Networked Movements Through the Dramaturgical Lens

by

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ABSTRACT

Movements such as #Occupy, #Egypt, #MeToo and #BlackLivesMatter have shifted the culture, inspired revolutions and influenced policy change and legal actions. Protests for Black lives, spurred by the murder of George Floyd in May 2020, have already led to shifts in attitudes toward police and to real policy change in several US cities. This movement, like many others, would not be possible without social media. My research extends literature in HCI/CSCW on networked movements and popular social movement theory by focusing not on how emerging technologies replace traditional movement infrastructure, but how networked activism, such as a hashtag campaign, is contextualized within broader social movements and is complementary to traditional forms of organizing and protest.

Informed by my interdisciplinary background as an organizer and theatre artist, this thesis draws from the sociological lens of dramaturgy and performance studies to develop a framework for understanding how scripts communicated through social media guide action and role development in local activist networks. The framework investigates how movements play out on different "stages," each affording different "scripts," which guide role formation, coordination, framing processes and behavior, transforming an audience member into an activist. This thesis involves empirical research of the 2020 Black Lives Matter (BLM) protests with a focus on events in Pittsburgh, the Justice for Antwon Rose II movement, self-identified social justice activists on Twitter, and a community-organized festival.

Each study adds to our understanding of how local, sometimes offline organizing, works hand-in-hand with networked forms of activism. I describe the type of locally situated action described in these studies as cooperative action and compare cooperative scripting processes to devised theatre processes. I propose that the dramaturgical approach can help activists, researchers, and technology designers understand how movement scripts guide action and lend to growth in local activist networks.

CHAPTER 1

Introduction

My work investigates what I believe to be one of the defining developments of our time, not just within HCI or computer science, but in our society: the rise of networked activism. Movements such as #Occupy, #Egypt, #MeToo and #BlackLivesMatter have shifted the culture, inspired revolutions, and influenced policy change and legal actions [46] [112] [123][176]. In the summer of 2020, protests spurred by the murders of George Floyd, Ahmaud Arbery, and Breonna Taylor led to a profound shift in public opinion around policing and systemic racism. This movement, like many others, would not be possible without social media.

The last decade of networked movements, characterized by horizontal, decentralized, and ad hoc organizational structures, have captured the attention of popular media and researchers alike. News outlets declared that the Arab Spring was the "Facebook Revolution" or alternately, the "Twitter Revolution" [60] [202], and have suggested that Occupy Wall Street and Black Lives Matter are "leaderless" movements [81]. HCI researchers too, in their zeal to understand and embrace new forms of collective action and organizing, have suggested that social media serves as movement infrastructure [67] [208], and fulfills many of the roles that social movement organizations (SMOs) have served in the past [76].

However, enthusiasm over the democratizing potential of social media may have led to overstating the role of specific social media platforms in movement building processes. By focusing solely on new technology, we lose sight of the context in which the technology is used, and fail to understand how networked processes work hand-in-hand with on-the-ground movement objectives, processes and actions [54]. Although studies in HCI and related fields have used knowledge of on-the-ground activism to understand networked movements [89] and some studies have discussed how local civic projects and movements use social media [17] [66] [167], these studies do not thoroughly investigate the dynamic relationship and interactions between on-the-ground and networked forms of activism.

My work extends existing literature in HCI/CSCW on networked movements and popular social movement theory by focusing not on how emerging technologies replace traditional movement

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infrastructure, but how networked activism, such as a hashtag campaign, is contextualized within broader grassroots social movements and is complementary to traditional forms of organizing and protest. In order to understand the nuances of the relationship between locally-situated, on-the-ground activism and networked activism within the same movement, I employ a mixed methods approach. Although called for by scholars [225], mixed methods studies are not often found in HCI studies of social movements.

I look at these cooperative and hybrid processes from three perspectives: the individual social justice activist, as a participant observer organizing and trying to maintain a cooperative infrastructure, and pulling back for a broader view of two local instantiations of BLM protests in 2019 and 2020 in Pittsburgh, Pennsylvania.

In the first part of this thesis, I contribute knowledge on how roles are developed and sustained in networked movements; how trust is established through the use of different ICTs and face-to-face communication to coordinate a community-organized event; and the relationship between on-the-ground and networked activism within a single movement.

In the second half of this thesis, I draw from the dramaturgical approach in sociology and performance theory to deepen our understanding of how social media functions as both a tool for collaborative scripting of movement behaviors and narratives, and as a stage for the performance of those scripts. I update the dramaturgical approach, which is based on the metaphor of the theatre by expanding our definition of the theatre to include more contemporary, improvisational and interactive forms of theatre. These forms are more readily compared to polyvocal and participatory social media platforms. I apply the approach to analysis of Black Lives Matter protest in Pittsburgh during the summer of 2020, revealing community-level interpretations of national scripts and a progressive focus on local racial justice issues. I then discuss cooperative scripting processes, drawing parallels between devising practices in theatre, and cooperation in locally situated networked movements.

1.1 Research Overview

The research in this thesis asks questions about how networked activism relates and interacts with locally-situated organizing and protest. Chapter 2 provides grounding definitions, background on relevant social movement theories, and related work on networked movements in HCI/CSCW.

1.1.1 Part 1: Rhizomatic Social Justice Movements

I provide evidence for how that interaction affects role development, coordination and framing processes in social movements, and the effects that has on personal and collective identity, trust,

and network growth. I start in Chapter 3 by exploring role-taking among social justice activists who use Twitter in their daily social movement work. Based on interviews with 12 social justice activists across a number of movements, I developed three roles: the storyteller, the advocate and the organizer. I found these roles to be influenced by the activists' professional identities and the standards and expectations of their professional communities. For example, storytellers used Twitter to make meaning of unfolding events and experiences and had professional backgrounds as writers or journalists, whereas advocates helped build bridges between affected communities and those in positions to help them, and tended to have backgrounds in public relations or policy. Through analysis of the activists' Twitter timelines, retweets and mentions, I found that the roles were associated with distinctive patterns of feature use, which suggested that the roles may be stable and persistent over time. This raised questions about how different roles might relate differently to movement identities and interact with each other within a movement.

Chapter 4 is a case study of a grassroots literary and cultural festival organized through a decentralized curatorial process. Organizers with backgrounds in arts and community organizing used online organizing tactics and tools to connect writers from different neighborhoods, marginalized identity groups, and cultural organizations. I observed that social media helped bring openness and transparency to the festival coordinating process, inviting broad participation and creating space for social interactions, and thus facilitating trust. Brokers played a pivotal role in connecting different networks online and off and fostered collaboration and relationship-building. However, in some cases brokering was not enough to establish trust; organizers had to make extra efforts to adapt to groups' cultural and communication norms and make special accommodations to increase inclusivity. This case study raises questions about how different ICTs and face-to-face communication facilitate trust in community organizing and the levels of visibility each communication channel affords.

Chapter 5 is a mixed-methods study of a Pittsburgh-based, grassroots movement, Justice for Antwon Rose II (J4A). In this study I asked: 1) How did J4A use ICTs for coordination of protests and other actions? 2) What is the relationship between on-the-ground framing processes and networked framing processes? 3) How do local coordination processes and the tools used for coordination affect the reach of local frames on Twitter? Through interviews with local organizers and protesters, I learned that organizers used secure messaging apps and multiple social media channels, representing expanding circles of trust, for coordination. Grounded in interviews and using social network analysis, I explored how prominent frames and narratives were developed through interaction between Twitter, on-the-ground protests, and organized media strategies. Because key activists were communicating in more secure channels, and not active on Twitter, they did not make up the core of the protest network; this presented challenges for spreading local frames and narratives to a broader, dispersed audience. This study contributed to our understanding of hy-

brid movements and suggested the need to rethink typical dualities of backstage and frontstage movement processes and online and offline communication channels.

1.1.2   Part 2: The Dramaturgical Approach to Networked Movements

I begin the second half of the thesis with background literature on the dramaturgical perspective in sociology and in theatre and performance studies. I discuss the use of theatre as a metaphor for social movements and protest as performance. I draw from examples of networked movements occurring in my previous research to illustrate the different phases in dramaturgy: scripting, staging, performing, and interpretation, focusing in on scripting.

Chapter 7 details how I adapted the dramaturgical notion of scripting to analyze a networked movement. Conceiving of Twitter networks as stages in which protests unfold, I examine tweets as scripts, providing explicit or implicit instructions on how to perform protest on Twitter or on the ground. I apply this method to analyze Twitter data related to periods of local BLM protests during the summer of 2020, spurred by the murder of George Floyd. I analyze highly retweeted tweets as either scripts for participation in staging, performing or the interpretive work of movements, including presenting counternarratives to mainstream media. I then code tweets according to the objectives they communicate through text, media, and links using script analysis methods drawn from the famed acting teacher and director, Stanislavski [207]. I discuss possible insights into the ability of tweet/scripts to move a reader from a passive audience member to an activist who participates in protest in either peripheral or substantial ways.

In Chapter 8, I apply this method of analysis to Twitter during Pittsburgh BLM protests of 2020. Focusing on three Twitter subsets that correspond with periods of intense local protest, I illustrate the unfolding social drama and the shift from outrage at the murder of George Floyd in May to a focus in August on local policing and racial justice issues. I integrate dramaturgical analysis of individual tweets and social network analysis to gain a more nuanced understanding of the objectives of different groups and different local contexts over time. I discuss the process of localization that I observed as community-level interpretations of BLM scripts emerged and were applied to put pressure on public officials. I discuss how activists work together to achieve a shared objective in the August dataset, and question whether this fits the Bennett and Segerberg's definition of connective action [26]. I propose that occurring in the middle ground between connective and collective actions, cooperative action incorporates some processes associated with both, and importantly reflects group-level decision-making through the use of different social technologies for different purposes and to communicate with different audiences. Remaining grounded in local movements helps make this type of cooperation and coalition building among groups more visible.

I close the thesis in Chapter 9 by restating my contributions, and discussing my future work

to further develop the theory of cooperative action in networked activism and to design in support of cooperative action. I seek to continue work in developing theatrical and embodied methods to assist in the design of networked protest and in thinking of social media platforms as a design material [135] for activists to use in the design of their own movement networks.

Part I

Rhizomatic Social Justice Movements

CHAPTER 2

Background

2.1 Introduction

The study of networked movements is multidisciplinary, spanning social sciences, communications and HCI and related fields. In this chapter, I will provide grounding definitions, historical background regarding the transition to digital organizing in a US context, and I will review literature from all three disciplines that addresses questions central to understanding the relationship between online and on-the-ground activism. I suggest that a reciprocal relationship between online and on-the-ground activism exists, and ask: how do online and on-the-ground activism interact and influence each other within the same movement?

2.2 Grounding Definitions

In this section, I define important terms and introduce theory applied throughout the dissertation.

I use Tarrow's definition of social movements as working outside of existing political structures to unite a network of individuals and organizations around social or political issues [212]. I am therefore not concerned here with electoral politics or with civic engagement or neighborhood improvement projects administered by governments or their agents. Social movements can include any number of issues, including religion and perspectives that justify the denial of human rights on the basis of race, gender, or sexuality; however, literature on social movements in CSCW/HCI focuses heavily on environmental and social justice issues. Social justice is the concept that equity and justice, having equal rights and access to wealth, opportunity, well-being and privilege, should be available to every member of society. Thus in this chapter I am referring primarily to social movements working toward environmental and social justice.

Social movement organizations (SMOs) have long been considered integral actors in social movements, mobilizing resources, negotiating shared meaning and collective identity, and elevating a movement's image in the media [156] [204]. An SMOs primary objective is the collec-

tive pursuit of social change. They do this by coordinating volunteer participation in the movement. This might take the form of maintaining membership rosters, communicating with members through meetings, mailers and email newsletters, recruiting new members, collecting donations, and persuading the public of their cause through door-to-door canvassing, distributing flyers and collecting signatures for petitions. SMOs have traditionally played key roles in organizing protests, rallies and other events and actions. I refer to protests and collective actions that take place in the physical world as "on-the-ground" protests, including organizing and related "on-the-ground" processes. Sociologists Earl and Kimport assert that the internet and social media technologies have transformed movements, in some cases rendering SMOs unnecessary [25] [76].

The term "networked movements" refers to social movements that are composed of decentralized networks made possible by the affordances of information technology [53]. A credit to the cultural influence of networked movements, the term "hashtag movements" has become part of the parlance. Researchers of networked movements sometimes refer to a single hashtag, such as #ILookLikeAnEngineer, as a hashtag movement [142]. However, I view a hashtag as one campaign or tactic among many employed by a given social movement—a view reflected in Freelon et al.'s study of Black Lives Matter [89]. Social movements often employ a diversity of tactics to achieve their goals, which may take years, if not generations, to accomplish. For example, the Black Lives Matter movement encompasses both online and offline actions and multiple networks of individuals and organizations. The study of the movement on Twitter covered 23 keywords and their corresponding hashtags [89], illustrating the multiplicity of tactics employed on Twitter alone in service of Black Lives Matter.

