New Medium, New Practice:
Civic Production in Live-Streaming Mobile Video

by

Audubon McKeown Dougherty

B.A. Anthropology
Smith College, 2002

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Signature of Author: _____
Program in Comparative Media Studies
05 May 2010

Certified by: _____
William Charles Uricchio
Professor of Comparative Media Studies
Director, Comparative Media Studies

Accepted by: _____
William Charles Uricchio
Professor of Comparative Media Studies
Director, Comparative Media Studies

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ABSTRACT

The ubiquity of camera phones, coupled with the increasing mobility of citizens and the rise of digital production as an embedded technosocial practice, is creating incentives for many people around the globe to engage in media creation. Mobile phone users are beginning to explore personal broadcasting through live-streaming video, but little is known about the type of content being produced or how much of that content has civic or community value.

At this technological and cultural moment, there is an opportunity to learn not only what is being created, but also how the medium can be embraced as a means of civic participation. This thesis analyzes overall production trends through a content analysis of 1,000 mobile videos on Qik.com, and goes on to investigate the motives and practices behind the production of civic content specifically. Looking at live-streaming mobile video production as a social practice through the lens of civic engagement, it analyzes how and why people are beginning to use this medium to become active citizens for the sake of educating or inspiring others. Research includes mobile production by general users but focuses more narrowly on those who self-identify as activists, journalists, educators and community leaders.

Thesis Supervisor: William Uricchio
Title: Director of Comparative Media Studies

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Table of contents

Acknowledgments.....03

I. Introduction.....05

Topic overview (p. 05)
Case study details (p. 14)
Research methods (p. 16)
Summary of findings (p. 28)
Chapter overview: themes explored (p. 31)

II. Civic production in the public realm.....34

Understanding engagement in the public sphere (p. 35)
Representation, privacy and distribution: historical parallels (p. 39)
Conclusion (p. 47)

III. Practice, participation, purpose.....51

Findings from content analysis (p. 51)
Qualitative research trends (p. 77)
Looking ahead: The future of mobile video (p. 79)

IV. Motivations for civic production.....84

Adoption (p. 84)
Liveness/Immediacy (p. 92)
Mobility (p. 99)
The real and imagined audience (p. 102)
Self-identification (p. 108)

V. Conclusion.....115

References.....121

Appendix.....126

Chapter 1: Introduction

I. Topic overview

When I was a child, I wanted to film everything. Constantly. The only problem was that I had nothing to film with. At the time, video cameras were huge, expensive, and primarily used by professionals and technology enthusiasts. Much has changed in the past few decades; as computers and audio-visual equipment have gotten cheaper, they have also become more open, portable and accessible, with entirely new consumer markets engaging in amateur production. Photo and video enthusiasts have always found innovative ways to produce and share their content, as have do-it-yourself (DIY) writers and musicians.

The age of computing opened new opportunities for video producers, with media moving from analog to digital. With the introduction of digital editing systems and internet broadcasting, the past decade has had a transformative effect on video production for amateur producers. But while video production represents a form of media communication, it has developed as an individualized platform, enabling videographers and editors to operate independently. Telephones, on the other hand, only work when we use them to communicate with others. In this way, phones can be understood as an inherently social medium. Mobile phones take this medium one step further by (dis)placing the user out of a physically connected environment through a portable, social and communicative utility — available to anyone at all times. Mobile phones as image capturing devices are also distinct from traditional

camcorders in that they are connected as physical devices to a networked sphere through telephony.

Today, we are in the midst of a phenomenon wherein video cameras meant for capturing images are beginning to incorporate the benefits of computing networks (connectivity, rapid information flows) as well as the social aspects of live mobile communication (co-presence without co-location). In essence, the mobile phone is being transformed into a multipurpose device, and new patterns of interaction and communication are emerging around it. A majority of new mobile phones now include built-in cameras. The integration of video functions on mobile phones is transforming how videography is understood – once a independent practice, now a connected enterprise. Kindberg (2004) re-envisions the camera phone as "an ever-present imager with communicational reach," explaining:

> [C]amera phones are not simply extensions of already existing devices (such as mobile phones or digital cameras), but rather enablers of new forms of interaction. These, in turn, are related to the particular affordances of these devices. (p. 12)

In this networked era, the means of production are literally in our pockets. Mobile phones have become ubiquitous — not just in more developed countries, but around the globe. They offer an accessible form of communication as well as an instant portal to connect with others. And with video capability now built into internet-enabled phones, and data plans becoming increasingly more affordable, the potential for production and distribution of multimedia content has rapidly

expanded. This potential has multiplied with the creation of free applications that allow mobile users to live-stream audio and video to the internet and interact with viewers in real time. It is a vital moment to assess the emerging practice of mobile video production and analyze live-streaming mobile production as a new medium – representing a convergence of telephony, networked communication and videography – rather than merely a new application of video production on mobile devices.

As a medium for civic engagement, the mobile phone enables activity that mirrors other forms of production. Photography, blogging, ham radio broadcasting and audio and video podcasting have all be used for distributing news as well as mobilizing and educating others. Free online services like TalkShoe.com even allow users to self-host call-in talk shows on any topic, allowing anonymous participants to interact through chat or voice. A virtual salon of sorts, this platform has been appropriated for discussion of religious and political issues, among other topics.

Having worked in the communications sector for human rights groups and other NGOs, I am very excited about the potential of mobile media to enable anyone — as citizens, as workers, as professionals — to document events that can impact or educate others. The power of cell phones to mobilize like-minded citizens has been lauded in recent years, and for good reason; governmental corruption and fraud in national elections have been monitored in Ghana, Kenya, Korea and other countries through mobile documentation by local people, and political demonstrations and street rallies have gathered thousands through the influence of SMS organizing (Rheingold, 2008).

As a coordinator of e-outreach for a labor union, I found SMS communication to be a successful tool in organizing our members who were otherwise difficult to reach. Mobile photography was also useful as a tool for expanding human rights efforts. On a trip to Southeast Asia, I spoke with activists about using mobile multimedia messages (MMS) for publishing mobile photos instantly. The covert nature of mobile production, while raising important privacy issues, allowed them to document rights abuses against migrant workers by members of the Thai police.

In legal cases, this visual evidence is critical, as was evidenced famously in the case of police brutality against Rodney King in 1991 and more recently in the police shooting of Oscar Grant in 2009. But while the footage of Rodney King's abuse was shot on a traditional video camera from an amateur videographer's private residence, Oscar Grant's death was recorded on mobile phones by several people witnessing the event from a subway platform. These days, television news stations frequently air citizen-filmed news footage, and some stations have even launched online platforms, like CNN's ireport.com, for easy submission of journalistic video footage by everyday users. Both the Grant and King videos aired on news stations, and both spurred riots in California. But it was an anomaly that a witness was able to capture the crime against Mr. King on video in 1991, whereas today this form of immediate, "bottom-up" surveillance is becoming easier and more common as the means of production are always on hand and broadcasting only requires a mobile connection. This can be thought of as democratized production, balancing power away from institutionally controlled surveillance and instead empowering everyday citizens.

> Why any of this matters is because live streaming video from your phone is proving to be an invaluable tool for certain circumstances. Despite its popularity, most people still don't carry around Flip cameras at all times, and even if they did, those don't stream live to the web. But having such a tool that is always on you, on your phone, with such capabilities is huge. (Siegler, 2009)

While videos of dramatic news events have perhaps received the most attention in recent years — notable examples include the covertly filmed execution of Saddam Hussein; bombings in London and Spain; protests in Iran; and the evacuation of passengers after the Hudson River plane landing — the potential of the medium for recording and distributing everyday news and information should not be overlooked. Just as organizations are beginning to use mobile media to increase their outreach and engage their members, the same tools are also available to average users. Whether it's filming a school meeting, a church concert, a car accident, a community festival or a political demonstration, in theory any mobile video producer can now create content that has civic value — what I refer to as "civic production" — and can capture footage in real time, broadcasting streaming video to a website.

To quantify this phenomenon, it becomes necessary to quantitatively assess mobile production in general. Here, research questions arise which form the foundation of my thesis:

- What types of videos are actually being broadcast online through mobile phones?
- How can we identify demographic trends in general production?
- How much of content in this new medium has civic value, and what factors encourage producers to capture and live-stream this type of footage?
- Can we form an understanding about the profile of civic producers and the contexts in which they produce media?

Live-streaming mobile video is an emerging medium. Few have measured how this new form of production is contributing to civic engagement or broadening the public sphere by circulating visual footage of community interest. Most research has to date focused on either the consumption and production of online video (Burgess & Green, 2009; Hilderbrand, 2007; Jenkins, 2006), sociological explanations of mobile use as an embedded social practice (Höflich, 2006; Ling & Campbell, 2009; Ito, Okabe & Anderson, 2009), or the general as well as culturally specific trends and privacy concerns surrounding personal content production from mobile phones (Koskinen, 2008a & 2008b; Reponen, 2007; Lasén, 2006; Ahern et al., 2007; Fortunati, 2006; Ito & Okabe, 2006).

Much has been written about the potential for mobile technology to promote democracy and organize grassroots movements for political purposes (Gergen, 2008; Gregory, 2009; Ibahrine, 2008; Rheingold, 2008) or to improve local economies and social services in developing nations (Castells, 2008a; Donner, 2008; Warschauer, 2003). All of these studies are significant in understanding the nuances of participatory mobile media, but I am analyzing mobile video as a

specific medium through which producers can become civically engaged. Other scholars have categorized mobile multimedia according to the style of production (Lehmuskallio & Sarvas, 2008), classifying content themes as emotional or task-based, and tracking the social sharing patterns of producers (Kindberg et al., 2004), but a more nuanced textual analysis of the potential civic value of mobile video is needed.

This thesis explores the overall trends in production of live-streaming mobile video from producers around the world, and focuses more narrowly on the motivations and practices surrounding the production of civic content. Informing my study are mobile videos on Qik.com, at the time of writing one of the only websites created to live-stream video strictly from mobile devices. I offer a quantitative content analysis of 1,000 videos on Qik.com, summarizing trends in content production in this new medium as well as analyzing qualitative interviews with regular producers of civic content. I document production by both general users as well as those who self-identify as activists, journalists, educators and community leaders.

Looking at this practice through the lens of cultural citizenship and civic engagement, I cite historical parallels with live broadcasting and other forms of multimedia production in the public sphere, from the nineteenth century Kodakers' movement in amateur photography to modern-day blogging. Because my emphasis is on the motivation and practices characterizing production, I do not focus on viewer reception, other than how the perception of one's audience influences production of content.

In the context of mobile production, I chose the term *civic* to describe an activity or event that relates to the community or public affairs, as opposed to private or personal activity — content which contributes in some way to civil society. This is based on a definition of civic[1] as "of or relating to a citizen, a city, citizenship, or community affairs" and a conception that through this type of mobile video production, producers are civic-minded[2], that is, "inclined to concern oneself with civic affairs; public-spirited." I incorporate a definition of *public*[3] in the sense that I see those participating in civic production as "authorized by, serving, or representing, the community." I lean on Henry Jenkins'[4] interpretation of *civic media* as that which fosters civic engagement, and I am looking at its production through what Ito and Okabe (2005) have called a technosocial approach, which uses anthropological analysis to interpret the technologies that underlie social activity. As Jenkins (2007) explains:

> Lisa Gitelman has suggested that a medium should be understood both as a technological platform (a channel of communication) and the social and cultural protocols which grow up around it. As we think about future civic media, we are not simply designing tools or devices which might be deployed to support and sustain citizenship; we are also talking about the practices that grow up around those devices, practices that shape how they get used

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[1] Merriam-Webster

[2] Oxford English Dictionary

[3] Oxford English Dictionary

[4] Jenkins defines civic media as "any use of any medium which fosters or enhances civic engagement." Confessions of an Aca/Fan, http://henryjenkins.org/2007/10/what_is_civic_media_1.html

and how they are understood by the people who use them.

Although civic production can sometimes take place in the private sphere, the activities or events it captures must have public value for *civil society*[5] — characterized as "public life rather than private or household-based activities; juxtaposed to the family and the state; and exist[ing] within the framework of the rule of law." This is in contrast to a notion of *private*[6] as "individual or personal, rather than communal or shared." Examples from my Qik case study include filming police activity from the window of a private home in Brazil, and documenting a political meeting held in a private office building in Mexico. That being said, it is important to note that 87 percent of civic videos identified in my study were filmed in discernibly public places, as opposed to seven percent shot in private, most often at home. In both cases, since the video content encourages viewers to be more informed citizens — whether or not this information motivates the audience to mobilize around a particular cause or engage in mobile production themselves — I classify civic production as an active form of civic engagement.

Speaking about mobile communication, Manuel Castells (2008a) advised:

"[I]f the lessons of history are of any use, people will shape the new communication system, largely based on wireless communication. They will do it as users, and they will do it as citizens. And researchers should be attentive to rigorously follow what they do, and to report it to society at large, so that our personal choices and our

[5] A Dictionary of Sociology

[6] Oxford English Dictionary

public strategies will become better informed than they currently are." (p. 451)

II. Case study details

Mobile video is an emerging production medium being adopted by a wide market of cell phone users. Over the course of my research into the this new field, many web and mobile services have appeared. Qik.com was one of the first services to host streaming videos exclusively filmed on mobile phones. Founded in November 2007, Qik is run by a small team of programmers and internet entrepreneurs in California. Membership is free, and there are no advertisements; the site is funded by venture capitalist investors, Quest Venture Partners and Camp Ventures. At the time of writing, strategic partners include device manufacturers (Nokia, Research in Motion), wireless providers (Boingo, Cubic Telecom) platform partners (Microsoft, Symbian) and technology partners (Twitter, YouTube, Livestream). The site offers mobile applications compatible with more than 140 phones in 19 languages[7], with more being added on a regular basis. Qik also supports high definition video content, and offers pay features for better quality streams and commercial monetization of user content through partnerships with Brightcove and VMIX.

Once streamed, user videos remain on the site's server for later viewing (as in the case of YouTube), although I have found some older videos listed as "archived," requiring longer load times before viewing. Members of the site can set up their accounts to automatically cross-post all content to social networking pages

[7] Chinese TW, Chinese PRC, American English, UK English, Polish, Chinese HK, French CA, French, Spanish AM, German, Portuguese BR, Portuguese, Ukrainian, Arabic, Italian, Indonesia, Russian, Hebrew and Spanish.

(Facebook, Twitter), other video-sharing sites (YouTube, 12seconds.tv, Livestream, Brightcove) and blogging platforms (Wordpress, Blogger, Tumblr). Producers can set each video to be either private (viewable only by accepted "friends" on Qik) or public (viewable by both Qik members and non-members).

Before filming a video on a mobile phone, users can choose whether or not to share their specific or general geographical location, which appears on a Google Map opposite their video. While streaming, viewers can interact with the producer by sending real-time chat messages (which become comments after the video stream ends) either from the web interface or from another mobile phone with the Qik application installed.

Competing services offering mobile video hosting include Ustream.tv, flixwagon.com, bambuser.com, justin.tv, 12seconds.tv, livecast.com, stickam.com, flickr.com, kyte.com, nicovideo.jp, youku.com and tudou.com, with more launching on a regular basis. Some websites are more popular in certain countries (Bambuser, for example, is a Scandinavian service); other sites, like Ustream — Qik's biggest rival — boast a wide viewership with greater potential for interaction through live chat or comments between the producer and an online audience. Qik offers less of a viewing community (like YouTube) than a collective of disparate producers; but it is still one of the only services that hosts live-streaming video exclusively from mobile phones. Most other services, including Ustream, cater toward content streamed from a webcam or camcorder, and secondarily from a mobile phone.

Compared to Qik, Ustream offers a more comprehensive organizational system for

videos, including various channels and tagging options. For viewers, it offers a ratings system, embed codes and an advanced integration of social network content (referred to as the "social stream"), including chat and commenting through Facebook, Twitter, Myspace and AOL accounts. It also offers producers the ability to host and promote their own recurring "shows" which broadcast with a higher streaming quality, and includes a scheduling function to advertise upcoming video broadcasts. However, the site is heavily populated with advertisements, including overlaid ads on all user videos. And although both Qik and Ustream allow users to "follow" other site members, the emphasis on social networking and enhanced viewer interaction is much greater on Ustream. The interface and broad functionality therefore result in a younger feel and perhaps a "cooler" online experience, but this comes at the expense of appearing overloaded or visually busy. Because there was no definitive way to tell which videos were uploaded from mobile phones on Ustream, I selected Qik.com as the site of my case study.

III. Research methods

At first I was unsure of how to approach this study. Since my background is in anthropology and documentary video production, it seemed most natural to conduct qualitative interviews with civic producers. User studies by mobile companies often include samples of around ten people to gain in-depth information and identify patterns among participants (Bentley & Metcalf, 2008). But using this method exclusively would neglect the larger production trends of mobile video in general, an area about which I could find few statistics. One important scholar in this field, Ilpo Koskinen (2008a) explains, "Multimedia content is produced by individuals, but

sent to the Web instead of just individual recipients. There is a potential for community action. However...no data exists about the use of such things" (p. 8).

The most pertinent study I found was a controlled experiment by Kindberg et al. (2004) which used a combined process of content analysis and user interviews to analyze 303 mobile photos and 17 mobile videos produced by 34 people. The research team created categories to identify the intentions of the producers in capturing these images, identifying them as either affective (emotional) or functional (supporting a task), for either individual or social use. But this study made no distinction between videos of personal value and videos that could have value in the public sphere — that is, impacting disparate users and groups of users within and beyond the producer's own social network. Additionally, since the time Kindberg's study was conducted, phones have advanced technologically and are now widely used to stream video content of moderate quality. Websites and mobile applications supporting live-streaming mobile video are now growing in popularity, yet I found no existing research on the types of mobile video content posted voluntarily (i.e., not as part of a controlled research study) through these platforms.

In an effort to identify general trends in mobile video production and learn about the specific motivations that underlay civic production practices, I decided to do both a wide quantitative survey as well as qualitative interviews. Content analysis reveals helpful trends and statistics, but does not offer more specific information about users; speaking with people is time-consuming and can provide limited information for a small sample, but is critical to gaining a more holistic sense of the motivations and context of technology use, particularly as a form of civic

engagement. Integrating both methods simultaneously was challenging, but promised to offer a broader view of the use of mobile video as a new medium for civic engagement.

QUANTITATIVE

As a framework for my content analysis, I used a model by Hansen, Cottle, Negrine, & Newbold (1998) which included six steps: defining the research problem; selecting media and sample; defining analytical categories; constructing a coding schedule; piloting the coding schedule (first 100 videos logged), then checking reliability; and completing data preparation and analysis. To improve *intra-coder reliability* (Hansen et al., 1998), or the consistency of my coding practice over time, I went back after logging was completed and verified the way I coded videos, standardizing the assignment of value tags. This included updating the first 100 videos of my pilot phase by filling in empty data fields (gender, user name) and untagging several videos I had previously categorized as journalistic, since I had later amended their criteria.

In defining analytical categories, I designed fields of analysis and their descriptions on a logging form[8] and spent five months watching and evaluating publicly posted mobile videos on Qik.com (private videos are only viewable to approved contacts). My logging form consisted of the following fields:

Number

[8] See Appendix

Date shot

Video URL

Video title

Length

Country

Language

Public or private space?

Event?

General description of video

Value: civic or personal/other

Value tags

Hosting style

User name

Gender of producer

Number of videos per user

My process for content analysis included viewing 1,000 public videos over a period of five months and logging each video to track the type of content, details surrounding its production (length, country in which it was shot, language spoken, gender and hosting style of producer) as well as to assign value tags for both personal and civic videos. This process was subjective and iterative; I logged videos alone, and used the first 100 videos as a test phase to determine ways to refine my logging categories and value tags. I tried logging videos at all times of the day and all days of the week, as I noticed broadcasting trends depending on whether producers were at work or at home, in public or in private.

Although I initially began to log videos algorithmically (logging every fifth video, starting from the most recent), after my pilot phase I switched to watching at least half of all content posted on the screen at a given time (twelve videos appear per page), starting with videos most recently streamed and leaving out videos that were less than 15 seconds in length – usually accidents or connectivity tests. In cases where several videos were streamed consecutively by the same producer, I only logged one so as not to distort my findings. Because of buffering issues, nearly all the videos I watched were not live but rather had just finished streaming, resulting in faster load times. This was a more feasible method, as I was not tracking the number of comments or viewer interactions, but was focusing instead on production.

