We shouldn't have to smoke and hide

The legalize hashtag as a platform for

collective identity and collective action framing

By

Linda Komori

Submitted to the Faculty of Extension

University of Alberta

In partial fulfillment of the requirements for the degree of

Master of Arts in Communications and Technology

Aug 9, 2013

Table of Contents

Abstract

An emerging area of research on Twitter, a micro-blogging service, is on the use of hashtags. Hashtags are both metadata and content; they allow users without prior connections to easily communicate around topics of interest, and to form fluid communities or publics based on interest. In this report, I considered the way hashtags are used in the context of a social movement, and studied tweets from the #legalize stream. I set out to understand how #legalize is used in relation to the movement for the legalization of marijuana, and whether the stream facilitates the building of collective identity, collective action framing and/or personalized action framing. My data set of 221 tweets was drawn from "Top Tweets" in the #legalize stream over several days. I used qualitative content analysis, a method suitable for understanding the latent meaning of content, to study the data set. I conceptualized the #legalize stream as both an actor in and window on the movement for the reform of marijuana laws. I found that the stream served as a platform for reinforcing the beliefs of participants and for activities that build collective identity. The #legalize stream was used by participants as a platform for two types of collective action framing: diagnostic framing and, to a lesser degree, motivational framing. I did not find evidence of prognostic framing. I conclude that the extended debate required to develop strategies for reform would be incompatible with the collective identity building activities evident in the #legalize stream, and instead that the #legalize stream offered participants an ability to personalize action frames and engage in identity presentation. I also found that when viewed through the #legalize stream, the movement for the reform of marijuana laws resembles recent conceptions of modern social movements in which participants self-organize and create personalized action frames reflective of their own concerns. There is an opportunity in future

research to examine the capacity of Twitter hashtag streams for collective identity building and social action in other social movement contexts.

Introduction

I can think of two big reasons to #LEGALIZE . Tax money, and safety. Take out the dealers, the cheaters and the killers. Buy pot legally!

We shouldn't have to smoke and hide #Legalize

In a world full of prescriptions for pain pills, I have a vision of a world full of prescriptions for marijuana. #NaturalMedicine #Legalize

- Tweets found in the #legalize stream

Twitter, a widely-used micro-blogging service, was launched in 2006. It has attracted over 200 million users. Originally criticized as a platform for mundane and trivial content, Twitter has since evolved into a network used in a multitude of ways: communication during crisis; the practice of celebrity; and the sharing of information, support, opinions and micro-memes (e.g. Gruzd, Wellman & Takhteyev, 2011; Heverin & Zach, 2012; Marwick & boyd, 2010; Stieglitz & Dang-Xuan, 2012; and Zappavigna, 2012).

boyd (2011) stated that networks bring about fundamental structural change in social practices, and that "architecture shapes and is shaped by practice in mediated environments just as in physical space" (55). Twitter differs from many other social networks in its architecture—particularly in its use of the @ (at) and # (hashtag) symbols. In Twitter, the @ symbol allows users to direct messages to other users, while the # symbol, in a practice modified from IRC channel usage, allows users who have not previously established a connection to easily

communicate with each other around tagged topics—a process which Bruns and Burgess (2011)

termed "the rapid formation of ad hoc publics" (2).

In this report, I look at the public or network that forms around #legalize, a hashtag which

denotes discourse concerning the legalization of marijuana. Casual observation of the Twitter

interface reveals that the majority of participants in the #legalize stream appear to share an

expressed set of beliefs. A network such as this, in which individuals share an expressed set of

beliefs, can be conceptualized as having a collective identity, or an identity "expressed in cultural

materials" (Polletta & Jasper, 2001, 283).

I chose to study #legalize, rather than one of many other hashtags related to social

movements, because of its relatively focused discourse and because it is used almost exclusively

by those *in favour of* the legalization of marijuana. In contrast, many other hashtags that are

related to social movements are used by both opponents and proponents of a cause, and include

antagonistic discourse, or are used for more broadly based discussion. Examples include

#prochoice and #prolife, both of which are used to express both pro-choice and pro-life

sentiment, or #sustainability, which attracts commentary on environmental issues from a wide

range of users. The relatively focused, non-antagonistic discourse on the #legalize stream allows

observation of interactions that lead to and sustain what I identify as activities that support

collective identity building: activities that show evidence of a sense of shared meanings,

attachment to an imagined or concrete community, and positive affect toward others in the

network.

In addition, this kind of discourse allows observation of what I interpret to be the

participants' collective action frames—the shared sets of beliefs which provide social movement

actors an interpretive lens for understanding problems—and personal action frames, which some

researchers theorize is the way that individuals are now defining their engagement in social

movements. The #legalize stream also allows observation of what I interpret to be the

interactional and discursive processes of frame alignment, in which participants knowingly or

unknowingly negotiate and co-create their understanding of a social movement.

The social movement I observe in this report, the movement for the reform of marijuana

laws, was recently described as "fractious and often hapless . . . a motley crew of potheads, civil

libertarians, and billionaires that's been set back many times before but has the wind of public

opinion at its back" (Ball, 2012). This definition speaks to the difficulty of describing the nature

of the movement: its breadth, the characteristics of its membership, and the difficulty of fitting it

into a traditional social movement typology. The movement spans a large number of legal

jurisdictions and is not unified in its leadership or in its beliefs in how marijuana laws should be

reformed; considerable debate continues about whether legalization or decriminalization is the

best course.

The #legalize stream, as part of the movement's network, offers a way to view the

movement. In addition to exhibiting signs of collective identity and collective action framing, the

public that forms around #legalize reflects features of Bennett and Segerberg's (2012)

"connective action network," which is typified by decentralization, "low cost" organization,

limited involvement with formal organizations and a high degree of personal expression in social

technology and network use (758-9). The network visible in the #legalize stream also resembles

other recent conceptualizations of social action in new media environments such as Croeser's

(2012) conceptualization of movements which lack an obvious organizational base and may be

more easily understood as networks than as organizations, and Bruns and Burgess' (2011) "ad

hoc publics."

Using qualitative content analysis as a research tool, I consider how activity in the #legalize stream can be conceptualized as collective action framing, and how recent theories about social movements in the new media environment may apply to this kind of discourse. Qualitative content analysis is a "method for systematically describing the meaning of qualitative material" (Schreier, 2012, p. 1). In contrast to quantitative content analysis, which is used to describe the manifest characteristics of data, QCA requires the researcher to take context into account and is suitable for studying the latent meaning in data, or understanding "symbolic material—verbal data, visual data, artefacts—which leaves much room for interpretation" (Schreier, 2012, 20).

While there has been study of online activity in the context of social movements, there has been little study of the role of Twitter or other micro-blogging services in social movements. In particular, the role of hashtags has not been considered in the context of social movements.

This study contributes to an understanding of the nature of publics formed around Twitter hashtags, and how electronic affordances such as the Twitter hashtag facilitate the creation of collective identity, collective action framing, and other kinds of social action. It also contributes to an understanding of the way individual participation in social movements is changing in response to the new media environment.

My research questions are:

- Is the #legalize stream used for building collective identity? If so, how? What features of the Twitter interface support this kind of activity?

- Is the #legalize stream used for social action such as collective action framing and/or personalized action framing? If so, how? What kinds of collective action framing can be seen in the #legalize stream? What features of the Twitter interface support this kind of activity?

- How do activities observed in the #legalize stream reflect recent theories of social action and social movements in the new media environment?

This report begins with a literature review, in which I consider pertinent literature concerning Twitter's network, structural features, and hashtag conventions. Also considered in the literature review is the sociological literature on collective identity and collective action framing, as the theories from this literature form key concepts in the study. The review concludes with recent literature that has reconceptualized social movement activity in the context of a new communication environment.

The methodology section of this report explains why qualitative content analysis, the method of analysis that I chose, is particularly useful for analyzing the latent content found in tweets. In this section I also define key concepts in the report: collective identity, collective action framing, diagnostic framing, prognostic framing, and motivational framing. I also explain how I constructed my coding frame, discuss issues of validity and reliability, and outline my data collection techniques.

In the findings section of the report, I discuss the frequency of tweets in each category of the coding frame, and give examples of these tweets. I also describe several additional findings.

In the discussion, I draw connections between the literature on Twitter and the literature on social action to consider the answers to my research questions. I consider how the legalize stream is used, whether building and maintaining collective identity are supported through activity in the stream, and whether the activity in the stream resembles reconceptualizations of social action such as the connective action network. I also suggest areas for further study.

In my conclusion, I review my observations on the unique characteristics of the legalize hashtag stream and the ways that the stream appears to be used by its participants. I also outline

the way that this report contributes to an understanding of the capacity of Twitter's hashtag

conventions as a venue for social action.

Literature Review

In the literature review for this study I focus on two main areas: a review of relevant

literature on Twitter's networks and structural features, with a particular look at how Twitter's

hashtag conventions have been conceptualized; and a review of literature on the sociological

theories of collective identity and collective action frames. I include a look at how the theories of

collective identity and collective action frames have been reconceptualized in light of the new

media environment and globalization.

The Twitter network

As Twitter has only been in use since 2008, Twitter practices continue to evolve.

Questions remain about the nature of networks that form among Twitter users and about the

ways in which Twitter is perceived and used by participants. These kinds of questions are

important to this study, as I consider what kind of network forms around the #legalize hashtag,

how the #legalize hashtag relates to the broader movement for the reform of marijuana laws, and

how the network is used for identity construction and a sense of community or collective

identity. A review of the literature concerned with these questions provides valuable context for

conceptualizing the #legalize network. Similarly, a review of research on the structural

characteristics of the Twitter interface and on the practices of participants—along with the

implications of these characteristics and practices—lends context for an understanding of the implications of hashtag usage.

Researchers have explored Twitter networks from a number of angles. Interested in the idea that social network users may have many contacts but a smaller number of genuine online relationships, Huberman, Romero and Wu (2008) sought to understand the patterns of interaction and relationships on Twitter. They studied the nature of "networks that matter," which they defined as "those networks that are made out of the pattern of interactions that people have with their friends or acquaintances, rather than constructed from a list of all the contacts they may decide to declare" (2). Huberman et al. (2008) defined *friends* as users to whom the subject had directed at least two posts, and contrasted *friends* with *followers* and *followees*. Using network analysis, the authors uncovered a simple "hidden network that matters the most," and a larger network of followers and followees (7). Huberman et al. (2008) argued that because of the level of interaction, the network of actual friends was a more influential and meaningful network, or "the one that matters when trying to rely on word of mouth to spread an idea, a belief, or a trend" (7).

Gruzd, Wellman and Takhteyev (2011) were interested in the "asymmetric" nature of networks on Twitter: reciprocity of following is not required or necessarily expected (1296). Gruzd et al. (2011) pointed out that this means Twitter connections are not dependent on direct contact. The authors asked what kind of communities could be formed from such a network, and used several established models of community as frameworks to study the Twitter network of Barry Wellman, one of the authors.

Through studying Wellman's Twitter network, Gruzd et al. (2011) conceived of Twitter as an "imagined community," in which users are aware of others' presence but may not interact

with them. The authors found that Wellman's network was *collective* in the sense of sharing a set

of linguistic conventions and practices such as hashtags and retweets. As further evidence of

collective awareness, the authors found that Twitter users seemed to share a sense of awareness

of being in the same point on a time continuum, or "a continued imagined consciousness of a

shared temporal dimension" (1303).

Gruzd et al. also found that Wellman's Twitter network displayed features of a "virtual

settlement" in that there was a high level of interactivity between mutual followers, a variety of

communicators, a common public place for interaction, and sustained membership over time

(1306-7). Besides meeting the criteria for "virtual settlement," Wellman's Twitter network also

displayed signs of having a "sense of community": members of the network clustered by interest,

members appeared to influence each other, asked for and provided help to each other, and shared

emotional connections (1308-12). Gruzd et al. concluded that a Twitter network is both real—as

evidenced by interaction—and imagined, as shown through a sense of community.

Marwick and boyd (2010) sought to understand the nature of networks on Twitter

through the concept of the "networked audience" (114). Drawing on the constructs of self-

presentation theory and symbolic interactionism, Marwick and boyd (2010) looked at the way

Twitter "affords dynamic, interactive identity presentation to unknown audiences" (116). In a

parallel to Gruzd et al.'s findings about Twitter's "imagined community," Marwick and boyd

(2010) noted that Twitter users can never know the nature or extent of their audiences because of

practices such as retweeting. In fact, through the respondents in their study, Marwick and boyd

(2010) found that many users rejected the notion of "audience" and its attendant "self-conscious

commodification" (119). However, awareness of audience and intended usage of Twitter varied

widely: some viewed it as a social space to keep in touch with friends, some saw it as a multi-

purpose communication tool, and some approached their audiences strategically, imagining them as "a fan base or community with whom they could connect or manage" and engaging in the practices of "micro-celebrity" (120).