Although I differentiate between on-the-ground actions and processes and networked activism and processes, this does not mean that activists do not use ICTs for on-the-ground actions, or that networked processes do not contribute to on-the-ground actions. Instead "on-the-ground" or "locally situated" actions and/or processes primarily take advantage of local networks, affiliations, and relationships with the primary protest action happening in the physical world. Networked protests and processes access distributed networks, and often rely on weak bonds [173] between users on a platform. In networked protests the primary protest action occurs virtually, typically on social media platforms.

2.3 Networked Movements

The internet has provided a meeting ground for like-minded individuals to gather, discuss and mobilize, providing a means to resist dominant sociopolitical narratives and structures [53]. Through the use of social media, social movements such as Occupy, the Arab Spring and Black Lives Matter have transformed our political and social landscape. The relatively low cost of organizing and

mobilizing using social media has reduced the role of central SMOs. Instead decentralized networks have replaced membership organizations [53] and social media platforms have served as a substitute for organizational infrastructure [25].

Earl and Kimport assert that as more activists leverage the affordances of the web, the more "transformative the changes are to organizing," suggesting that through the use of technology people change social processes [77]. In the section, I look at how social media has transformed three key movement processes: coordination, framing and identity formation.

2.3.1 Decentralized Coordination

Rather than being organized through a central SMO, networked movements are decentralized, horizontal, and multivocal. Individuals in a networked movement may take it upon themselves to identify and fill perceived needs or engage in their own communication strategies without gaining consensus or waiting for instruction from movement leadership. In 2011, with the Occupy Movement and the group of protests and revolts known as the Arab Spring, social media proved pivotal in mobilizing networks for collective action. Tasks once associated with an SMO were accomplished by volunteers with Twitter accounts and spreadsheets distributed around the world [213]. For example, an individual in the U.S., created a database and managed the donation and distribution of medical supplies to activists on the ground in Tahrir Square [213]. This type of independent, voluntary action from a stranger on the other side of the world would not be possible in a more centralized process.

Drawing from Dewey's idea of publics, groups which coalesce around shared social conditions or issues [73], networked publics are "spaces and audiences that are bound together through technological networks" [39]. Using the features and affordances of social technologies as infrastructure, activists form networked publics that can span the globe [44].

According to Papacharissi, networked publics "form and disband around bonds of sentiment or affect" [177]. A hashtag, for example, #BlackLivesMatter, allows a group to emerge "in an instant" around a shared sentiment [39] [44]. A networked movement is a type of networked public formed to achieve a social or political goal. Because social media is multivocal, supporting many voices and perspectives at once, the formation of networked publics is lateral and branching. Funke describes contemporary social movements as rhizomatic, a metaphor that originated with Deleuze and Guattari (1988). Rhizomatic movements lack the centralized structures and processes typical of traditional social movements, and instead grow laterally, occasionally putting down roots with no central structure (picture a ginger root) [92]. Rhizomatic growth facilitates transfer between movements and the building of movement coalitions [92].

Research on social movements draws from sociologist Erving Goffman's notion of frames as

"schemata of interpretation" [100] [24]. Social movement theory describes the processes by which movements construct meaning among community stakeholders, media and its audiences as "framing processes" [93]. The collective goals, narratives, values, and beliefs of a movement is called the collective action frame [24]. Collective action frames are "action-oriented sets of beliefs and meanings that inspire and legitimize the activities and campaigns of a social movement organization" [24]. Sometimes expressed through slogans or mission statements, collective action frames serve to guide a movement participants' actions and interpret those actions for the public [204].

The collective goals, narratives and values of a movement are arrived at by "the negotiation of shared meaning" and are called collective action frames [205]. Sometimes embodied by slogans or mission statements (e.g. Occupy's "We are the 99%!"), collective action frames are both constructed by movement participants and serve to guide individuals' actions. As such, framing processes are continuously being constructed and reconstituted [24].

2.3.2 Framing In Networked Movements

Because presenting a unified front is important for the success of social movements, framing processes have traditionally been considered backstage activities [84]. Framing is often thought of as a strategic process engaged by organizations with deliberate goals to, for example, recruit or mobilize participants [24]. Framing can also be discursive, arising from conversation to articulate issues, or contested, developed through dispute inside or outside of a movement [204] [210].

In networked activism, discursive framing processes often unfold frontstage on public-facing social media platforms. The process by which these individual frames become linked is frame alignment [205]. In networked movements frame alignment occurs through convergence around shared beliefs and values through the use of features such as sharing, commenting, retweeting and hashtag use [19] [96]. Activists are active producers and distributors of frames, which according to Castells "rarely stems from a concerted strategy, masterminded by a center" [52]. Frames are produced iteratively, being repeatedly revised and dispersed with the help of crowdsourced elites who act as curators and gatekeepers [159].

2.3.2.1 Connective action frames

According to Bennett and Segerberg's theory, connective action frames are intentionally flexible, inviting broad participation (e.g. Occupy's "We are the 99%"), and allowing for personalization (e.g. sharing of personal experiences of sexual harassment in #MeToo). Connective action can be compared to other forms of crowdwork, where individuals make contributions while underlying mechanisms produce a coherent whole [27]. This is evidenced by how contemporary social movements can be referred to by a hashtag, e.g. #MeToo or #BlackLivesMatter.

One way actors shape movement frames and counter mainstream narratives is through social media platforms such as Twitter. Citizen journalists use Twitter to report what's happening "on the ground," and in communities where the media or government is not a reliable source of information [9] [38] [177] [168] [123]. For example, roughly 146,000 tweets were published regarding Michael Brown's shooting death on the day it occurred in Ferguson, MO, but it took two full days before cable news reported the incident [163]. These tweets shaped the narrative, framed the problem of police brutality against Black Americans and set the stage for the protests to follow [123].

Often a small number of activists with expertise in communicating via social media have a significant influence on how movement narratives are framed [65]. Marwick and boyd describe these users as crowdsourced elites because they are awarded elite status through retweets and gaining followers [153]. Crowdsourced elites may emerge as de facto spokespeople or thought leaders for a movement; however, they lack the legitimacy that formal selection processes would grant them, sometimes leading to conflict within the movement [213].

2.3.2.2 The reach of frames and network growth

Although both online framing processes and networked publics are emergent, they often are developed by a highly connected group of like-minded individuals. The 2013 Gezi Uprising started with a small protest of 50 connected individuals [46], and participants in Occupy Wall Street were found to be highly-interconnected on Twitter prior to the start of the movement [64]. Interviews with activists in the early days of the Arab Spring suggest that the revolution started with a group of friends, who through the use of Facebook expanded into an activist network [225]. Movement growth relies on actors at the periphery of the network who spread movements to new audiences [18] [28]. Retweeting is the primary way peripheral actors spread a movement and connect [177]. Often a small number of activists with expertise in social media have a significant influence on how movement narratives are framed [65]. These crowdsourced elites along with mainstream media and celebrities, help push movement messages and grow the network [18]. Activists have successfully amplified their messages to and through legacy media [89], but frames may be misrepresented or distorted.

2.3.3 Identity

The goals of current social movements remain complex and far reaching, and social progress is notoriously slow and difficult to measure [182]. In the U.S., for example, movements for civil rights, marriage equality, and equal pay for women have spanned generations. Therefore, ongoing voluntary participation in a movement is essential to achieving long-term goals [204]. Among the chief motivators of ongoing participation is the salience of a movement identity for individuals

[204].

Social movement theory draws from social identity theory to elaborate on identity construction processes of movements and their members [182]. According to social identity theory, association with a group informs an individual's self-concept, the meaning and beliefs one holds about oneself. Individuals seek and benefit from the positive social identities derived from membership in groups [184], but also seek to differentiate themselves from the group in order to be recognized as a unique individual [42]. Through identity construction processes the movement identity becomes more salient, identification with the movement is strengthened, and the distinction between personal identity and collective identity becomes blurred [204].

2.3.3.1 Identity in networked movements

There is not consensus about whether participation in a networked movement through low-effort actions such as sharing media or hashtag use is sufficient for developing salient movement identities; or whether developing a collective identity is necessary for a successful networked movement [25]. Although social movements may pursue long-term goals and far-reaching social change, the study of identity in networked movements has largely focused on short-lived hashtag campaigns. A notable exception is Dimond et al.'s work with Hollaback!, a movement to end street harassment, demonstrating that constructing a movement identity is neither a requirement, or necessarily a product of participating in a networked movement. Hollaback! is an online app where users share accounts of street harassment and seek support. From the stories that participants share, Hollaback! generates data on street harassment globally, which is then used to advocate for policy and societal change. Participants reported that sharing and discussing their experiences shifted how they viewed the issue from a one-time incident, to a part of the widespread disenfranchisement of women [75]. However, many study participants did not view themselves as activists or as members of a movement—the movement identity was not a salient part of their self-concept.

In Li et al.'s study of the 2017 Disability March, they found that through participation in the virtual march on Facebook, participants amplified their identity as a person with disabilities and as an activist and suggested that participation led to identity transformation for some participants [141]. Liu et al.'s study of #ILookLikeAnEngineer discussed similar accounts of empowerment and strengthened affiliation amongst participants, but also found that some participants resisted identifying as an activist and felt that activism was a risk to their careers [142]. The relative importance of a movement identity to an individual's self-concept is difficult to study when looking at such short-term engagements rather than at networked movements that develop over time and may incorporate multiple campaigns.

2.4 The Relationship Between On-The-Ground and Networked Movement Processes

In this section, I explore three different perspectives in the literature on the relationship between networked protests and processes and on-the-ground protests and processes. First, I will review literature on how networked activism affects on-the-ground protest, including both criticisms of networked activism as "slacktivism" possibly detrimental to movements, as well as the ways in which networked activism supports and amplifies on-the-ground protests. Next, I will review literature on how on-the-ground organizing affects online protest. Lastly, I look at how, primarily through counternarratives and datafication, practitioners and researchers attempt to bridge networked and on-the-ground movement processes and actions, and submit that the relationship between networked and on-the-ground movement processes may indeed be more fluid than addressed in the literature.

2.4.1 Online Activism as an Alternative for On-the-Ground Activism

Some forms of networked activism exist primarily online, involving online communities. These movements exclusively make use of platform features, such as changing a profile pic [209], participating in a hashtag (e.g. #ILookLikeAnEngineer) [142], signing an online petition [139], or boycotting a technology platform [154]. The goals range from targeted attacks at politicians, corporations or other authorities [217], to advocacy [142], and increasing awareness and visibility of an issue through sharing media (e.g. the ALS ice bucket challenge) and personal narratives [112].

Social media affordances allow for types of actions not possible in on-the-ground protest. Twitter lends itself to introspective diary writing like the type found in the #MeToo movement, where accepted Twitter grammars helped #MeToo participants express emotion, for example, through the use of emojis, all caps, or elipses without revealing details of traumatic experiences [169]. K-Pop fandoms have coordinated across platforms to achieve some impressive actions. In 2020 fans of the group BTS, known as ARMY, organized using the hashtag #MATCHAMILLION to raise over a million dollars for Black Lives Matter. In June of 2020 K-Pop fans joined forces with Alt Tik-Tok to register thousands of fake tickets for then President Trump's rally in Oklahoma, leaving the bleachers looking empty for the television cameras [2].

This dissertation focuses on networked activism and on-the-ground protest typical of the ideological left, but the U.S. right also engages in internet-enabled activism. Studies over the last several years have found that the right is more likely than the left to engage in "trolling" the mainstream media, cooperating with ideologically aligned media sources, protesting big tech and moving to alternative platforms, e.g. Truth Social, and spreading disinformation and conspiracy

theories [88] [86]. During the June 2020 BLM protests, right-leaning sources gained higher visibility, as links were shared more often [102].

Online forms of activism have been criticized for being low-effort and ineffective. Both HCI and social movement research has questioned the impact of online activism on "real life" social issues [200] [166], and some have asserted that online activism is detrimental to on-the-ground efforts [98]. They have criticized the rise of "slacktivism" as low-effort, low-impact, and providing inadequate social infrastructure to sustain long-term movement building [193] [98] [213]. In a 2010 article, Gladwell voiced his concern that low-effort slacktivism would become a substitute for attending a protest or otherwise engaging with the movement offline, and hence replace social movement organizing. Schumann and Klein found that participating in a low-effort action, such as signing an online petition, make users feel a sense of group membership. Feeling as though they have made a significant contribution to the movement, online participation had a demobilizing effect on offline participation and offline movement-related events [200].

However, the bulk of the literature refutes the replacement theory. In a 2015 meta-analysis of the effect of social media activism on offline participation in a movement, Boulianne found that 80% of research showed a positive relationship; although overall the effect was only slight [36]. In fact, other studies have found that people exposed to online activism are more likely to give to related charitable organizations [139], to make political decisions [60], and to attend movement-related events [41].