Qik producers in my study come from 80 different countries representing six continents, including countries like Japan and the Czech Republic for which Qik presently offers no native language support. However, 39 percent of the total videos I logged were filmed discernibly in the United States (based on GPS data displayed next to most videos). I admit an American bias in approaching this study of production; every practice takes place within a particular social and cultural context, including mobile production. Understanding these cultural contexts is therefore critical to achieving a holistic understanding of the use of mobile technologies as an embedded technosocial practice. Some of my content analysis of videos from other countries is likely imperfect; language barriers and lack of cultural awareness might have prevented me from correctly understanding the nature of certain activity shown in the footage, and therefore resulted in coding

errors. Also, some civic producers broadcast content daily, or multiple times a week; because of this, content from repeat producers resulted in a higher tally of videos from particular countries (which in this case study includes Ireland, Denmark and the United States). Given those disclaimers, I nevertheless struggled consistently to offer as balanced an assessment of mobile video content as possible.

To code civic content for the purpose of quantitative analysis, I narrowed my parameters for civic content to include only videos that have journalistic, activistic, political, educational or religious value. Additional categories were used to further classify non-civic videos. A description of each category follows.

CIVIC VIDEOS

- *Journalistic* **-** Reporting, formally or informally, a news event or information of public interest. Producer commentary or text description of the event is therefore an important component.
- *Activistic* - of or relating to public actions or demonstrations by civilians.
- *Political* - Public events and activities with overtly political themes related to issues of governance (including speeches, press conferences, demonstrations).
- *Educational* - Videos wherein the producer or other subject is overtly teaching, lecturing or presenting information (explaining a piece of technology, talking at a conference) for the purpose of educating the viewer.
- *Religious* - Videos of public activity or events that are of a religious nature — a public discussion about religious topics, a ceremony, a church service, etc.

PERSONAL/OTHER VIDEOS

- *Promotional* - videos wherein the producer is overtly promoting himself or herself, a commercial product or personal property.
- *Confessional* - either producer-to-viewer conversations (akin to reality TV "confessionals") or videos wherein people are sharing personal, private information for the viewer's benefit. This is in contrast with general personal videos in which producers film their pets or family members most likely for their own documentation.
- *Entertainment* - spectacle; pop culture documentation; content shot for the purpose of entertaining the viewer or making them laugh, or content documenting actions largely associated with entertainment (dancing, movies, live music, comedy, other performances).
- *Touristic* - often shot when traveling to document new surroundings; videos wherein the producer is filming a physical place and/or describing that location (verbally or through text title or description) such that viewers learn about the place.

My subjective assessment of Qik videos was based on interpretive textual analysis; I evaluated each video based on my reading of the text itself (and its placement within one or more of the aforementioned categories) as opposed to the producer's intent when filming, which is impossible to deduce. I acknowledge the possibility that some civic producers film content for fun, or to share with their personal network of friends and family, not intending the footage to have informational or

educational value for other members of society or subcultural groups. Yet that same mobile video as a publicly shared cultural text can have political, journalistic or educational value to a wider audience.

In my choice of civic value codes, I decided to include a field for religious content and leave out "cultural." Although some definitions of civic exclude ecclesiastical matters, I included video content of a religious nature because it represents affiliation with a community organization (in most cases, a public church), and in that sense provides documentation or promotion of (faith-based) public affairs. This type of content has informational or educational value to many individual citizens who identify as "spiritual" or as part of an organized religion.

Content of cultural value was trickier to quantify. Participation in mobile video production in the public sphere is itself, one could argue, a mark of cultural citizenship, and hence warrants classification as civic production. Further, video documentation of any activity within a particular culture — even speaking a national language on camera — could be considered civic production. While documentation of cultural events (a heritage festival or theatrical production, for example) demonstrates an archival contribution to memorialize the civic affairs of one's community or nation, the video itself is not necessarily educational or informative to viewers unless accompanied by explanatory commentary, making it in essence a journalistic report. Therefore I excluded the cultural category from my study of live-streaming mobile videos.

QUALITATIVE

When selecting interview subjects, I reached out to producers who collectively produced content across all my categories of civic value (journalistic, educational, activistic, political, religious) — either exclusively or in combination with personal (or non-civic) footage. Of the ten people I contacted, eight agreed to speak with me and seven interviews were completed in total. Interviews took different forms, according to the producer's availability and preferred means of communication; four people communicated through a series of emails, and three others spoke to me via Skype (VOIP).

Participants were all English speakers in either the United States or Europe. Of those who agreed to interviews, six were men and one was a woman; three producers were within the age range of 25-40, three were between 40-65, and one was over 65. All producers I spoke with agreed to be mentioned by their real names in my thesis. A list of participants and their production characteristics is outlined in the following tables.

	Bernie	Aldon	Jay	Sanda
Description	Professor	Political activist and media consultant	Multimedia producer and Christian musician	Retired teacher; environmental activist
Location	Tipperary County, Ireland	New Haven, Connecticut	Austin, Texas	San Mateo, California
Also uses camcorders (Y/N)	Y	Y	Y	Y
Type of m-videos produced	Civic, Personal	Civic	Civic, Personal	Civic
Value tags	Journalistic, Political, Educational	Journalistic, Educational, Activistic, Political	Religious, Entertainment	Activistic, Political
Promotes or crossposts (Y/N)	Y	Y	Y	Y
Number of videos on Qik	~700	~40	~180	~30

Figure 1.

	Gurumustuk	Michael	Mark***
Description	Sikh community educator and "journalist of sorts"	Journalist	Digital media producer and human rights activist
Location	Española, New Mexico	Copenhagen, Denmark	New York City, NY
Also uses camcorders (Y/N)	Y	Y	Y
Type of m-videos produced	Civic, Personal	Civic	Civic
Value tags*	Religious	Journalistic, Political, Educational	Activistic, Journalistic
Promotes or crossposts (Y/N)	Y	Y	Y
Number of videos on Qik**	~150	~100	~40

* Represents value tags for the majority of civic content user has produced to date, not just the video(s) I logged during my content analysis.
** As of March 1, 2010
*** This producer's videos were not logged as part of the initial 1,000 videos I analyzed on Qik.com.

Figure 2.

Due to the fact that I am more familiar with American and Western European contexts and am not linguistically able to have in-depth conversations with Qik users in other languages, I conducted interviews with English-speaking producers of civic content from the U.S. and Europe: five people in the United States, one American in Ireland and a producer in Denmark. In terms of technology and participation, both Western Europe and the United States are contexts in which mobile communication is a social practice, further encouraged by increasingly affordable data plans. These are producers from various backgrounds and professions who consistently create content spanning all of the civic parameters I have identified, from educational and journalistic to political/activistic and religious.

My interviews, conducted over the internet through e-mail and VOIP conversations, yield qualitative data which I interpret through grounded theory, identifying motivating factors and patterns of production which characterize the potential of civic production in this emerging medium. Still, my findings are specific in that the producers I interviewed do not represent the average user, though possibly the average civic user; all are actively engaged in mobile production for civic purposes and are operating in developed countries with similar technosocial conditions.

TERMINOLOGY

Several key terms will come up repeatedly in this paper in relation to my content analysis and investigation of civic production. Before I was able to code videos as having civic value, and before I can describe them now, cogent meanings need to be articulated for the terms I have decided to employ. I use the words "code," "tag," and "category" interchangeably to refer to the classifications I have given to video content, and the term "producer" to refer to individual users on Qik who have created videos.

I employ the term *live-streaming*[9] to refer to streaming media, which for my case study is limited to video shot in real time from a mobile phone and sent in compressed form over the internet to be played immediately on the web or other mobile devices, rather than being saved to a hard drive. The term "streaming" refers to the delivery method of the medium (usually over telecommunications

[9] (2010, February 23). In WhatIs.com. Retrieved February 24, 2010, from http://whatis.techtarget.com/definition/0,,sid9_gci753540,00.html

networks) rather than to the medium itself[10]. When I refer to "mobile" in this thesis (as in *mobile video*, occasionally referenced as *m-video*), I mean specifically mobile phones. While other mobile devices enable video capture on the go (notably Apple's iPod Nano, Flip video camcorders and many digital cameras), the ubiquity of mobile phones as an ever-present, multifarious communication tool with the ability to send data to the internet makes both the medium and the practice of production distinct.

IV. Summary of findings

From my general content analysis of 1,000 mobile videos streamed to Qik.com, I have quantified particular trends in production of both civic and personal videos, which will be covered more in-depth in chapter three. From my overall data results:

- 11% of all videos in my case study qualify as civic — more than half of which had journalistic value (63%), followed by educational (35%), political (22%), activistic (17%), and religious (13%).
- 71% of all content was produced by users who self-identify as male, as opposed to 9% by females and 20% by producers of indeterminate gender. These percentages are consistent for civic videos, with 74% of civic content by male producers, 7% by female producers and 19% indeterminate.
- 54% of all videos were shot in discernibly public places, whereas 36% were in private (homes or offices) and 10% were indeterminate. However, 87% of civic videos were shot in public, as opposed to nearly half of all personal

[10] (2010, February 23). In Wikipedia, The Free Encyclopedia. Retrieved February 24, 2010, from http://en.wikipedia.org/w/index.php?title=Streaming_media&oldid=345843303

videos.

- 25% of all videos were of discernible events (accident, party, conference, class, music show, protest) and 30% of videos were given written titles by the producer at the time of streaming.
- Of personal or non-civic videos, 16% had entertainment value, 9% were confessional/exhibitionist, 6% were promotional, and another 6% were touristic.
- Most prevalent languages included English (43%), Spanish (14%), other/ indiscernible (12%) and Portuguese (4%).
- Top ten producing countries included the United States, Brazil, the United Kingdom, Mexico, Canada, Germany, the Netherlands, France and Italy — with 15% of all videos from unidentified countries.
- As far as each producer's hosting style, or the manner in which they film and acknowledge or don't acknowledge the viewer, 39% of videos were shot by what I term invisibles, producers who do not talk or address the camera; 36% were participant observers, speaking to others in the video but not to the camera directly; 15% were reality hosts, facing the camera as a visible MC; and 10% were documentary hosts, providing voiceover to narrate activity in the video, but not filming themselves facing the camera.

Although I did not quantify the approximate age, race, ethnicity or apparent socioeconomic status of producers, I noticed a wide array of ages (with an estimated age range of 25-50 being the most common, followed by older users), as well as a diverse array of racial and ethnic representation — in the North American context, this included production by at least a third of non-white users and broad

geographic dispersion across many parts of the country. From footage shot in private residences, I noticed a range of producers from humble economic situations (small apartments, multiple family members living together) as well as what appeared to be citizens of middle-class status. Again, these findings are largely conjectural, but point to the increased accessibility and attraction of the medium which more formal surveys could further investigate.

Findings from my interviews with repeat producers of civic content indicate that production is higher among those who self-identify as activists, community leaders or educators — people who going to be civically engaged whether or not mobile video exists — but also includes technology enthusiasts who do not classify themselves as having a civic role in the production of content. All of the producers I interviewed had previous access to and experience with more traditional camcorders or higher-end video production equipment, but have moved significantly away from traditional production with the advent of streaming video from mobile phones. Shared motivations include the ability to broadcast footage live, which goes hand-in-hand with having a perceived audience of known and unknown viewers. Cross-distribution of content is widespread, whereas no consistent patterns emerged in the preproduction phase — half of the producers I spoke to planned to shoot civic videos ahead of time and half film spontaneously, but all produce content on a regular basis.

For all the factors I investigated, there were many I chose to overlook. As stated earlier, this thesis does not explore audience reception of mobile videos, viewer interaction with producers, or the impact of audience participation on the

production process. It does not explore reception after redistribution of videos or identify the legal, personal, corporate or professional uses of civic mobile videos after they have been created. Although I offer a macro overview of producer statistics and of content posted to Qik, my qualitative data is based on producers from an American and Western European cultural context.

With the exception of a mobile producer reporting for the Brazilian police, I did not encounter "top-down" videos filmed overtly by the state or corporate entities. Civic content that was political or activistic in nature largely appeared to be bottom-up surveillance, or *sousveillance* (Gregory, 2009) — that is, footage shot by individual producers as part of a grassroots effort to capture the activities of citizens that challenge the status quo, in some cases monitoring the activity of the state or others with power. This is not a study about the use of SMS to organize or mobilize citizens or marginalized communities for civic purposes. This is not an exclusive exploration of MMS capture or amateur mobile photography production and distribution, nor does it focus on personal multimedia sharing within social networks, although it touches on these subjects and draws from previous research in the field. This is instead an overview of live-streaming mobile video production as a new medium, and an analysis of the production of civic content as a form of civic engagement.

V. Chapter overview: themes explored

An understanding of civic production in the mobile space needs to grow out of an understanding of other ways people have embraced media production as a form of

civic engagement. In this thesis, I begin chapter two with an overview of civic production in the public realm, exploring the idea of a public realm in the context of mobile and internet production. I look at historical examples of multimedia production in public spaces, including DIY production and live broadcasting — from early television, radio and amateur photography to blogging and videography — contextualizing mobile video within a history of civic communication, but distinct as a new practice.

Chapter three investigates live-streaming mobile video as a participatory practice. I explain data from my case study in greater detail and incorporate producer feedback to analyze how this medium is being integrated into other forms of civic engagement, identifying the implications of broad participation. The chapter ends by questioning the future of mobile video as a practice, giving a brief overview of industry developments and prospecting future trends in civic production from mobile users in developing countries.

After deconstructing current patterns of mobile production in chapter three, chapter four digs a bit deeper to explore the factors that motivate producers to stream content of civic value. These factors include liveness/immediacy, mobility of producers and of content, producer conceptions of a real and imagined audience, and self-identification. Finally, I conclude by addressing the implications of my study — including suggestions for user design — then offering a summary of trends in the production of content and outlining areas for further inquiry.

With or without technology, people have been civically engaged for a long time. What I explore here is a new set of technological affordances in an emerging medium and their impact on the social and civic practice of production. As an emerging mode of communication, live-streaming mobile video is both exciting and challenging. Real-time broadcasting in the physical and cyber realm, affordable means of production, and the capacity to film on the go make live-streaming mobile video a unique technosocial phenomenon. My case study is thorough, but not exhaustive; I offer examples of how civic production can be a successful practice, but there is still much to learn. I hope I can contribute some worthy analysis to this growing yet largely unexplored field of multimedia in mobile communication.

Chapter 2:

Civic production in the public sphere

"There's no way back to the twentieth century....The issues of strategy, organization and democracy belong to all times." (G. Lovink & F. Schneider, "A Virtual World is Possible: From Tactical Media to Digital Multitudes")

A civic practice — that is, an activity or event that relates to the community or public affairs, that contributes in some way to civil society — happens within a physical, informational and historical context, contributing to a broader cultural realm. Implicit in this sense of civic engagement is the notion of publicness, relating to both the capacity in which a person comes into contact with society as well as that which belongs to, affects, or concerns the local or global community[11]. Civic producers of live-streaming mobile video not only inhabit physical spaces while broadcasting footage, but also distribute that footage into a networked, online public sphere. Subsequently, producers' conception of the potential educational impact of their videos in this online context motivates them to broadcast more content of civic value. Digital information is mobile and fluid; gaining an understanding of these new communication flows and the public production practices that emerge around them — in contrast with previous forms of communication technologies — helps us learn what makes mobile video distinct as a new medium. This chapter deconstructs the idea of a public sphere to frame discussion of civic production, cites historical parallels with previous forms of media

[11] Oxford English Dictionary, 2009

production, and raises issues of privacy and representation then and now.

Understanding engagement in the public sphere

Scholars and philosophers have for years busied themselves with debates about the idea of a public sphere. In the New Dictionary of the History of Ideas, Thomas Murphy traces the term's dual meaning by explaining its origin, *Öffentlichkeit*, as both a physical entity (publicness), and as a concept (publicity). As Murphy (2005) explains,

> [T]he term is meant to imply not merely the intellectual exchange present in the notion of a 'marketplace of ideas' but also the embodied process of forming otherwise private people into a public through various means of communication. Yet the term connotes not simply the physically existing public but rather the radically democratic openness implicit in public discourse[.] (p. 1964)

When I discuss multimedia content of "civic" value, I incorporate this conception of democratic openness in the dissemination of informational, activistic or educational content – also referred to as "democratized production." Increasingly, documenting personal events and community issues through mobile video is becoming a compelling pastime, especially in light of affordable and ubiquitous technologies. These captured moments tell us something about ourselves and other global citizens; whether or not live broadcasting and distribution of content actually encourages public debate or mobilizes the masses, documentation of civic activity is

still a valuable part of the cultural public sphere — encompassing personal and cultural notions of politics through more subtle and less controlled forms of communication and popular media. Manuel Castells (2008b) justifies the contribution of civic production through his analysis of the public sphere as "not just the media or the sociospatial sites of public interaction" but "the cultural/ informational repository of the ideas and projects that feed public debate" (p. 79).

Jürgen Habermas, to whom the term 'public sphere' is attributed, originally conceptualized the idea of Öffentlichkeit as representing a participatory culture in which active discussion of civic issues took precedence over the passive acceptance of the state's representations. He promotes the notion of the public sphere as a universal space for critical reason, both a network of communication and a domain of social life engendering public opinion and democratic deliberation (Habermas, 1991; 1996). Some critics problematize this Habermasian model as exclusionary, citing the simultaneous existence of counterpublics, alternative or niche entities of community discourse, often thought of as subcultures that form around affiliation and shared values (Fraser, 1993; Hartley & Green, 2006; Ito, 2006; Warner, 2005; Lim & Kann, 2008) or what Kenneth Gergen (2008) calls monadic clusters — "small, intensely interdependent communication clusters" of civil society (p. 301).

This fragmentation of publics represents a cultural conception of the public sphere which Habermas renders abstract, consisting of "isolated readers, listeners, and viewers scattered across large geographic areas, or even around the globe, and brought together only through the mass media" (1996, p. 374). But what he describes here is an ad hoc organization of disparate citizens, or a networked

public. Although the implication is that these isolated people are merely media consumers, uniting as engaged citizens through the very act of their consumption, the information era (including mobile technology) has put the means of production and distribution into the hands of the masses — as well as niche mini-masses observed in my study, such Christian rockers, Sikh technologists and Green Party activists.

One way to better understand the new sociality emerging from technologically mediated environments is to conceive the user/producer as part of a new 'mobile public' whose social ties gel and erode. This post-network environment imagines a system of fluid connectivity enabled by mobile and internet communication and embedded in social processes. Mobile publics engaging in production increasingly slip between public and private spheres, temporarily connecting with others based on interest-based alliances through which they create "new temporalities and spatialities for public participation" (Sheller, 2004). Yet is important to understand mobile production as a continuum of previous forms of amateur media, such as ham radio broadcasting and underground newspaper publishing. While deploying low-cost media for alternative ends is not a new practice (Jenkins, 2009, p. 112), live-streaming mobile video is unique in its technical accessibility, physical portability, temporal immediacy and networked distribution to both broad and specific audiences.

The production of media by some, as well as active consumption of media by others, can link participants across national and cultural boundaries through what Ito (2006) calls a set of "social, cultural, and technological developments that have

accompanied the growing engagement with digitally networked media." Her prediction of future developments warrants full quotation:

> Objects and places are the next targets for aggregation into the digital network. As networks increasingly pervade the nooks and crannies of physical space through portable objects and place-based infrastructure, we have opportunities for an always-on sense of networked connectivity and a layering of presence in various physical and online places." (Ito, 2008, p. XII)

The multifarious functions of the modern mobile phone support this convergence, or layering, of on- and offline presence. Streaming video capability allows for the simultaneous co-presence of its user as both an actor in the physical realm as well as a producer (and thereby a commentator) in the virtual. However, just because anyone with the right technology can participate in a networked public sphere doesn't mean they do. As I found in my case study, producers inclined to broadcast content of civic value are people who are already engaged in their communities or interest-based groups as educators, journalists, activists and media-makers. As online civic practices adopt existing offline models of engagement (such as signing petitions, joining discussions or taking and sharing images), mobile video production is becoming easier for even casual producers to adopt because the social action behind it is still familiar. Mobile companies would benefit from investigating the activities of civically active users (with and without technology) and designing applications to support their modes of participation.