The respondents' varied approaches to their audience reflected the fact that Twitter "flattens" multiple audiences or allows "context collapse" (Marwick and boyd, 2010, 122), and in that way puts an onus on users to manage their self-presentation through self-censorship, balancing public and personal information, and monitoring of feedback. The user constructs their identity through interactions with a networked audience that is "unidentified but contains familiar faces; it is both potentially public and personal" (129).

Researchers have also looked at the implications of the structural characteristics of the Twitter interface. Honeycutt and Herring (2009) looked at uses of the "@" symbol for conversation and collaboration. They found that although Twitter had not been designed with collaboration in mind, the "@" symbol allowed conversational exchange and informal collaboration.

Kwak, Lee, Park and Moon (2010) set out to study the "topological characteristics of Twitter" (p. 1) by looking at distributions of users, retweeting behaviors, and information diffusion. Their findings of lower reciprocity in following than on other social networking sites and potential for an unexpectedly large audience via retweets appear to support Marwick and boyd's (2010) conception of the networked audience in which users can not be certain of the nature or breadth of their audience.

boyd, Golder and Lotan (2010) viewed retweeting as a form of conversational practice. They found that retweeting was used for diffusing information and as a way of participating in multiple conversations, and also served to raise the visibility of selected content. boyd et al.

(2010) also found that the retweeting had not yet "stabilized as a practice," (4) and that

inconsistent syntax and unintentional meaning shift during retweets reflected the different beliefs

of participants (and developers of third party applications) of how retweeting should be

conducted. The researchers argued that the developing conventions and fluid nature of the

Twitter network meant that "rather than participating in an ordered exchange of interactions,

people instead loosely inhabit a multiplicity of conversational contexts at once" (10).

Retweeting was also looked at by Macskassy and Michelson (2011), who considered

what factors led to retweets, and, based on user's topic-of-interest profiles, built and tested

several models to explain retweet behaviour. They found that users have a "strong tendency" to

retweet tweets from others with a similar profile (215). Nagarajan, Purohit & Sheth (2010) also

considered which factors led to retweets. In studying groups of tweets related to news topics,

they found that the most highly retweeted tweets involved a call for some sort of social action,

collective group identity-making, a call for crowdsourcing or information sharing (297). They

found that content played a key role, with tweets that shared information generating denser

retweet networks than other kinds of tweets.

Stieglitz and Dang-Xuan (2012) considered retweet behaviour in the context of political

discussion and how the "affective dimensions of tweets" affected likelihood of retweeting

(3501). They found that while the majority of tweets were used for information sharing, tweets

expressing sentiment—whether positive or negative—were more likely to be retweeted than

other kinds of tweets.

Conover, Ratkiewicz, Francisco, Goncalves, Flammini, and Menczer (2011) found that

the retweet network in political discussion tended to be highly polarized. While participants

incorporated hashtags to target audiences with diverse political opinions, and at times engaged in

discussion with others using the "@" convention, they tended to retweet only that content

containing views which with they agreed. The authors concluded that Twitter interactions might

serve to reinforce "pre-existing political biases" in spite of "substantial cross-ideological

interaction" (95).

This section of the literature review has been concerned with providing an understanding

of the nature of networks formed on Twitter, and the implications of practices such as the use of

the "@" symbol and retweeting. In the next section, I focus more particularly on the implications

of hashtag usage.

Twitter's hashtag convention and the formation of ad hoc publics

An emerging area of research on Twitter concerns user conventions for the hashtag

symbol, which serves as a user-generated tagging system. As I am looking at the use of the

legalize hashtag for collective identity formation and collective action or personalized action,

understanding the use of the hashtag symbol is a central concern in this report.

Zappavigna (2011) stated that, through hashtags, Twitter leverages the "affordance of the

database to render information searchable and to make visible relationships that would not

otherwise be recognizable" (804). This understanding of Twitter as a database, the contents of

which can be viewed through hashtags reflecting some form of user intention, is crucial to an

understanding of networks such as #legalize that form around a hashtag.

In the same way that the "@" symbol facilitates "conversationality" on Twitter

(Honeycutt & Herring, 2009), the hashtag may be viewed as a "structural affordance" (boyd,

2011) that facilitates tagging practices. Unique features of Twitter hashtag conventions allow

tagging practices on Twitter to differ from tagging practices on other social networks such as

Flickr or Delicious. In contrast to tags in other metadata systems, the Twitter hashtag is

integrated into content; it acts as both metadata and content, and is not hidden from the audience.

It "collapses" the separation of form and content (Zappavigna, 2012, 85). Bruns and Burgess

(2011) stated that the hashtag convention has a high capacity for "cultural generativity" (3),

which allows hashtag use to extend beyond keyword and filtering functions.

Zappavigna (2011) used the term "ambient affiliation" to describe the process of

individuals gathering in a hashtag stream (800), and noted that the use of hashtags "presupposes

a virtual community of interested listeners who may or may not align with the values expressed

together in the tag" (2012, 85). Hashtags give a "call to affiliate with the values in the tweet by

rendering the tweet searchable" (2011, 789). The impermanent communities formed through

ambient affiliation may "shift as hashtags shift and different couplings of ideational and

interpersonal meaning are established depending on what people are talking about at a given

time" (98).

Zappavigna (2012) argued that hashtag-related practices are "the beginning of searchable

talk, a change in social relations whereby we mark our discourse so that it can be found by

others, in effect so that we can bond around particular values" (1). She observed a number of

ways that hashtags are used, including generating internet memes, tracking and participating in

events such as conferences, and narrativizing self-representation (2012, 87), and argued that

hashtags offered "a novel gaze on community, with the organizing principle of affiliation being

an emergent bonding around searchable topics rather than direct interaction" (192).

Bruns and Burgess (2011) examined the way Twitter allows discussion of Australian

politics through the widely-used and enduring #auspol, a hashtag denoting content relevant to

Australian politics. They noted the complexity of ad hoc publics, pointing out that such

communities functioned "not as separate, sealed entities, but as embedded and permeable meso-level spaces" (6) which connected with and flowed through other online and off-line communities. Additionally, they found that the flexibility of Twitter and its hashtag system led to its utilization by mainstream media organizations and individuals.

Small (2011) examined #cdnpoli, a widely-used and enduring hashtag denoting content relevant to Canadian politics, in its role as a "space for political conversation" (878). Small found that #cdnpoli's primary function was informing, and that it served as an aggregator for relevant content. Segerberg and Bennett (2011) focused on another use of hashtags related to political discourse when looking at hashtag use in a political protest environment. They pointed out that Twitter is both "networking *agent* in and *window* on the protest space" (Segerberg & Bennett, 2011, 200, emphasis in the original), as it can serve to both "coconstitute and coconfigure the protest space" and "reveal interesting features of the protest ecology's wider composition" (201). In a conception similar to the Bruns and Burgess (2011) concept of "permeable" hashtag-driven ad hoc publics, Segerberg and Bennett (2011) also observed that hashtag streams can be "crosscutting network mechanisms" in that they "cut across and connect diverse networks" (202).

Segerberg and Bennett (2011) also noted the potential of hashtag streams for "gatekeeping processes" in which individuals may be using the hashtag for a particular organizational use (202). The way organizational dynamics change over time can also be viewed through the "window" of a hashtag stream, with some streams being "relatively long-running epistemic communities, rich with information and analysis," and others being "brief beacons of information and logistics contributing to the orchestration of a particular action within a bounded time frame" (Segerberg & Bennett, 2011, 202).

Heverin and Zach (2012) used a combination of content analysis, complex time-series analysis and discourse analysis to study the way Twitter contributed to "sense-making" during a crisis (38). Through the use of hashtags related to crisis events, users engaged not only in information sharing but also attempted to "make sense" of the situation, asked for information, expressed emotions, and sought to understand reasons for the crisis (41-44). Heverin and Zach (2012) found that individuals' opinion-related tweets and purposeful use of hashtags were signs of "collective behavior" and that use of Twitter in crisis situations "exemplifies the sense-making communicative micropractice of an individual connecting to a collectivity" (44-45).

In this section of the literature review, I have focused on literature related to Twitter's hashtag convention. An understanding of hashtags as mechanisms for searching, affiliating, sense-making, connecting with offline communities, and forming ad hoc publics or communities of ambient affiliation is central to understanding hashtag potential for building collective identity and collective action frames.

Collective identity and collective action frames

In this section, I review concepts and theories of collective identity and collective action to provide context for an understanding of Twitter hashtag usage for collective identity building and collective action.

Collective identity

In a widely accepted definition, Polletta and Jasper (2001) stated that collective identity is "an individual's cognitive, moral, and emotional connection with a broader community, category, practice, or institution" that is "expressed in cultural materials—names, narratives, symbols, verbal styles, rituals, clothing, and so on" (285). Polletta and Jasper also distinguished

collective identity from ideology, noting that "collective identity carries with it positive feelings

for the group" (285).

Ashmore, Deaux and McLaughlin-Volpe (2004) stated that, in contrast to personal or self

identity, collective identity is "explicitly connected to a group of people outside the self," and

includes a number of dimensions by which individuals experience collective identity (82-83).

Self-categorization is the "precondition for all other dimensions of collective identity" (Ashmore

et al., 2004, 85). Other dimensions include attitude toward the group, importance of group

membership to the individual, attachment and sense of interdependence with the group, social

embeddedness with the group, behavioral involvement, and "content and meaning" that the

individual constructs about the group (Ashmore et al., 2004, 83).

The concept of collective identity is often tied to concepts around the social construction

of identity. Hunt and Benford (2004) noted that collective identity is "a cultural representation, a

set of shared meanings that are produced and reproduced, negotiated and renegotiated, in the

interactions of individuals embedded in particular sociocultural contexts" (447). Melucci (1995)

took a constructionist view when he argued that collective identity is not merely the "expression

of values and beliefs" (43) but rather the process of "constructing an action system" (44). In

Melucci's (1995) view, the process of collective identity involved a "network of active

relationships between the actors, who interact, communicate, influence each other, negotiate, and

make decisions" (45).

Hund and Benford (2003), drawing on Taylor and Whittier's (1992) analytic framework,

identify the use of boundaries, consciousness, and negotiation by groups constructing and

maintaining collective identity. They describe "boundary work" as the "central dynamic of

collective identity construction" as it helps members define and demarcate the boundaries of

their group's identity (8). The process of drawing boundaries includes "accentuating putative moral, cognitive, affective, behavioral and other attributed differences between social movement participants and the web of others in the contested social world" (Hund & Benford, 2003, 8). Hund and Benford (2003) note that boundary work can involve the use of symbols and "identity markers" and offer the example of dreadlock hairstyles as symbols of identification with certain social movements (9).

Consciousness, the second element in the framework Hund and Benford (2003) use, is dependent on discursive processes, and collective identities are "talked into existence" (10). "Movement narratives" (11) are used to construct and sustain unity and continuity. "Emotion work" is also an important part of consciousness building, with emotions ranging from sorrow to indignation being employed in various movements (12). Emotions allow a collective identity to be "felt," not just conceived. Hund and Benford (2003) offer the example of the abolitionist movement of the 1800s using "moral shocks" to sustain commitment to the cause and to alter the consciousness of those indifferent to the cause.

Negotiation, the third element in the framework, refers to the interactive nature of collective identity construction and the constant process of defining and redefining identity in the face of cultural change, relationships within and outside the group, and opposition to the group. Collective identities "are negotiated, in part, as participants seek to resist negative definitions imposed by opponents" (12).

Hunt and Benford (2003) noted that collective identity theory has its roots in early sociology, including the conceptions of Marx's "class consciousness", Weber's "group identifications" of "class, status and party", and Durkheim's "collective representations" or

shared cognitive and emotional meanings (434). In addition, collective identity theory draws on

symbolic interactionism's view of the social construction of identity, including group identities.

Collective action framing

Steward, Shriver and Chasteen (2002) observed that during the 1970s through the 1990s,

social action was often examined through the "resource mobilization" model, in which

organizational dynamics and societal structure became a central focus. The lack of focus on the

individual and on social psychological processes eventually came to be seen as a limitation,

however. Alternative models developed since the 1990s have included such factors as solidarity,

micromobilization, and collective identity.

Benford and Snow (2000) stated that understanding participation in social movements is

aided by an understanding of framing processes, or "collective action frames." Originating in

Goffman's work on identity, frames can be seen as "sets of beliefs and meanings that inspire and

legitimate the activities and campaigns of a social movement organization" (Benford & Snow,

2000, 614). Snow (2007) explained the distinction between "everyday interpretive" frames and

"collective action frames": while both collective action frames and interpretive frames offer a

way to interpret and to focus attention, collective action frames have a core mobilization

function. Collective action frames also function as "innovative amplifications and extensions of,

or antidotes to, existing ideologies" (Benford & Snow, 2000, 613). Ladd (2011) argued that

collective action frames provide "an interpretive lens through which citizens can identify given

problems, conceptualize potential solutions, and justify to themselves and others their

involvement in various social change efforts" (364). In addition, framing processes involve the

construction of both meaning and identity (Steward, Shriver & Chasteen, 2002).