Furthermore, the assumption that online activism is low-risk may be inaccurate. As death threats, harassment, doxxing and other forms of cyberattack are common among online activists [59] [152]. Many of these critiques of slacktivism pre-date hashtag movements such as #MeToo, #ILookLikeAnEngineer, and #DisabilityMarch that require self-disclosure and personal expression, sometimes involving the retelling of traumatic events or otherwise putting the activists' professional reputation or standing in their community at risk. The critiques of slacktivism do not consider how participating in online activism may facilitate identity transformation [141], encouraging users to think of themselves as activists and become more involved in future movements.

2.4.2 Online Activism In Support of On-The-Ground Protest

Networked activism is known to support on-the-ground activism by 1) coordinating offline actions and recruiting new participants, 2) converging on popular frames, symbols, and language which motivate offline participation, and 3) amplifying on-the-ground events through reporting and sharing them on social media.

2.4.2.1 Coordinating on-the-ground actions with online tools

In networked movements social media is used for coordinating offline actions and recruiting participants [208]. As early as 1999 during the anti-globalization movement social media was used to coordinate protests against the World Trade Center (WTO) in Seattle. The independent news site, Indymedia.org. allowed any person to upload text or images, enabling activists to create their own newswires, and in the process authored the first social media "status update" [110].

During the 2011 Egyptian Revolution, Palen and Starbird found that approximately 30% of the 1000 most retweeted users were in Cairo and many appeared to be tweeting logistical information, the place and time of events, the need for supplies, etc. from on-the-ground at the protests [208].

Researchers have studied how Facebook groups and other discussion forums have been used to develop and coordinate offline actions [167] [66]. Facebook groups have been used to discuss issues and coordinate face-to-face meetings. Integrating both online and offline social interactions, Mosconi describes this approach as "hybrid forms of engagement" [167]. Perhaps, there is no more infamous use of the Facebook events feature than when Teresa Shook created an event for a "Million Women March" in Washington, D.C. in the days following the election of Donald Trump as U.S. President in November of 2016. The event grew out of a discussion in a pro-Hillary Clinton Facebook group. Without making any plans or proffering any permits for the march, and despite the fact that Shook lived in Hawaii thousands of miles away from Washington, D.C., over 10,000 women had rsvp'd that they would attend the event by the next day [29]. After garnering attention, experienced organizers stepped in to make the Women's March, proposed at a whim and brought into existence with a single Facebook post, into a reality and a global phenomenon [136].

2.4.2.2 Motivating on-the-ground participation

Some scholars have focused less on social media as a tool for coordination and more on its use in framing processes. Through the use of hashtags, retweeting, following, and shareable content such as memes and links, popular symbols and language emerge and are adopted as movement frames which motivate on-the-ground action [96]. In addition, social media is a space where training, discussions and disputes happen among movement members and leadership [84] [130].

2.4.2.3 Amplifying on-the-ground actions

Social media is also a tool for citizen reporting, which has been used to amplify on-the-ground actions and extend their audiences. Citizen reporting is a way to boost the signal of on-the-ground protests, interpreting events in the process [9] [38] and exposing misconduct by police and other authorities [165] [49] [122]. Livestream features, such as Instagram Live, enable activists to document important events as they happen and broadcast them to their audiences [124].

Reports of events on-the-ground not only raise awareness of local issues, but also provide legitimate forms of peripheral participation for those allies and accomplices not co-located. For instance, a campaign to raise awareness about river erosion in rural Bangladesh was spread largely by young people in urban areas with familial ties to the region [230].

2.4.3 How Does On-The-Ground Activism Affect Online Protest?

Understanding how on-the-ground processes shape social media use and affect the formation of networked publics presents unique challenges. Rigorous investigations of events on-the-ground are difficult, especially during political unrest and given activists' concerns about privacy and surveillance. Wulf discussed the need to understand events on-the-ground in order to contextualize ICT use, considering a movement's values and objectives, the social and political structures/relationships within the movement, and the purpose of a particular ICT within a movement's communication ecology [225]. Research has raised questions about how real-world relationships affect the formation of networked publics and how activists use different ICT's to achieve different, specific and situated goals.

At the core of networked publics, we typically find a small group of individuals who have strong ties and often have offline relationships. Interviews with activists on the ground in Tunisia in the early days of the Arab Spring suggested that a group of friends were converted into an activist network partially through the use of Facebook [225]. Similarly, the 2013 Gezi Uprising started with a small protest of 50 connected individuals [46]. Participants in Occupy Wall Street, for example, were found to be highly interconnected on Twitter (through retweets and mentions) in the months prior to the start of the movement [64].

The question of how activists use different ICTs to achieve specific and situated movement goals has been raised, but less thoroughly investigated in the literature. Asad and Le Dantec discuss how a housing activist group used Twitter to reveal and spread information about evictions that is typically hidden, situating a particular eviction in a larger narrative about housing rights [17]. Haciyakupoglu and Zhang's study of the Gezi protests suggests that different technological affordances facilitate different levels of social identification and trust among activists and with the platforms themselves [107]. They found that greater social identification was possible on Facebook and Whatsapp then on Twitter, because Facebook and Whatsapp accounts are linked to users' names and other contact information and private group chat features are available [107]. Social media is also used to reach sympathetic strangers and scaffold their participation in a movement through low-risk, low-effort activist scripts and campaigns [17] [160].

2.4.4 How Do On-The-Ground and Networked Forms of Protest Affect Each Other?

The relationship between online and on-the-ground forms of activism within a networked movement is not always one-directional (online to on-the-ground or on-the-ground to online), but can also be reciprocal or fluid. In this section I look more closely at three types of relationships between online and on-the-ground forms of activism. First, I build off of Papacharissi's idea of "electronic elsewheres" to understand online and on-the-ground actions as separate but complementary [177]. Then I look at processes of aggregating data and constructing counternarratives that make use of online forms of activism and translate them for more collective offline uses. Finally, I observe that some framing processes and protests move fluidly between online and on-the-ground realms as they grow and develop.

2.4.4.1 Separate but complementary

One can conceive of online activism as serving a separate, but complimentary purpose to on-the-ground actions. Papacharissi refers to Twitter as an "electronic elsewhere," where news reports are augmented by personal affect and opinion which are elevated in the public discourse [177]. Expanding on Bennett and Segerberg's theory of personalized action, Papacharissi describes how the sharing of personalized content can be easily propagated, bypassing formal negotiations or consensus building processes typical of traditional social movements. She refers to the networks that are formed around these expressions of shared sentiments as "affective publics" [177], and discusses how in the Egyptian Uprising that led to the ousting of President Mubarak, #Egypt was used primarily to share personal accounts, feelings and opinions. This served a distinct, but complementary function to the protests unfolding in Tahrir Square. Similarly, the Disability March was a type of complementary but distinct branch of the Women's March that extended participation to people for whom attendance at an on-the-ground protest would be difficult or impossible [141]. Activists with disabilities organized a virtual march using Facebook to occur simultaneous to and in support of the Women's March. Naming it the Disability March, participants were able to participate in the Women's March through the use of social media and simultaneously raise awareness of issues related to persons with disabilities [141].

Activists are increasingly using different social media platforms and ICT to accomplish separate tasks and speak to distinct audiences. As social media has become ubiquitous and its use in activism widespread, so too has state and corporate efforts to surveil social media and networked movements. In response, activists are moving coordination activities to more private and secure channels, effectively creating multiple "electronic elsewheres," each serving a different purpose and having its own social norms [130] [17]. Department of Homeland Security has used social

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media posts to target dissent and increase surveillance among religious and ethnic minorities. Visa applications into the US include giving over access to social media handles [178]. It is known that Russian agents used Black Lives Matter rhetoric and hashtags to sow dissent prior to the 2016 US presidential elections [16] [86]. To combat these concerns, reports from the frontlines of movements like Hong Kong's pro-democracy movement and the Catalan independence movement suggest that activists are using end-to-end encrypted messaging services and friend-to-friend technology [61]. As the coordination of movements and sharing of on-the-ground logistical information, such as the time and place of protests, is shared through private and secure channels and not corporate-run social media platforms, this will further separate out different ICTs for different functions within the movement. For example, Facebook may no longer be the place where groups discuss and deliberate the execution of on-the-ground protests, but it may still be used to post information about fundraising events and political talks.

2.4.4.2 Bridging collective action and connective action: datafication and counternarratives

There are examples in the literature of movements that use connective, personalized processes for collective means, typically through aggregating data (e.g. [162]) and forming new master narratives from personal narratives [94]. For example, the administrators of Hollaback! aggregate the personal accounts of street harassment and use the data to create maps of street harassment to advocate for changes in public policy [75]. The flood of personal accounts of sexual harassment and assault in #MeToo demonstrated the scope of the problem, which led to changes in corporate policies and culture and widespread attitudes about inappropriate sexual behavior [112]. Smaller movements use collaborative methods to form networked publics and create a unified message and media, as in the case of Letters for Black Lives [116]. In these cases, a small group of dedicated activists worked to make meaning out of networked and personalized actions, and in the process bridged connective and collective processes.

Collective actions can be distributed through connective means. Infographics and fliers created by SMOs or movement organizers are a type of collective action, as they express a unified ideology and objective; however, when movement infographics are shared on Instagram accounts, the decision to interact with them or screenshot and repost them is a personalized one, a type of connected action [128].

Photos taken by individuals can also serve a collective purpose by reinforcing symbols of the movement. A study on the use of Instagram in the 2019 Hong Kong protests revealed that photos from protests often included images that carried symbolic meaning: images of police in riot gear, protesters wearing masks (which were banned during the later part of the protests) and umbrellas, a symbol of the Hong Kong Umbrella Movement of 2014 intended to motivate the protester's network to act [113].

2.4.4.3 Fluidity between online (connective) and offline (collective) processes

Moving between connective to collective processes may be more fluid and iterative. Little theorizing has been done about this process; however, Black Lives Matter serves as an example of the weaving together of connective and collective, and networked and on-the-ground protests. Black Lives Matter started as a hashtag used in a comment thread discussing the acquittal of Zimmerman in the shooting death of a Black teen, Trayvon Martin [89]. The hashtag did not become popular until two years later when the protests in Ferguson, MO over the shooting death of Michael Brown by a police officer took up the banner of Black Lives Matter. The visibility of the movement eventually inspired on-the-ground Black Lives Matter organizations to form around the country, creating a nationwide network [89]. Eventually, Black Lives Matter became part of our everyday vernacular and has been applied to related issues and protests on and offline. In this kind of evolution, the movement grows through both networked and on-the-ground forms of activism and personalized, SMO enabled and collective uses of #BlackLivesMatter.

In my study of J4A (Chapter 5), I find that frames and rhetoric are developed through an interaction with emergent processes on social media and the actions of organizers on-the-ground. It is this type of fluid interaction that I set out to investigate more thoroughly in this proposal.

From the early 2000's when online activism first emerged in the form of online petition, contemporary networked movements have become increasingly complex, composed of complex ecologies of communication and coordination, use of multiple ICTs to reach multiple distinct audiences. As social media, and ICTs in general, continue to evolve, so too will networked movement processes. Understanding how these various processes, tools, and audiences work together requires new research frameworks.

CHAPTER 3

Identity-Based Roles in Rhizomatic Social Justice Movements on Twitter

1

3.1 Introduction

HCI and related fields have primarily studied movements through the mechanisms and affordances of social media platforms [67] or by developing and studying applications developed for a social movement [75]. However, by studying networked movements through the lens of a single hashtag or application, we lose sight of the rhizomatic interconnectedness of movements and activists. As a result, we understand very little about the roles activists play as they participate in a succession of campaigns toward long-term social change. Twitter has been instrumental in many transformative social justice movements of the last decade. It is essential to understand how social justice activists enact activism on Twitter, negotiate between personal and movement goals and identities, and how this affects their identity construction and affiliation with a broader movement.

This chapter describes a mixed methods study where I interview 12 activists representing a range of ongoing social justice movements in the U.S., U.K. and Canada, and analyze the tweeting behavior (timelines and retweets) of 11 of them. Using a grounded theory approach, I identify three activist roles: organizer, storyteller and advocate. Participants describe these roles in terms of their personal and professional identities, suggesting consistent role-based behavior over time and across hashtag campaigns. I then validate these roles and their stability through an analysis of feature use and tweeting behavior. I learn that activists amplify aspects of their identity to align with a movement agenda and take on roles shaped by their professional identities and goals. Aspects of identity, such as race, ethnicity, ability, gender, sexuality and geography impact decisions about the

movements they participate in, but professional identity and associated norms influence how they participate, shaping the roles they take on, and affecting the construction of movement identities.

3.2 Professional identity

Professional identity is the attributes, beliefs and values that make up one's professional self-concept [120]. On Twitter, professional identity construction occurs through information sharing, networking and developing expertise with professionals in the same field, but not necessarily the same organization [97]. Communities of practice develop on Twitter where professional jargon, rhetoric and practices are discussed and debated [190] and where grassroots professional development occurs [85].