How is the production of civic content in live-streaming mobile video different from

other forms of media production in public places? Mobile video is a singular medium which represents a hybrid of existing media (the telephone, the video camera, the Internet) but distinct as live, networked and mobile. In a connected public sphere where communication is mediated through mobile and web-enabled devices, broadcasting publicly brings new challenges for producers and the subjects they document. Lately, with location information embedded into many live-streaming videos from GPS-enabled mobile phones, any connected viewer is able to know exactly where a producer is filming at the moment they begin to broadcast. And enhanced technology will enable tagging systems to identify people and locations within a live video. This raises more questions about the nature of representation, privacy and distribution in a participatory democracy — issues with roots in public photography, telephone communication and web production.

Representation, privacy, and distribution: historical parallels

While issues surrounding representation and images have various cultural histories, the American context sets precedents for understanding the later rise of mobile multimedia. The establishment of the right of privacy emerged in the United States after the introduction of amateur photography in the late 1800s. This was also an era of immense technological growth, urbanization and mobilization. Raymond Williams contextualizes the photo-telegraphy developments of the time against the backdrop of the Industrial Revolution. Motion picture devices, photography, the copying telegraph and advances in electric transport were both "incentives and responses within a phase of general social transformation" (Williams, 1974, p. 15). The parallels of this transformation with the present-day Digital Revolution should

not be overlooked. The everyday practice of media production by amateurs continues to be an incentive and a response to the historical moment.

Against the political and economic backdrop Williams describes were social anxieties; not unlike today, there was a certain level of moral panic around the social effects of new technologies, including the electrical threat and promise of the telephone (Marvin, 1988). But in the late nineteenth century, during which time Eastman Kodak introduced its automatic hand camera, bourgeois consumers were especially tantalized by idea of emotional reality and notions of selfhood. Americans were trying to decide how they felt about the realness of photos themselves, and to what extent photographs captured the essence of a person (Mensel, 1991). The rhetoric around amateur photography was that it was dangerous and almost mythical. Because the general public believed that candid snapshots revealed the true feelings of an unguarded subject, newspapers capitalized on this sensationalism and compensated amateur photographers for these types of images. With no law mandating otherwise, amateur photographers could photograph anyone, with or without their knowledge, and sell or distribute the pictures without consent of the subject.

While Americans feared unwarranted distribution of images and the integrity of personhood they contained, there was at the same time a glorification of the artistic and mechanical skill of the amateur photographer. As Burgess (2007) explains,

> "In the early phases of its development photography was a 'fit' with the values and social practices of Victorian amateurism because of the scientific,

technical, and artistic knowledges and competencies that any aspiring photographer needed to master in order to participate" (p. 92).

Photography as an emerging cultural practice was both fascinating and terrifying, but it was still only a means through which existing fears about the loss of selfhood were manifested.

Despite legal cases that brought the protection of privacy into judicial scrutiny, courts were divided about how to conceive of the issue. Traditionally thought of as a social or moral right within the private sphere, personal rights regarding representation were not established until commercial misuse eventually tipped the scale in favor of protection — not for feelings or personality, but for the capitalization of one's image by corporate entities. In 1903, legislation was passed to protect images and names from unauthorized trade, and to allow a plaintiff to sue for damages (Mensel, 1991). This was later approved by the Supreme Court.

Two problems precipitated this legal protection: increasing exposure of the public with the advance of amateur photographers, and a growing market for these contested images by members of society, the press and advertisers. It is interesting to note the parallels between both the popularity of the medium as an amateur practice then and now, and the backlash against production and distribution of photography in the public realm in comparison with the anxieties that exist today around the clandestine capture and broadcast of mobile photographs and videos. In both cases, the public have been consumers of this contested media (buying snapshots in shops and viewing or downloading photographs of others online) as

well as producers — and the swelling ranks of amateur photographers by the early 1900s mirror, to some degree, the increasing number of present-day mobile users who take and share photos or videos. Yet while these same users actively engage in producing or consuming publicly posted media, they decry the potential for misuse and unsolicited distribution of personal images by contacts or strangers. Despite this concern for privacy, there is still little public outcry against the proliferation of private and public surveillance cameras, although this is changing.

My content analysis of Qik.com footage found nearly an even split between m-videos produced in public and private places (keeping in mind that nearly all videos of civic value were shot in public), signaling a newer trend of broadcasting both personal experiences in the home and outside public events to another's handheld or desktop screen. Raymond Williams asserts that the early period of nineteenth-century public technology was replaced by mobile privatization (p. 19), or social technologies that enabled mobility by bringing public life into one's home, as demonstrated through live television broadcasting. If shifts in labor production and the geographic dispersal of families provided an incentive for new communication systems over a century ago, the mobile lifestyles, changing work habits and transmedia consumption patterns of today's citizens obviate the incentive for live mobile broadcasting by everyday users.

The nature of our relationship to physical places is shifting, no longer tied to the maintenance of social or professional relationships. Improvements in technology support and perpetuate this shift. As happened during the advent of broadcasting, the means of communication — in the case of this study, web-enabled camera

phones — precedes the distribution of actual content, and "a set of scattered technical devices [becomes] an applied technology and then a social technology" (Williams, 1974, p. 18). The sharing of personal and civic content in both private and public places can be understood as a social action through which different kinds of communication take place. The particular anxieties that have grown up around this social technology are an extension of the fears surrounding public photography in its early period and more recently, blogging, SMS messaging and mobile publishing of web content. Today, public status updates about one's private life published on social networking sites have become not merely a wildly popular mode of micro-communication, but also a social action — the physical and communicative act of sharing one's immediate situation with known and unknown others, perhaps situated and perhaps mobile. Privacy concerns surrounding this genre are based not only on the vulnerability of personhood threatened by perpetual documentation (as in the late 1800s), but also on the broad distribution of private, personal details in a digital, immediate networked sphere.

Mobile video amplifies these concerns in the visual realm, with documentation centered not only of oneself but also of others, often inconspicuously. The inability to control the dissemination of one's image online can be troubling, especially when the means of production (a tiny, often silent camera on a mobile phone) allows producers to film covertly. This fear of surreptitious photography dates back to the late nineteenth century with the emergence of mobile spy-tech candid cameras concealed beneath clothing or hidden in accessories, used by the "proto-smart mobs" of authorities and average camera enthusiasts (Huhtamo, 2004). Because of the backlash against amateur photographers during that time, the concealment of

devices provided an easier way to operate, and can inform modern practices of mobile production in the public sphere:

"This issue is worth some reflection, because it may give us clues about the public passions currently raised by devices like mobile phones....the sudden massive presence of mobile phones in public spaces has raised ethical and social issues surprisingly close to the concerns about snapshot photography." (Huhtamo, 2004, p. 3)

However, just as tweeting or blogging have typically focused on the public sharing of information regarding the self, mobile video producers overwhelming focus on filming themselves as subjects, as well as consenting family members or colleagues. Looming privacy concerns still exist, but as live-streaming mobile video becomes more of a known and acknowledged medium, subjects will take greater pains to protect themselves from unwarranted documentation — and in cases where privacy violations do occur, the video itself could provide legal evidence in a case against the producer as with "authorized" surveillance footage. Documentation of another's public actions, while skirting the line between acceptable and questionable use, could have positive effects — like prosecuting police brutality, as in the fatal shooting of Oscar Grant in 2009 captured on mobile video by bystanders in the San Francisco subway — and obvious negative consequences, such as the exploitation of youth or the promotion of violence.

Additionally, the meaning of privacy is specific to context and generation. Studies in the United States have shown that, unless users have experienced a breach of

privacy personally in terms of information or multimedia shared with others, they are not apt to be as concerned (Reponen, 2007). Trust in one's social network also lowers fears about the misuse of personal images (Koskinen, 2008b), a feeling shared by a majority of younger producers. Research on digital photo producers reveals they feel a great responsibility for distributing photos of others online, but share a sense of confusion around the social norms for disclosure of photos, as well as technical options for privacy control and location decoupling (Ahern et al., 2007). Public/private boundaries in digital spaces "are flexibly demarcated and even blurred, depending on the accessibility of contents, their degrees of self-disclosure, and modes of mediated social relationships that contextualize their reception and interpretation" (Lee, 2009, p. 4).

Why not just stop participating in digital media production? We all know our profile photo can be downloaded from a website, defaced and recirculated, and there's nothing we can do about it. This happens to images of presidential candidates as a participatory cultural hazing tradition during every election cycle. Photo-sharing sites like Flickr have also begun using images uploaded by their users for advertisements if those users do not manually adjust their copyright settings. A century after the first privacy laws were enacted to protect unwarranted distribution of photographs, we are again in a hazy legal era regarding amateur media production and personal rights, now complicated by ubiquitous surveillance and at the same time, portable image capturing devices, instant broadcasting and impermanent digital networks.

The fear today lies in the potential enactment of laws that could infringe on one's

rights in the name of protecting citizens in the networked or mediated public spheres. So far, regional laws still allow for the right of image production in public spaces, but this can change according to context — as illustrated by restrictions for photographing various public infrastructures and transportation systems in New York City nearly a decade after the attacks on the World Trade Center. Medium-specific legislation, such as restrictions against internet neutrality or mobile phone use, has yet to be passed on a federal level in the United States.

Perhaps, like the conflicted citizens in industrial-era America, we hope that if things get really bad, the authorities will intervene. In a democracy, after all, we are taught to believe that our elected representatives will enact laws to protect citizens, especially when those citizens rally for protection. Laws are changing globally, for better or for worse. In Japan and Korea, for example, new laws mandate the inclusion of a shutter voice in digital cameras, ostensibly to protect against unnoticeable photographing in public (Reponen, 2007, p. 461). State-specific laws are also being introduced to protect youth against bullying, raising awareness of aggressive bullying on the web and through text messaging.

Since its inception as a public cultural practice, photography has been both a social activity and a means of personal documentation. Newer forms of media, like mobile and web communication, can transcribe cultural processes into a different medium, but the motivation (social bonding, exhibition, reification) and intent behind them (communication, maintaining social connections) remain the same. Those participating in the photographic process — whether as a subject, a producer or a distributor — are to some extent willing to be exposed. We just want control over

the level of that exposure, circulating content within a private domain (usually to a bounded audience) while negotiating the shifting boundaries of overlapping private and public spheres in a mediated, networked or mobile context.

Like the judicial courts of the early twentieth century, societies and governments today are debating the hybrid, overlapping spheres through which digital content is produced and circulated. This new era, characterized not by the Industrial Revolution but the information revolution and the technosocial developments that define it, finds us in a moment of cultural change — but aren't we always in a moment of change? It will be interesting to see whether legal bodies decide to regulate and protect creative production for a populous of increasingly connected global citizens.

Conclusion

Do we really live in a global world? The term itself is redundant, but stratification of communications systems is connecting people across national borders. If, through these means, we are really becoming global citizens, then who governs? Manuel Castells envisions a communications-based global public sphere with ad hoc forms of governance wherein global civil society can engage in discussion of civic issues separate from big government and mass media. New technologies are an intrinsic part of this sociopolitical development, making a global communication system — and thereby a network state and a new public sphere — possible in the modern era (Castells, 2008b).

In this vision of active and engaged citizenship, true democratic participation can be realized because the means of participating — through zeroes and ones, from the comfort of one's home or mobile device — have become more accessible. This doesn't necessarily mean the level of civic engagement will rise, but suggests a lateral shift is taking place in the modes of engagement. The spaces in which content is shared and discussed, including streaming mobile video websites like Qik.com, are architecturally configured to allow for open discussion and dissemination of media; they are, in a sense, structurally democratic. Mobile multimedia producers (I do not call them amateur producers, as many users of mobile technology are far beyond amateurs) are contributing to the cultural public realm, and thereby the global public realm, through this democratization of production — even as journalists and bloggers have engaged in discourse and commentary in the political public sphere.

However, these spaces of production and participation are largely owned and operated by private entities — like the newspapers of the Habermasian era and web and mobile services today. Should governing bodies create media environments where civic deliberation and user-produced content can be viewed and discussed not only by other citizens, but by decision-makers themselves? The current administration in the United States is making strides to encourage participation through its own websites. But they are not providing free, lifetime hosting space for content of civic value. Are governments slow to conceive of media production and consumption as innovative conduits for citizenship, unsure how to reward e-participation with e-incentives? Or is it a hallmark of the capitalist economy that private media companies control platforms for citizen-produced content? Most

likely, these private media companies will continue to retain control, creating (and extinguishing) platforms for the distribution of civic multimedia content and thereby supporting and displacing waves of discourse and action within niche groups of engaged citizens.

Just as audiences must be understood as participating publics (Livingstone, 2005), consumers must be recognized as citizens by governing bodies and media companies. And the notion of citizenship itself must be expanded to reflect the fluid connectivity inherent in our online social and communications systems. As Castells (2008b) notes:

> "To harness the power of the world's public opinion through global media and Internet networks is the most effective form of broadening political participation on a global scale, by inducing a fruitful, synergistic connection between the government-based international institutions and the global civil society. This multimodal communication space is what constitutes the new global public sphere." (p. 90)

Democracies have always fostered engagement in various forms, and those who participate make up many different kinds of publics and counterpublics, asserting their citizenship in the public sphere. Media production has been an integral part of communication in the cultural public realm, as the history of amateur photography has shown; whether created or received by citizens, media form a part of mainstream and alternative communications systems that shape public discourse about civic issues. They also raise issues about privacy, representation and

distribution that continue to evolve within a changing political and technosocial context.

In the digital era, social relationships and civic practices including media production have become part of a larger networked public sphere, and this has made participation increasingly democratic. The distinction between public and private is becoming less opaque; complicated by online and mobile communications, the two have begun to overlap. For members of a global public sphere where participation is mediated by technologies, a new sense of citizenship is emerging — shaped by separate cultural norms and ideals but no longer physically confined. While telephones and film cameras were once standalone mediums, there are now converging with one another and the internet; while communication and production once happened in separated physical contexts, they now occur across platforms in a networked environment; and while media was formerly created, distributed and stored, it is now created, shared and archived all at once in real time.

This is new terrain. It’s expansive and exciting. As outlets for participation increase through technological means, it is important to learn what motivates mobile publics to exercise their global citizenship through new media production, and to monitor the forms and functions of these new civic practices.

Chapter 3:

Practice, participation, purpose

In this chapter I provide detailed results from my content analysis of Qik.com videos, followed by a summary of patterns of civic production from users I interviewed. My hope is to offer a broad overview of the kinds of video content being broadcast from mobile phones along with a sharper focus on patterns of production in civic content, and to pinpoint connections between the contexts and motivations of civic producers.

My content analysis examines video statistics, including technical information about videos streamed on Qik and a description of their content; a summary of participation by producers in different world regions; civic content by value tag; producer demographics, with an emphasis on gender; hosting styles; and production in public and private places. Finally, I consider future trends in this new medium.

I. Findings from content analysis

M-VIDEO & PRODUCER STATISTICS

Based on my own observations, roughly 1,000 mobile videos are posted to Qik every day. What are the specifications of an average video?

Only 30 percent of producers had titled their videos immediately after streaming content, although many producers I spoke to explained that they visit the Qik website later to review and title their videos. Qik's mobile application presently supports titling either just after footage is streamed or before non-live videos are uploaded, which could explain the low number of titled clips.

I found the average length of a given video on Qik to be two minutes and thirteen seconds (02:13), which excludes the highest time of 06:30:59 (an unusual case from Japan wherein the producer filmed himself sleeping) as well as all videos shorter than 15 seconds (usually accidental recordings or connectivity tests). This compares to the average length of 07:23 for civic videos — a full five minutes longer — indicating that civic producers are often focused on full coverage of newsworthy or educational activity, as opposed to the sentimental capture of small moments in personal life. I did not consider measuring the total hours of footage per producer, per country or per value tag, but this would be a rich area for future researchers to investigate.

I found the general Qik user to be a frequent mobile producer with an average of 73 videos. However, my logging was conducted from October 2009 to February 2010, with 75 percent of videos logged in the final two months; year-round logging might reveal other patterns. But even considering that climate conditions might be a barrier to production outdoors, the average civic producer streamed 100 videos, suggesting civic production might be more premeditated than production of personal or other content.

Non-civic videos tended to capture family members, friends or pets as subjects, and to take place in familiar environments such as the home, the car or the office. This general footage includes mundane tours around the producer's house, videos shot while driving or clips of friends socializing. This is consistent with Koskinen's similar research on multimedia messages that found users capture everyday activity on their camera phones more than anything else:

> I went through over 400 actual multimedia messages, but could find only a handful of examples in which people dealt with political, economic or, say, media topics. In the main, communication was about ordinary, mundane things and about what friends and acquaintances were doing.... The main problem may simply be lack of imagination and lack of methods for making, say, news broadcasts – and user interfaces that are not easy to use without practice. (Koskinen, 2008. p. 6)

A similar study by Ito and Okabe (2006) reported that camera phones were used for personal archiving (images usually not shared with others), intimate visual co-presence (images shared to maintain relationships and communication with others) and peer-to-peer news and reporting. They argue that these types of production can be conceived of as everyday photojournalism:

> Some of these photos might make it onto a photo journal site or into the news if the photographer happens to capture an event newsworthy to a general public. But most of these photos are trafficked among peers, and are

> newsworthy only among friends and families. We would argue that the transformation of "news" in the hands of these amateur photographers is a less spectacular, but perhaps more significant shift in behavior and visual awareness than the photos that might grab the latest headline on a news site. (p. 14)

Similarly, public broadcasting of personal video content on Qik serves the purpose of sharing information — and sometimes news of public value, such as severe weather reports — to a known audience of friends and family. Live-streaming mobile video is a new medium; while many mobile phone users have become comfortable taking and sharing photos spontaneously to known contacts, broadcasting video content is still a novel concept. At the moment, the bulk of short, non-civic videos on Qik include users experimenting with streaming video, either alone or with others, often watching their stream live on a computer while filming. Once the novelty wears off, what type of content will users continue to produce, and for what purpose?

While footage of personal content will continue to be streamed and shared from mobile phones, perhaps activists, citizen journalists and educators will appropriate the medium in a more strategic way, as has happened in the case of traditional video production and online distribution. As Jenkins points out in *YouTube* (Burgess & Green, 2009), many groups were already in a position to take advantage of video sharing platforms since "they already had the communities of practice that supported the production of DIY media....YouTube may represent the epicenter of today's participatory culture but it doesn't represent its origin point for any of the

cultural practices people associate with it" (p. 110).

The same argument could be applied to mobile video production, since all of the civic producers I interviewed have had prior experience producing media around causes of public interest. Even though the producers I spoke with realize the majority of m-video content currently circulating is not of a civic nature, they hope to inspire average users — in addition to seasoned activists — to capture at least some civic content from their mobile phones.

As one political activist and civic producer explained,

> I want to, shall we say, model good 21st century civic engagement. And as such, the hardcore activist is going to be engaged no matter what. But if I as just a regular guy can go out and stream some event, it gets more people to think about, gee, I can stream events, I can do this too. So I think 'in-the-moment' communicates that aspect and encourages more people to get involved that way. (Aldon, personal communication, February 16, 2010)

PARTICIPATION BY WORLD REGION

My general content analysis of videos on Qik.com revealed participation from around the globe. Keeping in mind that Qik is a U.S.-based company, and similar mobile video sites are popular in other regions (Bambuser in Scandinavia, for example), the breadth of participation in this particular case study is still significant (Figure 3).