When collective action frames have a broad enough scope and influence, they can be considered "master frames" (Snow, 2007, 2). Master frames can "help to animate an entire social movement sector" and through adaptation processes can emerge as "a flexible and adaptable residue of oppositional framing that may become a permanent feature of the political culture" (Tarrow, 1995, 131).

Frames are both action-oriented and discursive, and are constructed by participants who "negotiate a shared understanding of some problematic condition or situation they define as in need of change" (Benford and Snow, 2000, 615). Tarrow (1995) noted that it is "the weaving of new materials into a cultural matrix that produces expanding collective action frames" (134). Beyond legitimating protest activities, frames are also the "interpretive packages" that activists use to mobilize others and to sustain solidarity and commitment (Jasper & Polletta, 2001, 291). Steward, Shriver and Chasteen (2002) argued that narratives can serve as "significant tools for the construction of identity" and are the "central mechanism" in framing (114).

Core "framing tasks" include diagnostic, prognostic, and motivational framing. Diagnostic framing tasks are focused on identifying problems and attributing blame or responsibility for the problems, and may include "injustice frames" that define how an injustice is occurring. Benford and Snow (2000) noted that "injustice frames appear to be fairly ubiquitous across movements advocating some form of political and/or economic change" but also pointed out that with complex issues of injustice it can be difficult to identify the culpable party (616). Prognostic framing is focused on articulating strategies to solve an injustice or societal problem, while motivational framing focuses on motivating participation through a "call to arms" which may involve "socially constructed vocabularies" to compel participants to engage in collective action (Benford & Snow, 2000, 616).

"Frame alignment" processes such as frame bridging, in which two or more frames are brought together to strengthen collective action, are accomplished through discursive processes (Benford and Snow, 2000). Frame alignment includes "frame articulation"—the process of "connection and alignment of events and experiences so that they hang together in a relatively unified and compelling fashion"—so that issues can be seen in a new light (Benford and Snow, 2000, p. 623). "Frame amplification," or the process of drawing attention to certain issues and creating movement slogans or catchphrases, is also seen as a frame alignment process. Frame amplification involves the "idealization, embellishment, clarification, or invigoration of existing values or beliefs" through highlighting issues that resonate with those in the intended audience (Benford and Snow, 2000, p. 624). In addition, the frame alignment processes of extension and transformation are also used to expand or extend the reach or lifespan of collective action. Because of the discursive nature of frame alignment processes, frames are "continuously reconstituted during the course of interaction" (Benford and Snow, 2000, p. 623). The success of frame alignment processes is shown through "frame resonance", measured through the frame's credibility and salience to its "targets of mobilization (Snow, 2007, p. 3).

In this section, I've reviewed fundamental concepts of collective identity and collective action framing. Understanding that collective identity is socially constructed through discursive processes, and is seen through cultural materials which reflect cognitive, moral and emotional connection to a group, is key to conceptualizing the #legalize hashtag network as a platform for collective identity. The concept of frames as socially constructed sets of meanings and beliefs used by participants to view and discuss problems is also key to this study, and to an understanding of how social action can be seen in the new media environment.

Collective identity and collective action frames in the new media environment

In the previous section, I discussed theories of collective identity and collective action framing. In recent years, a number of researchers have re-examined these theories in light of developments in communication technologies, globalization, and other changes in society. Researchers have sought to understand the impact of changing communication technologies on social movements. In considering the relevance of collective action theory to new forms of social movements, they have also sought ways to redefine collective action phenomena so as to make sense of new forms of social action.

Understanding the impact of changing social technologies on collective action

Diani (2000), in considering the effects of computer-mediated communication (CMC) on social movements, raised a number of questions, including how forms of individual participation change with CMC and how actors develop identities and solidarities. Diani (2000) acknowledged the benefits of CMC as a "powerful facilitator" but argued that its contributions were of an instrumental rather than symbolic kind, and was skeptical of whether it could foster the "spread of new democratic practices based on principles of discursiveness and consultation" (396). Diani (2000) stated that it was, at that time, still unknown whether new social ties could develop in a virtual community and whether collective identity could be built without pre-existing ties.

Van Aelst and Walgrave (2002) used research on websites related to the anti-globalization movement of the early 2000s to consider how the Internet was used for building collective identity, mobilizing participants, and creating a network of different organizations. The authors found that although the trans-national anti-globalization movement lacked the

centralized organization previously expected of social movements, the websites they studied

showed evidence of diagnostic framing, prognostic framing, mobilization processes, and

integration between websites, which all reflected traditional theories around collective identity

and collective action. In the same way that Diani (2000) questioned whether CMC could have

both symbolic and instrumental effects, Van Aelst and Walgrave (2002) were unable to conclude

whether the use of the Internet "changed the 'logic of collective action' or just the speed of

protest diffusion" (487).

Della Porta and Mosca (2005) argued that computer-mediated communication "creates

easily accessible spaces in which any organization can, at a low cost, communicate interpretative

schemes and definitions of the situation" (184). In their study of the anti-G8 protest in Genoa in

2001 and the European Social Forum in 2002, the authors found that online and offline forms of

collective action tended to reinforce each other. Similarly, Harlow and Harp (2012) found that,

rather than replacing traditional forms of collective action, digital tools supported and enhanced

traditional forms, and "could actually be creating new activism that would not have occurred had

it not been for the Internet" (211).

Bimber, Flanagin and Stohl (2005) argued that collective action, as it is situated in the

public domain, requires individuals to "cross a boundary" between private and public realms

(19). As this kind of boundary crossing, or easy transition between the public and private, is a

central feature of the new media environment, the cost of engaging in collective action is

lowered. The authors identified a number of ways this lowered cost of engagement could impact

collective action, including "amplification of engagement" in which a small group can mobilize a

large protest (Bimber et al., 2005, 24), trans-national collective action, and the formation of

collective action groups without clearly-defined leaders. The authors contended that theories

pertaining to collective action are still relevant, but called for additional research into changing

social action phenomena, as "the varieties of human collective experience are broader than have

been accounted for so far" (Bimber et al., 2005, 30).

Redefining collective action

McDonald (2002) questioned the established conception of collective identity in light of

increasing globalization, and argued for "an emerging paradigm of contemporary social

movement, one constructed in terms of fluidarity rather than solidarity, and in terms of 'public

experience of self' rather than collective identity" (111). McDonald's concept of "fluidarity" was

embraced by Croeser (2012) in research on a movement she coined the "digital liberties

movement" (DLM), which is concerned with government surveillance, intellectual property,

censorship, and open source software.

Croeser argued that many movements in the new media environment are better

understood as networks than as organizations, with movements and their frames being constantly

constructed and reconstructed. In contrast to the social movements described in traditional

literature, and in keeping with the trans-national movements described by Van Aelst and

Walgrave (2002) and della Porta and Mosca (2005), movements such as the DLM do not have an

obvious organizational base or unified collective identity. Croeser (2012) noted that while "this

theoretical framework is more untidy than the standard model, it allows for a more complete

understanding of the DLM" (9).

Bennett and Segerberg (2011) also argued that standard models of collective identity and

action need to be revisited in the face of complex, interrelated political issues that "cut across

conventional social movement sectors" (771). The authors added that the complexity of issues,

which may involve trans-national authorities and corporations, is coupled with a growing

"personalization of issues" as the influence of the traditional "bases of social solidarity" such as

political parties, unions, and churches declines (771). They noted that individuals may eschew

formal membership in organizations in favour of selective involvement in issues and actions that

carry personal meaning. The authors added that digital communication media lend themselves

particularly well to this loosely-structured and flexible form of involvement, an observation

reflective of McDonald's (2002) conception of the 'public experience of self' (111).

In order to mobilize individuals who are less receptive to traditional collective action

frames, organizations must be willing to share communicative control, according to Bennett and

Segerberg (2012). While sharing communicative control expands the organizational protest

space, it also raises the danger of increasing heterogeneity and a resulting weakening of

collective action frames, with user contributions "diluting or contradicting the organization's

messages about itself and its cause" (Bennett & Segerberg, 2012, 774). The authors found that,

in the cases they studied, effective mobilization occurred despite shared communicative control,

and despite a lack of formal organizational membership or clearly defined collective identity.

In a separate study, Bennett and Segerberg (2012) looked further into the relatively recent

phenomena of social movement organizations in which "communication becomes a prominent

part of the organizational structure" (739). The authors found that "more personalized, digitally

mediated collective action formations" (742) were able to bridge different issues, respond to

changes quickly, and grow in size more quickly than conventional social movement

organizations.

Contrasting the "familiar logic of collective action" with what they termed "connective

action," Bennett and Segerberg (2012) developed a typology of collective and connective action

networks. The authors typified the traditional "collective action network" as having "the logical

centrality of the resource-rich organization" (Bennett & Segerberg, 2012, 760), complete with higher organizational costs, a focus on collective action frames, organizational control of social technologies and networks, hierarchical organization, and placement of the organization in the foreground. In contrast, the "connective action network," with its distributed and dynamic structure, is typified by lower organizational costs, a high degree of personal expression in social technology and network use, personal action frames, decentralization, and less involvement with existing formal organizations. The authors also describe a "hybrid" network in the centre of the typology, but acknowledged that "the real world is of course far messier than this three-type model," with dynamic movements such as *occupy* assuming different forms at different times (Bennett & Segerberg, 2012, 758-9).

Bennett and Segerberg's (2012) conception of the dynamic and fluid "connective action" network with low organization costs, for which the "linchpin . . . is the formative element of 'sharing'" (760), runs parallel to Shirky's (2008) observation of the trend toward "ridiculously easy group-forming" (54) and "replacing planning with coordination" in social action (172).

Also recognizing the need to redefine collective action in order to explain new social movement phenomena, Earl and Kimport (2011) asserted that traditional conceptions of collective action relied on individuals being "copresent" in time and space. They sought to "challenge the conflation of collective action and copresence . . . by asserting that innovative uses of Internet-enabled technologies can allow for meaningful collective action without copresence (126).

Literature Review Summary

This literature review began by looking at literature concerned with describing and defining the nature of networks on Twitter. The key concepts from this literature—concepts such

as the networked audience, real and imagined communities, multiple conversational contexts, and collective awareness in networks—provide a basis for understanding the nature of the #legalize network. Understanding practices such as retweeting and use of the "@" symbol are also key to understanding the way #legalize participants interact and perceive the #legalize network. The review then focused in particular on the use of hashtags in Twitter, and key concepts such as ambient affiliation, the formation of ad hoc publics, and the use of hashtags for collective behavior were considered. In concert with the next section, which outlined theories of collective identity and collective action framing, this section provided context for understanding how Twitter hashtags can be used for collective identity building and collective action. Finally, this review considered the way collective identity and collective action frames have been conceptualized in the new media environment, including theories around the lowered cost of engagement, fluid networks, decentralized action, and personalized action.

In seeking answers to questions about whether and how the #legalize stream is used for social action and how Twitter facilitates this kind of activity, this report draws on theories around Twitter and theories of collective identity, collective action, and social action in new media environments. By connecting the findings of recent studies of Twitter and its unique characteristics with theories of social action, this study offers a new perspective on Twitter hashtag use and on the capacity of Twitter as an agent on, and window into, social movements. In asking how the movement for the reform of marijuana laws, as viewed through the #legalize window, resembles theories of social movements in new media environments, it also adds to an understanding of how the new media environment affects individual participation in social movements.

Methodology

To conduct an analysis of discourse in the #legalize stream, I used Qualitative Content

Analysis (QCA), a "method for systematically describing the meaning of qualitative material"

(Schreier, 2012, 1). In contrast to quantitative content analysis, which is used to describe the

manifest characteristics of data, QCA requires the researcher to take context into account and is

suitable for studying the latent meaning in data, or understanding "symbolic material—verbal

data, visual data, artefacts—which leaves much room for interpretation" (Schreier, 2012, p. 20).

Because I was seeking to understand the latent meaning found in tweets in the #legalize

stream, QCA presented a suitable method for interpretation. In the following section, I define

key theoretical concepts which were operationalized in the study.

Definitions of key terms, concepts and variables

Collective identity

Collective identity can be seen as a "cultural representation, a set of shared meanings"

(Hund & Benford, 2003, 12) that reflect individuals' identifications with and attachments to a

group. Attachments to the group can be on "cognitive, emotional and moral terms" and include

positive affect toward other group members. (Hund & Benford, 2003, 14).

Collective identity describes "imagined as well as concrete communities . . . It is fluid

and relational, emerging out of interactions with a number of different audiences" and is

"expressed in cultural materials—names, narratives, symbols, verbal styles, rituals, clothing, and

so on…" (Polletta & Jasper, 2001, 285).

It is produced through interactions with not only other group members but also "oppositional forces, and audiences who can be real or imagined" (Hund and Benford, 2003, 14). To operationalize this concept, I considered whether the cultural materials found in the #legalize stream showed evidence of a sense of shared meanings, attachment to an imagined or concrete community, and positive affect toward others in the network.