Research to date has not associated professional identity with participation in social movements online, except in reports that participants sometimes fear repercussions in the workplace for their activist involvement [142]. Because Twitter flattens all of a user's followers into a single audience, users are forced to present a singular identity that reads to diverse audiences [153], including professional networks and movement networks. Therefore, to understand social justice activist roles as they play out on Twitter, it is necessary to also consider an activist's professional self-concept.

In traditional, offline organizations, roles are usually formally assigned, designated by job titles and accompanied by a set of socially constructed responsibilities and expectations [78]. In self-organizing online communities, roles are emergent and self-selected [228]. The boundaries of a movement are less well-defined than an "online community" as the literature defines it and activists are known to move from movement to movement [192] [65], suggesting that, rather than emerging from a specific social context, roles develop based on an individual's own experiences and identities. In this study, I investigate the identity-based roles that activists develop and carry with them from one hashtag campaign to the next. Previous literature has shown that the connection between personal and collective identity is fundamental to social movements; I consider the role of both personal and professional identity in shaping how activists participate in movements on Twitter, construct movement identities, and contribute to rhizomatic social movements.

3.3 Methods

In this study, I conducted and analyzed 12 semi-structured interviews with self-described social justice activists who use Twitter. To deepen our interview findings, I developed a corpus of tweets by or referencing through retweets, mentions and replies 11 of the 12 interview participants (one interviewee was on a social media break).

3.3.1 Interviews

I recruited social justice activists who use Twitter through Facebook and Twitter posts and by asking activists within our personal networks to forward a recruitment email. Participants were at least 18, had a minimum of 1,000 Twitter followers, and reported using Twitter for activist purposes a minimum average of once a day. Our consent form specified that, while I would not disclose names, locations, usernames, or organizations, because they work in the public sphere, participants are potentially identifiable, and I could not guarantee anonymity. In an effort to protect participants' identity, all tweets quoted in this study are paraphrased.

One-hour phone or Skype interviews were audio recorded, transcribed and analyzed using a grounded theory approach. The interview protocol included questions about the participant's identity, their definition of activism, their history of activism, how they enact activism on Twitter, and the challenges that they face.

Through a process of open iterative coding, 135 codes were collapsed into 9 categories: 1) identity, 2) goals and motivations, 3) Twitter feature use, 4) audience, 5) community, 6) rules guiding Twitter behavior, 7) challenges, 8) success, and 9) failure. Based on our coding, I developed a profile for each activist, including how they identify, their goals and motivations, their concepts of audience and community, and how they reported using Twitter. From these profiles, I noticed a relationship between the way participants described their activism, the metaphors they used to describe themselves, and their professional background or expertise. From the observable similarities, I developed three activist roles.

3.3.1.1 Tweet corpus

The corpus of tweets began with the accounts of 11 of the 12 interview participants. I used the Tweepy Python library to access the Twitter Search API filter. From May 23-July 11, 2016 I accessed three types of Twitter data: 1) all tweets from the 11 activist accounts 2) all mentions of those users, and 3) all retweets of activist tweets (whether or not the tweet was original to the activist). In total, the corpus includes over 1 million tweets.

From all the tweets scraped I created two sets of data for closer analysis: the timelines of the 11 participants, totalling 5,598 tweets, and the full set of 1,346 unique retweets of participant's original tweets (both with quotes and without).

Our interview analysis suggested that participants enact different activist roles. Therefore, in the tweet corpus I looked for observable differences in tweeting behavior, such as tweet frequency and feature use. I looked for relationships between activist type and feature use with a contingency table analysis. To gain a fuller understanding of tweeting behavior, I also examined tweet and retweet frequency by each user over time, especially as related to major news events, and generated

descriptors of the corpus such as the most retweeted tweets and popular hashtags.

I conducted further statistical tests, running a one-way ANOVA to determine if there was significantly differences between the means of feature use in different activist roles. However, with such a small sample–3 advocates, 3 organizers and 5 storytellers– I could not reject the null hypothesis.

3.3.1.2 Participants

Participants were self-identified social justice activists who use Twitter for activism. Ten participants were women; two were men. Ten lived in the US across 7 different cities, 1 in Canada, and 1 in the UK. Interviewees described themselves across a range of identities: 4 Asian, 3 Black, 2 Latinx, 2 White, 3 queer, and 2 disabled. (Not all participants identified along every dimension.) Many work for multiple causes and/or incorporate intersectional approaches in their activism. Their activism spans feminism, Asian-American issues, immigration, Muslim-American issues, Black issues, Latinx issues, disability rights, Black Lives Matter, racial justice, LGBTQ rights, the environment, international human rights and poverty. Participants had between 1K-41K followers, with a median of 3.5K followers, at the time.

3.4 Findings

Our data illustrate how activists' personal and professional identities affects the construction of movement identities and the roles that they enact in online movements. Participants amplify aspects of their identity to align with a movement; this manifests as expressions of authenticity and the sharing of personal experience. I describe three different activist roles that emerged from our interviews and analysis of the tweet corpus: storytellers, advocates and organizers. Each role enacts social justice activism and constructs movement identities differently online. Concurrently, their Twitter use reveals tactics shared across roles and the challenges and risks of doing social justice work on Twitter.

3.4.1 Identity Amplification

Study participants reported incorporating aspects of their personal identity (e.g. Asian American or person with a disability) into their activist tweets in an "authentic" way, allowing their unique perspective to shine through.

Identity amplification lends authenticity to activism. An experienced organizer, P7 works for an immigration rights organization. She realized that she could more convincingly tweet about immigration if others understood the importance of immigration to her:

I felt more like I had to talk (on Twitter) about being Jewish and how that connects me to my concerns about Syrian refugees. They sound like my grandparents, and it's the same shit that happened to my family when they weren't allowed to come here.

As a result, P7 now posts tweets on her personal account such as, "Waiting on papers got my family murdered by Nazis. I wish they came over undocumented." Participants expressed the belief that personalizing their activist tweets helped them stand out and gain visibility, while also helping them connect with others.

Study participants described Twitter as a tool to "build a personality" (P1) and reflected on how their Twitter personas represented their core values. P10, for example, described her Twitter persona as "diasporadical," a term she devised to reflect her uniquely radical dedication to inclusivity.

Authenticity was an emergent theme in the interviews. Most participants stated that they were "just themselves" on Twitter. Participants contrasted authenticity to strategies associated with self-marketing, such as having a "personal brand" (P11) or "platforming my voice" (P10). P11 asserted that authenticity was key to her success on Twitter, "I'm ME on my personal account....I'm not necessarily on message, but it's that authenticity that attracts people."

3.4.2 Identity-Based Activist Roles

Our data revealed commonalities in how participants approached and enacted activism on Twitter based on professional identities and experience. Participants described their activist goals and use of Twitter to further those goals in terms related to their professional identities and fields of expertise rather than in terms of the agendas of movements they are affiliated with, suggesting that they bring these practices and goals to whatever campaign they participate in.

Based on the interviews, I found three different identity-based roles: organizers, those mobilizing others to take action (N=4); storytellers, those actively creating content to shape the broader narrative (N=5); and advocates, those focused on amplifying the voices of underrepresented people (N=3). Interviews indicated that different roles use Twitter for activism differently, leading us to expect them to use Twitter features differently. I analyzed tweet frequency, feature use, the percentage of followers they follow back, and the percentage of their tweets that are retweeted by others as seen is Tables 3.1 and 3.2. Although a small sample, the results support role-based differences in tweeting behavior. I describe each role in detail according to the professional identity and experience of the participants, how they enact their activist goals on Twitter, their observable Twitter behavior, and how they construct movement identities.

In order to compare how different activist roles engage with social justice hashtag campaigns, I looked at tweets in the corpus around three major events: the mass shooting at Pulse, a nightclub in Orlando, during an LGBTQ event, including the House of Representatives' sit-in to force a vote

on gun control legislation; Black Lives Matter protests in response to the shooting deaths of Alton Sterling and Philando Castille; and the Rohyinga crisis in Myanmar. Ad hoc publics are known to form around acute events with the use of hashtags [45]. Ten of 11 participants tweeted in response to the Pulse shooting and Black Lives Matter, and the eleventh participant tweeted extensively about the Rohyinga crisis. While the number of tweets by each activist varies across the three movements, the qualitative descriptions of their participation lends to an understanding of roles in social justice activism on Twitter.

	Story.	Adv.	Org.
Tweets per day	8.02	14.38	14.8
Follower count	7352	3065	6464
Friends	.268	.397	.658
Retweeted	.293	.135	.152

Table 3.1: Average tweets per day per, follower count, the ratio of followers that the participant follows back ("friends"), and the ratio of tweets that were retweeted at least once by another user per each role. N=11.

	Story.	Adv.	Org.
Retweets	.316	.502	.469
Mentions	.398	.38	.516
Hashtags	.351	.29	.26
Url	.383	.358	.214
Media	.205	.236	.165
Text Only	.412	.29	.192

Table 3.2: Description of feature use by activist role. Ratio of participant tweets that are retweets, that contain a mention, a hashtag or that are text only (containing no features, links or images).

	Story./Org.	Adv./Org.	Story./Adv.
Retweets	<.0001*	.0761	<.0001*
Mentions	<.0001*	<.0001*	.5280
Hashtags	.0293*	.3831	.0004*
Url	<.0001*	<.0001*	.2026
Media	.0046*	<.0001*	.0465*
Text Only	<.0001*	<.0001*	<.0001*

Table 3.3: Description of feature use by activist role. Ratio of participant tweets that are retweets, that contain a mention, a hashtag or that are text only (containing no features, links or images). Using a post-hoc Tukey test for each row, the results show non-random differences in pairs marked with an asterik. The p-value (p<.05) is listed above; N=5,998.

3.4.3 Organizers: "The Social Arsonist"

Organizers play a pivotal role in social justice movements, building communities from the ground up based on shared and co-created values. Four participants in this study are professional organizers who bring the methods and values of organizing to their personal tweeting.

Organizers persuade others to act in their self-interest and for the common good, and create the conditions that allow for collective actions to have impact in the public arena. P7 describes it as, "Organizing is specifically about working with other people to get them to do things." In describing their work, organizers referred to them- selves as a "political organizer," "union organizer," and "social arsonist.[2]" All four organizers run or are employed by SMOs. They all also either consult or volunteer for additional social justice organizations.

3.4.3.1 Inspiring action

Organizers described their role within movements on Twitter in the same terms they used to describe offline organizing–to inspire others to act. They compared Twitter to traditional organizing tools, as P6 explains:

> The model that we were trained on...is you house visit people that are trying to organize a union, and you talk to them, and you always bring a flyer or something with you. But that's only just to get in the door and to leave something with them so that they will remember you. I feel like the Twitter thing is now that flyer.

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[2]"Social arsonist" is a term used in organizer training materials: "A good organizer is a social arsonist who goes around setting people on fire" [191].

A tweet is the first interaction of an ongoing conversation. In response to the mass shooting at Pulse Nightclub, P7 tweeted "If you don't take action in support of LGBTQ people, you're against us." She tweeted provocative quotes from Orlando's LGBTQ community, such as this headline, "They're killing us. Help us stop them." These tweets did not link to a petition, fundraiser or protest event, yet they are intended to stir emotions and ignite action.

3.4.3.2 Building community

Organizers take a relational approach to Twitter. They follow back 65.8%of their followers while advocates follow back 39.7% and storytellers only follow back 26.8% of theirs (Table 3.1) . Organizers discussed building a community of "fairly likeminded people" by "propogat(ing) knowledge...along a certain set of themes or world view" (P2). To that end, 46.9% of their tweets are retweets and over half of their tweets mention other users (Table 3.2). They are less focused on composing original tweets or sharing off-Twitter content. Only 19.2% of their tweets are text only, containing no features, and only 21.4% contain urls.

3.4.3.3 Coordinating hashtag campaigns

Organizers design, launch and monitor hashtag campaigns, which often requires a great deal of pre-planning and strategizing. To the casual Twitter user, the emergence of hashtag campaigns may appear organic. However, campaigns often require planning and coordination. P2 explains:

> I think we can't pretend that those things (campaigns like #sayhername) are all essentially coordinated, but I also think we can't pretend that those things aren't happening without the expertise of some very sharp organizers and concerted campaigns.

Organizers design, launch and monitor hashtag campaigns. All twelve participants reported starting their own hashtag or being involved in launching a hashtag campaign. The storytellers and advocates used hashtags to differentiate themselves or to position their work within broader conversations. Organizers, however, created hashtags that encouraged participation from other users, calling them to action and inviting them to join the conversation.

Both P2 and P12 reported using Twitter responses to suggest directions for campaign design. P2 described using Twitter "to test ideas [on race in America] out and see what gets traction and what doesn't." P2 openly discussed a past hashtag campaign for which she and her organization received blowback. The negative response helped her reframe the message and develop a more appropriate hashtag.