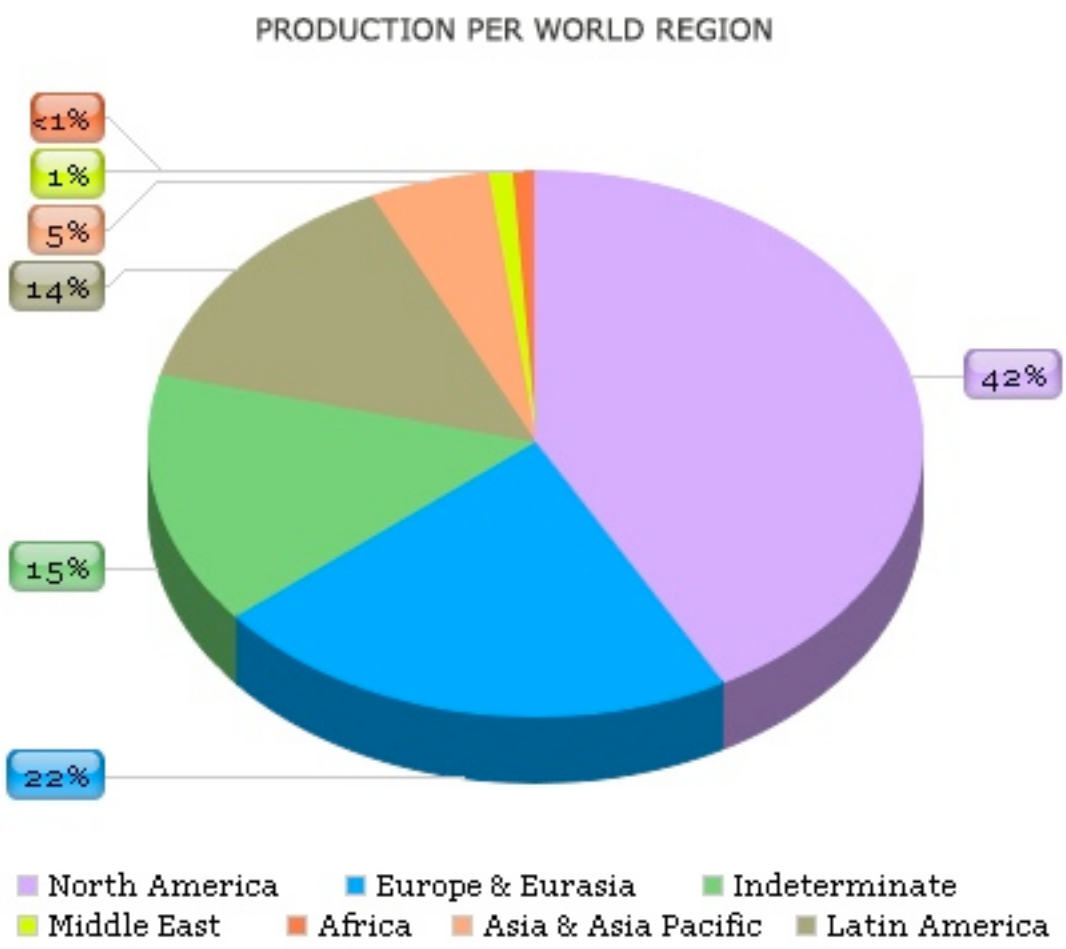

Figure 3.

A comprehensive breakdown of m-video production by country based on my study is listed below, organized by world region and number of videos produced.

NORTH AMERICA (42%)

1. USA - 389

2. Canada - 30

EUROPE & EURASIA (22%)

1. UK - 43

2. Germany - 22

3. Netherlands - 21

4. France - 18

5. Italy - 16

6. Spain - 13

7. Finland - 11

8. Russia - 10

9. Turkey - 8

10. Denmark, Norway - 6

11. Albania, Austria, Ireland, Romania - 5

12. Bulgaria, Portugal 4

13. Belgium - 3

14. Greece, Hungary, Scotland - 2

15. Croatia, Czech Republic, Estonia, Iceland, Latvia, Lithuania, Macedonia, Poland, Serbia, Slovakia, Sweden, Switzerland - 1

INDETERMINATE - 146 (15%)

LATIN AMERICA (Central/South America + Caribbean) - (14%)

1. Brazil - 48

2. Mexico - 31

3. Venezuela - 13

4. Argentina - 12

5. Colombia - 9

6. Chile, Guatemala - 5

7. Peru - 3

8. Haiti - 2

9. Belize, Barbados, Costa Rica, Dominican Republic, El Salvador, Honduras, Panama, Paraguay - 1

ASIA, SOUTHEAST ASIA & ASIAN PACIFIC (5%)

1. Taiwan - 9

2. Japan - 7

3. Singapore - 5

4. China, Hong Kong, India, Malaysia, South Korea - 4

5. Vietnam - 3

6. Australia, New Zealand, Philippines, Thailand - 2

7. Bangladesh, Indonesia - 1

MIDDLE EAST (1%)

1. Israel, Saudi Arabia - 4

2. Pakistan - 3

3. Bahrain, Iraq, Jordan, Kuwait, Oman, United Arab Emirates - 1

AFRICA (.04%)

1. South Africa - 3

2. Kenya, Nigeria - 1

Predictably, over half of the live-streaming mobile videos I surveyed were produced in North America and Europe, mirroring Qik's limited language support which is at present disproportionately targeted toward European languages. But many of my demographic findings were in line with general patterns of mobile phone use worldwide; mobile technology is more advanced in more developed countries and mobile penetration rates are highest in the European Union and in parts of Asia ("Measuring the information society," 2009, p. 6). Where wireless infrastructure and national economies are stable, more citizens can afford multimedia-enabled phones as well as data plans that support streaming video production. Presently the biggest challenges facing mobile adoption in developing nations is access and affordability (Donner, 2008). However, my case study illustrates a gap in production from Asia, which leads other world regions in mobile adoption and use, with mobile penetration in Australia and New Zealand at 82 percent and in Japan and South Korea at 75 percent (Castells, 2008a).

While a small amount content on Qik was broadcast from Asian countries known for their advanced use of mobile communication, reduced representation in my study could be traced to several factors — a noticeable lack of adequate language support, on the one hand, as well as the popularity of country-specific mobile video services such as Nico Nico Douga in Japan ("Nico Nico," 2009) or Youku and Tudou (A. Davis, 2009) in China. Despite international connectivity, commercial monopolies often dominate the market in specific countries, reducing the opportunity for cross-cultural participation. Yet 15 percent of all m-videos were from indeterminate countries — that is, either no GPS metadata was displayed next to the video (possibly an intentional privacy protection) or the producer did not list

their country on their profile. Although Qik profiles usually detect country by a user's IP address, this default can be overridden if the user selects a country manually — and the first country listed in Qik's drop-down field is the United States. I came across many videos clearly shot in foreign countries (visual markers included license plates and physical landmarks) but were from producers whose profiles were set to the U.S., therefore I logged U.S.-listed videos as "indeterminate" unless the video content clearly indicated the footage was shot in the United States.

Another factor explaining lack of representation in many regions is a higher cost for data plans. Although there were nearly 335 million mobile broadband subscribers by the end of 2008, less than one percent came from the developing world ("Measuring the information society," 2009, p. 63). Jay, a producer from Texas whom I interviewed about his coverage of church-based activities, is originally from Sri Lanka. He cited phone plan cost — rather than lack of motivation or technical ability — as the major reason his family members in Southeast Asia are not presently participating in mobile production. As of 2008, Sri Lanka had 0.8 mobile broadband subscribers per 100 inhabitants, compared with 17.4 in the United States and 56.8 in Japan ("Measuring the information society," 2009, p. 93). This participation divide exists in Latin America as well. However, Brazil (with 1.2% mobile broadband subscribers) and Mexico (with 0.3%) both placed in the top five countries for general mobile video production in my Qik study (Figure 4), and in the top three countries for civic video production (Figure 5).

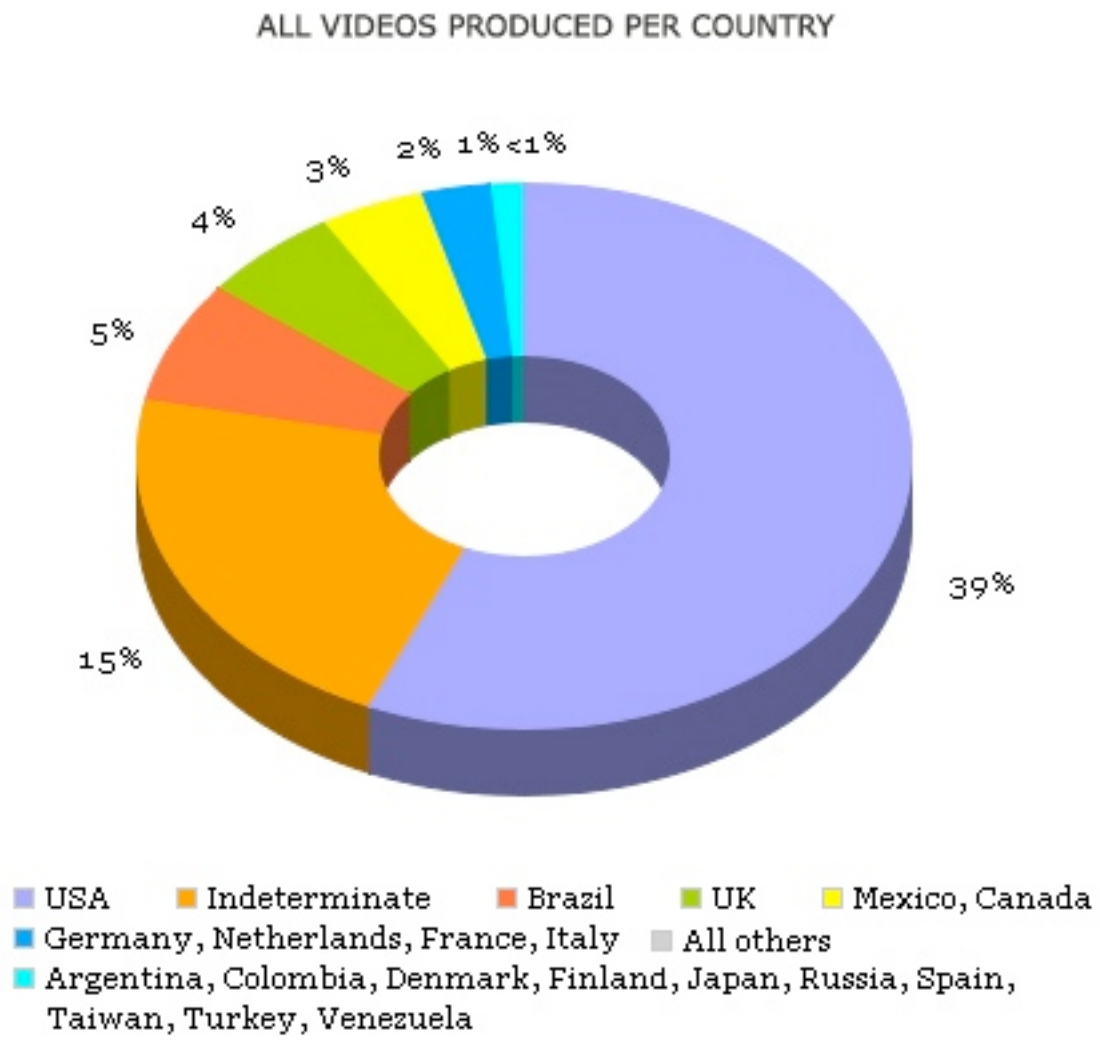
ALL VIDEOS PRODUCED PER COUNTRY
39%
15%
5%
4%
3%
2%
1%
<1%
USA
Indeterminate
Brazil
UK
Mexico, Canada
Germany, Netherlands, France, Italy
All others
Argentina, Colombia, Denmark, Finland, Japan, Russia, Spain, Taiwan, Turkey, Venezuela

Figure 4.

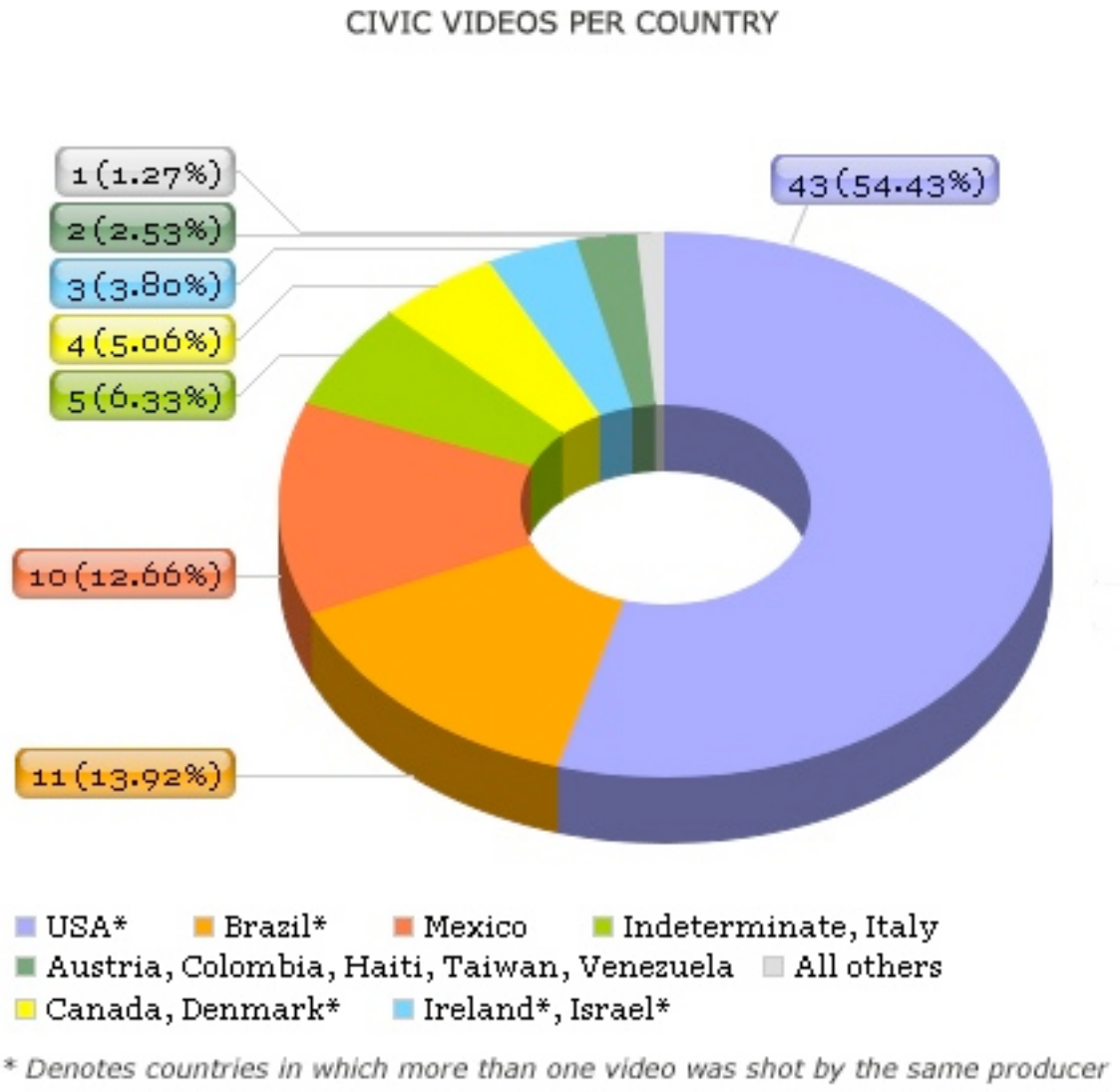

Figure 5. (Countries grouped by total number of m-videos)

Jay suggested the prevalence of Latin American civic producers on Qik could point to a perceived value in mobile broadcasting: if people in less developed areas incur a higher data cost for mobile broadband supporting streaming videos, they're going to be more discriminating and only broadcast content they consider important. Prepaid phone plans are popular in Latin America and elsewhere; as rates decrease in the coming years, streaming mobile video might see a dramatic rise — and

perhaps content will become more trivial in nature, with an increase in footage of cute pets instead of community meetings. As researcher Juan Ignacio Fernandez writes in the *Latin Business Chronicle*:

> Mobile Internet is too expensive for most prepaid users and the penetration of laptops and 3G smartphone users is still relatively low although growing. Most applications for mobile Internet remain basic web connectivity although there are a number of other applications available in smartphones that will begin to gain importance as these devices become more widespread. (qtd. in "Latin America," 2009)

Innovation often occurs in economically challenged areas, where citizens must find new uses for existing tools. When web-enabled mobile phones do reach greater penetration in Latin America, perhaps their application will be more aligned with community and familial needs (supporting enhanced communication and information sharing) rather than exclusively for leisure purposes. Likewise, culturally specific trends in mobile video production – both civic and personal – would be a fascinating topic to pursue in the near future.

CIVIC VALUE TAGS

In tracking civic videos, results were slightly skewed due the regular production of civic content filmed by specific producers. Those who tended to shoot content of a civic nature tended to do so regularly; this pointed to a notable trend and helped in identifying active producers to interview, but it altered the results of my

quantitative study. The most significant cases were Brazil and Ireland. Out of the 11 civic videos I logged from Brazil, six were broadcast by the same producer, a police officer who filmed accidents and arrests daily, then embedded his Qik video stream into the website of a related news station. All three of the civic videos from Ireland were from the same producer (Bernie), whom I later interviewed.

On the whole, I found 11 percent of m-videos to have civic value, 63 percent of which were journalistic in nature (Figure 6). Because each video was tagged with as many categories as was relevant, many civic videos shared multiple value tags (Figure 7). Perhaps the higher percentage of journalistic and educational tags was due to the fact that newsworthy events and educational content are accessible modes of civic engagement wherein the producer's presumed intent is simply to inform the viewer. Political, activistic and religious activities might be filmed for the same reason, but often involve a niche community of participants active in a group or organization.

Whether producers are part of mobilized "smart mobs" (Rheingold, 2002) or a member of a church or civic organization — forms of face-to-face engagement which Putnam (2002) and others have argued are on the decline and which Gergen (2008) suggests is being transformed through media communication to independent, monadic clusters — my study indicates that producers who are affiliated with a (physical) network are more likely to film activity within that network than those outside of it. That is to say, an individual walking past a political protest might choose to live-stream the event; but, as with all m-video content, people usually film that which is a part of their lives. When activist meetings,

church events or political debates are embedded within a person's regular activities, and that person has begun to film content from their phone, chances are they will broadcast those activities through mobile video.

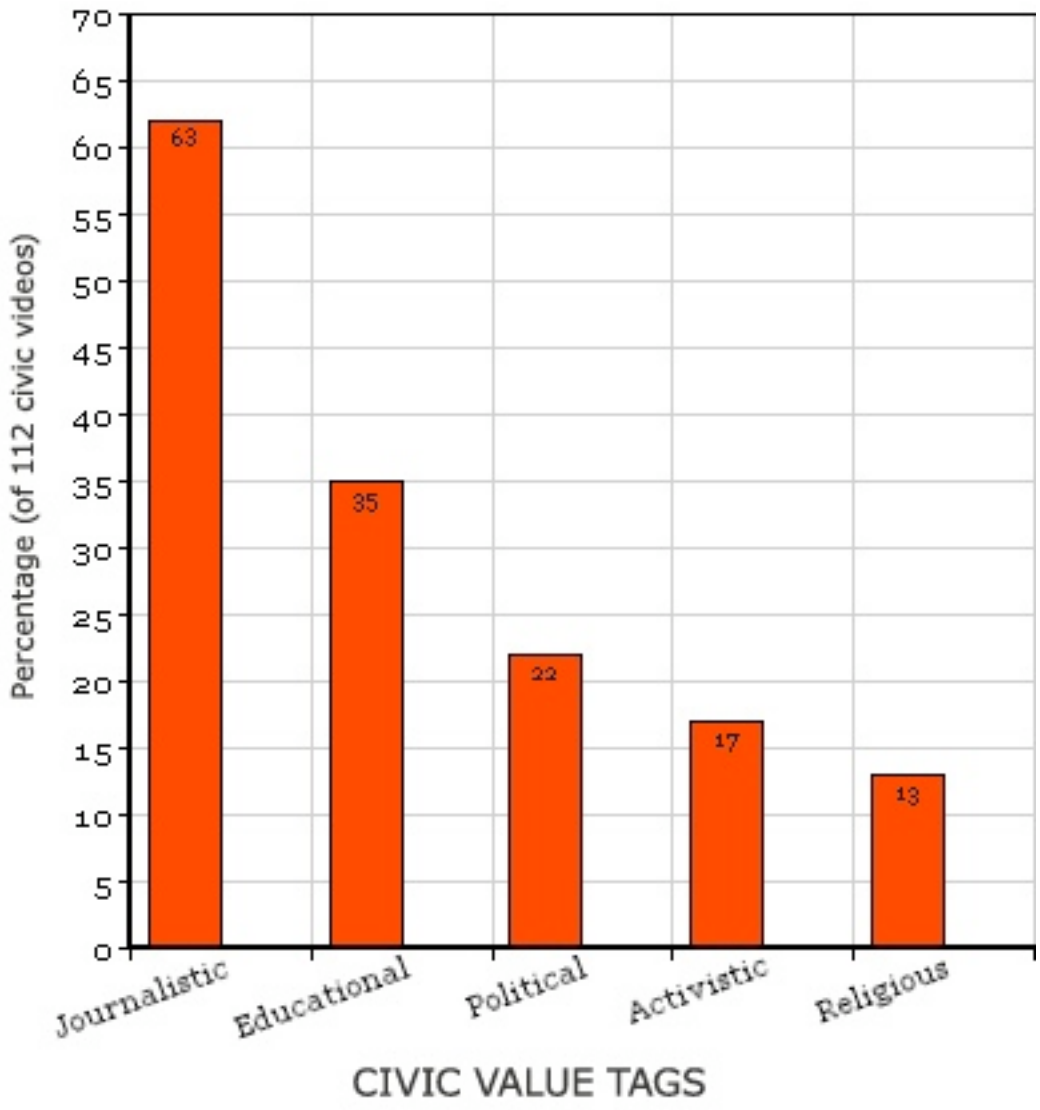

Figure 6.