Collective action framing

Ladd (2011) stated that collective action frames provide "an interpretive lens through which citizens can identify given problems, conceptualize potential solutions, and justify to themselves and others their involvement in various social change efforts" (364). In addition, framing processes involve the construction of both meaning and identity (Steward, Shriver & Chasteen, 2002). Framing processes can be seen as "a central dynamic in understanding the character and course of social movements" (Snow, 2004, p. 612).

Collective action framing involves a number of "core framing tasks" which mobilize consensus and action (Benford & Snow, 2000, 615). These tasks include diagnostic framing, prognostic framing, and motivational framing. Collective action framing also includes interactive, discursive processes, including frame amplification, which involves the "clarification and invigoration of an interpretive frame that bears on a particular issue" (Snow et al. 1986, 469).

The concept-driven part of the coding frame includes dimensions based on collective action framing tasks.

Diagnostic framing

Diagnostic framing is concerned with identifying problems, attributing blame or responsibility for the problem, and delineating the boundaries between movement protagonists

and antagonists. It clarifies the character of a problem or issue, and can include injustice framing, in which the victims of an injustice are identified and the victimization is "amplified" (Benford & Snow, 2000, 615). Diagnostic framing answers questions like, "What is wrong? Who or what is to blame? In what ways is this an injustice?"

Prognostic framing

In prognostic framing, proposed solutions, "plans of attack" or remedies are proposed (Benford & Snow, 2000, 617). In this case, prognostic framing offers strategies to increase the likelihood of legalization, and answers questions like, "What do we need to do to fix this? How do we get what we want?"

Motivational framing

Motivational framing can be seen as a "call to arms" or "rationale for engaging in ameliorative collective action, including the construction of appropriate vocabularies of motive" (Benford & Snow, 2000, 617). Motivational framing includes statements like, "Let's change this. Join me in changing this situation. Let's make a difference."

The coding frame

A coding frame can be seen as "a structure, a kind of filter through which you view your material" (Schreier, 2012, 63). It can be built from concept-driven strategies, data-driven strategies, or through a combination of the two. A concept-driven strategy is a deductive approach, with categories being based on previous knowledge, such as from previous research or from a theoretical framework. In contrast, a data-driven approach is an inductive approach, suitable for research that is more exploratory or descriptive.

According to Schreier (2012), a combined approach is most common in QCA. Some parts of a coding frame are typically driven by the research question, which provides concept-driven dimensions. However, because of the richness of qualitative data, at least part of a coding frame is data-driven to allow for unanticipated categories. Including a data-driven approach is "especially useful if you want to describe your material in depth" (Schreier, 2012, 88), and avoids "the danger of disregarding part of the material" (Schreier, 2012, 106). It also aids in meeting the requirement of coding frame exhaustiveness. Schreier (2012) advised that a "typical mix" is to have concept-driven main categories, with sub-categories emerging from an inductive, open coding of the data, in which the researcher specifies what is said about the main categories (89).

To analyze the data I collected, I followed Schreier's (2012) recommendations for constructing a coding frame and analyzing data. My coding frame was designed to be both concept-driven and data-driven, with initial upper-level categories being determined by theoretical constructs drawn from collective action framing theory. As an overriding, supra-level category I assumed the discursive processes of frame amplification to be present in all tweets related to collective action framing. By definition, when participants join the "discursive community" (Bruns & Burgess, 2011, p. 5) of a hashtag, they are aligning themselves with those who also use the hashtag, or are expressing "a 'call' to affiliate with the values in the tweet" (Zappavigna, 2011, p. 799).

Within this broad category of frame amplification, I created three upper-level categories related to the concept of collective action framing's three "core framing tasks"—diagnostic framing, prognostic framing, and motivational framing, which are achieved through discursive processes of frame alignment.

I conducted open coding following Berg's (2004) recommendations: analyzing data minutely, beginning with a "wide funnel" and then getting narrower (p. 278). Following Schreier's (2012) recommendation, I paraphrased data to generate category names.

Following Schreier (2012), who pointed out that "unless you at least adapt your categories to your data, chances are that your coding frame will not be sufficiently valid" (p. 35), those categories that emerged during open coding were included in the coding frame for the sake of validity.

Through this process I also created a fourth upper-level category I called "interaction using hashtag" for tweets with interaction-based behaviours such as requests for retweets and directing tweets to other users. In addition, I created a fifth upper-level category I called "Other uses of the hashtag" for tweets that did not exhibit clear evidence of core framing tasks.

During the open coding process I also developed an upper-level category for the small number of tweets I found which were unrelated to discourse about the legalization of marijuana, or that had unclear meaning.

After open coding the entire data set, my frame contained six upper-level categories and 25 sub-categories. Following open coding, I enlisted the help of a second coder for a pilot phase, and revised my coding frame for clarity. I then recoded each tweet in the data set based on categories and sub-categories established during open coding and had a second coder recode a portion of the data set.

Berg (2004) and Schreier (2012) recommended coding to the point of saturation while developing the coding frame. Saturation occurs when all categories in a coding frame are used at least once, and no empty categories remain. I open coded the entire data set, and was able to see saturation for all upper-level categories—with the exception of the category "prognostic

framing," an exception I discuss in the Findings section. The criterion of saturation did not apply

to my subcategories as they were data-driven and thus were only created in response to the

appearance of data for each subcategory.

While developing the coding frame, I also developed category descriptions. These took

took the form of questions or statements that reflected the underlying meaning of each category.

Notes about coding

A number of decisions had to be made during open coding about how to handle certain

kinds of tweets:

- Tweets with links to external media: When a Tweet contained a link to external media

and the participant clearly summarized the content of the link, I coded according to the poster's

summary. However, when the participant did not summarize the content of a link, and the link

could not be readily interpreted within the Twitter interface—e.g. via a link "summary" to a blog

post or article on a news site—I did not attempt to analyze the meaning of the externally linked

material to determine which category it would fit. Rather, I assigned tweets containing such links

to the sub-category #19, "Information sharing—link to blog post or news article" under the

upper-level category "Other interaction using hashtag." Similarly, I did not attempt to analyze

videos that were linked to from tweets, instead assigning those to category #16.

- Tweets with photos and other embedded media: When a link contained a photo of a

cartoon, poster or other media with clear and easily interpreted text on it, and the image could be

accessed within the Twitter interface, I interpreted the meaning of the text in the photo and coded

it accordingly, rather than assigning the tweet to category #15, "Image". I reserved category #15

for images without text such as photos of paraphernalia, clothing, etc. Two contrasting tweets are

shown below (see Figure 1). I assigned the tweet on the left, which contains the user's statement

"Its time for change" and a cartoon which makes a point about the antiquated nature of marijuana laws to #6, "Prohibition has failed". I assigned the tweet on the right, which shows only the words "Weapon of choice!" with a photo of a marijuana pipe to category #15, "Image":

Figure 1.

- I did not attempt to analyze the meaning of those tweets which I deemed to contain slogans, jokes, or memes in terms of core framing tasks. Because of the symbolic nature of slogans, jokes, and memes, it was difficult to define content for this category. Instead, I relied on a prima facie, "I know it when I see it" approach to categorize such tweets. (Example given on p. 45.)

- It is possible for tweets to contain multiple meanings. A participant can simultaneously engage in diagnostic framing while directing a message to another user, or can ask for a retweet while engaging in motivational framing. Because understanding the interactive, discursive processes of the community are important to this study, I didn't want to overlook information about interactions or relationships—so for these kinds of tweets, I coded for multiple meanings.

As a result, some tweets have been coded under under one of the "Core framing tasks" categories as well as under "Interaction using hashtag". For this reason, the number of total instances in the frame exceeds the total number of tweets which were coded. Schreier (2012) states that assigning codes to more than one category is acceptable, as long as tweets do not appear more than once in each "dimension," or upper-level category. An example is this tweet, which I included in both category #3 (Diagnostic framing - The criminalization of marijuana violates freedom) and category #13 (Interaction using hashtag):

It's ironic that I could go to jail for choosing to live freely. End marijuana prohibition. Retweed and spread the truth about cannabis. #Legalize

Issues of validity and reliability

A coding frame is considered internally valid "to the extent that it in fact captures what it sets out to capture," or "to the extent that your categories adequately represent the concepts in your research question" (Schreier, 2012, 175).

Schreier's statement about coding frame validity is similar to the concept of construct validity. Krippendorf (2004) explains that construct validity "acknowledges that many concepts in the social sciences—such as self-esteem, alienation, and ethnic prejudice—are abstract and cannot be observed directly . . . one would first have to spell out the observable behaviours and verbal responses that the concept entails" (315). Because the constructs for the main coding categories—diagnostic framing, motivational framing, etc.—that I worked with were not directly observable, validity depended on ensuring that the concept of each category was adequately represented by the observable behaviour.

This posed a challenge, because I was unable to find previous studies which offered precise definitions of core framing tasks, or examples at a fine-grained level such as a tweet.

Using open coding, I developed initial categories and then had a second coder re-code a portion

of the data set during the pilot phase of the project. In response to a number of questions from

my second coder about distinctions between the core framing task categories, I developed

questions or statements which reflected the underlying meaning of each type of core framing,

and was able to define the categories more clearly. I defined diagnostic framing as framing

which articulated why criminalization of marijuana is wrong, and then, based on the features of

diagnostic framing outlined in the literature, developed the questions "What is wrong? Who or

what is to blame? In what ways is this an injustice?" For each tweet, I considered whether one of

these questions could be applied. I developed the questions "What do we need to do to fix this?

How do we get what we want?" for prognostic framing, and for motivational framing developed

the statements "Let's change this. Join me in changing this. Let's make a difference." For each

tweet, I considered whether the content of the tweet reflected the nature of these questions or

statements. Using these questions and statements helped me to avoid shifts in meaning during

analysis.

After refining the coding frame, I re-coded the entire data set and then, to improve

reliability, had a second coder re-code a portion of it. My second coder assigned 62 of 75 tweets

to the same categories that I did. We discussed the tweets assigned to different categories and

decided, based on discussion, which categories were most appropriate for the tweets in question.

Issues of external validity or transferability were addressed through sampling adequacy.

The size of the sample allowed me to see the repetition of certain types of tweets in the data set,

suggesting that findings from this data set could be transferable to the stream as a whole.

