forms, and localization. The design was in collaboration with the founding Hollaback group in New York and other Hollaback volunteers. The first author also participates in a local Hollaback organization and helps with events and blogging.

The first author and the Hollaback team share similar political values and experiences that are pertinent to the project. For example, both consider themselves feminist and have been subject to street harassment. The second and fourth authors do not consider themselves members of the Hollaback community, while the third author has worked with a local Hollaback organization. Due to the first author's close involvement with the organization, the authors who were not involved with Hollaback helped to minimize bias in data collection and analysis as suggested in [29].

According to feminist social science, reflexivity is a method that helps researchers to question whether their work improves human quality of life and addresses issues of social oppression [2]. In our work we seek to understand how collective storytelling online impacts those who experience street harassment; by examining this, we believe our research helps to understand how storytelling frames this phenomenon and how it has impacted contributors. However, this work represents the experiences of Western women who have experienced gender-based harassment and is not representative of all kinds of harassment in all locales. More work is needed to examine how collective storytelling online affects those who experience harassment at the intersections of race, gender, class, sexual orientation, and other signifiers.

Data Collection and Analysis

We interviewed 13 people who submitted a story through the website. We selected participants by sampling from a variety of different Hollaback sites within the United States and the UK as well as selecting for a variety of different street harassment experiences such as verbal, stalking, and assault. We emailed this sample and asked if they would like to participate in a research interview about Hollaback. In the email, the first author disclosed both her role as the technical developer for Hollaback and her position as a graduate student doing research. The first author conducted six of the interviews and the second author (who is not involved with Hollaback) conducted seven. Because of the first author's involvement with Hollaback, this approach helped to minimize bias.

Because of the potentially emotional nature of the topic, we offered to conduct the interview through either phone or instant message. Four of the thirteen participants opted for instant message because they felt more comfortable over that medium. One participant stated that it was a very emotional topic for her and she felt more comfortable talking about it using text. We recruited participants until we felt that the data we were getting was saturated. The list of participants who we interviewed is in Table 2. All participants were women.

Participant	City	Age	Occupation
P1	New York City	29	Graduate Student
P2	Baltimore	19	Student
P3	Richmond, Virginia	22	Student
P4	Baltimore	27	Graduate Student
P5	Atlanta	33	Public Health
P6	Richmond, Virginia	20	Student
P7	Los Angeles	23	Server/Improv Actress
P8	Los Angeles	25	Student
P9	Houston	20	Student
P10	Boston	25	Non-Profit
P11	New York City	29	Graduate Student
P12	London, UK	30	Human Re- sources
P13	London, UK	36	Non-Profit

Table 2. Participant Demographics

We used a semi-structured interview because we wanted to understand why people contributed stories and how it affected them, but we also wanted to allow freedom for the conversation to go off-topic [29]. Each interview lasted 30-90 minutes. We first asked participants to recount the story they decided to share on the Hollaback site, their motivations for doing so, and how they felt after sharing. Based on our interviews with Hollaback site leaders (activists who run the local sites), we also asked the women if they thought they were "doing activism" by posting the story. We also asked them demographic information including their age and occupation. We did not ask participants their ethnicity, sexual orientation, or gender presentation. In further research, we will look at how these intersections affect sharing stories on Hollaback.

Type of Harassment	# of Ppts
Assault	1
Groping	3
Attempted Abduction	1
Stalking	2
Verbal	6

Table 3. Participant Harassment Experiences

We then transcribed the phone interviews approaching the data analysis qualitatively using inductive and deductive approaches informed by grounded theory and other qualitative analysis methods [40,56]. The first two authors separately open coded the interview data and then used axial coding to identify themes. That is, we used a Straussian approach to deductively and inductively identify themes based on social movement theory and emergent themes grounded in the data [56]. We also selected themes based on interest to the CSCW and HCI research communities. Some themes are of interest primarily from a practical standpoint (for example, that the mobile apps were not working in some cases), and those are omitted here.

FINDINGS

Participants had a range of experiences of harassment, but the most prominent was verbal harassment (shown in Table 3.) We did not interview anyone with harassment due to sexual orientation, race, or gender non-conformance.