It is important to note that despite my attempts to remain objective, these textual interpretations of civic content on Qik were subjective and therefore less scientific

than a study involving multiple researchers and rigid categories. Journalistic videos were often informative, but I chose to code educational videos as those in which the producer or other subject was overtly teaching, lecturing or presenting information, thereby educating the viewer. A different researcher might have defined these categories in different way, resulting in greater intersections between journalistic and educational content. My intent was merely to offer a small glimpse into the types of civic content being produced in this new medium based on a specific framework of analysis (Hansen, Cottle, Negrine, & Newbold, 1998), and to identify areas of similarity.

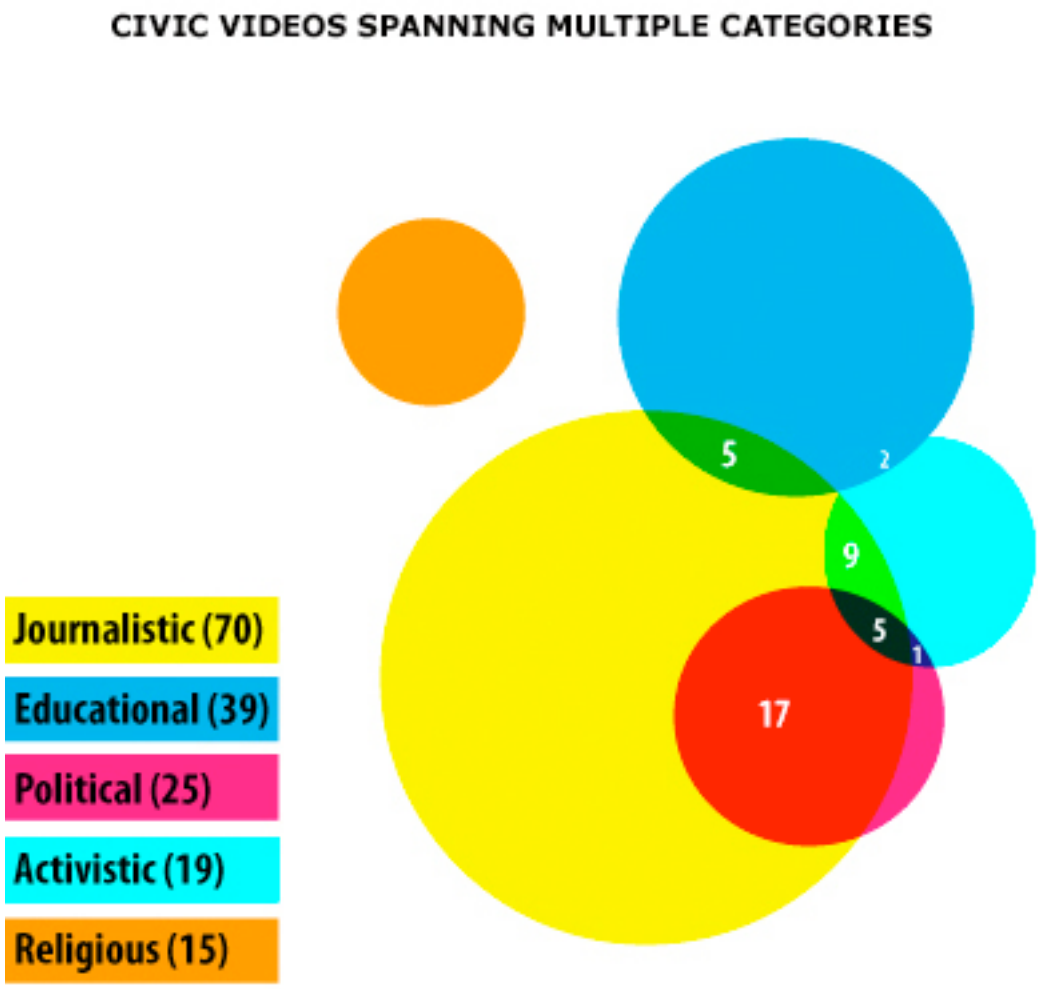

Figure 7.

PRODUCER DEMOGRAPHICS

Race, ethnicity, age and economic class were not surveyed in this study of Qik videos, although future analysis would benefit from evaluating these demographics. Nevertheless, in logging 1,000 videos, I noticed what seemed to be a broad representation of producers — including a range of languages (English, Spanish and Portuguese being the most popular), racial representation (particularly in the North American context, although white producers were still the dominant group), economic status (an inference based primarily on personal videos shot in peoples' homes) and age.

While it seemed a majority of m-videos were produced by those in the 25-40 range, at least a fourth of producers appeared to be over 40 years of age, including many in their 50s and 60s. This older demographic easily surpassed representation by younger producers. And while teenagers often used mobile video as part of a social activity, usually to film their friends or test out the technology with others, older users took advantage of the medium in a more strategic way and often filmed alone. They discussed topics of interest, filmed events in their lives and captured civic content with a "hosting style" that frequently acknowledged the viewer or perceived live audience.

Despite the higher levels of participation across ages and cultures, gender representation remains the primary disparity in my study of mobile video production on Qik. Only nine percent of all videos were shot by producers who, on

their profile, self-identified as women (or spoke or appeared on camera), contrasted with 71 percent of men and 20 percent of producers whose gender was indeterminate. Percentages were exactly the same when tallying personal videos. Civic production only saw slight changes — with seven percent of civic videos shot by women, 83 percent by men and 19 percent indeterminate.

Intriguing patterns began to emerge in the personal videos shot by men. I discovered men from various countries around the world filming women in their homes — mothers, sisters, wives, daughters. These female subjects often looked disinterested, either unaware they were being filmed or too busy to care. They were often engaged in housework — changing a baby's diaper; cooking; bathing a child. One woman in Greece ironed clothes in the dining room until the man filming showed her a real-time stream of his mobile video on a computer. The woman saw herself on the screen, laughed, asked a few questions, and then went back to ironing. A different man in the Netherlands filmed his wife drying dishes, and several men in the U.S. filmed women texting on mobile phones. Two different men in India filmed domestic scenes around the home, including clips of female family members engaged in conversation with one another or taking care of children.

Why aren't these female subjects also engaged in mobile production? Cultural context must be considered; in certain Caribbean, Southern European and Asian contexts, there is perhaps less of an expectation for men to engage in domestic work. Are the men merely bored, experimenting with this new medium by filming "real" scenes in their personal environments? Is technology experimentation and multimedia production considered tertiary hobbies primarily promoted for men,

while women have more important things to do or are discouraged from participating? When women did stream m-videos, they were more likely to film scenes around the home — particularly children (especially babies), which is logical content for a new parent and an easy way to share family footage with remote contacts without the need for a camcorder, computer or editing software.

In the work environment, m-videos were almost exclusively shot by men, ostensibly bored and attempting to discreetly (or indiscreetly) play with live mobile video. Some would film their offices covertly, or even film themselves facing the computer, as if the mobile phone was a security camera they could not control. Others initiated informal interviews with their coworkers or filmed lunch conversations, as in the case of factory workers in the United States and Mexico, as well as employees of a car wash having fun on the job in Culiacan Rosales, Mexico. A large portion of at-work videos were inadvertent demonstrations of the production process, wherein the producer would teach his colleagues how to use streaming video. While this trend of peer-to-peer learning is laudable as a gateway to media literacy, hardly any producers in these instances were women. This contrasts with existing trends for civic involvement which show young women are becoming more involved in organizational volunteering and electoral voting than young men (Marcelo, Lopez, & Kirby, 2007). Why aren't patterns of civic engagement mirrored in a technologically mediated, networked sphere? Perhaps it is the means of participation. Other research[12] indicates that the number of women studying and working in IT-related fields has rapidly declined in recent decades. Access to

[12] National Center for Women & Information Technology Fact Sheet: http://ncwit.org/about.factsheet.html

technology and basic education are still major barriers to bridging this gender gap in developing countries (Simard, 2009). Will the gender disparity recede as broadband connections increase, costs decrease and the younger generation of digital (and mobile) natives comes of age?

In my case study, civic production by women was scant — only eight videos, out of 112 — but included content that was largely journalistic, educational and activistic. These producers reported on news events, such as a house fire in Norway and a severe storm in the United States, filmed technology conferences (New Zealand, Mexico and the U.S.) and captured labor demonstrations (U.S.), environmental discussions (U.S.) and protests for internet freedom (Mexico). Future research and even corporate marketing efforts would benefit from investigating the social contexts in which women participate in mobile video production, and designing incentives to increase their participation — especially as a means to promote civic engagement.

HOSTING STYLE

Figure 8 tracks the hosting style each producer employed while filming. These styles are based on subjective categories influenced by existing modes of directing and cinematography from traditional media (television and film). As such, new, independent hosting styles were not identified, but might well exist.

Invisible producers were the most prevalent type of host in my study, neither speaking nor facing the camera. In this mobile cinema verité, the viewer was

invited to be a silent witness to the action. Participant observers (borrowing a term from anthropology) often acted as if the camera phone did not exist, despite the fact that they were holding it and filming a scene. These hosts would talk to others in the video but would not face the camera or address viewers directly. Reality hosts, on the other hand, would both face the camera and speak to the perceived audience in a confessional style. Finally, documentary hosts would provide a voiceover, explaining the scene they were filming.

Accordingly, 20 percent of civic videos were shot in this documentary hosting style — perhaps mimicking live news broadcasts on television — whereas half of all civic videos were filmed by invisible hosts who merely allowed the action to take place for the viewer without offering commentary or description. As participant observers, the second most popular hosting style, producers also allowed the action to unfold but became a part of it, interacting with others. These trends could suggest that popular hosting styles in real-time, on-the-go cinematography are medium or context specific: a phone in hand enables a spontaneous broadcast, and physical location, as well as the producer's relationship to her subject, come together to influence the hosting style she adopts. The raw format of live-streaming invites the viewer to participate in what Ito & Okabe (2006) have called an "intimate visual co-presence" — as a silent actor alongside the producer, in this way engaging with the producer.

These hosting styles demonstrate a form of media literacy, adaptable models of visual communication wherein users appropriate dominant production styles from mainstream media and sometimes create their own. The way producers choose

(consciously or unconsciously) to direct their m-videos can tell us much about their self-perception as educators or entertainers, as well as their constructed and often intimate relationship with viewers. Future research on m-video reception could explore how of these hosting styles (as well as more original styles) are valued by engaged audiences, and how each style encourages or discourages viewer interaction.

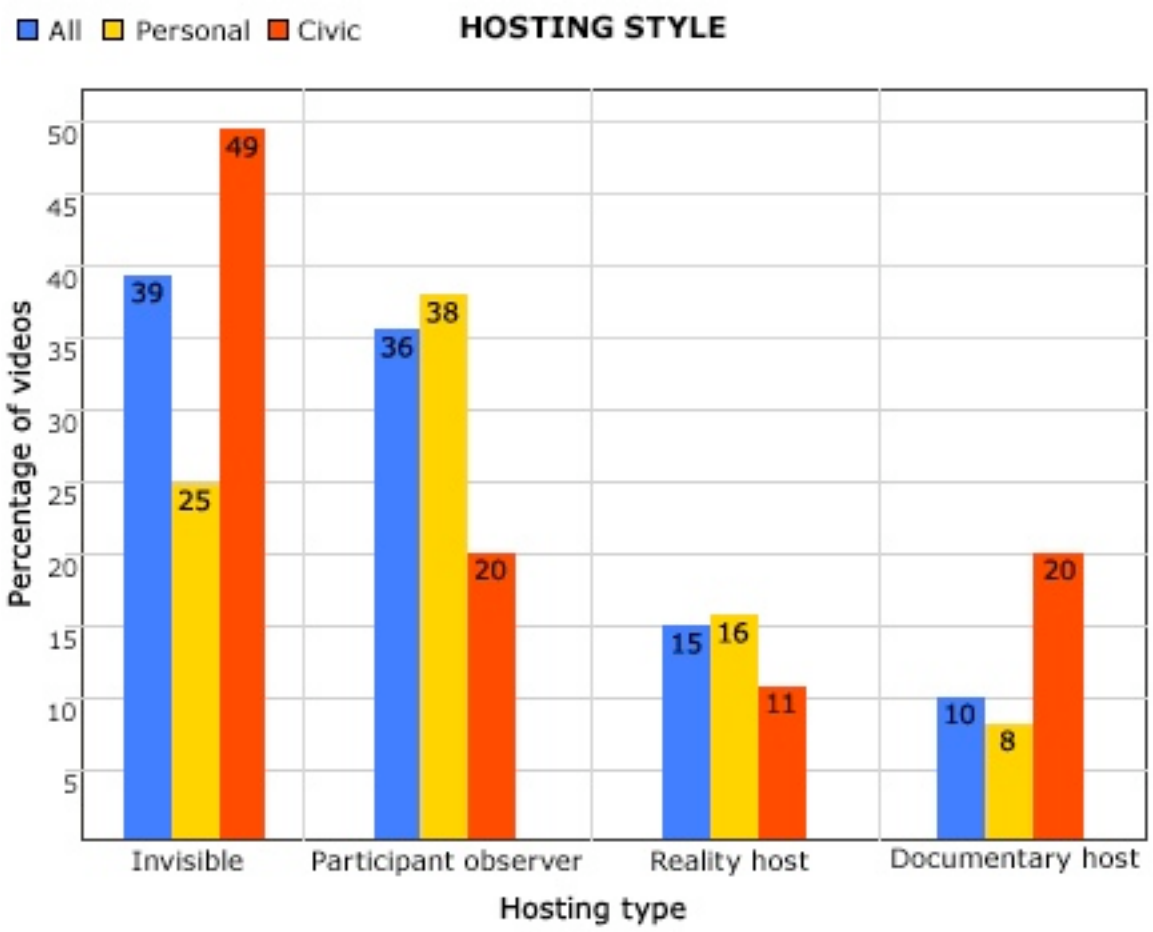

Figure 8.

PUBLIC AND PRIVATE PRODUCTION

Physical location was also a factor I surveyed (Figure 9). Predictably, 87 percent of civic content was shot in a public place — that is, outdoors, on the street or in a public building or business. In contrast, only half of personal videos were shot in public. These statistics also hint at the type of content being produced. Because this is an emerging medium, many videos on Qik are of producers learning how to use streaming mobile video — both in public and private. But I have found most footage shot in one's private home is usually personal content of family, friends or pets, and often the producer articulates that the footage will be circulated within their personal social networks.

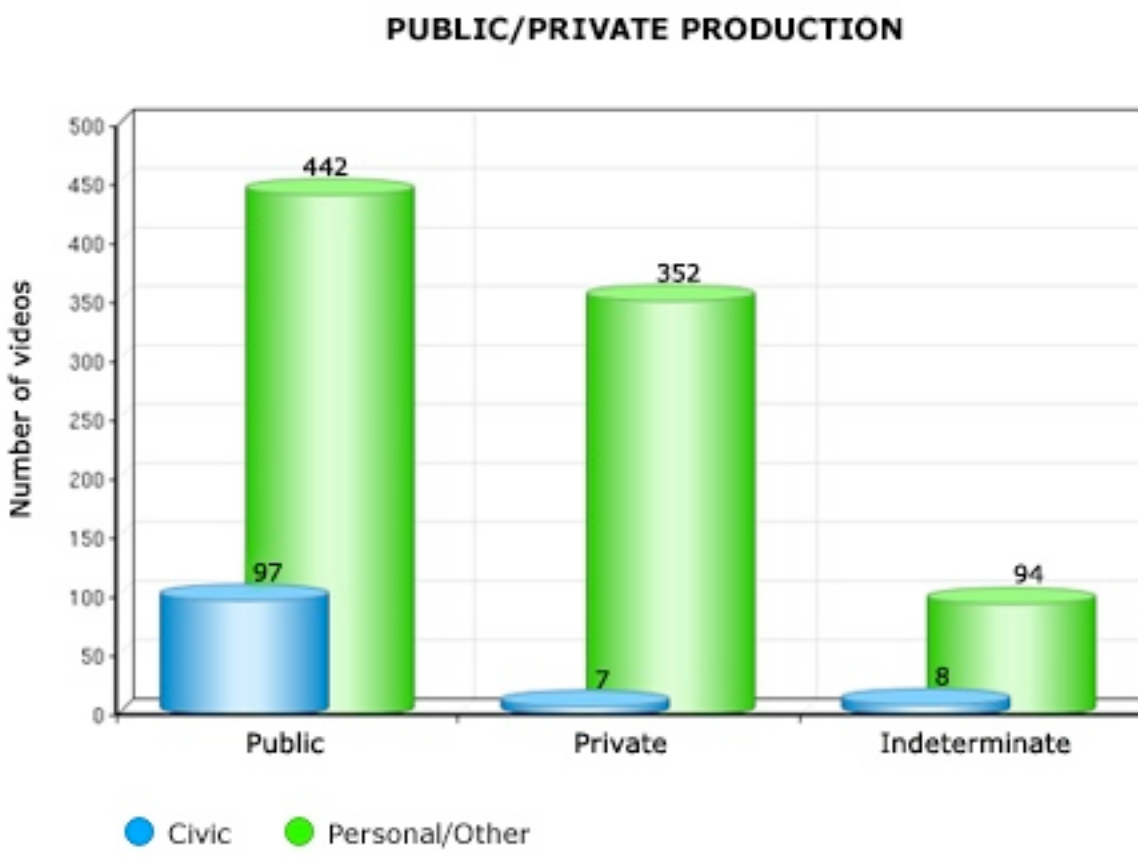

Figure 9.

It is curious, then, that these 352 personal videos shot in private places were still broadcast publicly to Qik, despite the option of restricting them to private status, accessible only by approved contacts. While many producers embrace the novelty of having their private lives viewable — in real time — by an anonymous audience, others broadcast videos for a known personal audience (often family members), ignoring the possibility that the general public would be interested in watching private content but broadcasting publicly regardless. Reponen (2007) points to research suggesting users are generally unconcerned about privacy issues in information or multimedia sharing unless it has negatively affected them personally (Reponen, 2007, p. 468). It is also possible that many users are unaware of how to

alter their privacy settings on Qik, as in the case of one young man filming his mother at home. “I think I could make it private,” he told his mother, “but I don't even know how to do it" (2/3/10). Similarly, since private videos on Qik are hidden from general users, I was unable to determine what percentage of uploads include private content.