Figure 2. Coding Frame

Coding Frame

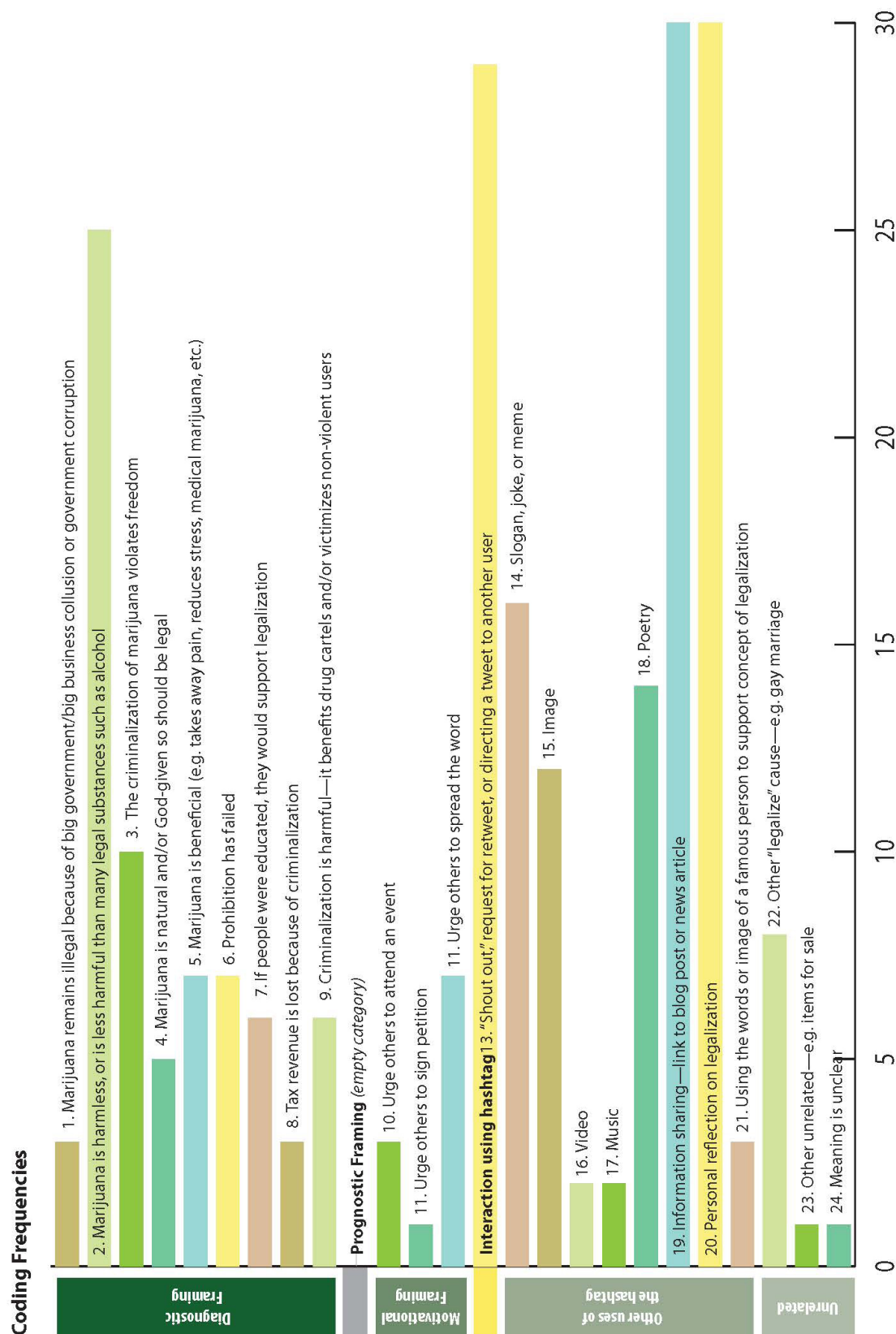| Upper-level category	Subcategory	Number of instances
1. Diagnostic - Clarifies the character of a problem or issue. In this case, used to articulate why criminalization is wrong. - Answers questions like: "What is wrong? Who or what is to blame? In what ways is this an injustice?	1. Marijuana remains illegal because of big government/big business collusion or government corruption	3
	2. Marijuana is harmless, or is less harmful than many legal substances such as alcohol	25
	3. The criminalization of marijuana violates freedom	10
	4. Marijuana is natural and/or God-given so should be legal	5
	5. Marijuana is beneficial (e.g. takes away pain, reduces stress, medical Marijuana, etc.)	7
	6. Prohibition has failed	7
	7. If people were educated, they would support legalization	6
	8. Tax revenue is lost because of criminalization	3
	9. Criminalization is harmful - it benefits drug cartels and/or victimizes non-violent users	6
2. Prognostic - Clarifies solutions to the problem or plans of attack. In this case, offer strategies to increase likelihood of legalization. - Answers questions like: "What do we need to do to fix this? How do we get what we want?"		0
3. Motivational - "Call to arms" - motivating others to engage. In this case, offers tangible opportunities for others to engage. - Includes statements like: "Let's change this. Join me in changing this. Let's make a difference."	10. Urge others to attend an event	3
	11. Urge others to sign petition	1
	12. Urge others to spread the word	7
4. Interaction using hashtag	13. "Shout out", request for retweet, or directing a tweet to another user	29
5. Other uses of the hashtag	14. Slogan, joke, or meme	16
	15. Image	12
	16. Video	2
	17. Music	2
	18. Poetry	14
	19. Information sharing - link to blog post or news article	30
	20. Personal reflection on legalization	30
	21. Using the words or image of a famous person to support concept of legalization	3
6. Unrelated	22. Other "legalize" cause - e.g. gay marriage	8
	23. Other unrelated - e.g. items for sale	1
	24. Meaning is unclear	1

Coding Frequencies

Figure 3. Coding Frequencies Chart

Data collection techniques

The unit of analysis in this study is individual tweets from the #legalize stream. The #legalize stream typically includes 100 to 150 tweets per day, many of which are "one-off" tweets which result in no observable interactions with others in the network. Because of my interest in the use of hashtags for collective action framing, I was seeking tweets which had what Snow, Rochford, Worden and Benford (1986) termed "frame resonance", or "resonance with the current life situation and experience of the potential constituents" (p. 477). To collect tweets with resonance, that "strike a responsive chord" (Snow et al. p. 477) for those following the #legalize stream, I used Twitter's "Top Tweets" feature.

According to Twitter, Top Tweets are selected through an algorithm that "finds the Tweets that have caught the attention of other users. Top Tweets . . . are surfaced for popularly-retweeted subjects" (FAQs about Top Search Results, n.d.). In most cases, Top Tweets have been retweeted, marked as a favorite, or replied to at least once. In those cases where Top Tweets have not been responded to in these ways, they seem to meet the "Top Tweet" criteria by featuring links to media—videos, news articles, or photos—that others have also included in tweets. Such tweets in effect gain their Top Tweet status through the interactions and dialogue of the stream's participants, reflecting the interactional and discursive nature of collective action framing. As collective identity involves constructing, negotiating, and communicating a set of shared meanings (Hunt and Benford, 2004, Melucci, 1995), we can speculate that the interactional and discursive action that leads tweets to become Top Tweets is reflective of the process of collective identity building, and that tweets gaining Top Tweet status are more reflective of the collective identity of the participants than are the "one-off" Tweets that don't result in interaction.

In order to select non-repeating content, I collected Top Tweets under the #legalize hashtag from the Twitter interface on six non-consecutive days, approximately one week apart, over a six-week period. In each case, I collected tweets until I received the prompt, "You've reached the end of top tweets for #legalize." This resulted in a total of 221 unique tweets. As tweets in Top Tweets can maintain Top Tweet status for several days, separating data collection by a span of a few days in each case allowed a higher incidence of unique tweets than collecting more closely spaced data would have. I removed duplicate tweets between data sets. Top Tweets for each day were saved as a web archive so that the archive would be searchable. Additionally, I took a screen shot of each tweet in expanded view, so that it would be possible to view embedded photos and to view data on how many times a tweet had been retweeted or marked as a favourite.

Findings

In this section, I review the findings revealed through coding and describe the content found in each category of the coding frame. I also present additional findings which emerged from the data.

Frequency and examples of tweets in categories

Coding frequency is generally associated with quantitative analysis, but is often included in QCA because frequency is generated as part of the coding frame. I've included coding frequency in my analysis to give a fuller picture of the nature of the #legalize discourse.

Diagnostic Framing

In this category, participants "diagnosed" the injustice of marijuana criminalization. There were 72 tweets which met the definition for diagnostic framing. Participants articulated the problem in nine different ways, with the most common argument being that marijuana is harmless, or less harmful than many legal substances such as alcohol. The categories, the number of occurrences, and examples are:

1. Marijuana remains illegal because of big government/big business collusion or government corruption (Three tweets). Example:

The DEA and the FDA are the pharmaceutical industry's strong arm. #Libertarian #tlot #legalize #cronycapitalism

2. Marijuana is harmless, or is less harmful than many legal substances such as alcohol (25 tweets). Example:

I can buy a bottle of 180 proof liquor that could kill me in hours, but not pot, with which I'd starve to death before I'd OD. #Legalize

3. The criminalization of marijuana violates freedom (Ten tweets). Example:

I'm not asking you to change anything about your life. I'm just asking you to let me live mine. #Legalize

4. Marijuana is natural and/or God-given so should be legal (Five tweets). Example:

Weed is a seed that grows in the ground if God didn't want it it wouldn't be around so fucking free the #weed #Legalize

5. Marijuana is beneficial (e.g. Takes away pain, reduces stress, medical marijuana, etc.) (Seven tweets). Example:

About time people are realizing this. Marijuana Helps Stop Metastasis in Aggressive Cancers [Link to external media] #gogreen #legalize

6. Prohibition has failed (Seven tweets). Example:

Prohibition has never worked on anything #legalize

7. If people were educated, they would support legalization (Six tweets). Example:

Smoking #weed aint bad its just society makes most people think it is..how is this when weed is a natural plant..time for change..#Legalize

8. Tax revenue is lost because of criminalization (Three tweets). Example:

When will the world understand theres revenue behind reefer #Legalize

9. Criminalization is harmful—it benefits drug cartels and/or victimizes non-violent users (Six tweets). Example:

#Legalize, regulate, tax and control #cannabis: complex? Sure. But status quo gives gangs control + $Billions in profit [Link to news media]

Prognostic Framing

This category was intended to hold tweets offering solutions to problems, strategies, or plans of attack for achieving legalization. I found no tweets which met these criteria in the #legalize stream. This is a concept-driven category, so is generated by theory, as opposed to a data-driven category, which is created in response to data. Schreier (2012) states that while an empty data-driven category in a frame indicates a validity problem due to the need for saturation, an empty concept-driven category may lead to an unexpected finding about the data (77-78). In this case, a finding that the #legalize stream is used for diagnostic and motivational framing and not for prognostic framing leads to questions about why participants in the #legalize stream are motivated to use the stream for some kinds of collective action framing but not all. Speculation on reasons for this behavior is included in the Discussion section.

Motivational Framing

In the 11 tweets assigned to this category, participants urged others to engage with the cause in three different ways. The categories, the number of occurrences, and examples are:

10. Urge others to attend an event (Three tweets). Example:

Register today. Join us in Philly in March. #NORMLConference #Legalize Buy Tickets Here: [Link to website] [Link to photo of conference poster]

11. Urge others to sign a petition (One tweet). Example:

#Legalize [Link to petition]

12. Urge others to spread the word (Seven tweets). Example:

I love when my brilliant followers RT cannabis reform news & advocacy pieces. That's how knowledge is spread, keep it up! #Legalize

Interaction using hashtag

This category includes tweets which appeared to be purely intended for interaction with others, such as "shout out" tweets, and tweets directed to particular participants. In addition, this category contains tweets which are also coded elsewhere such as some tweets in category #12, "Urge others to spread the word."

13. "Shout out", request for retweet or directing tweet to another user (29 tweets). Examples:

Shouts to all the peeps who puff on some pot . #Legalize

I love when my brilliant followers RT cannabis reform news & advocacy pieces. That's how knowledge is spread, keep it up! #Legalize
(also included in category #12).

Other uses of the hashtag

In tweets assigned to this category, there was no clear evidence of core framing tasks. Participants shared images, jokes, memes, links to videos, poetry, personal reflections, images of and words from famous people, and links to information on other websites. In some cases, apart from the use of the #legalize hashtag, there was limited reference to the issue of the reform of marijuana laws, and tweets appeared to be serving primarily a social function. The categories, the number of occurrences, and examples are:

14. Slogan, joke, or meme (16 tweets). Example: See *Figure 4.*

Figure 4.

5. Image (12 tweets). Example:

See Figure 5:

"@   : Um yes i do have a bonus card #Legalize
pic.twitter.com/HHWADZLf" I wAnT a BoNuS cArD!! wHeRe Is ThAt
BtW? #sTaYsToNeD =)
🖼 Hide photo   ← Reply   ↻ Retweet   ★ Favorite   ••• More
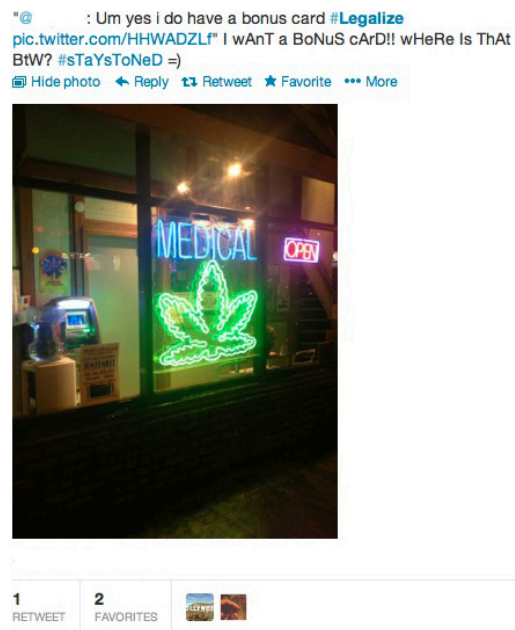
1 RETWEET   2 FAVORITES

Figure 5.

16. Video (Two tweets). Example:

Is that your grandmas pipe? #Potshop #legalize [Link to Youtube video]

17. Music related to the issue (Two tweets). Example:

#Listening to "Capital Letters, Smoking My Ganja" #Reggae #Legalize #Classic #Jamaica #Freeyoursoul [Link to external website]

18. Poetry related to the issue (14 tweets). Example:

My cause is simple, to spread the healing love, my solution is this, little green bud. #stonedPoet#Legalize

19. Information sharing - link to blog post or news article (30 tweets). Example:

Montana Medical Marijuana Cultivator Chris Williams to be Sentenced Friday in Federal Court #P4P #Legalize #pot [Link to external website]

20. Personal reflection on legalization (30 tweets). Example:

If weed was legal in Texas id be walking to the library with a joint in my hand right now..just saying #LEGALIZE

21. Using the words or image of a famous person to support concept of legalization

(Three tweets). Example: See Figure 6:

Figure 6.