Prior Structural Impediments

Participants stated that they felt that there was a lack of ways to process and cope with their experience with street harassment. There are several structural factors that impeded participants from emotionally dealing with or taking action in response to their experience. There were several reasons why they did not feel comfortable talking about their experience with other people.

Participants said they were hesitant to talk about their experience with friends or family because they had often been called "too sensitive" or told they were overreacting when they had tried to discuss it in the past. P3 stated,

"I think that awareness is the best way to call attention to a problem, especially one like street harassment that's so easy to overlook (I'm often called "sensitive" for getting upset about it) and I decided that I also wanted to share mine."

Others felt that their friends or family might criticize them for the way they handled the harassment even if they felt proud of the way that they dealt with the situation.

"...the reactions I got from just telling people about it just face to face or on the phone. The reaction I got every single time was just "what if you had been hurt, what if they had come after you." And then I felt like I had to say, if it had been dark and I was the only person there I wouldn't have done that. Then they say oh ok. I feel like that shouldn't be the initial reaction and on the Hollaback site it really is not."

In sharing their experience with others, two participants were fearful that mentioning it to their family might have limited their independence and freedom.

"Oh I've shared it with a lot of over people besides my family because I know that they already don't want me here by myself in Baltimore. And because I'm short and I look young for my age they're very overprotective. I have a very overprotective family; lots of older brothers. If they knew it wouldn't go over well. I'm not sure how they would react. Especially now since I want to eventually move off of campus it might not be wise to tell them." -- P2

Three participants tried to elicit the help of the police and were unsuccessful and experienced further blame in doing so.

"...when you get told by the cop that "you shouldn't have done this, you asked for it, and you shouldn't have called" it's hard not to question yourself. Like...maybe I am overreacting?" --P10

One participant sensed that posting her story limited her ability to contact the police. In her case, she had verbally attacked her harasser in return and she posted this on the Hollaback website. Although she only posted her first name, she felt that the police might find that evidence and hold it against her. She was frustrated and angry that in the eyes of the law she could not defend herself.

Participants also stated that they have been taught a script from an early age that the best thing to do is to ignore street harassment and walk away. However, this made them feel like they had lost some power and, as a result, were not able to deal with the harassment as it kept happening, sometimes on a daily basis.

"I've always been taught that if a guy yells at you, you should just ignore it and walk quickly away. But sharing my story reminded me of all the times I've been made to feel uncomfortable by some asshole who somehow expects me to react to what he's saying to me." --P3

Diagnosing a Problem and Frame Extension

By visiting the Hollaback website, participants were able to problematize their experience with street harassment whereas before, they considered it as a part of life that they had to accept. This is an example of a core-framing task used by social movement organizations to elicit a frame shift. For example, the following two participants were able to diagnose harassment as a problem whereas before they thought harassment was just a part of life.

"I was reading everyone else's [stories] and came to the realization that this was actually a really big problem." -- P3

"Before reading those stories, and posting, I accepted it as the norm to get harassed all the time. "--P7

As a result of problematizing their experience, two participants were able to extend the frame of street harassment to something greater. That is, the Hollaback platform gave them a way to position their experiences of street harassment within a greater frame: the position of women in society and their right to be in a public space without the fear of harassment. As we saw in the epigraph:

"Posting it did a weird thing to me though...I used to be able to brush off a lot of the stuff I get on the street and at work, because I've been getting it consistently since I was in high school, but now I think it means something more to me to be able to just walk down the street and be left alone." --P7

"But it's not something that I really thought about as a serious problem. But now, I think it definitely portrays how people think about women. I think it's disgusting." -- P9

Traditionally, social movement organizations undertake this framing work. But on the Hollaback platform, story contributors are helping to extend the frame of street harassment to the greater frame of participation in public space. Design features such as the map of harassment incidents helps reinforce frame extension by illustrating the extent that harassment happens on a wide-scale.

Frame Transformation

Posting and reading stories on Hollaback changed the way that participants thought and felt about their experience, both cognitively and emotionally. That is, they experienced a frame transformation in their beliefs and feelings about the experience of being harassed.

Change of Emotions

By reading other people's stories of harassment on the site, participants felt that their own experience was validated and that they were a part of a larger epidemic that warrants change.