Another tactic for both community building and to testing ideas in a public forum are Twitter town halls. A town hall is a moderated discussion held at a specific time around a particular theme,

sometimes featuring experts. Participants in the discussion use a hashtag allowing for the town hall to be found, read and archived. P12 and P7 discussed town halls as a tool to engage and educate the public on Twitter.

3.4.3.4 Strong movement affiliation

During interviews organizers described themselves firstly by their movement affiliations, demonstrating the salience of movement identities. Their movement identities also expand into their non-activist networks. For example, P7 took on an organizer role in a comic book fan community, helping transform community outrage at a transphobic comic book scene into action by encouraging fans to organize and contacting people who could put pressure on the publisher: "I've worked in the movement long enough that I know who to call at GLAAD. I know who at the DNC cares about comics and stuff like that."

Organizers were least comfortable with the level of visibility that Twitter demands and were reluctant to reveal aspects of their personal identity. All four organizers recognized that revealing their personal experiences would lend to their success on Twitter, but to varying degrees had difficulty reconciling this with their training as an organizer. This discomfort stemmed from an understanding that organizing is inherently other-focused.

3.4.4 Storytellers: "The Town Crier"

Storytelling is creating narratives through journalism, blogging, essay writing, personal narrative, and other forms of creative writing and media production. The role of storytellers within a movement is to contribute to movement narratives and direct the public's attention to social issues. Storytellers use Twitter as a publishing tool to make sense of unfolding events, and influence movement narratives. They do not necessarily seek to represent a movement, but instead to shift the discussion and shape action through story.

Five participants in this study are professional writers who use Twitter for social justice movements in ways that closely align with their professional identity. They expand their movement identities to their writing and their self-presentation online; however, they also expressed a fierce independence, describing themselves with titles such as, "provocateur" and "town crier."

3.4.4.1 Publishing

Storytellers develop a voice on Twitter and through off-Twitter content, earning a reputation as an authority in a particular area. Storytellers use Twitter primarily to publish original content rather than retweet others. They have the lowest retweet rate of the three types at 31.6% and the highest percentage of text only, original tweets at 41.2% (Table 3.2). They often tweet links to

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articles written by themselves or others, which is reflected in the high percentage of tweets with urls (38.3%).

They use Twitter as a publishing platform, having fewer friends and retweeting others less often. They only follow back 26.8% of their followers (Table 3.1). Collectively, this suggests that storytellers use Twitter as a one-directional tool to amplify their stories, and they are rewarded for it: 29.3% of their tweets were retweeted at least once by others–a rate roughly twice that of organizers or storytellers. However, they use mentions and hashtags at rates comparable to the other roles. This may reflect practices described in the interviews of crediting others and using hashtags to contextualize their work as part of a broader narrative.

3.4.4.2 Meaning making

In response to unfolding events, storytellers work to make meaning and provide context, often through personal experience or reflection. They may or may not use movement hashtags in these tweets, which tend to be text heavy. Storytellers tweeting about Black Lives Matter included insights such as, "The responsibility to address these issues has fallen to black people, and it's not their problem to fix" (P9) and "When will we address racism and state violence?" (P3) and often included links to articles, blogs and think pieces that address these topics. P5 curated videos of people reading poems by Black authors to help contextualize Black Lives Matter within an ongoing African American literary tradition. Maintaining a blog and a cohesive Twitter timeline is another way of making meaning over time. P1 has been maintaining a blog since 2001 on Asian-American issues. Although he describes himself as a journalist first, he has evolved to think of himself as an activist, drawing attention to important issues for Asian-Americans and becoming increasingly involved in other forms of political action.

3.4.4.3 Influencing the narrative

P3 tweets about disability rights from the perspective of someone who is queer and disabled. He uses his personal experience to expand the conversation within disability rights movements:

> We're always talking about disability from a very outside discussion. We're talking about access. We're talking about elevators and ramps and healthcare and funds in the medical system and blah, blah, all that stuff. No one's asking, 'How does disability feel? How does disability feel from the inside out?'

Because cultivating an audience sympathetic to the reality of living with a disability has the potential to change the narrative about disability, P3 also writes articles and hosts a podcast about dating and sex. P3 makes a point of tweeting openly about his own sexuality in an effort to counter the desexualization of people with disabilities.

Other factors influence the narratives that storytellers write. P9 uses her positions as a journalist to investigate issues that "highlight marginalized people who often don't get their stories told." However, both her Twitter persona and audience are somewhat shaped by the news site that she writes for and the beat that she covers. P9 laments that although she now has more followers, they are not as radical as the audience she had when she freelanced for a feminist blog, nor do they engage her in conversation about her work as often.

3.4.4.4 Personalized movement identity

Storytellers personalize their activism, using their personal identity and experiences to shape movement narratives. Three of the five storytellers have usernames that describe themselves by their ethnicity, sexuality or ability, amplifying those aspects of their identity that align with social justice movements (and are the only three participants in the study who do so. They describe themselves as working independently from movements, giving them the freedom to take risks that would be dangerous or bad strategically for an organizer, and the distance to report with journalistic objectivity. P4, for example, holds on fiercely to her independence:

> I'm a writer, and I expose things in my writing...social justice is a nice, comfortable word for the non-profit industrial complex. I'm not here to make you comfortable...I feel like I'm independent. I'm not part of that, and I don't want to be.

3.4.5 Advocates: "The Radical Witness"

Advocacy is supporting others to make their voices heard. Within a movement advocates focus on networking and building bridges to increase a movement's visibility. Advocacy does not translate as easily to a single profession as the other two roles, but is associated with positions across industries in public relations, marketing and public policy. On Twitter, advocates amplify the voices of other by expanding their personal networks through retweeting and mentions and bridging affected communities to other networks.

Of the three advocates in our study, two have a background in marketing and are entrepreneurs and the third has worked in advocacy for education and human rights agencies for decades. Their current professions include promotions, public relations and social media strategist. They construct their identity through their expertise and the role that they play. They describe themselves as a "radical witness" and "someone who sticks their nose in." They do not associate with a single movement, but further a number of related causes, such as human rights issues in various countries, the environment or alternative economies.

3.4.5.1 Amplifying voices

In line with their mission to amplify others, advocates combine the one-directional behavior of storytellers with the the relational behavior of organizers. Advocates make use of all Twitter features, with slightly higher rates of publishing retweets at 50.2% (Table 3.1).

Advocates build relationships and support by retweeting others. P10 is dedicated to promoting artists of color, especially those of Caribbean and Afro-Latino descent. She describes her role in amplifying other people's experiences on Twitter, which she connects specifically to retweeting:

> I try to be a radical witness...I really try to honor that and witness people and not lurk, and not just favorite, you know. Whenever someone favorites me, I go and I retweet something of theirs.

3.4.5.2 Building bridges

When a movement aligns with their personal beliefs, advocates draw from their professional identities to bring attention to the issue, even if it does not overlap with their personal or cultural identity. P8, who is geographically and culturally removed from the events, tweeted frequently and passionately about the Rohingya crisis in Myanmar calling out "#Genocide! #Genocide!" and posting petitions. These actions serve as a bridge between affected groups and those with more access and agency.

Advocates also represent the needs of groups that they are a part of. P11 tweets regularly about state and local politics, especially as they concern a local water crisis. She described a tweet of hers about the water crisis that went viral, calling on the state to bring water to a particular location in need. She tweeted regularly about the crisis, wrote about it offline and was interviewed by local newspapers. She also became the lead class rep for a class action lawsuit against the state. The entirety of her tweets, which she described as "a real life timeline of a crisis," were read in the deposition.

3.4.5.3 Constructing unique movement identities

The advocates each framed their activism around their values and unique talents as opposed to their association with a particular social movement. They sometimes personalized their activism in innovative and ingenious ways. P11 gave herself the title of "social media senator" and set out to bridge the divide between residents of her region and state politicians through tweeting. As advocates often serve to bridge a movement to other networks, their movement identity may be constructed through interactions with both groups.

3.4.6 Cross-Role Tactics

Roles in rhizomatic movements are self-defined and based on a combination of identities and experiences particular to each activist. In our analysis, I found that personal and professional identity shaped activist participation, and I grouped participants into three roles–organizer, storyteller and advocate–based on these identities and their behavior on Twitter. Identity, even professional identity, is complex, and therefore, a single role could not account for Twitter use in all cases. Several of the participants had professional identities that straddled storyteller and organizer roles, and this informed their activism: organizers with storytelling experience reported sometimes using storytelling tactics to persuade others, and one storyteller with organizing experience used organizing tactics to create a moment of collective storytelling through a hashtag campaign. While some participants expressed a discomfort with self-promotion, participants in all three roles recognized its necessity on Twitter, reporting behavior I characterize as self-advocacy.

3.4.6.1 The importance of self-advocacy

Activists, especially those from marginalized groups, need to advocate for themselves. Participants in all three roles discussed the need for self-advocacy, including posting about speaking engagements, interviews, publications and even soliciting work to make themselves heard. For example, P3 reported tweeting directly at magazine editors asking, "Hey, want to hire somebody cool with a disability?" P3 also developed relationships with celebrities to further his cause, persuading an adult film star to mention him and use his hashtag.

3.4.7 Challenges and Risks

Bringing aspects of one's professional, personal or cultural identity to Twitter for the potentially contentious work of activism makes activists especially vulnerable to harassment. All of the participants experienced some form of harassment, account hacking, death and rape threats, and even receiving threats of harm to one's child and experiencing a home break-in. Participants also encountered challenges around finding success on Twitter, engaging the right audience, and leveraging aspects of their personal identity to maintain authenticity and credibility.

Storytellers often reveal personal information in the course of reporting, making them vulnerable to attacks, but they also typically lack the institutional or social support of an activist who is more embedded in a movement. Storytellers expressed concern about journalists or editors from mainstream media outlets following them as they discuss social justice issues, then reporting on it as if it was their own, a process P10 called "getting scooped."

Organizers cautioned against over-emphasizing the role of Twitter in social movements. Even when a Twitter campaign is successful, it does not necessarily engage the group of people most

affected by injustice. P6 discussed the problem of using Twitter to put pressure on a company to unionize. Their campaign was intended to draw media and public attention to the workers and by doing so put pressure on their employer to negotiate. However, the workers themselves were not necessarily participating in the Twitter campaign. They had to be engaged by more traditional means.

Credibility and authenticity were also difficult to maintain. Advocates and organizers reported that their credibility was often questioned (P2, P8, P10), especially when drawing attention to a community they were not a part of. Organizers, who were focused on others and not on their own experiences and accomplishments, felt the pressure to repeatedly prove their authenticity and credibility–what in Twitter-speak is sometimes called "receipts."

3.5 Discussion

Prior research on online social movements has primarily focused on hashtag campaigns or forums focused on a specific collective action, leaving a gap in our understanding of how activists use social media to achieve long-term goals. Contemporary social movements are rhizomatic, emerging and evolving over time with the help of communication technologies such as Twitter. Although social justice movement networks are emergent and dynamic, I find that activist roles are shaped by individuals' professional and personal identities, and, therefore, are relatively stable. Among participants, professional identity influences the activist roles that they play and how they construct movement identities.

In keeping with Snow and Benford's theory of movement identity construction, I find that activists amplify aspects of their personal identity on Twitter in order to align with a social movement. Participants described integrating aspects of their identity in their activist tweets as a way to be authentic or "just myself." Understood in the context of rhizomatic movements, personal identity expression also expands movement goals and identities. For example, P3 works to expand disability rights movements to include discussions of sexuality. Through tweeting P3 attracts other users with similar experiences and identities, representing an emerging lateral branch of the disability rights movement.

In online movements, it is tempting to think of participants as a "crowd," executing small, low-effort actions [27]. This masks the unique expertise, experience and networks that activists engage when doing movement work. Unlike previous studies that have found that participation in a hashtag movement may be a career risk (e.g. [142]), participants in this study have integrated their professional identities into their social justice activism and vice versa. Professional and movement identities and goals are often entangled. For example, P9's journalism is both a profession and a form of activism. This expands the theory of personalized action [25] to include professional

identities, practices and career-minded goals.

3.6 Limitations

This is a relatively small study of 12 self-identified social justice activists. While further work is necessary to validate the roles and associated Twitter behaviours described, the insights gained by adopting the lens of identity-based roles adds to a generalizable understanding of activism on Twitter. The participants in this study represent a committed minority of social justice activists who have the potential to influence the emergence and growth of rhizomatic movements.

The roles of organizers, storyteller and advocate were developed through a ground-up analysis of our data; however, I do not claim that this list is exhaustive. There may be additional activist roles with distinct behaviors on Twitter.

3.7 Future Work

I find that each activist role uses Twitter differently to achieve their goals. Further research is necessary to develop a global understanding of how different roles interact and coordinate in a rhizomatic movement.