22. Other "legalize" cause, e.g. Gay marriage (Eight tweets). Example:

Being gay is not a choice why would I choose to be bullied? Why would I choose to be hated? Why do all those kids kill themselves? #Legalize

23. Other unrelated, e.g. Items for sale (One tweet):

I have another one of these in a blue xs if anyone is interested in buying it. Americanapparelusa #legalize [Embedded image of t-shirt]

24. Meaning is unclear (One tweet):

@Anonuser1 @anonuser2 InB4 someone gets shot over a carton of Newports & some pol says #guncontrol instead of #legalize

Additional findings

In addition to frequencies in the coding frame, several other patterns could be seen in the data:

Frequency of tweets in each category vs. resonance of individual tweets:

The majority of tweets attracted one to ten retweets and "favorites." Nine tweets attracted over 60 retweets each. The frequency of tweets in each category did not necessarily reflect the level of resonance represented by a particular category. For instance, category #5, "Marijuana is natural and/or God-given so should be legal" only contains five tweets. However, one of those tweets was the most highly retweeted and favorited tweet in the data set, with 182 retweets and 121 favorites. See Figure 7.

Figure 7.

Similarly, while category #6, "Prohibition has failed" only contains seven tweets, one of the tweets in this category attracted 84 retweets and 32 favorites:

Prohibition has never worked on anything #Legalize

Likelihood of tweets being retweeted or favorited did not appear to depend on the use of embedded photos or links to media; nor did more prolific participants appear to achieve higher resonance with the community.

Participants and tweet frequency:

There were 151 unique participants in the data sampled, with the most prolific participant contributing 19 tweets. The second most prolific participant contributed 17 tweets, and the third contributed 9 tweets. A "power law" distribution (Shirky, 2008, p. 124) appeared after these prolific participants, with a large majority contributing only one tweet.

The majority of tweets appeared to be from individuals with no stated connection to an established organization. Twenty tweets were found from eleven participants who did identify, through user names, as representatives of established organizations. These organizations ranged from online publications dedicated to "cannabis culture" and news related to marijuana to the advocacy groups NORML and Michigan NORML.

Discussion

As discussed in the Findings section, the coding frame for this report revealed that the #legalize stream is used in a number of different ways. In this section, I will draw connections between these findings and key concepts from the literature review—collective action framing, collective identity, and social action in the new media environment. This discussion will also be informed by literature that explores the nature of Twitter networks and Twitter practices.

How is the #legalize stream used?

Collective action framing

The data from this report reveals that the #legalize stream is used in a variety of ways. Many participants appeared to have a clear desire to "diagnose" the problem of marijuana criminalization, with the data set containing 72 tweets with statements about the reasons criminalization is unjust. This process of identifying problems or injustices can be considered "diagnostic framing" (Benford and Snow, 2000, p. 615). These tweets can also be viewed as diagnostic framing's subset of "injustice framing"—framing which "defines the actions of an authority system as unjust and simultaneously legitimates noncompliance" (Snow, Rochford, Worden and Benford, 1986, p. 466). Tweets such as this reflect injustice framing:

#SomebodyTellMeWhy my medicine is illegal in 32 states including the one I reside in. #Legalize

Westby (2002) noted that strategic framing "has its roots in the diverse and changing nature of a society's cultural stock" and as a result "often tends to embrace a multiplicity of frames" (289). The nine different diagnostic framing categories that emerged in the data give some indication of the movement's multiple frames, with frames ranging from those that stress freedom, and align with a libertarian view, to those that stress the potential benefit to society of regulating and taxing marijuana.

Developments in political and legislative response to the movement, celebrity involvement in the movement, and various cultural responses to the movement are referred to in tweets. In this way, the diagnostic framing activity in the #legalize stream reflects an ongoing response to developments in the broader social movement, and is similar to this process described by Benford and Snow (2000): "changing cultural resonances and collective action

frames reciprocally influence one another . . . framing processes typically reflect wider cultural

continuities and changes" (p. 629). In these tweets, the participants share experiences to

demonstrate their belief that legislation is lagging behind societal norms:

NW #FamilyFeud and a Q was "what activities make you hungry"…smoking weed was
on the board! Man, they just need to go ahead and #legalize

Yup. Back in mtl. Someone totes just walked past me smoking a spliff. Seriously why not
just #legalize it basically already is.

Despite the willingness of many participants to apply diagnostic framing, the data

provided no evidence of prognostic framing, in which strategies for change are articulated. It's

difficult to determine whether the absence of prognostic framing is due to the nature of the

Twitter interface, or due to the nature of the social movement for the reform of marijuana laws.

Legislative change regarding prohibited substances typically requires the involvement of

several levels of government. In addition, considerable debate continues about appropriate levels

of decriminalization and/or legalization. The Twitter interface, with its 140-character limit, may

be suitable for the airing of grievances and sharing of cultural materials, but be too restrictive to

allow the serious discussion required to articulate strategies for change.

The difficulty of achieving meaningful dialogue about strategies for change on Twitter is

increased by the apparent broad geographic base—and multiple jurisdictions—of those using

#legalize. Additionally, Twitter may not be perceived by its participants as a suitable venue for

that kind of discussion. Marwick and boyd (2010) described Twitter as offering "dynamic,

interactive identity presentation to unknown audiences" (116). If #legalize participants perceive

the hashtag as a forum for identity presentation, this may prevent them from perceiving #legalize

as a forum for strategizing change. The use of the space for identity presentation—a process

entwined with self-representation, one of the key elements of collective identity (Ashmore et al.,

2004, 85)—may mean that it serves as a space for certain kinds of framing activities and not

others, and may also be a more suitable space for the discursive processes of collective identity

building than for strategic activity. Prognostic framing would inevitably require debate about the

best course to effect change, and absence of debate appears to be a hallmark of #legalize

discourse.

The ambient nature of hashtag publics, in which "different couplings of ideational and

interpersonal meaning are established depending on what people are talking about at a given

time" (Zappavigna, 2011, 803), may mean that participants do not see #legalize as a forum for

the deep and prolonged discussion required to strategize about legal reform. Rather, the fluid

nature of the interface appears to lend itself to spontaneous expressions of emotion, humour, and

a desire to share experiences with others. As Zappavigna noted:

> "Twitter is the place you go when you want to find out what people are saying about
> a topic right now and in order to involve yourself in communities of shared value that
> interest you in this given moment."
> Zappavigna, 2011, 804.

There was also little evidence—11 instances—of motivational framing, in which

participants advocate action for change. This finding is at odds with Nagarajan et al.'s (2010)

finding that tweets with a "call for some sort of social action" were among those most popular in

their data set (297). It's possible that this difference in findings can be attributed to the more

focused discourse in Nagarajan et al.'s (2010) data set, which was in part drawn from streams

formed around specific events: an election in Iran, and the 2009 International Semantic Web

(ISW) conference. A hashtag stream related to a particular event is likely to be used for on-topic

discussion of the event, particularly if that event is geographically focused (e.g. Iranian election)

or involves individuals who have intentionally come together to discuss particular issues (e.g. the

ISW conference). In contrast, the #legalize stream's span of multiple jurisdictions and usage as a platform for identity presentation is less likely to foster clearly articulated calls for social action.

As with prognostic framing, the span of #legalize across multiple jurisdictions, coupled with various features of the Twitter interface, may prevent participants from seeing #legalize as a suitable forum for urging others to effect change.

It seems, then, that while the #legalize stream functions well as a forum for participants to articulate reasons for legalization and to participate in the dialectical processes of collective action framing, it does not provide a platform to—or inspire participants to—perform the other core framing tasks of strategizing ways to effect change and motivating participants to take action.

Building and maintaining collective identity

The evidence of framing activity in the #legalize stream is one indicator of collective identity processes at work. Ackland and O'Neil (2011) argue that frames are a key element of online collective identity because they are used to communicate beliefs and vision. They represent a "disinterested or 'non-conscious' means of expressing collective identity" (180). Melucci's (1995) constructionist view that collective identity involves interaction, communication, influencing, negotiating, and decision making (44 – 45) also supports the idea that framing activity is an indicator of collective identity.

If we accept Polletta & Jasper's (2001) statement that collective identities are "expressed in cultural materials—names, narratives, symbols, verbal styles, rituals, clothing, and so on" (285), then the wealth of photos, slogans, memes, poetry and personal reflections shared in the stream could certainly be interpreted as evidence of collective identity in the #legalize stream. Additionally, interaction in the stream through retweets and favoriting suggests an engaged

community with "positive feelings for other members of the group" (Polletta & Jasper, 2001, 285), a requirement for collective identity.

Ashmore et al. (2004) consider attachment and affective commitment to be an individual-level construct of collective identity. Attachment and affective commitment are demonstrated in the #legalize stream through retweeting and favoriting activity, and through those tweets which fall under the category "Interaction using hashtag." Additionally, affective commitment is shown through tweets such as:

cannabis prohibition is real. our friends and followers are falling victim to a broken system. #legalize

The processes of boundaries, consciousness, and negotiation central to the creation and maintenance of collective identity (Hund and Benford, 2003) can also be seen in the #legalize stream. Boundary work, or the demarcation of group identity can be seen in tweets that identify an in-group and out-group such as:

Weed is smoked all over the world allday everyday so why cant some people chill the fuk out and just let us stoners blaze in peace #Legalize

Boundary work can also be seen in tweets such as this, which demarcate the participant from those who rely on pharmaceuticals rather than on marijuana:

I could get 20-30 pills a day for free from the VA but I choose to buy a plant that I could grow #legalize

In parallel to the apparent boundary work in the #legalize discourse, collective identity's requisite individual-level construct of "self-categorization" (Ashmore et al., 2004), can be seen in tweets such as Figure 8, in which the participant identifies him or herself with marijuana advocates Cheech and Chong.

Figure 8.

As boundary work also involves the creation of identity symbols, then, as with Polletta &

Jasper's (2001) "cultural materials", boundary work can be seen in the sharing of pictures such

as in Figures 9 and 10:

Figure 9.

For the fuckheads that judge me for smoking weed. 😒
#legalize instagr.am/p/Vm7LyqgCQo/
Collapse   ← Reply   ⟲ Retweet   ★ Favorite   ••• More

1   1
RETWEET   FAVORITE

2:55 p.m. - Feb 11, 2013 · Details

ANNUAL DEATHS FROM:

Tobacco 400,000
Alcohol 100,000
Legal Drugs 20,000
Illegal Drugs 15,000
Caffeine 2,000
Aspirin 500

For the fuckheads that judge me for smoking weed. 😒 #legalize

Figure 10.

The processes of consciousness building, which involve movement narratives and

"identity talk" (Hund and Benford, 2003, p. 10) can be seen throughout the #legalize stream, as

in tweets such as this, in which participants speak wishfully about the future:

In the future I hope marijuana is all good so I have an edibles bakery #legalize

In #legalize, narratives are also expressed through photos such as this which provide a

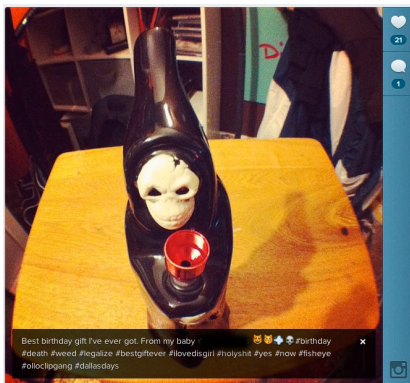window into the participants' lifestyles (see Figures 11 and 12).

Figure 11.

Figure 12.

Similarly, Ashmore et al. (2004) identify narrative as a dimension of individual-level collective identity building, in which an individual creates a "collective identity story" that includes thoughts, feelings and images about the "self as a member of a particular social category" (97).

The "emotion work" aspect of consciousness (Hund and Benford, 2003, 12) can be seen in tweets with an appeal to emotions such as:

If I wasn't stoned right now, I'd probably be crying. In fact, I guaranty it. #Legalize #medicine

"@anonuser: Every 19 seconds some bodies life is change with a drug charge [Link to infographic, Figure 13]" 3 ppl while I read this #Legalize
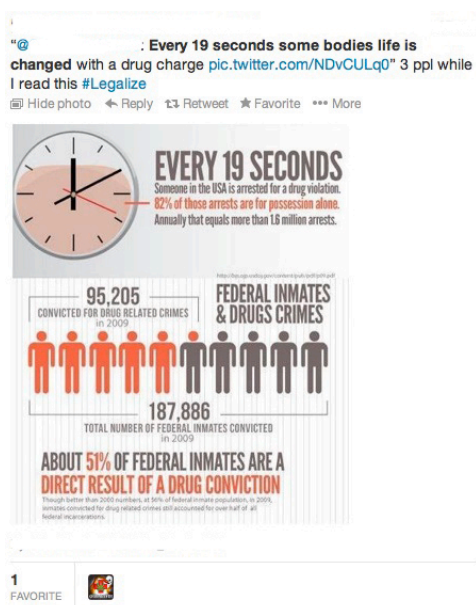

Figure 13.

The presence of "emotion work" tweets in the Top Tweets stream stands to reason if we consider Stieglitz and Dang-Xuan's (2012) finding that tweets expressing sentiment—whether positive or negative—were more likely to gain retweets than other kinds of tweets. This tendency may mean that tweets with affective content are destined to achieve more resonance with the #legalize public than affect-neutral tweets such as those sharing information via links to news media.