"It felt reassuring to realize that so many other people are also fed up with getting harassed going about their daily business."--P3

"Yeah, I mean before I personally had felt that it was not OK but it was very validating to know that there was a whole group of people out there that felt the same way I did and that could articulate, better than I could, why it was not OK. "--P10

One participant mentioned that by posting her experience, she could, in return, be a marker on the map of harassment for someone else:

"Just like for me, it makes me feel better to know that there are other women going through the same thing and trying to put a thought to it. I know I can be a little star on the map for someone else so they know they are not alone either and part of the collective activism."--P8

The women interviewed also felt that by posting their story, they were able to reclaim some power that was lost when they were harassed.

"Contributing to Hollaback was productive. That was a scary situation for me as a teenager and it was a way to make something positive out of it. "--P9

"I felt empowered posting my story on the website whether or not anyone read it. Obviously, someone did. It made me feel a lot better knowing it was out there." --P6

"I felt better. I didn't do much but I felt I had done something. Made me feel that I was taking back some of the power."--P13

Furthermore, reading other stories helped them feel like it was not their fault, and helped shift the blame and burden of the experience.

"I became more sure in my conviction that I was right to consider what happened was really, really wrong. Not to just accept it as part of life. "--P5

However, for one participant posting the story made her feel that she was not regaining any power back and that she was still acting like a victim.

"Well, because it didn't feel like it was from a position of power. It was good putting it out there, but it also felt like complaining and just leaving it there, instead of it leading to action." --P12

When this participant experienced the harassment, she was angry and wanted to do something about it. She posted to Facebook about starting a site similar to the "Microaggressions" site, a place where people submit seemingly benign experiences of racism or other oppression. On her Facebook wall, one of her friends pointed out Hollaback and encouraged her to post. In this case, the participant wanted to do more than only posting a story. She had already connected the experience of being harassed with a lack of power in society.

But for four participants, the experience of writing or sharing artwork about their experience was therapeutic and cathartic.

"I think well after experiencing it, I don't know how to put it into words, I felt like I had to articulate better the actual experience of what had happened." -- P6

Shifting to the Collective

After sharing their story and reading the stories of others, participants shifted from believing the experience was limited to "just them," to viewing it as part of a broader, collective phenomenon and as part of a community. They also wanted to understand how their individual experience related to a collective one and what they should do about it. In this way, participants experienced a frame transformation in the way that they connected their individual experience under the umbrella of street harassment.

"Sharing is like standing with the group of people who will understand what it feels like to be threatened and scared but who have not accepted what society tells us about it being "okay" and that we shouldn't complain "--P5

"It made me feel like I was a part of something. There was an excitement that came across in the other women's postings with what they were sharing. It was a camaraderie out of something that's pretty negative. But they're trying to change things and I felt that from reading the other stories."--P2

"I think it was to see if other women had this shared experience. Like what the temperature was; how other people were dealing with it or feeling about it. Because it's just a constant, and I think I may have said this in my post, but it feels like constantly that I'm getting comments or whistles and it's even happened to me again since my post. I actually got groped again in a very public place. I was actually at a bar with my boyfriend you know so like it's just so ridiculous and I wanted to see how other people are reconciling this in their daily lives."--PI

Hollaback as a Networked Public

Stories serve as a networked public and are visible to anyone on the Internet [56]. By networked public, we specifically refer to boyd's definition of "spaces and audiences that are bound together through technological networks" that include the properties of persistence, searchability, replicability, and invisible audiences [34]. As a result, these factors impact individuals who share their stories online Participants talked about how it felt good that their story was "out there" in a fixed medium.

"I felt like I got the complete story in a fixed medium and that maybe other people would see it and it was kind like alright, like checking a box. It was a good feeling"--PI

Others used the public nature of the site to thank those who helped them---something they were not able to do during the time that the harassment occurred.

"On the off chance he had told the story to someone or found the website, that he would know that I was really grateful. I feel really bad for never getting the chance to thank him because he was so nice."--P6

Two participants submitted art pieces that expressed their feelings of their experience because they thought the website would have an audience that would appreciate and understand their art.