First, I can attempt to explain known tensions between activists using roles as a lens. Tensions between movement organizers and Twitter crowdsourced elites have been reported in mainstream media (e.g. [117]), and is known to contribute to the misattribution of movement work (e.g. [95]). Analyzing this problem based on roles, I can see that behaviors associated with organizers, such as having more "friends" or mentioning others do not necessarily afford greater visibility or reach. Organizers, therefore, may struggle to gain influence on Twitter more than storytellers whose tweets are retweeted at roughly twice the rate of organizers or advocates. This suggests the possibility of role-based design interventions to alleviate tensions.

Second, the salience of a social movement identity is key to ongoing voluntary participation [204]. I have demonstrated that individuals may be dedicated social justice activists, but not be strongly affiliated with a social movement, as seems to be true for storytellers, or, in the case of advocates, may retain a level of detachment in order to bridge multiple communities. This suggests different models of movement identity construction for different roles. Further research can explore how to develop infrastructure to capitalize on the unique contribution of each role and corresponding movement identities.

Third, to further validate the identified roles, I will look for behavior associated with each role among activists before, after and during a specific hashtag campaign. Network analysis will deepen our understanding of how roles function. I hypothesize that different roles serve different

purposes within a social justice hashtag campaign on Twitter. Based on our findings, I would expect organizers to operate in the highly-connected network core, advocates to work at the periphery to join networks, and storytellers to operate either at the core or periphery, depending on their relationship to the movement and status as crowdsourced elites.

Understanding activist roles as identity-based, and therefore relatively stable, also suggests design interventions to increase awareness of roles at play within dynamic and growing rhizomatic movements, capitalize on the unique contributions of each role, and facilitate communication between them. New Twitter features could identify activists according to behaviors associated with activist roles and communicate their position within a movement network.

Increasing awareness of the network may alleviate tensions between different roles and facilitate coordination. For example, one might imagine that a "trending" list of highly connected users in a hashtag campaign might help give organizers needed attention. A network visualization that identifies dedicated activists and situates them in a dynamic network, may prevent misattribution and public misrepresentation. Such tools may open up communication channels between organizers, storytellers and advocates to execute coordinated actions and facilitate communication between branching identities and groups within a movement.

However, increasing the visibility of activists will make them more vulnerable to harassment and targeted attacks. Pseudo-anonymous approaches may reveal how roles operate over time without revealing individual activist identities. Engaging in community-based design practices is essential to co-designing tools that help movements take advantage of the affordances of social media while maintaining safety and autonomy. For example, Document the Now's community-based digital archiving workshops and tools help activists take control of their own narratives and security [226].

3.8   Conclusion

In this mixed methods study of self-identified social justice activists, I build on previous literature on identity in social movements to consider the role of personal and professional identity in online movement participation. I find that professional identity shapes how activists participate in social movements on Twitter and identify three activist roles: organizer, storyteller and advocate. I use these roles as a lens to better understand how movement identities are constructed and how they might function together during a hashtag campaign. I then lay out an agenda for future research on roles in rhizomatic movements and suggest design directions.

CHAPTER 4

Trust-Building Across Networks in Community Organizing

3

4.1 Introduction

In this case study, I examine a grassroots literary and cultural festival organized primarily through social media, #90X90LA. Festivals offer a unique space to celebrate, reflect on a community's values, share resources, and further community development [15] [68] [82], [180]. As one of the organizers and the designer of the festival's decentralized curatorial process, I provide insight into online community organizing and event coordination.

#90X90LA invited community members to develop festival programming and shape the festival's goals and identity. To achieve this #90X90LA involved multiple networks of neighborhood residents, artists, writers and cultural organizations. While individuals within each of these networks may be richly connected, connections between networks were weak or nonexistent. Organizing the festival required building connections and a degree of trust across distinct networks. The goals among different networks sometimes conflicted and were frequently mutually opaque. There were concerns about sharing the spotlight, negotiating a group's and the festival's collective identities, and appropriation.

While much is known about the role of trust in teams [10] and in online communities [185], less is known about trust in ad hoc networks and how networks join. Through this case study, I gain an understanding of how trust was built across networks, how online tools were used to facilitate trust, and where brokers and additional efforts of inclusion were necessary. I find that online tools helped bring openness and transparency to the organizing process, and brokers played a pivotal

role online and off in forging new relationships; however, in some cases, additional efforts were required to build trust among collaborators.

4.2 Trust

Trust is understood to develop through interpersonal interactions [51]. This has been observed in organizations and among work teams. For example, Wang and Redmiles report that among software development teams informal, non-work talk ("cheap talk") is associated with trust [220]. In online communities, interpersonal interactions are also believed to nurture relationship and trust [158] [185]. Online, trust has been found to extend to a shared acquaintance (a friend of a friend is a friend) [229]. This has formed the basis for referral systems and networks of trust [125].

4.2.1 Trust in Online Organizing

In traditional organizing, strategic coalition building between organizations and individuals is a central activity [74]. However, online organizing is thought to rely less on relationship-building, and is marked instead by connecting likeminded individuals in ad hoc networks through personal acts of expression; for example, through use of a hashtag [25]. For this reason, online organizing has been criticized for its performativity [60] [179] and reliance on weak social ties [98].

However, some research suggests that social media provides opportunities for informal social interactions, openness and visibility, which facilitate trust among individuals engaging in collective action [189]. Social media platforms, such as Facebook, provide opportunities for informal social interaction among networks of organizers, activists and community members that helps establish trust [189]. Bennett and Segerberg suggest that social media is the site for building relationships and establishing trust: "These technologies not only create online meeting places and coordinate offline activities, but they also help calibrate relationships by establishing levels of transparency, privacy, security and interpersonal trust" [25].

Other factors that Rohde suggests should be considered when developing ICT for organizing among actors with loose associations, from heterogeneous networks, and in temporary and informal organizing contexts, is visibility and openness and allowing the time required for trust to develop [189].

4.2.2 Festivals

This case study follows organizers of a grassroots literary and cultural festival who use online organizing tools to bridge networks and build trust. Festivals help bring people together in communities

and through shared culture [180]. They provide a temporary space outside of everyday life [215] that focuses on celebration and reflects the values and ideology of a community [82] [68]. Bringing together multiple stakeholders and networks, festivals build and raise awareness around community resources and produces social links between previously unrelated individuals and groups [15]. The social capital that is built through relationships and sharing community resources can have lasting effects [15].

Because festivals bring together community members and organizations that may not know each other and may have their own culture, expectations and norms, collaboration can be difficult. Although community members may have high levels of trust among their own groups and networks, enough trust has to be developed between networks to jointly plan events and develop the identity of the festival.

4.3   Methods

#90X90LA was a literary and cultural festival presenting an event every day for 90 consecutive days. Data was collected using participant observation of the design and coordination of the festival and a sample of events, and by coding planning documents and related social media.

4.3.1   Setting

Organizing for #90X90LA began in January 2017 and extended through the festival which lasted from July 5-October 2, 2017. Approximately half of the events were presented at Cielo Gallery/Studios, an independently owned gallery and community space in South Central Los Angeles. The rest of the events were distributed among community venues and businesses in the Los Angeles neighborhoods of Little Tokyo and Downtown, with a handful of events occurring at other venues around Los Angeles.

Planning meetings occurred over Google Hangout and in-person among the 5 primary organizers in two different states. Facebook, Google Forms, Google Docs, Google Calendar, Instagram, Twitter, email, text message and a festival website (90x90la.com) were all used for coordination and communication between participants and the organizers.

4.3.2   Data

I was one of five principle festival organizers. In the role of festival organizer, I brought my knowledge of online collective action to the design of the #90X90LA's decentralized curating processes. With the knowledge of my fellow organizers, I employed participant observation, taking field

notes of the festival development and coordination process and five weeks of daily events. I coded planning documents (e.g. internal operating policies, mission statements, volunteer and proposal forms) for evidence of program design decisions, division of tasks and responsibilities, and communication between organizers, participants, and brokers. Facebook posts related to #90X90LA from the organizers' public accounts, and 87 Facebook event pages created for separate events were also coded for types of social interaction, event planning and logistics, and brokering. We, the organizers, kept a record of roles and tasks for organizers, volunteer curators, volunteer support positions, performers and brokers. In addition, I scraped tweets related to #90X90LA from July 6 - July 25, 2017 and August 8 - October 10, 2017 using the Twither search API and coded these according to the role of the tweeter in the festival and the tweet content (e.g. a call for participation, advertising an event, or reporting about an event).

4.4   The Case: #90X90LA

#90X90LA was created by Writ Large Press, an independent publisher in Los Angeles. Events included readings, performances, art exhibits, panel discussions, dance parties and workshops. Events were curated and produced by local community members and featured the writing, music and art of people from marginalized communities, independent publishers and local literary, cultural and activist organizations.

4.4.1   History

The first iteration of the 90-day literary and cultural festival ran in the summer of 2014 as a pop-up series in a bar within Union Station, the main train station in Downtown Los Angeles. The festival created a space to feature the diversity of talent within the Los Angeles literary community. Over the course of the summer of 2014, it became clear that the real value of the festival was its ability to hold space and shine a spotlight on writers from marginalized identities, bringing them to the forefront of the Los Angeles cultural scene.

4.4.2   Festival Design

In 2017, Writ Large Press sought to expand the goals and scope of the festival. They set out to design a festival that would connect writers across cultural and geographical boundaries (geography being a significant obstacle in the sprawling city of Los Angeles), center writers from marginalized groups–especially those from the neighborhoods in which the festival took place–and help reduce the socio-spatial distance between marginalized groups and the city's literary and cultural institutions.

The three partners of Writ Large Press reached out to two additional community organizers, both of whom were deeply embedded in their local communities–one located in South Central and the other in Little Tokyo. This team of 5 were the primary organizers of the festival.

The team adopted an organizing model that was influenced by community organizing techniques and networked movements. This included using social media tools, such as a festival hashtag, posting calls to action on social media sites, and creating Facebook event pages. The name of the festival was its hashtag, #90X90LA. The organizers intentionally chose a festival name that did not include any group identity or communicate the organizer's values. Instead the name was a blank slate, allowing room for participants to personalize and shape it through their participation.

4.4.3   Decentralized Event Coordination

In conventional festival planning, a team of organizers curate and produce performances, hire vendors and plan activities for the public. In #90X90LA, the public was invited to curate the festival and organizers played the role of facilitator, helping participants develop events and connecting them to presenters, venues and other resources as needed.

Spanning 90 days, festival events were being developed and scheduled during and up until the last week of the festival. This allowed participants to shape the content and the identity of the festival as it unfolded. To provide some structure and an overall narrative arc to the festival, the organizers scheduled the opening and closing weeks of events as an introduction and closing/debrief. They also scheduled symposium weekends, grouping together a series of related panels, performances and discussions around a theme. Curated by community members and organizers, symposium themes included anti-gentrification, the immigrant experience, disability and access, and interactive narratives.

4.5   Building Trust

In total, #90X90LA 2017 incorporated 55 organizations, businesses and groups, and over 260 presenters and volunteers with events in 17 different venues. With the stated goal of connecting groups of artists and writers, encouraging new collaborations, and developing a festival community and identity, it was essential that the festival organizers facilitated trust between participants and with organizers. This was accomplished through openness and transparency, with the help of brokers, and by exerting effort to ensure inclusivity.

I observed trusting behaviors in participants' social interactions on social media, their willingness to collaborate with unknown parties (with the help of brokers and through the efforts of organizers), their ability to follow through on event planning tasks, and evidence of ongoing col-

laborations.

4.5.1 Openness and Transparency

The organizers made efforts both online and off to open up the process and invite participants to take part in festival production. Posting about the process online allowed space for social interactions, including off-topic discussion and joking, while open calls for participation created avenues for people without social ties to the organizers to participate. During offline events and through personal interactions, organizers set expectations and opened strategic planning and coordination discussions to the public.

Starting in January of 2017, the organizers published a series of 8 articles on a multi-author blog about the festival and organizing process. These articles helped articulate the values of the festival and discuss its community-centered structure and decentralized curatorial processes. In addition to these 8 articles, the organizers posted approximately 16 posts on Facebook (some re-posted to Instagram and Twitter) before the festival began. In the comment threads to these Facebook posts participants expressed enthusiasm, volunteered and joked around. For example, the announcement of #90X90LA generated 61 comments and 18 shares. Among the comments, 29 were expressions of enthusiasm (e.g. "Yes! I'm in!") and 10 were offers of resources and discussions of particular event proposals and dates. In a series of posts, a Writ Large Press collaborator (but not a festival organizer) created humorous memes riffing off of the hashtag. These opportunities for both on-topic and off-topic social interactions leading up to the festival helped establish relationships and made existing relationships between participants and organizers publicly visible.

Two calls for participation via Google Forms were circulated on social media a month before the festival. One was a call for event proposals, and the second was a call for volunteers to fill support roles. 34 of the 101 respondents participated in the festival, and 28 proposals developed into unique events. 13 of those participants had no prior collaborations with any of the organizers. Respondents were kept informed on the organizing process via group and personal emails, which set expectations of transparency on the part of organizers and made clear the uniquely participatory nature of the festival's coordination and curation.