Intended to be of interest to the larger community, civic content is generally public in nature. One civic producer I interviewed, an active member of the Sikh community as well as a technologist and educator, explained his reasoning for publicly broadcasting both personal videos as well as civic videos of religious activity:

> I only post stuff online if I am ok with everyone seeing it. The only reason I might not post something more publicly is if I didn't think it would be of interest to people outside of my family (which isn't often). The reason is that using my own life and community is a way of being very real. When you have very formal journalistic type content it's very different feel than when you see REAL people and informal type settings. People like personal...and real. Part of having things this way for me is so that people see that we are all on the same level and not better or different in essence. (Gurumustuk, personal communication, March 5, 2010).

What Gurumustuk articulates here is an important motivation that shapes production practices of mobile video in general: public sharing of personal content is not always exhibitionist but merely human. The attraction to watch raw, uncut

footage of real people in real time can cater to voyeuristic tendencies in any anonymous viewer, but observation can also yield to empathy and sometimes understanding. Seeing m-video subjects as "real" people, engaged in everyday activities both in public and private spaces, has the potential to bridge cultural (and subcultural) divides. Visual information as an educational tool can be as valuable as academic literature, with m-videos functioning as raw documentary footage, immediate and produced by "regular" people. This inclination to promote understanding of others is itself a civic virtue. But combined with m-video production, it becomes a civic act. While video content in and of itself might not always have civic value according to the parameters I have defined for this case study, even personal videos can change the way viewers think about the world.

"Whatever I do," Gurumustuk concluded, "I like to try to break down barriers of mis-understanding, prejudice, judgement [sic], hate, etc in hope that people will see each other as part of the same." While not every mobile video producer consciously films content with this goal in mind, or finds an audience to benefit from his content, it is heartening to think that some cultural barriers could erode from the consumption of "real" citizen-generated content. Burgess (2007) refers to this production of everyday events as vernacular creativity, "practiced outside the cultural value systems of either high culture (art) or commercial creative practice (television)." Like Gurumustuk, she finds hope for cultural citizenship to be asserted through vernacular creativity because "its means of production promise to be accessible, offering the creative citizen a place to speak, and because it appears to be a potential means of connecting cultural citizens" (p. 71). Cultural citizens will always find a way to be connected — but emerging communication systems can

provide portals of expression, like mobile video, and forge pathways for those connections.

II. Qualitative research trends

I contacted ten civic producers for interviews — all of them English speakers from the United States or Europe — and completed remote interviews through email and VOIP conversations with seven people[13], six men and one woman. The selection of these producers was not intended to represent a broad range of average site users, but of civic producers — those who repeatedly filmed civic content to educate, engage or inform an audience. I wanted to understand what motivated them to participate in civic production, why they chose to use mobile phones and live-streaming video, and how their personal contexts and prior modes of civic engagement affected or encouraged production of m-videos. A continuation of this research might also explore the motivations behind producers of non-civic content.

Some similarities in production practices are worth noting:

- All producers own, presently use or have in the past used camcorders or other higher-end video equipment, and most have learned digital video editing.
- Self-identifying activists (political, environmental, human rights) have a long history of civic engagement both through in-person actions and through digital production; m-video merely provides a new, more immediate and convenient

[13] (See Figures 1 & 2)

means through which to broadcast and distribute activistic content.

- All producers conceptualize streaming video as offering particular affordances (accessibility, mobility, liveness) but see it as only one of many tools for educating and engaging others around civic issues. They also understand pre- and post-production efforts are essential for spreading their content through social networks (promotion, cross-distribution, embedding).
- Nearly all producers were introduced to Qik by friends or colleagues, and all producers actively teach others how to use the medium (peer-to-peer media literacy training).
- Upon initial adoption, all producers intended to use mobile video for civic purposes (in addition to personal or other use, in some cases).
- All producers articulate they are mindful of privacy issues when filming subjects in public. Although this ethical standard is subjective, all producers bear in mind a responsibility not to violate the rights of others through m-video production.

Other production practices were different among participants. There were no clear trends in premeditated production versus spontaneous production; although two producers in my study always plan to film an activity in advance, most respondents decide to film an event either just beforehand or as it takes place. Sanda, a retired teacher and Green Party activist in California, explained her thought process when she recently attended a benefit concert for Haiti earthquake relief:

> I think I just went, and I was like, oh, I could video this guy from Haiti. I have a friend from Haiti, and I thought I can send it to him. No, I didn't know

> that I was going to do it. (Sanda, personal communication, March 2, 2010)

Aldon, also a political activist and civic producer, shared a similar motivation in describing his intention to film educational or community events:

> I'll be going to a Board of Education meeting or a Board of Selectman meeting and I'll think, well, I'll look around and see if it makes sense for me to stream it. So sometimes it's planned like that....Other times I'll go a meeting and it'll suddenly occur to me that, oh, this is really something I should stream. Rarely [...] will I do something like write up a notice on any of the social networks saying, this evening at six I will be broadcasting such-and-such. (Aldon, personal communication, February 16, 2010)

Respondents also differed in the conception of their audience; four producers had a specific idea of who was watching their videos, whereas others hoped people outside of their own social networks would notice their content. Two respondents monitored their own videos after streaming them to Qik, often deleting clips if they were too short, not interesting or not appropriate for a general audience. But post-production censorship or editing was not widespread, which could in part be a limitation of functions on Qik. Further analysis of motivating factors behind civic production will be covered in the following chapter.

III. Looking ahead: the future of mobile video

Mobile communication has been cited as "the fastest diffusing communication

technology in human history" (Castells, 2008a, p. 447). In the past year alone, streaming video services have expanded widely, as has the capacity to record video from various mobile phones. For example, when I began my study, Apple (through AT&T) did not support streaming video from its popular iPhone 3G due to a concern about bandwidth use. But in December 2009, streaming mobile video support was introduced for the iPhone 3GS, including applications for Qik and Ustream (M. Siegler, 2009).

Just as cheaper phones are now becoming equipped with cameras, consumer camcorders are becoming smaller and more affordable — often the same size and cost as a mobile phone. But even digital camcorder footage must still be uploaded first to a computer and then to the internet. Once these portable devices become wifi-enabled, and once multi-function portable media players such as the iPod Touch include built-in cameras, the level of production in live-streaming mobile video will not only increase, but its quality will rise as well, perhaps encouraging more of an audience on sites like Qik.com. The recent introduction of 4G connectivity and HTML5 will further facilitate video streaming and playback on mobile devices.

When I first began my case study of Qik content, I was able to find few other websites that supported streaming video; after seven months, several others had either launched or, like YouTube, expanded to provide hosting services for already created mobile videos.

I asked some of the civic producers I interviewed about how they imagine the future of mobile video. Mark, a human rights activist in New York City, sees "open

video" platforms as a means to inspire more creativity, and cited HTML5 as "very exciting for subtitling and closing the digital divide" (Mark, personal communication, February 14, 2010). He added that the biggest challenge in the years to come will be finding high-quality content filters. This raises an important issue for archivists and media hosts — managing and organizing user content. One potential benefit could be remote, collaborative production. As Aldon explained,

> [I]deally I'd like to see better collaborations in which you get a whole lot of people streaming different events, making that available via Creative Commons so that other people can grab parts of lots of different videos to come up with their own edited story of what really happened. (Aldon, personal communication, February 16, 2010)

Aldon also imagined an expansion of streaming services. He suggested computer-generated graphics and editing could be integrated into m-video production, and wondered about the possibilities of incorporating augmented reality:

> The idea of creating some augmented reality mashup of some political event — the potentials of that for political advertising is fascinating.... I think the key part is for broadening out the group of people who are capable of doing it. (Aldon, personal communication, February 16, 2010)

Jay looked to other countries for advances in mobile video production, especially where devices are being designed with multiple cameras to support video calls. "Imagine this," he said. "One day you won't even need to make phone calls, you'll

just use video." (Jay, personal communication, February 16, 2010). Mobile application providers like Microsoft's Mobicast are also working to develop services that utilize image recognition technology to combine live-streaming video from multiple users in the same location[14].

There is great potential in VOIP services that incorporate free or low-cost video conferencing from mobile phones; whether these modes of communication will become popular in countries with bandwidth restrictions and lower levels of economic development is questionable. My own prior research on wireless communication in rural Peru[15] showed that the perceived benefits of technology influenced its adoption and use, even when the actual benefits were minimal. In areas with limited mobile services or unstable internet connections, I found that occasional phone or internet use still had broadened user perceptions of the possibilities for communication, commerce and education, increasing dependency on the new media. Governing bodies, in partnership with private telecoms, are now tasked with expanding access and providing incentives for the civic and developmental appropriation of wireless communication.

As Castells (2008a) articulates,

> [T]echnology cannot substitute for development and for community control

[14] Microsoft's Mobicast Stitches Together Multiple Cell Phone Videos in Real Time: http://gizmodo.com/5435335/microsofts-mobicast-stitches-together-multiple-cell-phone-videos-in-real-time

[15] Dougherty, A. (2010). Rural Peru's transition to wireless internet: A case study on the challenges and potentials of ICT entrepreneurship in the developing world. *The International Journal of Knowledge, Technology and Society, 6* (forthcoming).

> over this development. But given the social and institutional conditions to engage in a developmental process, wireless connectivity is an essential medium to leapfrog toward full participation in the global economy — on the condition that governments and telecommunication providers play a fair game. (p. 450)

Will civic engagement continue to rise through mobile media production in Latin America? Brazil and Mexico account for nearly a fifth of civic videos in my analysis. Although Qik is too narrow a case study to be indicative of accurate global trends, if more m-video services and applications are created specifically for the Latin American context we could see important growth in this area, akin to the rise of microlending and crisis mapping through SMS in Africa. Combined with the addition of more accurate, computer-generated subtitles, civic videos could have an impact beyond their immediate cultural contexts.

For now, simply establishing stable and affordable wireless networks continues to be a challenge in some parts of the world. And in regions where mobile technology is advanced and more ubiquitous, we still need to learn why, when and how mobile multimedia is being produced. As Koskinen (2008) notes, "[W]e know little about what kinds of multimedia things the majority of people want to create with phones – or whether they want to do that at all" (p. 9). The following chapter explores producer motivations in greater detail.

Chapter 4:

Motivating factors for civic production

News stories increasingly highlight average citizens capturing journalistic events with their camera phones. But for mobile video producers, is this type of civic production the exception or the norm? In this chapter I look at the factors that motivate m-video producers to stream content of civic value, drawing largely on interviews from civic producers broadcasting footage on Qik.com. After reviewing the initial adoption of m-video by civic producers, I focus on liveness/immediacy, mobility, the real and imagined audience, and self-identification of producers as factors encouraging civic engagement.

Adoption

In the small sample of producers with whom I spoke, everyone had some previous experience in technology use or multimedia production, and was already engaged in journalistic, activistic, political, religious or educational activities in their communities. Video production — made faster, cheaper and easier with the affordances of a mobile phone and live streaming — was yet another way for already engaged citizens to broaden their mode of engagement and reach a (potentially) wider audience.

Gurumustuk was introduced to photoblogging from a younger friend of his, which

led to his production of video podcasts (shot with a camcorder) for Sikh youth, and eventually mobile videos to capture "little snapshots of life as a Sikh in our community," or unedited videos that give "little openings into life here." These little snapshots range from interfaith chanting sessions (Figure 10) to more personal footage of his family.

Figure 10. "Interfaith chanting" (http://qik.com/video/3309438)

Michael works for a news website called *The Copenhagen Voice*, which provides a mix of photographic, video and written reports. Over a year ago, his colleague introduced him to streaming video and gave him a phone from which he could broadcast interviews and other reports for the news site through Qik.com. For him, streaming was an easy way to capture and share longer professional content.

> With my journalistic background I not only try to combine the videos (and stills that either [my colleague] or I take) with written stories, but also aim at properly structured interviews. These often exceed the 10-11 minute exposure time accepted by YouTube...but the length is often necessary for the report as we do not edit the interviews.

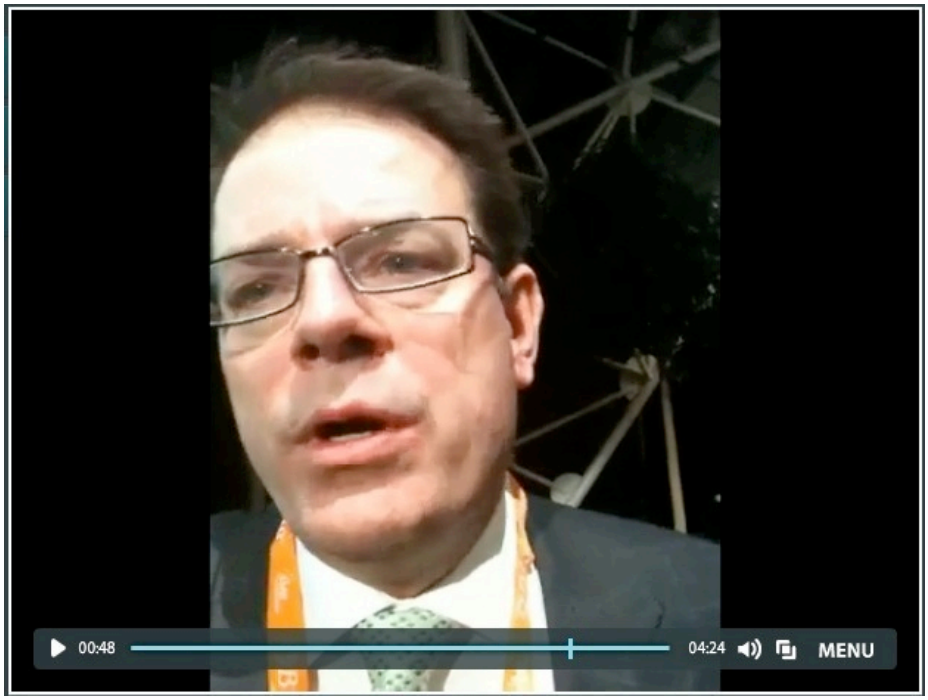

Figure 11. An executive from the biotech sector talks to Michael at an industry convention. (http://qik.com/video/3976814)

Figure 12. New York Mayor Michael Bloomberg speaks to reporters at the 2009 United Nations Climate Change Conference in Copenhagen. (http://qik.com/video/3939304)

Figure 13. "Live from the DigiDem party - How are you changing the world?" An attendee is interviewed at a gathering for Mark's nonprofit organization. (http://qik.com/video/3981931)

Mark is a cofounder of Digital Democracy, an NGO committed to empowering civic engagement through digital technologies. Already at the forefront of media production and mobile news, Mark and his business partner Emily were early adopters of live-streaming mobile video, employing it originally as a means to expand their internet television show. "Our purpose has changed a bit," he explained. Mark said he and Emily are broadcasting "as a means to disseminate footage not only to our viewers, but to our editors, who can then cut the video without a separate upload. Viewers can join us at any stage of the film process, from production to distribution." Mark rarely shoots m-video for personal purposes, but rather sees it as a strategic way to document and promote the work of his organization.

Bernie aims to "give Qik viewers an American technologist's perspective from Ireland." He has been experimenting with mobile production — both photo and video — since 2003, streaming both personal and civic videos. On Qik, he produces weekly broadcasts summarizing Sunday news headlines from several papers (Figure 14) because people he knew expressed an interest in that type of content. As a college professor, Bernie also incorporates streaming video into the classroom, encouraging students to use the medium to stream "critical visual reviews" of art

and other subjects, posted as private videos on Qik (Figure 15).

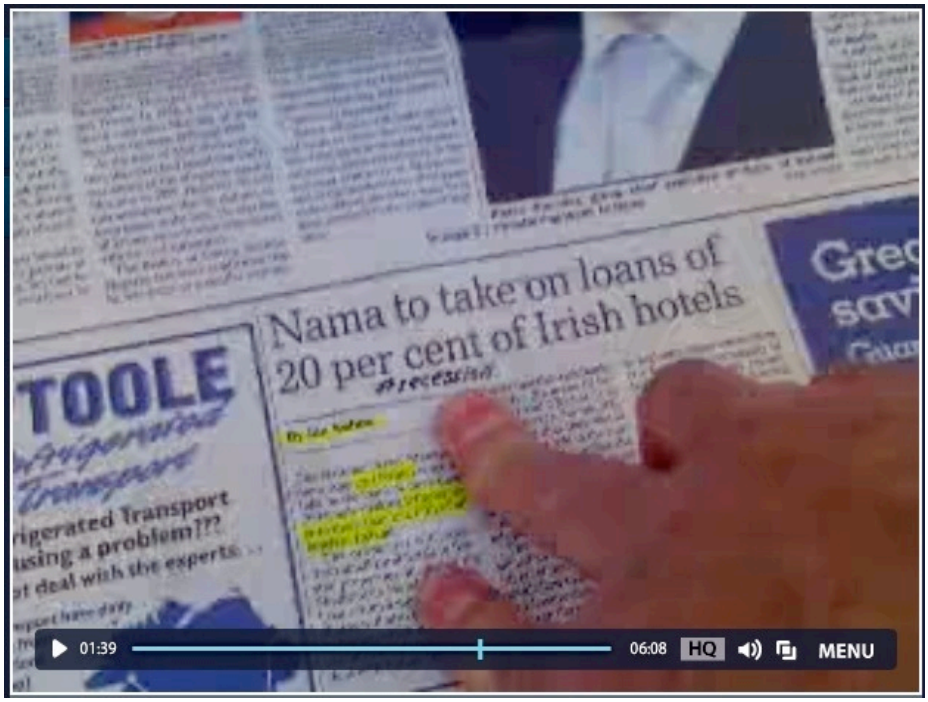

Figure 14. Bernie reviews headlines in the Sunday news. (http://qik.com/video/5605612)

Figure 15. "About Multimedia in Tipperary" — Bernie has his students interview one another. (http://qik.com/video/5237439)

Figure 16. Aldon films a session at the Podcamp conference in Western Massachusetts (http://qik.com/video/4963323)

Aldon, a consultant and member of his town's community access TV commission, became very politically active in 2003 during the U.S. presidential campaign of Howard Dean; merging political engagement with his long-time use of different technologies seemed a natural fit. "I'm always looking for new and interesting ways to use technology, and of late much of that has been focused on it for political and civic involvement," he explained. No one needed to introduce Aldon to live-streaming mobile video; he discovered it on his own and has been using the medium to capture civic, political and educational events in his community, but not as a representative of any organization. Using technological means to document political and community events just makes sense to him. It is not a temporary fad related to the nascent state of mobile video. "The idea of gathering video and making it available to the

Figure 17. "Live stream of MLK breakfast" (http://qik.com/video/4489806)

public is something that goes beyond my use of cell phone streaming," he explained.

Figure 18. "Rockbridge Church - Who we are" (http://qik.com/video/5337799)

Based in Texas, Jay is a member of a Christian rock band (Chaney), and also serves as the band's media producer and web designer. Explaining his adoption of streaming m-video, Jay explained, "I wanted to start a way for our fans to see little bits of updates from us, even when they're not there." Mobile video provided a fast and easy way to broadcast live footage. Soon afterward, he began streaming scenes from his personal life — including religious activities. Many of Jay's videos document sermons and events at his church in Austin (Figure 18).

Sanda is a recently retired teacher and a co-chair of the national Green Party in Northern California. She also serves on the California delegation to the Green Party and is now working as a full-time activist. At a political meeting, she volunteered to live-stream video footage through a webcam on a laptop, and was later introduced to mobile production by a colleague. "In the Green Party," she said, "we are so ignored by media that we need to create our own media." Sanda went on to explain:

> I first did it when they were doing this teach-in at a community college that I take classes at, and then I started realizing the potential for it. I mean I was just sitting there in the audience, and then realized I could just start videoing it, which I did. (Sanda, personal communication, March 2, 2010)

Sanda now films events as a "self-delegated representative" of different political and community groups. Using m-video production exclusively for sharing civic information, her recent documentation of activist events has helped her feel engaged in the causes she supports and allows her to experiment with new technologies for strategic purposes.