"I felt cool for posting my painting because I have never shown at a gallery or anything. It felt good to have an audience to appreciate what it was about. "--P8

Some participants viewed the Hollaback website as a safer space than Facebook. They felt that Facebook was not a safe space for them to share their story.

"If I had posted that story on Facebook, people could take what they wanted out of it. Like thinking I wanted

attention. But by posting it on the Hollaback website, you know the context of the website is like these are people submitting their harassment stories. So I felt really good about it."--P6

"I did share it on Facebook and people who read it came up to me and said, "you need to be careful." I just think that's ridiculous. It's kind of close to victim blaming. I just think that women that we always have to be afraid of men and there's no other way to exist."--P10

However, one participant used Facebook to garner support, and then posted to Hollaback later as a way of giving back or doing activism.

"Facebook narrows down the people who are reading your posts. People who know you know and support you on a personal level, people who may or may not think about things the same as you. So I had friends and for the most part people who think along the same lines as I do, supporting that but more than just discussing it among my own friends and my own social network, Hollaback is more open to the public." --P11

Due to the public nature of Hollaback, one participant wanted to make sure she posted a story that would not call into question that she did anything wrong.

"I've been harassed countless times as I'm sure tons of people have, but I chose that particular story because it was so blatantly wrong. It was broad daylight and I was in a public place. I thought people should realize that street harassment happens everywhere, not just in dark alleys."--P3

Responding Back and Dealing

For some participants, posting a story also changed the way that they reacted to harassment later. According to framing processes, a new way of framing an experience can help to guide future actions. One participant started talking back and learning how to stand up for herself:

"But I've also started getting what you might call "sassy" at work to guys who try to hit on me. You have to read the table and be careful, because if you get too bitchy you might get a complaint to the manager about you being rude, but lately I've just been as bitchy as can be to people who think they can talk down to me. Or people who call me "sweetie" or ask me to sit at the table and eat with them. I have to keep an air of "it's all in good fun," but I'm definitely talking back more. It makes me feel like I can actually let them know I'm a human being. Plus after I sass them, they'll usually laugh, but they'll stop hitting on me. Back when I was just nice, it would continue until the check came." --P7

After sharing her story on Hollaback, another participant said she started talking to more people about her experience, such as her Dad.

"But I found myself forcing myself to bring it up and to tell people about it and to, even like, people I wouldn't normally tell this to, like my Dad. It's something weird to talk about but I wanted people to know this happened to me, it's not cool, and you should support me. Hollaback cultured my feeling that this should be shared." --Pl

One participant read other stories to help her be better prepared to respond to street harassment in the future.

"It almost prepares you if you're ever in a bad situation. You've already thought about it. It gives you a head start. "--P9

One participant experimented with calling out someone who was harassing another person. She didn't feel as though she did it in the best way and is trying to negotiate how to respond to a harasser.

Unpacking Activism

For participants, activism and feminism were loaded terms---they felt uncomfortable with the potential baggage the labels carried. We asked if they felt that sharing their story on Hollaback was "doing activism." Some were hesitant about the label.

"Sort of. I'm not really much of an activist, but I do theatre, so I feel like story-sharing is a big part of helping the human condition." --P7

"I don't consider myself an activist in this area but I knew when I saw the site that it's an activist site and that posting to it would be contributing to that cause not just to document a story but to agitate for change but I can see sharing stories in a non-activist's way still being important."--P5

"When I was thinking about this whole thing last year and stuff and writing down my stuff I was wondering if someone would call me a feminist and stuff because some people have negative connotations if I like start making art like this. "--P2

For some, storytelling online was a good way to frame doing activism because it did not carry the same baggage as "being an activist." However, others thought that sharing their story was definitely a part of doing activism.

"I think so. I think the first step towards change is acknowledging there's a problem and raising awareness. I feel very strongly about sharing my stories with people so that they know they're not alone. This is why I also share that I was sexually assaulted two years ago. I think some of the best activist work comes from letting others know they're not alone and that what is happening to them is not ok." --P3

"Yeah I do. That is part of the reason I like Hollaback, part of the activism for this issue at this point in time is making people aware of it. I think that is how it starts, once people realize it's a problem then you can do something about it. Until people realize it's a problem it's hard to make anything happen." --P4

DISCUSSION

Due to structural impediments that prevented participants to interpret and respond to the harassment, Hollaback

provided an alternative online space for participants to share their experiences in a way that they could not do offline. The act of writing their story changed how participants felt and thought about the experience. That is, sharing their story fundamentally changed their experience with street harassment. The concept of framing helps to explain these shifts and technology plays a new role into how framing is traditionally done.