Organizers opened strategic goal-setting and identity formation processes to the public before, during and at the close of the festival. This included educating the public about the needs of neighborhood and community stakeholders, contextualizing the festival alongside other community organizing efforts, and hosting strategy discussions and planning workshops. Included in the first week of events were opening receptions, performances, and talks intended to center the local neighborhoods and welcome festival participants from outside of the community. This served as a gesture of good faith to community collaborators, assuring that their needs and values were a prior-

ity and also educated newcomers. For example, community leaders in Little Tokyo held a welcome event that included live performances from community elders, a documentary on the history of the neighborhood and a presentation by local politicians on the challenges Little Tokyo currently faces. Organizers also created opportunities to publicly negotiate participants' goals and gain participant buy-in. At one event during the opening week, participants generated a list of goals and intentions for #90X90LA through facilitated discussion. Organizers also held workshops to help community members develop their event or project ideas and connect with potential collaborators.

4.5.2 Brokers

Throughout the festival coordination process, individuals took on the role of broker, connecting festival organizers and participants to individuals and groups outside of their network. Brokers proved important in connecting networks and building the trust necessary for collaborators to discover and act on their shared goals. I observed three types of brokering roles: organizers serving as brokers to groups of which they were a member, organizers brokering relationships between participants, and participants who brokered new relationships between organizers and other individuals or groups outside of the organizers' networks.

4.5.2.1 Organizers as brokers to groups

Each organizer had access to communities or organizations that the other four did not. The organizer with the existing relationship was trusted to negotiate and manage event coordination with these groups and decide when it was appropriate to include others. For example, one organizer has worked for over twenty years as a music producer and promoter. Having a reputation for finding innovative talent and producing quality shows, he was able to book top, local musicians and offer his personal assurance that events would be well-produced and artistically relevant to them. Likewise, the other organizers trusted his ability to match musicians to an event appropriately. The organizer's communication with musicians was often one-on-one via direct message, phone and in-person conversations that did not involve the other four organizers.

Another organizer is a member of a local radical collective. This collective was initially hesitant to participate in the festival because they were concerned about privacy and safety issues and their ability to accurately present themselves and their values within the festival context. To broker trust with the collective, the organizer took steps to ensure that the collective's social/political message would not be watered down or appropriated by the festival. She encouraged them to host their own Facebook event pages (without the festival organizers as co-hosts) and helped them create events that were intentionally POC (People of Color)-Queer/Trans-only spaces. To ease tensions, the organizer with membership handled all communication and negotiations with the

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group, only filling in the other organizers when an event had been planned and was added to the Google Calendar.

4.5.2.2 Organizers brokering between participants

In some cases, organizers served as brokers between participants, encouraging new collaborations when there was not a pre-existing relationship. For example, in the call for proposals, one participant wrote that she wanted to curate an event about "writing the immigrant experience." Based on this proposal the organizers developed a weekend symposium around the theme "the immigrant experience." The participant who originally proposed the event wanted to develop a writing workshop and discussion for U.S. immigrants. In order to increase the participants' access to immigrants from different parts of the world, the organizers suggested she partner with someone who expressed interest in the Google Form in organizing an Asian and Pacific Islander centered event. An organizer emailed each participant separately about the idea, and once she had the participants' approval introduced them on an email chain. The organizer checked in with the participants periodically for updates on event planning.

4.5.2.3 Participants as brokers

Participants also served as brokers, connecting organizers to new participants, organizations and venues. I counted 28 instances when participants served as brokers for an event. In some cases, a simple introduction might be enough to spur a new relationship. For example, when developing a panel discussion with POC art critics, one of the organizers put out a call for participants on Facebook and other people tagged in those who fit that description from their own networks. In another case, an organizer wanted to invite an activist group for a community discussion on "artwashing" (the use of art and art galleries to "clean up" a neighborhood undergoing redevelopment) and actions artists can take in anti-gentrification efforts. The organizer reached out to a colleague who was associated with the activist group. The colleague acted as a broker, connecting with key members of the activist group and introducing everyone via email. However, the activists had to decide amongst themselves how they wanted to participate, and whether participation would make themselves and the festival a target of backlash from their detractors. The broker was pivotal in backchannel conversations, vouching for the organizers and festival and offering to serve as a discussion facilitator. While these discussions were happening behind-the-scenes, the organizer had to contact the broker for updates on the activists and their concerns. To help prepare attendees for the discussion and to demonstrate that the festival organizers and activist group shared political views on the topic, the broker posted relevant articles on the Facebook event page and engaged commenters with opposing views.

Participants also contacted the organizers to broker the use of venues and connect organizers to new participants and organizations. For example, seeing festival posts on social media, an out-of- state colleague Facebook messaged one of the organizers in April and suggested he invite a Los Angeles-based filmmaker with a new documentary on the 1992 Los Angeles Uprising to participate. Taking an active role in brokering, she then emailed the filmmaker and organizer putting them in touch. Later, when looking for a venue to screen the documentary and host a talkback with the filmmaker, the broker contacted an associate of hers who owns a restaurant in Koreatown and booked the venue. The social brokering, however, did not stop there. The Director of Programming at Grand Performances, a free outdoor concert series in Downtown Los Angeles, contacted one of the organizers (initially through a Facebook comment thread) asking him to curate a #90X90LA event in commemoration of the 25th anniversary of the uprising as part of the concert series. The organizer was able to include the filmmaker and excerpts of her film in the event and in front of a broad audience.

4.5.3 Effort and Inclusivity

Although brokers were essential to forging new collaborations and bridging existing networks, sometimes their efforts were not enough to inspire trust between participants and organizers. In these cases, organizers had to demonstrate their willingness to prioritize the needs and adjust to the norms of each participant, including their communication media preferences and accessibility needs. This communicated that the festival centered its participants, was invested in developing a supportive and inclusive festival community, and was interested in building mutually respectful relationships that could extend beyond the festival.

4.5.4 Media Choice

Media choice theory suggests that when faced with multiple communication options, individuals and organizations develop norms over time based on a number of factors, including organizational structure, the nature of the task, and inter-personal trust (24). Organizers adjusted to the media choices and communication norms established by their collaborators. Doing so made it easier to sustain interpersonal interactions and build trust. Some organizations had more formal bureaucratic structures and processes in place to reach consensus among collaborators and stakeholders. Engaging these more formal structures required extra work for the organizers, but resulted in increased trust. For example, in order to build a relationship with a network of Little Tokyo organizations, organizers attended 7 in-person meetings prior to the festival. Presentation was very important to this group, and long email conversations, often including representatives from three or more organizations, persisted about what image to use on Facebook event pages, how to properly credit the

curators and sponsors, and the writing of event descriptions.

In order to maintain communication with other participants, organizers went out of their way to meet participant's schedules and adjust to their communication preferences. Sometimes this meant an organizer would stop by a participant's place of work (e.g. during a bar tending shift) or, for example, meet with musicians late at night, after a gig. Organizers also adhered to an individual's media choices. For example, if a participant was known to "always be on Instagram," then organizers would message them via Instagram.

4.5.5 Inclusivity

Particular events were geared toward children, older adults, non-English speakers and persons with disabilities. These events required specific accommodations, such as providing interpreters, moving events to venues with greater accessibility and providing options for participants to participate remotely. This was particularly important for a panel discussion on disability and access, which was held in an accessible venue and video conferencing was arranged for two panelists with disabilities to participate remotely. Organizers and participants had to negotiate each of these needs given limited time and budget. This extra effort and additional communication became the basis for establishing relationships and trust.

4.6 Challenges

In order to organize a decentralized festival in a networked environment, multiple social media platforms and other ICTs were used. Engaging an ecology of communication tools allowed organizers to match the communication needs and expectations of the participants and to build trust through transparency, social interaction and brokering. However, this also created challenges for organizers who had limited awareness of each other's actions and had to manage a number of different communication channels at once.

I observe that different tools were used for different types of communication. For example, Facebook comment threads were often the site of informal interactions, volunteering, and brokering. Nearly every event (91 of 93) had their own Facebook event page where users publicly signaled their intent to attend events. Twitter, on the other hand, was primarily used as a marketing tool, sharing event announcements, including links to the festival web page and Facebook event pages, and mainstream media coverage of the festival. The tweet corpus includes only a few instances of on-topic or off-topic discussion about the festival or its coordination. Although I do not have a complete record of emails and direct messages involving organizers, from our field notes I observe that the more centrally organized non-profit organizations preferred email communication,

while individual participants often appreciated synchronous communication via direct messaging apps.

However, using an ecology of tools to coordinate a festival in a decentralized process also presented challenges for the organizers. With so many avenues for communication, organizers were often unaware of the actions of each other (in cases where trust had to be carefully brokered with participants, this was intentionally so). Occasionally events were scheduled over each other and communication with participants was either duplicated or dropped, which was potentially damaging to the relationships organizers were attempting to build. Despite using collaborative work tools, such as Google Calendar and Sheets, one of the organizers became the clearinghouse for information and coordination for the other four organizers. This significantly increased his workload.

4.7 Ongoing Collaborations

Many relationships formed during #90X90LA in the summer of 2017 persist today and have led to new collaborations. This is evidence that trust established during the festival helped join networks beyond the 90 days. For example, two participants who volunteered in support positions for a recurring reading series during #90X90LA, decided to continue producing the event in collaboration with Writ Large Press once the festival was over. It has been running now for two years. Another two participants who met during #90X90LA, one a visual artist and the other a poet, were awarded a grant to teach a series of art and writing workshops at local libraries and archive the stories and art created in the workshops using the Japanese tradition of Kamishibai. Relationships between local businesses and writers have also been ongoing. A venue that had not hosted literary events before #90X90LA now regularly hosts readings and book launch events for local authors. Anecdotally, I also observe writers reading together at local literary events who had no relationship prior to #90X90LA, suggesting that their professional networks now overlap.

4.8 Discussion

While #90X90LA used online tools and tactics similar to other online collective actions, such as hashtag campaigns and Facebook event pages, #90X90LA differed from these efforts in their need to establish trust in order to link distinct networks, collaborate on shared tasks, and negotiate the identity and goals of the grassroots festival. Community-driven festivals like #90X90LA may also serve to establish relationships and trust that extends beyond the festival to future collaborations, community engagement and collective action.

Similar to prior research on trust in teams and in online communities, interpersonal interaction was key to establishing trust. Social media, especially Facebook comment threads, provided a site for social interaction around event coordination. However, this was not sufficient to build trust between networks and amongst groups with either opaque or conflicting values and goals. Personal relationship building often required one-on-one interactions via email, phone or direct messages, and sometimes in-person meetings. Brokers played a pivotal role in facilitating relationships across networks; however, sometimes organizers had to demonstrate extra effort and commitment in new relationships by adapting to participants' needs and communication norms.

The use of online tools allowed organizers to be open about the coordination process and invite broad participation. Having multiple avenues for communication and coordination helped organizers adapt to the needs and communication norms of diverse participants. While essential to building trust, this personalized approach to coordination in a decentralized process created a lack of awareness and opportunities for miscommunication among the organizers. This led to the development of alternate coordination strategies (i.e. one organizer becoming the hub of many collaborations) and possibly corroded trust with community partners.

Festivals are sites for community development and increasingly, through efforts like SXSW's Social and Global Impact Tract (SXSW 2019) activism. Decentralized festival curation processes provide communities the opportunity to reflect on their own values and cultures, share resources, and develop relationships. Grassroot festivals play a role in building trust across diverse groups and networks; I have noted some examples of new and ongoing collaborations that grew out of #90X90LA. On a larger scale, the trust built between individuals and groups may also facilitate future community engagement and collective action.

This case study of a grassroots festival organized through decentralized curatorial processes using online tools is an exploration of how trust is built across networks in a festival context. The organizers used social media to bring openness and transparency to the coordination process, invite broad participation, and support social interaction. Brokers, acting both online and offline, were essential in forging new relationships and building trust, and sometimes organizers exerted extra effort to meet participants' needs and conform to communication norms.

CHAPTER 5

Hybridity in the Justice for Antwon Rose II Movements

6

5.1 Introduction

Much HCI research has focused on how social media platforms, such as Facebook and Twitter, facilitate movement coordination (e.g. [208]) and in some cases have replaced traditional movement infrastructure, forming networked publics through the use of hashtags [67] [161]. However, enthusiasm over the democratizing potential of social media may have led to overstating the role of specific social media platforms in movement building processes. By focusing solely on new technology, we lose sight of the context in which the technology is used and fail to understand how networked processes work hand-in-hand with on-the-ground movement objectives, processes and actions [225]. Although studies have used knowledge of on-the-ground activism to understand networked movements [89] and some studies have discussed how local civic projects and movements use social media [17] [66] [167], these studies do not thoroughly investigate the dynamic relationship and interactions between on-the-ground and networked forms of activism. This chapter seeks to understand how on-the-ground and networked forms of activism interact with and influence each other within a single movement, using the notion of hybridity, following from Mosconi's "hybrid forms of community engagement" [167] to describe the interaction between on-the-ground and networked activism and how meaning is constructed through this interaction.