Negotiation work can be seen in tweets that address the negative framing of marijuana users, such as these tweets:

People who are against medical marijuana just refuse to see that it actually does help and continues to label us as drug addicts #legalize

#TellMeWhy People who have no idea what they're even talking about judge others for smoking weed? Do some research and be amazed. #Legalize

Personalized or "connective" action framing

The #legalize stream appears to offer a platform for what Bennett and Segerberg (2011) describe as "personalized action" (771), in which participants construct personal action frames "inclusive of different personal reasons for contesting a situation that needs to be changed" (Bennett & Segerberg, 2012, 744). Tweets such as the following show a highly personal justification for legalization:

#WhenImHigh I imagine a world where my medicine doesn't mean that society can marginalize & criminalize me. #Legalize

I find solace in my smoke each day. I feel lifted, and positive, I wouldn't have it any other way. #StonedPoet #legalize

Personal action frames can be adapted to multiple causes based on individual values. Affiliation with multiple causes can be seen in tweets which use multiple hashtags, such as in the following tweet, which reflects a participant's affiliation with both libertarianism and the legalize cause:

#Legalize #belibertarianwithme RT @anonuser: The War On Pot Is No Safe Bet [Link to external website]

Similarly, the inclusion of hashtags such as #Australia, #NSW, #cdnpoli, and #Pennsylvania indicate affiliation with the concerns of geographically specific communities. The inclusion of multiple hashtags reflects the permeable nature of the community formed around

#legalize, with participants being able to "act as a bridge between the hashtag community and their own follower network" (Bruns & Burgess, 2011, 4).

The #legalize public reflects Twitter's "cross-cutting transmission belt connecting diverse users, uses and different termporal and spatial regions of the protest space" (Segerberg and Bennett, 2011, 203). Tweets such as the following two sit together in top tweets from the #legalize stream but indicate identification with different lifestyles and geographic regions: the first participant references West Virginia and medical cannabis, while the second references reggae, music, and Jamaica.

For all the stoners! Lol #WV might get its chance. #Legalize #MOmoney #WestVirginia #news #wboy #MedicalCann

#Listeningto "Capital Letters, Smoking my Ganja" #Reggae #Legalize #Classic #Jamaica #Freeyoursoul

In "connective action" (Bennett, 2012), individuals easily join, leave, or personalize their engagement in social movements through "intrinsically motivating personal expression that can be shared across social networks" (28). The motivation of many participants to engage in the stream for purposes of interaction can be seen in the interaction-focused tweets found in the #legalize stream, such as this tweet:

Morning s/o to my newest followers, welcome to my world @anonuser1 @anonuser2 @anonuser3 @anonuser4 #StayLifted #Legalize

Additionally, personal expression can be seen in the many photos, poems and slogans found in the stream, and in the expressive use of hashtags such as #Bestgiftever, #AboveTheIgnorance #Freedom, and #itsjustaplant—which appear to be used not for purposes of affiliation but for personal expression.

As with other hashtags associated with social movements, the #legalize stream acts as a "networking *agent* in and *window* on the protest space (Segerberg & Bennett, 2011, 200, emphasis in the original). It is beyond the scope of this report to analyze the nature of the larger social movement for the legalization of marijuana. However, when viewed through the #legalize stream, adherents of the legalize movement, spread as they are across multiple jurisdictions, do not appear to have a central organization which coordinates action. Based on the distribution of retweets and favorites, there was no evidence of particularly influential individuals or groups which might provide movement leadership. Twitter accounts for organizations such as The Stoned Society and NORML were not especially prolific and did not achieve higher than average response to tweets.

When viewed through the #legalize stream, the movement appears to align with Bennett and Segerberg's (2012) conception of the "connective action network"—a network which is largely self-organized and lacking in central authority, with communication an important part of the organizational structure and content mainly composed of personal action frames and personal expression shared over social networks (p. 756).

Through offering a platform for personal expression, interaction with other participants, and the construction of personal action frames, the #legalize stream supports the functioning of the larger social movement's connective action network. Bennett's (2012) question, "Can these personalized forms of collective action achieve the levels of focus and sustainability that have typically been required for social movements to press their demands successfully?" (30) remains unanswered: the stream by itself does not provide a comprehensive platform for social change, but may play a role in social change by providing a venue for personalized action framing.

Comparing #legalize to other hashtag publics

To understand the meaning of the kinds of materials shared on #legalize, it is interesting to compare the #legalize stream with the #cdnpoli stream, as studied by Small (2010), who found that the primary function of the hashtag #cdnpoli was "informing," in which "twitterers glean political information from the internet to pass on," primarily through links to external sites (884). Similarly, Stieglitz and Dang-Xuan (2012) found that 52% of tweets pertaining to political elections in Germany in 2011 shared URLs, an information-sharing activity (505).

In contrast, only 30 (13%) of the #legalize tweets in this data set had information sharing as their primary purpose. As common as tweets which informed were tweets which featured personal reflections. Also as common were tweets which were primarily interaction-based and involved a "shout out", request for retweet, or a tweet directed to another participant. Tweets that expressed diagnostic framing arguments were more common than tweets with a primary purpose of informing.

This reflects a crucial difference between hashtags such as #cdnpoli and #legalize: while #cdnpoli is used for broad-based discussion and debate by those across the political spectrum, #legalize appears to be used by a group with a collective identity based on injustice framing and interaction with other participants. #legalize participants appear to use the hashtag to reinforce collective identity through sharing cultural materials and constructing shared meanings, as opposed to #cdnpoli participants, who seek not to share meanings but to debate and persuade others. The particular kind of discourse found and the kinds of materials shared on #legalize appears to be shaped by the collective identity of the group, and the discourse may in turn shape the collective identity of the group.

Benford and Snow (2000) stated that "movement framing processes are frequently

contested and negotiated processes" (p. 625). There is little evidence of contesting and

negotiating framing in #legalize. It seems that through affiliation with the legalize hashtag,

participants are aligning with those in the movement for the reform of marijuana laws who

favour legalization rather than decriminalization.

The absence of argument in #legalize discourse reflects Conover et al.'s (2011) view that

Twitter discourse can serve to reinforce "pre-existing political biases" (p. 95). Although

participants frequently belong to diverse communities on Twitter, participants in the #legalize

public do not retweet content which expresses opposing views on the movement to reform

marijuana laws. There are only three references to decriminalization (as opposed to legalization)

in the data set, indicating that #legalize discourse is not used for debate on the best way to reform

marijuana laws. Rather, it is used for reinforcing views that legalization (rather than

decriminalization) is desirable. Reinforcing existing political biases can be seen as a component

of collective identity construction, as shared beliefs are a crucial element of collective identity.

McDonald (2002) found that, in modern networked social movements, the conception of

collective identity was being replaced by the "public experience of self . . . A struggle for (rather

than mobilization of) identity that is more personal than collective" (125). In contrast to this

view, Harlow and Harp (2012) argue that social networks "in fact strengthen collective identities,

which potentially could lead to forms of collective action that might not have occurred had it not

been for SNS [social networking sites] in the first place (210).

After studying the #legalize stream, I agree with Harlow and Harp's (2012) argument that

social networks can strengthen collective identities. McDonald's (2002) view that public

experience of self replaces collective identity building isn't consistent with what I see in

#legalize, where a hashtag stream seems to have the capacity to encompass both collective identity building and public experience of self. Collective identity building and public experience of self are not mutually exclusive in Twitter: participants can share cultural material, conduct boundary, emotion, and consciousness work, reinforce each others' views and express positive affect toward other participants in the #legalize stream, while simultaneously engaging in activities that resemble public experience of self (McDonald, 2002) and identity presentation (Marwick and boyd, 2010). Similarly, I see evidence of activity that looks like traditional collective action framing, particularly diagnostic framing, but also see personal action frames such as those described by Bennett and Segerberg (2011). A hashtag stream such as #legalize offers participants the ability to participate in collective action framing such as injustice framing while also personalizing their action frames; they are able to state an injustice in a tweet in the #legalize stream while at the same time, through the use of additional hashtags, express other aspects of their identity and connect to other networks. Bruns & Burgess (2011) described Twitter hashtag networks as permeable communities that can bridge multiple publics. Through its permeability and bridging ability, the #legalize stream allows participants to simultaneously participate in collective identity building, public expression of self, collective action framing, and personal action framing.

Discussion Summary

I found that the diagnostic or injustice framing activity in #legalize supported collective identity building. The legalize stream's capacity for the construction of shared meanings, reinforcement of existing views, interaction, emotion work, narratives and sharing of cultural also contributed to the building of collective identity. However, by their nature, these activities precluded the prolonged discussion and debate required for effective prognostic framing. The

absence of prognostic framing in the legalize stream may also reflect the nature of the Twitter interface, which encourages spontaneous self-representation and does not readily lend itself to protracted discussion. I found that the discourse in the legalize stream showed evidence of some types of collective action framing and also personal action framing, in which participants create personalized reasons for social action. I also found that collective identity building activity was compatible with identity presentation, or public experience of self. The legalize stream is an actor in the movement to reform marijuana laws and also serves as a window on to the movement. Viewed through the window of #legalize, the movement for the reform of marijuana laws resembles the fluid, decentralized personalized action networks described in studies of social action in the new media environment.

Areas for further study

As mentioned in the introduction to this paper, I chose the #legalize stream in part for its relatively focused, non-antagonistic discourse and readily observable collective identity. Studies of hashtags such as #prochoice and #prolife, which are used by both opponents and proponents of causes (often in antagonistic discourse), or #idlenomore, a hashtag which has expanded from relatively focused discourse on First Nations issues in Canada to broad-based international discourse on indigenous rights and the environment, would yield additional insights into the nature of collective identity and collective/connective action framing through hashtag use.

Study of hashtags related to social movements which have strong central organizations within the movement—e.g. PETA and its role in the animal rights movement—would provide insight into the different role that a Twitter hashtag would play in a social movement of that type.

Following the evolution of a hashtag related to a social movement over a longer time frame would allow a clearer picture of the way hashtag publics form, adapt, disperse, or stay constant in response to changes in the social movement or broader societal events.

Studying different hashtags related to social movements for evidence of collective action framing might help to illuminate reasons for the absence of prognostic framing activity and the low level of motivational framing activity. It would be valuable for those seeking to effect social change to know whether Twitter can be used as an effective tool for all kinds of collective action framing, or whether its effectiveness is limited to building collective identity and allowing participants a forum for diagnostic framing.

Other areas for further study could include an examination of the way certain factors such as tweet content or the influence of certain participants contribute to frame resonance of tweets in a social movement context. It was beyond the scope of this report to do a full analysis of the effects of media inclusion and the nature of the network in order to understand this phenomenon.

The use of additional hashtags by participants in a hashtag stream is also a potential area of study. It was beyond the scope of this report to gain a full understanding of how additional hashtags such as #tlot, #libertarian, or #reggae, which indicate affiliation with additional causes or ideologies, contribute to the discourse connected to a social movement.

Conclusion

Twitter's hashtag streams are unusual phenomena in a number of ways: they reflect a merging of metadata and content; they act as both agents on and windows into the environment (Segerberg and Bennett, 2011); and they herald a new age of "public experience of self"

(McDonald), "searchable talk," and "ambient affiliation" (Zappavigna, 2012). The hashtag

feature in Twitter primes the interface to be a component in the fluid, decentralized social action

networks of the new media environment that researchers such as McDonald, Croeser, and

Bennett and Segerberg describe.

Through the discourse of its participants, #legalize offers a window on to the movement

for the reform of marijuana laws. The #legalize stream differs from many other hashtags as the

discourse found there does not reflect diverse views and conflicting opinions, and participants do

not place a premium on information sharing. Rather, #legalize reflects a shared set of beliefs. It

does not appear to be used for debate, and does not attract participants who disagree with the

idea that marijuana should be legalized.

I asked the following questions:

- Is the #legalize stream used for building collective identity? If so, how? What features

of the Twitter interface support this kind of activity?

- Is the #legalize stream used for social action such as collective action framing and/or

personalized action framing? If so, how? What kinds of collective action framing can be seen in

the #legalize stream? What features of the Twitter interface support this kind of activity?

- How do activities observed in the #legalize stream reflect recent theories of social

action and social movements in the new media environment?

This report has allowed a close look at the #legalize discourse through "Top Tweets,"

which I deemed to be tweets which resonated with the #legalize public. A hybrid concept-driven

and data-driven coding frame was used to categorize the various activities found in tweets.

I expected to find evidence of collective identity building and collective action framing,

as these activities appeared to be occurring on casual observation of the #legalize stream. I was

surprised to discover that the data set revealed strong evidence of just one kind of collective

action framing: diagnostic framing, or framing which articulated the injustice of marijuana

criminalization. There was no evidence of prognostic framing, or framing which offered

strategies for addressing injustice, and limited evidence of motivational framing, or framing in

which participants urge others to effect change.