Crowd-Sourced Framing Online

As a result of reading and writing stories on Hollaback, participants went through a frame shift [5]. Participants experienced frame transformation---the act of writing their experience and reading other stories changed their cognitive orientation toward how they viewed the occurrence, problematizing the experience as street harassment and connecting it to a greater phenomenon. In addition, design features such as the map of locations where the harassment occurred and the archive of stories worked to illustrate a collective phenomenon. Writing and reading also changed participants' emotional sensitivities. Participants shifted from blaming themselves to transferring that blame to the problem of street harassment and getting angry about it. Some participants also experienced a frame extension, where they connected the experience of street harassment with a greater frame of not being able to participate in public space and the position of women in society in general. We also have evidence that framing the incident as street harassment also changed how participants responded to it later.

Telling and sharing stories online provided a different way of performing traditional core framing tasks (e.g. diagnosing a problem, proposing a solution, eliciting a call to action) that elicit frame shifts. Because the stories are crowd-sourced or told by people around the world, participants themselves are also doing the core framing tasks rather than just the social movement organization. That is, storytellers help to define what the problem is and how to respond. As a result, contributors also experience frame shifts such as frame transformation and frame extension. Traditionally, social movement organizations have had more access to the media and positions of power, and have played an active role in defining the problem, proposing solutions, and calling to action. On Hollaback, people read other's stories of how they define harassment and ways that they cope and respond back. Beyond raising "awareness," crowd-sourced storytelling helps to fundamentally change the way that people think and respond to a phenomenon.

Concealed and Resistance Stories

Historically, storytelling has been used in many social movements, and, in particular, anti-racist movements. According to the theoretical framework for a critical examination of racism through storytelling, there are different types of stories that accomplish different things [4]. Stock stories are stories that are told through dominant groups that rationalize the status quo, and help to reveal and uncover biases. Concealed stories are stories told

from non-dominant groups that counter stock stories, and uncover different ways of experiencing the world. Resistance stories are stories about how people have resisted and challenged stock stories and experiences. Emerging/transforming stories are constructed to "challenge the stock stories, build on and amplify concealed and resistance stories, and offer ways to interrupt the status quo to work for change" [4]. For the participants we talked to, we can categorize their stories as concealed and resistance stories. That is, they told stories that they felt they were unable to tell other people due to structural impediments (concealed) as well as stories about how they tried to fight back (resistance). Participants also told stories about how they were sick of "victim-blaming" and how ignoring street harassment (which is how society dictated them to act) was not working.

Sharing these concealed stories helped to frame street harassment as problematic. Furthermore, sharing concealed stories has helped site leaders to diagnose the problem and decide what to actions to take. For example, in Buenos Aires, there were a lot of stories being posted by teenage girls. The site leader decided to hold workshops in schools and to target youth. In France, there were many stories of sexual assault which led the site leader to gather and post resources on help lines and to learn more about how to respond to these intense cases. In New York City, there were a lot of stories of how bystanders failed to help out. In response, the "mothership" started a Bystander Campaign, where people who witness street harassment are also called on to share their story, and given ways and ideas to intervene. In this way, Hollaback is trying to amplify the frame of street harassment to include everyone. Some site leaders have started telling transformation stories through their own personal experiences. For example, one site leader in Winnipeg, Canada, told a story about how a man asked if he could compliment her. She gave him consent, and he told her that he really liked her hair. She experienced that public exchange as the way in which she felt comfortable about it because she gave consent.

This type of storytelling is different than the method of "digital storytelling." Digital storytelling is a particular technique and kind of storytelling that uses video to share stories [34]. However, there are some disadvantages to this approach. For one, it is impossible to be anonymous and many people do not have access to video editing software or technical skill. Also, there is not always a public forum to publish or participate in the telling of these stories. As we have seen in the responses from the Hollaback site leaders, there also may not be a social movement organization to respond to this data. Thus, the medium (the availability of text or images to remain anonymous) and a community are important in order to publish this information, as discussed in the next section.