Figure 19. "Laura Wells for Governor at her Kick-off party" (http://qik.com/video/4694932)

Liveness/Immediacy

Capturing media from a mobile phone is not a new concept; users have been taking and sharing photos from their phones for years, but video capture — and the ability to broadcast it live online — is a recent phenomenon. Certainly real-time broadcasting has been profitable in television for years; the popularity of live-hosted (yet pre-edited) talent shows and the standardized format of live news broadcasting now inspire civic and personal production among m-video producers. Additionally, the immense popularity of live status updates through social networking websites have given new value to in-the-moment textual reporting, and a convergence of media functions on mobile devices means updates are increasingly posted by phone. This provides a sense of connection to others which Auslander terms "social liveness" (2008, p. 61), best characterized by mobile communication but emerging from previous expectations of live video broadcasting. The value behind these forms of liveness is dependent on context — historical and cultural:

> [W]ithin our mediated culture, whatever distinction we may have supposed there to be between live and mediated events is collapsing because live events are increasingly either made to be reproduced or are becoming ever more identical with mediatized ones. (Auslander, 2008, 35)

Only recently have traditional broadcasters embraced mobile phones and the internet as conduits for live viewer participation in both news and entertainment programs (examples include real-time SMS voting for opinion polls and talent

competitions, as well CNN's display of Twitter and Facebook messages during the 2008 U.S. presidential campaign). This model often creates a social or nationalistic connection among viewers, making them not just a passive audience but an active public (Livingstone, 2005). Live broadcast coverage of media events and major sports games also reinforce public engagement, illustrating what Dayan and Katz (1992) describe as a contract of consent between event organizers, broadcasters and participating audiences.

Live-streaming mobile video services like Qik and Ustream are based on an interactive model, moving one-to-many live broadcasting out of the control of monopolized mass media producers and into the hands (or pockets) of individual mobile phone users, democratizing the process. In this model, reception is not static but active. Ustream boasts a large community of viewers ready and willing to engage with mobile producers through comments, live chats and tweets, viewable in real time from the producer's mobile phone. This provides a simultaneous connection between the producer, while broadcasting, to an audience within and beyond his online social network in an expansion of the YouTube interaction model, presently offering only static comments.

Qik, however, offers a unique case study because the community of viewers is scant. As it is one of the only websites to support broadcasting exclusively from mobile phones (rather than from phones, webcams and camcorders, like Ustream), most users are busy producing video content on the go. They are generally not sitting at a computer consuming content, although for those who are, this consumption should be considered an active mode of participation rather than

passive lurking by voyeuristic viewers (Burgess & Green, 2009, p. 82). I found the average Qik video to have such a low number of hits — usually fewer than ten — that after my pilot study, I removed view count from my logging form altogether. While the number of hits does tend to increase when producers are more active on the site and have established an audience of "followers," or other Qik contacts, the producers I spoke with acknowledge a majority of their views come from outside of Qik once they cross-post their videos to other websites.

What if it doesn't matter who is actually watching? Is it enough that the footage is live, making mobile video a new and exciting medium for both the producer and a potential audience? The feeling of 'being there' extends the viewer's reach to the event, compounded by the ability to comment on the narrative in real time, and adds an element of suspense since even the producer cannot predict what will happen. This sensory experience is quite different from that of prerecorded, edited content. Even live events on television are at least somewhat edited in real-time, enabling a level of directorial oversight and ostensibly a smoother viewing experience for the audience. Because streaming mobile video is of lower quality and is a more accessible medium for users with no prior videography skills, unedited mobile content is often more difficult to watch. But the amateur nature of its production is a compromise for uncensored, in-the-moment broadcasting — more real than reality TV.

Gurumustuk noted that his edited videos of Sikh daily life (shot with a camcorder and distributed on YouTube, Facebook and his own website) receive many more hits than his m-videos on Qik, but felt that the authenticity of spontaneous mobile video

broadcasting holds its own appeal.

> [T]he convenience of recording a video and posting it so easily makes for easier/faster updates that you would not normally do. This gives a certain "live" and "raw/real" element that you don't always get from edited video. To me it is just one of the many ways that people digest mobile content. (Gurumustuk, personal communication, February 4, 2010)

Figure 20. "At the Woodbridge BOE presentation" - Board of Education meeting. (http://qik.com/video/4704996)

Aldon cited immediacy and accessibility as major benefits. Like a few other respondents, he shoots mobile footage spontaneously; unlike most respondents, he does not publicize it just before broadcasting (through social network updates) to increase viewership.

> The fact that it is live is very important....If you think of traditional video, people go out there with their big cameras, and it's expensive to get set up and it's a lot of work and then there's the latency between you shooting the film and it actually being distributed. And with this, it's relatively inexpensive, anyone can do it and it's immediate. (Aldon, personal communication, February 16, 2010)

For Sanda, capturing and archiving activist or political content on the go is the primary draw. "With the Qik videos, just that they're there that week, or that day, or the next day [is what's important]. I don't think about people watching it as I'm doing it," she said.

Jay streams footage spontaneously much of the time, but will use Qik's integration with social networking sites to send a notice to all of his contacts and fans, especially when filming videos of his band (Figure 21).

> Chad, our lead vocalist...he doesn't like the fact that it's very shaky and blurry. And I always tell him, hey, the coolest thing is that it's live, right now. And then he's like, "Oh, ok." ...That feeling of having it live at the same time is awesome, you know? (Jay, personal communication, February 16, 2010)

Regardless of the quality of production, live-streaming mobile video can be valuable as a symbol of technological zeitgeist. In my findings, this "hip" factor was important not only to younger users but became a motivation for producers of all ages to engage in production. The

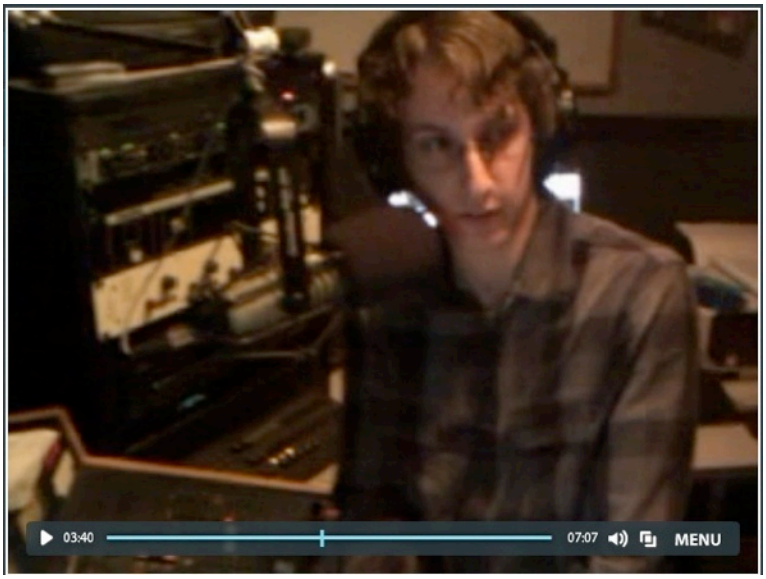

Figure 21. "Chaney Live on Power FM 106.7" — A member of Jay's band live on the radio. (http://qik.com/video/3501676)

"contemporaneous connection" (Kindberg et al., 2004) is a new kind of instant communication made possible through mobile multimedia. In Kindberg's study, photo and video messages received after capture were still valuable, but "drawing someone into an experience happening at the same time despite being separated by distance represented a compelling way to stay close" (p. 8).

To retain some control over what they broadcast, Jay and other producers (myself included) watch their own videos later and delete those not worthy of remaining archived. Because Qik and similar services do not at present offer tools for editing footage after it has been streamed, reviewing and self-censoring posted videos from a computer is becoming a common practice. As Jay explained,

> It's like, "I'm here, let me put this on, maybe I can go back and watch it." Depends on what it is....if it's a bad quality video or didn't capture what I meant to say (because it's live) or if it's something really short, I'll just delete it. (Jay, personal communication, February 16, 2010)

For Michael, a professional journalist, post-production features would greatly enhance the benefit of live-streaming video.

> The great thing about streaming is its immediacy (depending on available telephony, again), while a written report that supports it takes longer to prepare. Another downside (applies to all recordings) is the need to review the recording if a summary is to be made at the end: as we generally work alone, I both record and ask the questions, which makes it impossible to take

simultaneous notes for a summary. (Michael, personal communication, February 3, 2010)

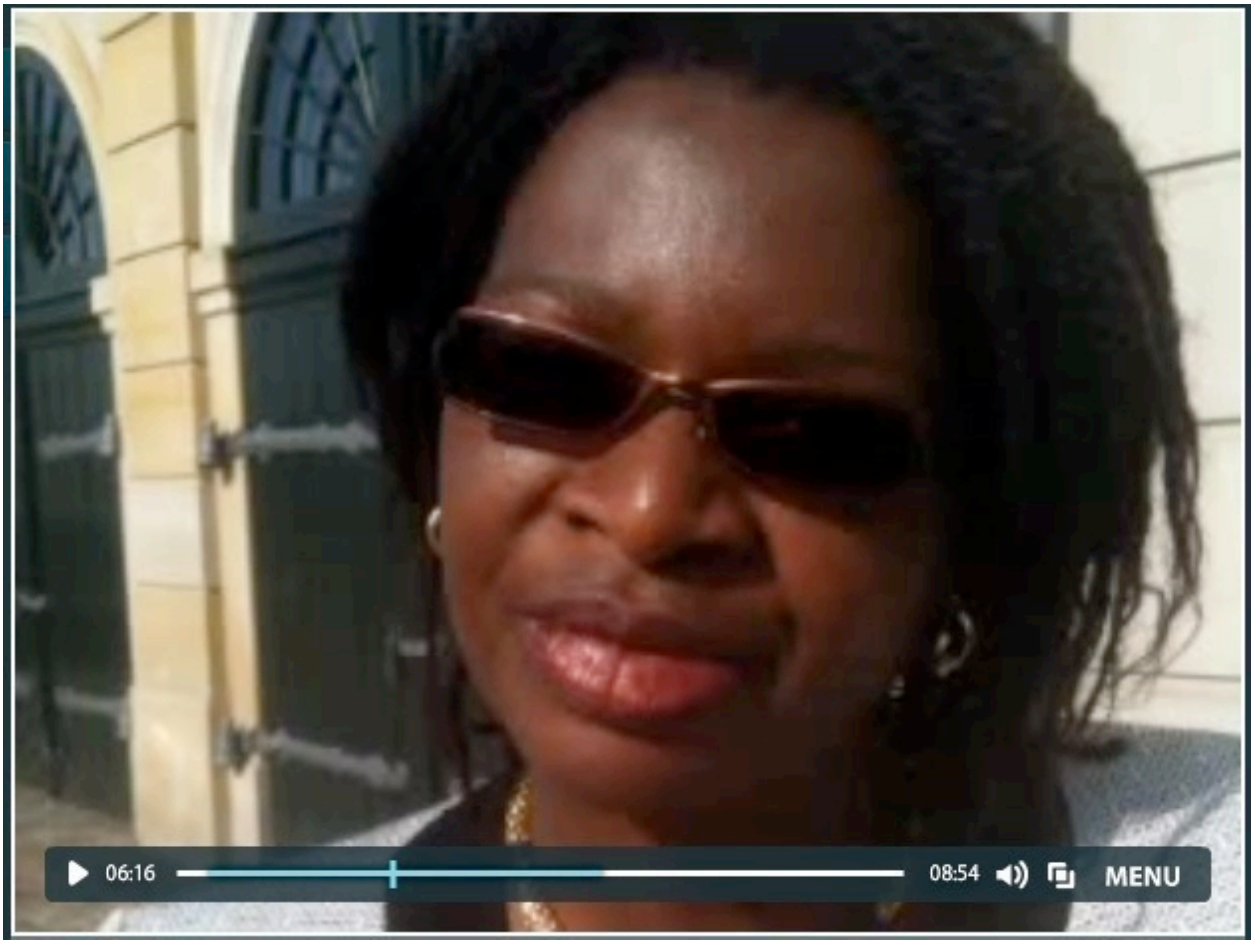

Figure 22. Michael interviews Letty Chiwara of UNIFEM at a conference on women's empowerment. (http://qik.com/video/5674085)

The implications for live broadcasting are more significant with content of civic value, such as Michael's journalistic interviews. While live-streaming footage of personal events and activities is a convenient way to maintain social relationships and communicate with friends, family and colleagues in other places, newsworthy information is time-sensitive. The benefits of liveness and immediacy first introduced by telephones is now reflected in the live broadcasting aspect of mobile

video, and has perhaps the most advantageous potential for instantaneous news reporting — even though unlike live blogging, footage can't be edited in the moment. Rather than simply a means for average users to become impromptu citizen journalists, I see live-streaming mobile video as an additional, affordable and accessible tool to enhance the work of reporters, educators and activists in the field.

Mobility

In their investigation of the mediation of urban spaces through portable devices, Ito, Okabe & Anderson (2009) grouped social practices into "genres of presence" — cocooning, camping and footprinting. All three modes seek to characterize urban citizens' negotiation of places and infrastructures through the use of portable technology. While they found people using mobile phones to block out the world (cocooning), encamp in specific spaces (camping), or negotiating relationships with businesses and public areas (footprinting), my study showed civic producers are not only learning about their environments through camera phones but are sharing activity in those places with a known or unknown audience through streaming mobile video.

Mobility enables and encourages regular documentation of civic events, almost always in public places; feedback from viewers is an added incentive, but not requisite to perpetuate filming on the go. In this way, producers' relationship to public places has shifted from individual awareness to shared experience, with the camera phone mediating the co-presence of displaced viewers. Live-streaming

mobile video production is thus becoming a social interaction between the producer and her virtual audience, even when few people are watching.

Although mobile communication has been described as a conduit through which contact with others is physically removed (Ling, 2008), real-time video capture bridges the physical environment with the co-present (but not co-located) viewer. The mere accessibility of the phone as recording device is enough of a motivating factor to capture footage that might be of value to an existing or potential viewer. Sanda wishes the video quality of mobile cameras was higher, but says the small size and ever-presence of a phone is more convenient and less intimidating.

> I've thought about getting a better camera, but the iPhone's always in my pocket. So I like that part of it, and I feel like if I had a big bulky camera (because I don't think of myself as a photographer as such), I wouldn't be carrying it around... (Sanda, personal communication, March 2, 2010)

Aldon added that, like others, he hasn't used his higher quality camcorder very much since he began live-streaming mobile footage, describing the upload process as "more of a pain." The low-profile (often incognito) mode of mobile production also makes it less easy to be noticed as a videographer in public places, but this can sometimes be problematic when one is capturing footage in a professional capacity. Michael explained that while the phone does not get in the way and allows the reporter to stand apart from press photographers and "TV station camera operators with cameras on their shoulders," it is also a disadvantage since those same camera operators "push and shove and don't realize you're also recording."

Perhaps portable, DIY filmmaking is to commercial videography as blogging is to journalism: a less professional yet democratized and more immediate mode of engagement. As portable devices become equipped with higher resolution sensors and free m-video services enable post-production editing features, journalistic mobile footage could reach wider audiences than well-produced television spots.

For Mark, sharing his work with a target audience of activists and supporters is the most important goal, and mobile video has been an appropriate medium through which he can broadcast human reports from the field. Although he also shot video with a portable Flip camera during a recent trip to Thailand, Mark used Qik broadcasts in conjunction with social network updates to promote his organization's work with Burmese refugees. The location-aware aspect of live streaming allowed him to be identified on a map adjacent to his video feed, a real-time incentive of mobile metadata not presently available through traditional video production.

Figure 23. Thailand — A teacher talks to Mark and his partner about conditions in a refugee camp. (http://qik.com/video/2924715)

> My favorite interview was shot in the back of a pickup truck, headed into a refugee camp in Thailand. The interviewee was talking about his experiences as a teacher in the camp and viewers could watch the map as we made our way north to a place that doesn't currently exist on

Google Maps. (Mark, personal communication, February 14, 2010)

In a similar study of the motivations behind mobile multimedia production, researchers found four purposes for documentation (though without distinguishing between civic and personal content): personal archiving; sharing one's life with others; enhancing social presence; and to serve as a facilitator in group dynamics (Reponen, 2007, p. 464). These social dimensions are important factors in understanding the impetus for visual communication, but need to account for the mobile contexts in which communication takes place. What's exciting to m-video producers is that footage can be captured, shared and archived anywhere, at any time and without prior planning or preparation. The social aspects of m-video therefore become pertinent in two ways — as a mediator of interactions with others physically co-present, and as a means of communicating information immediately to a remote audience. Further studies would benefit from gathering grounded data about the uses and impact of m-video in specific physical contexts.

The real and imagined audience

"The whole internet is watching!"

During my quantitative analysis of footage on Qik, I watched scores of mobile videos wherein producers explained the concept of live-streaming production to another person. The pitch usually went something like: "Everyone on the internet can see you right now!" or, "People are watching you online! Say hello!" There is a marked disconnect between who is actually watching and who could be watching, but for m-video producers, it might not matter.

Some producers begin filming with a concrete audience in mind. Often the audience includes members of one's social network or acquaintances who are co-present, as in the case of a store manager who used m-video documentation to reprimand his employees after trash was left at the front desk. Some users film messages for specific family members, and some address anonymous viewers but speak to them as if they were close friends. Others, like a few civic producers I spoke with, see a potential for less-engaged viewers to stumble upon their political or journalistic videos and become accidentally educated on civic issues.

Although my study found mostly adults using the service, a few younger producers seemed to embrace the medium as a potential platform of interaction with anonymous friends, similar to confessional-style webcam videos popularized on YouTube. S.B., a pre-teen in Scotland, described Qik to one of her friends as "a site where people follow me from all over," even though her videos had received a handful of views and I was one of her only Qik followers. Her videos are humorous, confessional and performative, directed toward an unknown internet audience. She faces the camera as a reality host and speaks directly to perceived viewers. Even after broadcasting for several months with few comments

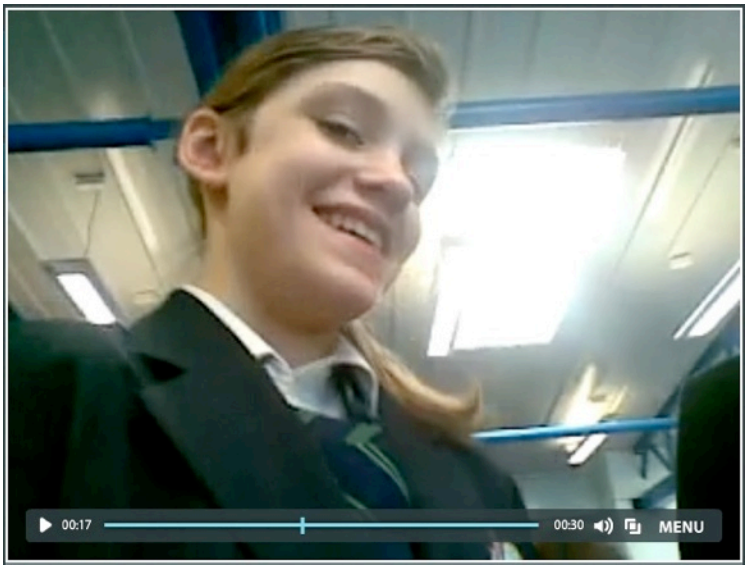

Figure 24. S.B. hosts an impromptu Louie Armstrong song competition during lunchtime at school.

or views, S.B. continues to engage in production, satisfied with the possibility that eventually more people might watch — or merely content with the act of production itself.

While there are obvious privacy concerns with minors broadcasting their lives publicly on the internet, ostensibly unbeknownst to parents or guardians (mobile companies would do well to create supportive and protected video-sharing environments for this market), the conception of an existing and interested audience is often prevalent with adult producers as well.

But while hundreds of personal m-video producers verbally acknowledge 'The Internet' as a potential audience, civic producers usually know their market already. Gurumustuk, Michael, Jay, Mark and Bernie broadcast to niche groups, for the most part — Sikh communities, Copenhagen citizens, Christians, and Irish emigrants, respectively — and they also receive feedback in some form from their viewers within and beyond their own networks. Even occasional feedback is a major motivating factor to continue production, but becomes especially meaningful for producers who film civic content. Speaking about his use of technology to reach out to Sikh youth, Gurumustuk[16] explained:

> A big part of what motivates me to spend the time doing this are all the emails and comments from people....It has put me more in a role of teaching and sharing rather than just providing a Web service. I have always felt that my destiny was to teach and share with others....Service like this is what

[16] Excerpted from his website, http://www.mrsikhnet.com/index.php/about/

gives my life purpose and satisfaction.