The stream also showed evidence of personal action framing, in which participants

created highly personalized reasons for aligning with a social movement. Personal action

framing is distinguished in the literature from collective action framing in that it is more

personalized and less organization-centred than collective action framing (Bennett and

Segerberg, 2011, 774). However, I found that personal action framing was not incompatible with

collective action framing, as the flexibility of Twitter's hashtag practices allow participants to

simultaneously engage in collective action framing, personal expression, and multiple networks

that reflect different interests or concerns.

The reasons for #legalize participants to engage in diagnostic framing to a greater degree

than prognostic or motivational framing may be due both to characteristics of the broader social

movement for the reform of marijuana laws and to characteristics of the way publics use Twitter

hashtags. The movement for the reform of marijuana laws spans multiple jurisdictions; it faces

complex challenges in determining appropriate levels of decriminalization and in finding

solutions to satisfy diverse stakeholders. Twitter's interface and 140-character limit offers a

suitable platform for quickly describing injustice or expressing a desire for change, but not for

the extended discussion required to construct complex solutions. However, just as the Twitter

interface precludes protracted discussion, it steers participants toward other activities that result

in the building of collective identity.

Collective identity, commonly seen as the product of a discursive, constructive process, is demonstrated in the #legalize stream through framing activities, the sharing of cultural materials, affective commitment, boundary work, consciousness building, narrative, emotion work and negotiation work. The complex discussion required for prognostic framing on marijuana reform would inevitably require debate, an activity at odds with the reinforcement of existing views seen on the #legalize stream.

Through using #legalize as a spontaneous platform for self-representation, personal expression, reinforcement of beliefs, and injustice framing, participants build collective identity. #Legalize has been constructed as an evolving repository for cultural materials reflecting that identity. While it is possible that participants debate the merits of various approaches to legal reform in other venues, they do not use #legalize for that purpose.

Participants also reveal themselves as actors in a "connective action network" (Bennett and Segerberg, 2012) in which participants self-organize, do not follow a central authority, and create personalized action frames reflective of their own concerns within multiple movements. This kind of network can be contrasted with traditional social action organizations, in which a central authority communicates a standardized message out to its members and organizes action. In a connective action network, personalized communication and content sharing between participants replaces the organizing efforts of a central organization. Participants in the #legalize stream use personalized content and the sharing of content to self-organize, to construct messages and shared understanding of the movement, and to reconstruct the stream in response to change.

This report contributes to the literature by drawing a previously unexplored connection between the study of Twitter networks and practices and the study of social action. While studies

to date have considered online activity in the context of social movements, Twitter—and its hashtag convention—have not been widely studied for their capacity as a venue for social action. This report also contributes to an understanding of the way hashtag streams develop and are used by participants.

If I had the opportunity to conduct this report again with more time, I would include a comparative component. Comparing social action activity in #legalize with social action activity in a hashtag stream related to a different social movement would help to illuminate how specifically the behavior in #legalize is tied to the movement for the reform of marijuana laws, and to what degree this behavior can be generalized to other social movements. As an alternative, it would be valuable to approach the study of a hashtag stream with a mixed-methods approach: adding network analysis would reveal relationships and patterns of influence. A mixed methods approach involving interviews with active participants about their involvement in the movement for the reform of marijuana laws would give an opportunity to find out how their participation in #legalize influences and/or is influenced by their participation in the movement in other ways.

As social movement dynamics evolve in response to changing communication environments, researchers continue to look for ways to understand these dynamics. At the same time, researchers are considering the ways that Twitter's hashtag conventions—now in play for only a few years—are evolving. By looking at these two research areas in concert, this report has opened a door to discussion about the potential role of Twitter hashtags in social movements. Through finding that the legalize stream appears to function as a venue for collective identity building and to a lesser degree as a venue for collective action framing, this report offers a new perspective for viewing the activities of hashtag stream participants. In addition, through finding

that the legalize hashtag allows participants to create personalized action frames, share social

movement-related content engage in fluid, permeable communities, this report has contributed to

an understanding of the way that social action is changing in response to the new media

environment.

References

Ackland, R., & O'Neil, M. (2011). Online collective identity: The case of the environmental movement. *Social Networks*, *33*(3), 177–190. doi:10.1016/j.socnet.2011.03.001

Ashmore, R. D., Deaux, K., & McLaughlin-Volpe, T. (2004). An organizing framework for collective identity: articulation and significance of multidimensionality. *Psychological bulletin*, *130*(1), 80–114. doi:10.1037/0033-2909.130.1.80

Ball, M. (2012). Will Colorado Legalize Pot? *The Atlantic*. Retrieved from: http://www.theatlantic.com/politics/archive/2012/10/will-colorado-legalize-pot/263355/

Benford, R. D., & Snow, D. A. (2000). Framing processes and social movements: An overview and assessment. *Annual Review of Sociology*, *26*, 611–39.

Bennett, W. L. (2012). The Personalization of Politics: Political Identity, Social Media, and Changing Patterns of Participation. *The annals of the American Academy of Political and Social Science*, *644*(1), 20–39. doi:10.1177/0002716212451428

Bennett, W. L., & Segerberg, A. (2011). Digital Media and the Personalization of Collective Action. *Information, Communication & Society*, *14*(7), 770–799.

Bennett, W. L., & Segerberg, A. (2012). The Logic of Connective Action. *Information, Communication & Society*, *15*(5), 739–768.

Berg, B. (2004). *Qualitative Research Methods*. (5th ed.). Boston: Pearson Education Inc.

Bimber, B., Flanagin, A., & Stohl, C. (2005). Reconceptualizing Collective Action in the Contemporary Media Environment. *International Communication Association 2005 Annual Meeting* (pp. 1–39).

boyd, d. (2011). Social Network Sites as Networked Publics: Affordances, Dynamics and

Implications. In Z. Papacharissi (Ed.), *A Networked Self: Identity, Community, and Culture

on Social Network Sites*. New York: Routledge.

Bruns, A. & Burgess, J. (2011). The use of Twitter hashtags in the formation of ad hoc publics.

6th European Consortium for Political Research General Conference. Retrieved from

http://eprints.qut.edu.au/46515/

Conover, M. D., Ratkiewicz, J., Francisco, M., Gonc, B., Flammini, A., & Menczer, F. (2010).

Political Polarization on Twitter. *Proceedings of the Fifth International AAAI Conference

on Weblogs and Social Media*, 89–96.

Croeser, S. (2012). Contested technologies: The emergence of the digital liberties movement.

First Monday, *17*(8), 1–13.

Della Porta, D., & Mosca, L. (2005). Global-net for Global Movements? A Network of Networks

for a Movement of Movements. *Journal of Public Policy*, *25*(1), 165–190.

doi:10.1017/S0143814X05000255

Diani, M. (2000). SOCIAL MOVEMENT NETWORKS VIRTUAL and real. *Information,

Communication & Society*, *3*(3), 386–401. Retrieved from

http://dx.doi.org/10.1080/13691180051033333

Earl, J., & Kimport, K. (2011). Digitally Enabled Social Change: Activism in the Internet Age.

Cambridge: MIT Press.

FAQs about Top Search Results (n.d.) Retrieved from

https://support.twitter.com/articles/131209-faqs-about-top-search-results

Gray, D. (2004). Doing Research in the Real World. Sage Publications, Inc. [EBook version].

Retrieved from EBSCO Publishing via University of Alberta Libraries.

Gruzd, A., Wellman, B., & Takhteyev, Y. (2011). Imagining Twitter as an Imagined

    Community. *American Behavioral Scientist*, *55*(10), 1294–1318.

    doi:10.1177/0002764211409378

Harlow, S., & Harp, D. (2012). Collective action on the web. *Information, Communication &*

    Society, *15*(2), 196–216. doi:10.1080/1369118X.2011.591411

Heverin, T., & Zach, L. (2012). Use of Microblogging for Collective Sense-Making During

    Violent Crises : A Study of Three Campus Shootings. *Journal of the American Society for*

    Information Science and Technology, *63*(1), 34–47. doi:10.1002/asi.21685

Honeycutt, C., & Herring, S. C. (2009). Beyond Microblogging : Conversation and Collaboration

    via Twitter. *Proceedings of the Forty-Second Hawai'i International Conference on System*

    Sciences (HICSS-42). Los Alamitos, CA: IEEE Press.

Huberman, B., Romero, D. and Wu, F. (2008). Social networks that matter: Twitter under the

    microscope. *First Monday*, *14*(1), 1–9.

Hund, S. and Benford, R. (2003). Collective Identity, Solidarity, and Commitment. In D. Snow,

    S. Soule & H. Kriesi (Eds.), *The Blackwell Companion to Social Movements*. (1–22).

    Oxford: Blackwell Publishing Ltd.

Krippendorf, K. (2004). *Content Analysis: An Introduction to Its Methodology*. (3rd ed.).

    Thousand Oaks: Sage Publications, Inc.

Kwak, H., Lee, C., Park, H., & Moon, S. (2010). What is Twitter, a Social Network or a News

    Media? *WWW 2010* (pp. 1–10). Raleigh, North Carolina: IW3C2.

Ladd, A. (2011). Feedlots of the Sea: Movement Frames and Activist Claims in the Protest over

    Salmon Farming in the Pacific Northwest. *Humanity & Society*, *35*(4), 343–375.

    doi:10.1177/016059761103500402

Marwick, A. E., & boyd, d. (2010). I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New Media & Society*, *13*(1), 114–133. doi:10.1177/1461444810365313

Mayring, P. (2000). Qualitative Content Analysis. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research* [On-line Journal], 1(2). Retrieved from: http://qualitative-research.net/fqs/fqs-e/2-00inhalt-e.htm

McDonald, K. (2002). From Solidarity to Fluidarity: Social movements beyond "collective identity"--the case of globalization conflicts. *Social Movement Studies*, *1*(2), 109–128. doi:10.1080/14742830022000010637

Melucci, A. (1995). The Process of Collective Identity. In H. Johnston, B. Klandermans, (Eds.). *Social Movements and Culture*. Minneapolis: University of Minnesota Press.

Polletta, F., & Jasper, J. (2001). Collective Identity and Social Movements. *Annual Review of Sociology*, *27*, 283 – 305.

Schreier, M. (2012). *Qualitative Content Analysis in Practice.* London: Sage Publications Ltd.

Segerberg, A., & Bennett, W. L. (2011). Social Media and the Organization of Collective Action: Using Twitter to Explore the Ecologies of Two Climate Change Protests. *The Communication Review*, *14*(3), 197–215. doi:10.1080/10714421.2011.597250

Shirky, C. (2008). *Here Comes Everybody*. New York: Penguin

Small, T. (2011). What the Hashtag? A Content Analysis of Canadian Politics on Twitter. *Information, Communication and Society.* Retrieved from http://dx.doi.org/10.1080/1369118X.2011.554572

Snow, D. (2004). Framing Processes, Ideology, and Discursive Fields. In: D. Snow, S. Soule & H. Kriesi (Eds.), *The Blackwell Companion to Social Movements*. Oxford: Blackwell. 380-412.

Snow, D. (2007). Framing and Social Movements. In G. Ritzer (Ed.), *Blackwell Encyclopedia of Sociology*, 1–5. doi:10.1111/b.9781405124331.2007.x

Snow, D. A., Rochford, E. B., Worden, S. K., Benford, R. D., Review, A. S., Aug, N., Snow, A., et al. (1986). Frame Alignment Processes, Micromobilization, and Movement Participation. *American Sociological Review*, *51*(4), 464–481.

Stieglitz, S., & Dang-Xuan, L. (2012). Political Communication and Influence through Microblogging--An Empirical Analysis of Sentiment in Twitter Messages and Retweet Behavior. *2012 45th Hawaii International Conference on System Sciences*, 3500–3509. doi:10.1109/HICSS.2012.476

Steward, G., Shriver, T. E., & Chasteen, A. L. (2002). Participant narratives and collective identity in a metaphysical movement. *Sociological Spectrum*, *22*(1), 107–135.

Tarrow, S. (1995). Power in movement: Social movements, collective action and politics. Cambridge: Cambridge University Press.

Taylor, Verta, and Nancy E., Whittier (1992) Collective Identity In Social Movement Communities: Lesbian Feminist Mobilization. In A. D., Morris and C. M. Mueller (eds.) , *Frontiers in Social Movement Theory*. New Haven: Yale University Press, 104–29.

Twitter Privacy Policy (n.d.). In Twitter. Retrieved from http://twitter.com/privacy

Van Aelst, P., & Walgrave, S. (2002). New media, new movements? The role of the internet in shaping the "anti-globalization" movement. *Information , Communication & Society*, *5*(4), 465–493.

Westby, D. L. (2002). Strategic imperative, ideology, and frame. *Mobilization*, *7*(3), 287–304.

Zappavigna, M. (2011). Ambient affiliation: A linguistic perspective on Twitter. *New Media &
    Society*, *13*(5), 788–806. doi:10.1177/1461444810385097

Zappavigna, M. (2012). *Discourse of Twitter and Social Media*. London: Continuum
    International Publishing Group.