Safe Space vs. Networked Public

Hollaback works as both a networked public and, to a degree, as a safe space, but there is tension between these

roles. The stories on Hollaback are open to anyone to read and to potentially comment on (the site leaders moderate comments.) Additionally, some stories of harassment from Hollaback have been replicated through traditional media. As mentioned in previous sections, the public property is important in order for a collective framing of street harassment to happen. But for some participants, Hollaback was the only place that they could talk about their harassment experience---for them, there was no one else they could talk to, online or offline. However, Hollaback is an imperfect safe space. Participants were afraid of those invisible audiences, that they would be criticized by the way they reacted the situation. One participant was worried that it would impede their ability to contact the police or they were worried about their safety by posting the story. This fact is also variable depending on laws in different countries.

Yet, for participants, posting these stories was an act of reclaiming power and doing activism, although sometimes they did not see it through the lens of activism. Thus, there is a need for a safe space online where people who do experience harassment and do not feel that they have any other way of dealing with it, can work through their emotions and understandings of it with out fearing criticism. Yet the networked public property of Hollaback is important for reclaiming power and doing an act of resistance in response to harassment. For some participants, it was also training to talk about it offline, in public, to their friends and family.

Methodological Considerations

In the course of this study, there were additional findings related to method. At first with our recruitment email, we offered to conduct interviews over the phone. However, early on, one participant asked if she could do the interview over instant message because she felt more comfortable with the medium for such an emotionally laden topic. After that, we decided to offer the option of either phone or instant message interview. Out of 13 interviews, four chose to do them over instant message. Thus, for more emotionally laden topics, it is important to offer different types of medium choices for conducting interviews.

Similar to our experience in interviewing intimate partner violence survivors (citation omitted for blind review), we often found that we had to support and validate the participants in their experience. That is, even though they often went off topic and spent more time talking about the experience of their harassment, it was important for us to not push the conversation onto how their experience related to technology. Because of the emotionally heavy topic, it was important to act as someone who will just listen and validate their experience. This is different than research interview methods that recommend researchers to be neutral and to not show any emotions about what participants are saying. In this case, both the first and second authors were also supporting the participants and helped them deal with traumatic experiences. Participants also commented on how part of the reason they were doing the

interview was another way for them to give back, and to fight against street harassment. That through participating in the research, they were doing another form of activism or giving back. This fits within the action research paradigm on how research is connected with action.

CONCLUSION

Telling the story of a traumatic experience is a typical way for an individual to make sense of that experience. CSCW technology makes it possible to tell stories to a different and larger audience. We began our study of this online story telling with a somewhat skeptical outlook. How much difference, after all, could a blog posting make? However, our empirical investigation of women who have shared stories on Hollaback has shown that it makes a great deal of difference, both to individuals struggling to understand their own experiences and to the collection of those individuals together. Whether this makes a substantial difference to others outside that group of direct participants is more difficult to discern, and is an intriguing topic for further work. We need to expand our toolkit of methods of empirically understanding the use of CSCW technology in the service of social movements.

In this research, we have, first, contributed a case study of the successful use of CSCW technology by a social movement. Second, on a more theoretical level, we have contributed a way of thinking about activism using the theories of social movements and framing. We have shown how the concept of framing helps demonstrate the effect of collective storytelling online. Specifically, sharing stories online with the Hollaback community helped to shift the way that people thought about and responded to street harassment. Telling and sharing stories on a networked public provides a different way of performing traditional core framing tasks typically done by social movement organizations and those in positions of power. Because the stories are crowd-sourced, people who experience harassment in public are helping to define what street harassment is and what to do about it. We have also provided a case of Emancipatory Action Research as an approach to doing research in the context of social justice issues.

Hollaback is an example of a social movement organization mediated by online communication. As the field of social movements and technology develops, we expect that a number of different kinds or genres will emerge. This example is grounded in storytelling as its fundamental mode of interaction. In future work, we hope to continue investigating the potential of collaborative technologies for social change.

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