Michael and his colleagues at The Copenhagen Voice use site statistics to measure their number of hits after cross-posting Qik videos into their news website, but find user feedback equally important:

> [W]e cannot say whether we're actually being seen by the people we're aiming at. But we know that we have viewers from all over the world....We do get quite a bit of feedback, mostly thanking us for doing the work (gratifying!), and often amazed at what we do and how we do it, rarely complaints. (Michael, personal communication, February 3, 2010)

As an American living in Ireland, Bernie imagines his viewers as "a connected Irish audience" and streams content with the goal of holding a viewer's attention for up to ten minutes at a time. Because his news videos are a response to acquaintances' suggestions, feedback is important to track the impact of his broadcasts. "I get some comments inside Qik," he told me, "but also some very sweet emails and Facebook comments when my Qik clips go outside to other networks." Naturally, this active viewer support perpetuates subsequent production of m-videos. But what about those who know they don't really have an audience?

Interestingly, lack of a concrete viewership does not seem to impede the motivation to produce m-videos. Perhaps this will pass once the novelty wears off, at least for occasional users who are not producing civic content to be shared with engaged communities. I watched one video wherein a middle-aged factory worker eagerly

promoted the cutting-edge features of live-streaming mobile video to a coworker, but understood his audience was limited:

> Producer: "So we're live, so now if somebody was at that website, you'd be broadcasting."
> Coworker: "That's weird. So of course whoever's watching that is like—"
> Producer: "Which of course no one is. Maybe my daughter..."

What makes civic producers different is that the content they film is not just of interest to intimate personal recipients. It is footage they consider informative and relevant for niche audiences and often wider publics; whether or not they find audiences or audiences find them, they will still continue to produce content as yet another form of civic engagement. "I don't know if anybody is watching it yet, and I don't know how many people I'm telling," Sanda told me. She realizes that anyone on the internet can watch the videos she makes public, but she films for a preconceived audience of other activists in her social circle. The real payoff is when a viewer from one niche area (for example, political activism) watches her civic videos from another niche area (like technology education).

> One of the things I thought was kind of cool — if I can get people to even go to the Qik site — is, here I did something with some people that consider themselves pretty much activists on certain issues at the community college, and then I'm doing something else with the Green Party, and then I'm doing something else with another group. And by sending them to Qik, they can

> see all the different things that I'm doing. So it's sort of an opportunity to cross-pollinate my different activism. (Sanda, personal communication, March 2, 2010)

Similarly, Aldon hopes to attract average viewers to his civic videos, leaving a "video footprint" for others to follow later on:

> I do not have a specific audience in mind....I try to reach out to as broad an audience as possible. So that with my blog, for example, where I cross-post various things, I write about politics, I write about technology, I write about my family, I write about just about anything I can think of, partly to bridge different communities — to get people who think about one thing to try to think about something else. So this afternoon, I did a little bit of live streaming of the snowstorm. So people will come in and look at my videos because they're interested in looking at the snowstorm, and hopefully then they'll look over and look at the Board of Education meeting, or look at a speech that a candidate recently gave. (Aldon, personal communication, February 16, 2010)

Because my study did not measure viewer reception, I have no data on the actual impact of mobile videos, but this is a ripe topic for further research. If Sanda and Aldon are any indication as to what civic producers are hoping to achieve by live streaming educational, political and informational content, perhaps we're seeing a shift to a virtual water cooler culture. In this networked space, civic issues are shared and possibly discussed not with known colleagues in a physical environment

but with anonymous citizens in horizontal (many-to-many) communication, similar to blogging but mediated by mobile devices. This type of civic engagement is what Gergen (2008) calls the "proactive Mittelbau" of democratic expression (p. 305) within interest-based monadic clusters rather than traditional civil society. Appropriated by engaged subgroups of activists, civic journalists and teachers, m-video could make a tangible impact in particular spheres of interest.

Self-identification

Although my qualitative study was limited, I found a noticeable pattern in the way civic producers described themselves. With the exception of Jay, every producer I spoke to self-identified in a role related to their production of videos — as an educator, an activist, a journalist, or a combination of different roles. Most respondents also described themselves as technologists, multimedia buffs or geeks, and five producers created m-videos voluntarily on behalf of an organization or group.

Jay represented the only average user, describing himself not as a religious advocate but as a "just a person" using mobile video to promote his band and his church, and to network with others in the Christian music scene. However, with nearly 200 videos at the time of writing, Jay had the second highest number of m-videos of all the producers I studied. His love of multimedia production compliments his commitment to the monadic clusters, or niche groups, of which he is a part. Although he produces mobile media for anyone on the internet to watch, his videos further specific causes and have meaning for viewers who take an interest in those

causes. The same is true for all other producers in my study.

Whether producing a mix of personal and civic videos or just civic content, every producer I spoke to felt strongly that their publicly posted videos have substance as civic texts. “For me, everything has to be productive and have some value,” Gurumustuk explained on his blog. Working to foster mutual understanding and respect amongst different Sikh communities as well as those outside of the religion, Gurumustuk documents everyday events through m-video in an effort to communicate a sense of what his community is all about.

> I see myself as a journalist of sorts trying to capture interesting elements that show people in the community in real ways so that people get to see who we are and understand what we are about. I never have thought of myself as an "activist" as that is generally used. I think my actions are more in line with educating and trying to inspire people to be better people and see the God that is in each of us and that connects all of us as ONE. (Gurumustuk, personal communication, March 5, 2010)

Along with cultural ceremonies and community events, Gurumustuk captures what Patricia Lange (2007) refers to as “micro-events with no particular point or relevance beyond the videomaker’s own life.”

> [M]any video bloggers argue that it is precisely by putting these intimate moments on the Internet for all to see that a space is created to expose and discuss difficult issues and thereby achieve greater understanding of oneself

and others. (Lange, as cited in Burgess & Green, p. 80)

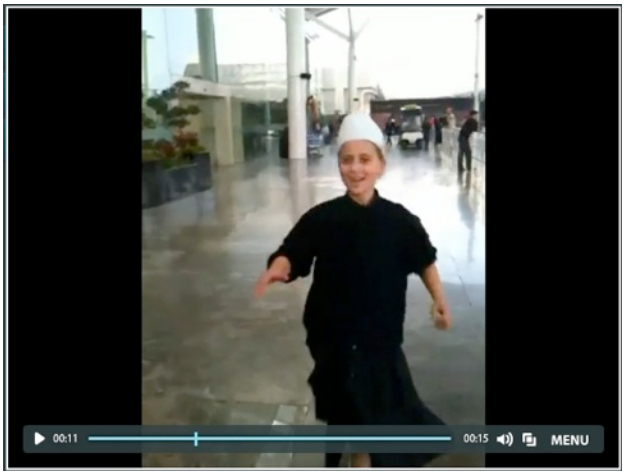

Figure 25. "Meeting Narayan at the airport in Delhi" (http://qik.com/video/4141362)

Figure 26. Gurumustuk tells viewers about a recent youth film festival. (http://qik.com/video/3050685)

While shots of his family and daily activities might seem ordinary, it is exactly these micro-events that he hopes outside viewers are able to relate to (Figure 25). Through low-tech, accessible media, he is helping bring civil society online.

Conversely, Sanda sees m-video entirely as a means to expand her political and environmental activism through formal documentation of events. She shuns public video streaming of personal or frivolous activity:

> I'm definitely not into the nonsense that's on YouTube. I'm not into, you know, here's a picture of my cute dog....I'm definitely in it for communication, but I'm a teacher. So wanting to do media is an extension of that....I spend way too much time with technology, but I'm hoping most of it is focused and serves a purpose. (Sanda, personal communication, March 2, 2010)

I asked Sanda why she thinks so few women are experimenting with m-video, for civic or other purposes. She noted a similar problem with issue-based discussion forums online, which in her experience are often dominated by men. For Sanda, mobile video is just another way to engage with a community of activists beyond her physical area. The mediated nature of engagement allows the focus to remain on the activistic content she films, rather than on her personal identity:

> As a woman, I have had the experience of feeling invisible my whole life, and as an older woman — oh my God, are you ever invisible....So I guess that's the beauty of the internet for a lot of people. For people who are basically shy, or self-conscious about how they look — you can communicate without having that in there. (Sanda, personal communication, March 2, 2010)

In this regard, teaching others how to use the technology for civic ends has become an important goal for most producers, Sanda included. Because the means are increasingly more affordable and easy to access (requiring only a camera phone and an adequate data plan), promoting live-streaming mobile video as a new medium is not difficult, but requires time and energy on the part of activists and educators. In his own activist circles, Aldon aims "to teach and empower [others] to do the videography instead of doing it myself on behalf of the campaign." Bernie uses m-video production to train his students "to become active citizens," and Jay helps his friends download and use the Qik mobile application to their phones.

As the only professional journalist, Michael experiments with m-video not as a

Figure 27. "Day of Action against the cuts in public education: Rally at the Civic Center in San Francisco." Video by Sanda. (http://qik.com/video/5284229)

personal side project but as an additional medium through which to share information with engaged citizens. Rather than replacing edited television reports, he feels streaming video can add unique value depending on the context of production and reception. This can include reaching a computer-based and even mobile audience, as well as live-streaming events "in cases where immediacy is relevant," such as demonstrations he covered during the UN Climate Change Conference. As Michael went on to explain,

> I regard video streaming as a very useful extension of traditional journalism

> as it gives immediacy to reports and is low cost and easy to deal with compared with camcorder or TV camera reports. Basically, anyone can stream videos (and the quality often reflects this), but this need not be a drawback in reporting terms – consider, say, the Oscar-nominated 'Burma VJ' film showing events in Burma in 2007 or reports from Gaza last year or from Haiti in recent weeks, where the quality of the reports was less important than the information conveyed. (Michael, personal communication, February 3, 2010)

The potential use of m-video as legal evidence is certainly an incentive for civic production by human rights activists as well as journalists. "Our video on Thai Netizens gave more pressure to the case against the imprisonment of digital journalists in Thailand," Mark told me. This type of documentation benefits not only the subjects (provided privacy concerns are addressed appropriately) but also the producers, and when footage has a tangible impact, civic producers are more likely to continue engaging in mobile production.

In summary, my research points to the potential of civic production in live-streaming mobile video not for casual users but for active, already engaged educators, activists, issue-based advocates as well as citizen and professional journalists. Although average users can and will use the medium to broadcast the occasional video of civic value, greater impact will be achieved through the strategic use of m-video by those with an existing commitment to community empowerment and education. While live-streaming video is not a new technology, its integration on mobile devices for live broadcasting is a recent yet unstudied development.

Once video quality improves and producers are offered tools with which to edit and combine their clips on the go, civic producers will have more to offer both known and unknown audiences. If streaming video services and mobile companies learn from these trends in production — perhaps in partnership with major media companies or broadcasters — they could tailor applications to better facilitate, organize and distribute multimedia content and thereby further the movement of civil society into a discursive, networked sphere.

Chapter 5: Conclusion

Media are always in transition. Being in the midst of technological change is exciting, but requires effort and analysis if we are to make sense of what is actually going on at a broader cultural level. I offer this study of an emergent medium — written as it is being adopted by a public — as a precursor to larger explorations of mobile multimedia as both a technological development and a social practice. Protocols are being created around production, with live-streaming mobile video as a platform for civic engagement. Researchers and designers need to gain a clear understanding of these usage patterns in order to create devices and applications that better support civic production by active producers.

To date, little has been written about the emerging medium of live-streaming mobile video, despite the fact that video-enabled phones are becoming ubiquitous in wealthier nations and are increasingly more affordable in developing areas. My study has tracked basic production trends from users in 80 countries, extrapolating on the contextual factors that motivate regular production of civic content and promoting the idea that this type of accessible multimedia production can be considered a form of citizen engagement. Unlike other research on image capture and sharing from mobile devices, my study was based on a textual analysis of recently posted media from users around the globe, rather than a controlled study with select participants testing a new technology.

The implications of my research are preliminary, but significant. Most video content

(89 percent) is of a personal nature, focusing on family and friends as subjects. While these personal videos help to communicate information, connect physically separated families and potentially bridge cultural divides through the sharing of day-to-day events, the textual value of their content is not as valuable in the public realm. Mobile videos that are civic in nature are often created by users who are committed to producing footage of value to the wider community.

Should platforms be designed to support the sharing of exclusively personal content, or exclusively civic content? Or does the unfiltered nature of Qik and similar m-video sites encourage general users to watch (even accidentally) videos of civic value? Gergen (2008) has asserted that mobile phones have shifted civic engagement to occur within monadic clusters of interest, wherein like-minded people exchange information in a networked public sphere. While the active civic producers in my case study cross-post their mobile videos to be viewed by known audiences of other activists and educators, they all hope "regular" people outside of their social networks will also discover their videos and learn something. So while content-specific platforms aggregating journalistic or other newsworthy videos might be useful for media professionals to access and promote citizen-produced content, it might limit reception to an audience of already engaged viewers. Service providers and application designers would need to take these considerations into account when creating platforms that both support civic production and encourage reception by a wider audience.

While women might be civically active in their communities, there is still a disparity in their level of engagement with technology, which has been reflected in my case

study. Can this under-representation of female producers be remedied through changes in mobile video application design alone? Certainly not; media literacy needs to increase for all women, and that begins by broadening access to education and technology on a global scale. However, further research on the factors that do encourage m-video production by women and girls would be incredibly valuable — not to mention marketable for media companies and application designers. The same holds true for research on older users, a demographic of surprisingly active producers.

Production in public places — which accounted for nearly all of the civic videos I tracked and half of all personal videos — is another protocol worth noticing. How can applications support mobile production in public? Are there ways that user-interface design or camera manipulation can support the protection of privacy for vulnerable video subjects during live streaming? Perhaps applications could enable identity protection through image distortion or post-production editing features. At the very least, mobile video platforms like Qik.com could emulate other services such as Witness.org by offering resources for new users, such as production tips and ethical guidelines for video documentation.

There were several areas I did not investigate in this study which warrant attention by other scholars and researchers. Regional and language-specific case studies could explore mobile production trends, including civic production in regions like Latin America. I have suggested that economic barriers in developing countries (the high cost of data plans, specifically) might influence producers to film more serious content — often of a civic nature — if these users are paying more to broadcast

video. Although this conjecture is based on data from my quantitative survey (showing higher numbers of civic content from Brazil and Mexico), it is still speculative. Grounded research with users in these regions would provide many useful insights into the potential for mobile technology to be used as a platform for civic engagement in specific cultural contexts.

Similarly, the legal, educational and newsworthy value of civic m-videos could be more fully explored in case studies that look beyond the sharing and archiving of multimedia. Despite the increased use of amateur video by television news programs, few studies have systematically mapped the use and impact of these types of civic videos.

Digital archivists could also expand my data, looking past the production or reception of mobile content to the organizational and archival systems used by privately owned video platforms. With an average of 1,000 m-videos posted per day to Qik — one of many free mobile video sites — what are the implications for the storage (and deletion) of mobile videos hosted on commercial servers? Should governmental institutions purchase video platforms to create a national or international cultural archive of digitally published works, similar to the recent archive of Twitter content by the U.S. Library of Congress?[17]

Many civic producers I spoke with had their own suggestions for technological improvements. Sanda wants the ability to download her Qik videos so she can store

[17] "Twitter is Forever": http://www.theatlantic.com/science/archive/2010/04/twitter-is-forever/38975/

them on her own server; she also hopes camcorders will become wi-fi enabled, so higher quality video footage can be streamed live. Jay wants more phones to be designed with two cameras to better support VOIP video conferencing. Aldon would appreciate the opportunity for collaborative video production and editing, and wants to see more computer-generated graphics and live editing capabilities so m-video mashups can be created in real time. Mark hopes to see better filtering of content, open source video editing platforms and more avenues to promote new media literacy. Michael is waiting for higher picture quality and real-time editing features.

All of these suggestions have implications for design improvements in phones, portable devices and applications that support live-streaming video. Using the contextual design approach (Beyer & Holtzblatt, 1999), researchers could apply findings from my existing qualitative interviews and discover further production patterns from situational observation (contextual inquiry). As mobile video is a relatively new medium, I found producers of civic content were happy to discuss their experiences transforming a specific technology into a social and professional practice.

Live-streaming mobile video is also becoming a means for enhancing media literacy. Because the means of production are accessible (in many cases, people have video-enabled phones but do not realize they can broadcast content), the practice of teaching others to broadcast events is popular in both personal and civic production. Aldon referenced this practice when explaining how he promotes mobile production to other political activists: "[M]y approach is to try and get lots of other people to do the videography, to teach and empower them to do the videography

instead of doing it myself on behalf of the campaign." Other producers expressed similar enthusiasm for expanding participation. While film and video production has historically been the domain of men (from personal experience, I would specify this demographic as largely white men), this inclination to educate others is a hopeful sign of democratized production by all types of cultural citizens.

Though the medium might have potential to expand participation across ages, genders and economic class, I feel its greatest impact — at least in the short term — will be made within spheres of interest. Functioning as another tool for activists, educators, journalists and active citizens to make media around topics pertinent to their social networks and the wider community, live-streaming mobile video is and will continue to be a valid means of civic engagement.

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Appendix

Qik mobile video logging form (with explanations)

NUMBER
The order in which I watch/log videos.

DATE SHOT

VIDEO URL

VIDEO TITLE
(If applicable)

LENGTH
Format: 00:00:00

NUMBER OF VIEWS

COUNTRY (Choose from list)
If the user's profile lists no country, or if the content has either has no GPS data or if it is listed as United States but there is no evidence that it is shot in the U.S., I mark it as indeterminate.

LANGUAGE (Choose from list)
Includes "Other" and "Indeterminate"

PUBLIC OR PRIVATE SPACE?

- *Public* - in an obviously public space, or publicly owned — including the street, schools, theatres, vehicles, conferences, etc.
- *Private* - an obviously private space, usually a person's home.
- *Indeterminate* - when I can't tell whether it's a public or private space.

EVENT?
If the content is about a specific event (car accident, press conference, hospital emergency, soccer game, etc.)

GENERAL DESCRIPTION
Quoted from the user's description, if applicable, otherwise my own summary of who/what/where.

CIVIC OR PERSONAL VALUE?

- Civic
- Personal/Other

VALUE TAGS

- *Journalistic* **-** Reporting, formally or informally, a news event or information of public interest. Producer commentary or text description of the event is therefore an important component.
- Activistic - of or relating to public actions or demonstrations by civilians.
- *Political* - Public events and activities with overtly political themes related to issues of governance (including speeches, press conferences, demonstrations).
- *Educational* - Videos wherein the producer or other subject is overtly teaching, lecturing or presenting information (explaining a piece of technology, talking at a conference) for the purpose of educating the viewer.
- *Religious* - Videos of public activity or events that are of a religious nature — a public discussion about religious topics, a ceremony, a church service, etc.
- *Promotional* - videos wherein the producer is overtly promoting himself or herself, a commercial product or personal property.
- *Confessional* - either producer-to-viewer conversations (a la reality TV confessionals) or videos wherein people are sharing personal, private information for the viewer's benefit. This is in contrast with general personal videos in which producers film their pets or family members most likely for their own documentation.
- *Entertainment* - spectacle; pop culture documentation; content shot for the purpose of entertaining the viewer or making them laugh, or content documenting actions largely associated with entertainment (dancing, movies, live music, comedy, other performances).
- *Touristic* - often shot when traveling to document new surroundings; videos wherein the producer is filming a physical place and/or describing that location (verbally or through text title or description) such that viewers learn about the place.

HOSTING STYLE

- *Reality host:* hosts both face the camera and speak to the perceived audience in a confessional style.
- *Documentary host:* hosts provide a voiceover, explaining the scene they were filming.
- *Participant observer:* hosts talk to others in the video but would not face the camera or address viewers directly.
- *Invisibles:* hosts don't talk or address the camera.

STAR FOR FURTHER INVESTIGATION?
If the content has unique, interesting civic value that I might choose to investigate through interviews with the producer.

USER NAME

GENDER (OF PRODUCER)
Based first on producer's presence in video, and secondarily on user name/photo —

an assumption that the account holder is the person filming.

- male
- female
- indeterminate

NUMBER OF VIDEOS BY USER
Based on the date on which I originally watched the user’s video.