We present a case study of a grassroots movement, Justice for Antwon Rose II (J4A). J4A is a movement formed in response to the shooting of 17-year-old African-American Antwon Rose II by a police officer, and is part of years long activism and political organizing against police

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brutality in Pittsburgh. J4A is also part of the national Black Lives Matter (BLM) movement, a movement that spread with the help of social media and has developed its own rhetoric, de facto spokespeople and the attention of national politicians and media. As such, J4A played out through events on-the-ground, through social media, including as part of the broader BLM movement, and through an interaction between these spheres.

We examine the relationship between on-the-ground and networked forms of activism in J4A through two aspects of the movement: protest coordination and framing processes. Protest coordination includes planning protests, recruiting participants and dispersing protest-related information. Framing processes are the ways in which movements negotiate and construct meaning, developing narratives, values, shared language and symbols referred to as "frames" (e.g. "We Shall Overcome" or #BlackLivesMatter) [24]. Finding that J4A activists used multiple communication channels and ICT for protest coordination and framing processes, we ask the following research questions: RQ1) How did J4A use ICTs for coordination of protests and other actions? RQ2) How does J4A incorporate local framing processes and emergent, networked framing processes? RQ3) How do these local, hybrid communication strategies affect the reach of frames and influence the overall growth of the movement on Twitter?

In this mixed methods study, we interviewed 5 local J4A organizers and 10 participants in on-the-ground protests. We collected and conducted quantitative social network analysis of over 74,000 tweets and qualitative analysis of a subset of the most retweeted tweets related to J4A from the approximately one month surrounding the trial of Michael Rosfeld, the officer who killed Antwon Rose II, and the protests that followed the not-guilty verdict.

Regarding RQ1, we find that, due in part to concerns about safety and surveillance, J4A did not use Twitter or Facebook for movement coordination and logistics, instead using secure messenger apps and known networks of trust. This represents a departure from movement coordination processes described in HCI literature (e.g. [130] [141] [208]). In response to RQ2, we observed that hybrid framing processes, moving fluidly and interacting between online and offline spheres. In response to RQ3, we find that localized and hybrid communication strategies meant that key activists did not form a strong network core on Twitter. We conclude with a discussion of future research on hybrid movements.

5.2 Thinking Expansively About Networked Activism

Increasingly, the infrastructure of networked movements is not reliant on a single platform or feature, but rather appropriates a diversity of technologies to meet their needs. As social media monitoring has become more common, and secure communication options have become more available, movements are using multiple communication channels with varying levels of visibility. In order

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to address this reality, HCI researchers need to ground their analysis of ICT use in qualitative data and an understanding of the ecology of ICTs activists engage.

Activists choose which channels to communicate through, whether it be an ICT or face-to-face, depending on the task, levels of trust in people and the system [107], and concerns about censorship and surveillance [130]. Activists appropriate particular ICTs to accomplish specific tasks [225], such as Facebook for recruitment and Twitter for internal coordination [55]. Twitter has also been used to disseminate protest-related information and logistics [208], facilitating decentralized coordination [213]. Facebook groups were used to facilitate social interaction between neighbors in a neighborhood infrastructuring project. This led to face-to-face meetings, and continued interaction online and off that Mosconi described as "hybrid forms of engagement" [167].

Social media monitoring by the state has become common practice in the US [83] [178]. Concerns around surveillance are particularly relevant to BLM activists as police openly and violently oppose the movement [186], and have created a counter-movement, e.g. Blue Lives Matter [206]. To combat these concerns, reports from the frontlines of movements in 2019 like Hong Kong's pro-democracy movement and the Catalan independence movement suggest that activists are using end-to-end encrypted messaging services and friend-to-friend technology [61].

Qualitative research can provide social and political context of unfolding events, to provide insight into the information and communication ecology of a movement [225]. Asad and Le Dantec, for example, looked at how ICTs supported a housing justice activist organization on-the-ground in Atlanta [17]. Freelon et al.'s study of Black Lives Matter triangulates Twitter data, web links and interviews to develop an understanding of how the Black Lives Matter media ecology evolved and the role and objectives of activists, Black youth and traditional media agencies within it [89].

The HCI literature has largely focused on how single social media platforms used in social movements, and has not investigated the dynamics and interaction of hybrid processes, spanning social media and on-the-ground organizing.

5.3 Context: Justice for Antwon Rose II

Protests in the Spring of 2020 have revealed the scale of police violence against Black people in the US and worldwide. However, neither police violence, nor the struggle to end racist policing is new. With the increase of smartphones capable of recording violent encounters and instantly broadcasting them on social media, police transgressions can no longer be denied [34] [89]. Public outrage around police brutality targeting Black people came to a head in 2014 with the birth of the nation-wide, loosely coordinated Black Lives Matter movement.

J4A is part of a history of activism in Pittsburgh against systemic racism and police brutality ongoing since 1995, when Jonny Gammage died of asphyxiation during a struggle with suburban

police. In 1997, Pittsburgh was the first city to be issued a consent decree, mandating equity-based policing and a temporary take-over of the Pittsburgh Police Department by the FBI. This was a galvanizing event for the local Black community and inspired several racial justice efforts, but unfortunately has not ended the killing of Black people by police [7]

J4A is a local, grassroots movement against police brutality and violence which emerged in response to the shooting death of 17-year-old African-American Antwon Rose II at the hands of East Pittsburgh Police Officer Michael Rosfeld on June 19, 2018. Hundreds of people attended protests in the days following the shooting. Protests continued throughout the summer and fall.

In March 2019, Michael Rosfeld was put on trial and acquitted of all charges four days later. Michelle Kenney, Antwon Rose II's mother, requested that no protests take place during the trial. Organizers who worked closely with the family throughout the movement honored her request and were careful with the language they used on social media. Instead, organizers created other avenues for participation, primarily through public art and calls for fundraising and assistance during the trial. After the verdict was announced on the evening of March 22, marches commenced in several Pittsburgh neighborhoods. Protests and other actions continued steadily for the next two weeks, the largest of which drew over a thousand youth protesters.

At the time of the trial, the movement had been ongoing for over nine months, and during that time leaders and allies had emerged. 1Hood Media, "a collective of socially conscious artists and activists" (1hood.org), became a hub for the movement. Although they did not organize any protest themselves, they provided a meeting place, lent their expertise in activism and media production, and hosted public events.

J4A is both a local grassroots movement and part of the nationwide movement for Black lives, as evidenced on Twitter by use of #BlackLivesMatter alongside J4A hashtags. It operates both through local, on-the-ground processes and dispersed network processes, making it a prime example of a hybrid movement.

5.4 Methods

In this mixed methods study, we conducted semi-structured interviews and developed a tweet corpus of 74,613 J4A tweets which we analyzed using quantitative social network analysis and through a qualitative analysis of highly retweeted tweets in the corpus.

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[7]The list of Black victims of police violence in Pittsburgh since the 1997 dissent decree, also includes Jordan Miles, Leon Ford, Bruce Kelley Jr., Christopher Tomkins, Mark Daniels, and Romir Talley.

5.4.1 Interviews

We conducted interviews with 5 local organizers and 10 protesters who were recruited through email, and by direct messaging local activists actively tweeting about J4A on Twitter. Participants were at least 18 years old and had attended at least one J4A protest.

Interviews ranged from 1-2.5 hours and were conducted in person, using phone and video conferencing. Interviews were audio recorded, transcribed and analyzed. Our consent form specified that we would not disclose identities, but due to the nature of the public participation in protest, we could not guarantee anonymity. All tweets quoted are paraphrased, and we sometimes refer to "an organizer" rather than a particular study participant to protect the organizer's identity.

The interview protocol included questions about the interviewees' personal, professional and identity-related social justice work; previous activist experience and training; participation in and interaction with J4A online and offline; and questions about their typical social media use and particularly, use of Twitter for activism. In addition, 12/15 interviewees filled out a worksheet reporting their transmission of protest-related information prior to attending a J4A protest. The 13/15 participants who had personal or organizational Twitter accounts were asked to describe up to 15 of their own J4A tweets and retweets, providing context and motivation for communication. The range of J4A tweets by the interviewees during data collection period was March 10 - April 4, 2019. For interviewees who tweeted more than 15 times during the period, researchers selected tweets that were distributed over time and that involved a range of interaction with different users (through retweets or mentions).

Through a process of iterative open coding we developed themes around coordination, information transmission, framing, safety and risk, construction of movement identities, and affect [211].

5.4.2 Participants

The 5 organizers (O1-5) ranged from a community elder who has been working on issues of police brutality in Pittsburgh for over 20 years to a first-time youth organizer. Four organizers were Black, 1 White; 3 men and 2 women. Three of the organizers have careers in racial justice work. In addition, individual organizers self-identified with other identity groups, including Muslim, Jewish and as an immigrant. Three of five organizers tweeted about J4A from their personal accounts. Two did not have personal Twitter accounts; one of these organizers was part of an organization that tweeted frequently about J4A, the other did not have a personal or organizational Twitter account.

The 10 protest participants (P6-P15) all attended at least one J4A protest and reported posting about J4A on social media, eight of whom did so on Twitter during the data collection period. The participants included a multimedia artist, two writers, 3 undergraduate students and 4 graduate students in technology-related fields. Of the 10 protest participants 6 were Black, 2 Asian-American,

and 2 White. In addition, 4 participants are involved in racial justice or Black cultural organizations, 3 participants are involved in a tech-related activist organization, one is involved with a progressive Jewish group, and one is active in reproductive justice.

5.4.3 Twitter Analysis

We collected tweets in the month surrounding the trial of Michael Rosfeld in March and April 2019, capturing the densest periods of protest and largest protests. From 10 March-4 April 2019 we collected 74,613 tweets and N=44,601 users, accessing the Twitter API with the Tweepy Python library. We searched on keywords and hashtags associated with Antwon Rose II and the trial (Appendix A). We used both large-scale social network analysis and qualitative analysis of tweets and users to understand the development and reach of movement narratives and frames.

5.4.4 Social Network Analysis

Using ORA Pro network analysis tools, we created timelines of tweeting, retweeting and hashtag use [13]. The bulk of the protests began after the verdict was announced at approximately 9:00 pm on March 22 and continued through March 25. After analyzing the social network, including the most retweeted tweets and hashtags, we noticed three distinct periods: the pre-protest period March 10-March 22, 8:59 pm, in which local activists were active and expressions of support for the family and speculation about the upcoming trial common; the protest period, March 22, 9:00 pm-March 25, the highest volume of tweets, in which local media, public figures and a few local crowdsourced elites dominated the conversation; and the post-protest period March 26–April 4, in which tweeting slowed, non-local news picked up the story, and analysis of the trial and protests emerged. We identified influential users across a variety of network measures, highly retweeted tweets and popular hashtags in each period. We also looked for reciprocal interactions between users.

We identified "local" users by searching for references to Pittsburgh in Twitter bio or location. While this does not necessarily describe the users' location, it does tell us that they identify strongly with Pittsburgh. We identified 3,916 accounts, 8.1% of unique users and 18% of the tweets in dataset, as local and labeled the rest non-local. We created visualizations of the social network to investigate the network links between local and non-local users.

ORA Pro's analysis of tweeters identifies two classes, which were used in this study: super spreaders, super friends. Super spreaders "generate content which is shared often, and hence share information effectively [13]." Super spreaders are determined by 1) how often a user is mentioned or retweeted by others (out degree centrality), 2) how iteratively a user is mentioned or retweeted by others (page rank centrality), and 3) how often a user is mentioned or retweeted by groups of

others (membership in a large k-core). Super friends "exhibit frequent two-way communication, facilitating large or strong communication networks [13]. Super friends are determined by 1) how often the user mentions or retweets others (total degree centrality in an agent x agent-reciprocal network), 2) how often the user mentions or retweets with many others (total degree centrality unweighted in an agent x agent-reciprocal network), 3) the user's mentions or retweets in cliques (member of many cliques, agent x agent-reciprocal network), and 4) the user's mentions or retweets in groups (member of large k-core, agent x agent-reciprocal network).

In order to understand who comprised the connected core of the Twitter network, and which users were influential at spreading J4A at the periphery. We calculated the influential users in each period and across the entire network. To provide more context, we hand-labeled 1053 unique users with the labels: local news/media, non-local news/media, local activist, public figure, organization, deleted/suspended account or other. We based the labels on users' Twitter bio and information collected in interviews. "Non-local news" includes both national news agencies and local news from other cities, e.g. a Cleveland, OH newspaper. We added user labels and "local" to the attributes used in social network analysis.

5.4.5 Qualitative analysis of twitter data

To understand the reach of movement frames, we analyzed the top 100 most retweeted tweets for each of the three periods, labeling tweets that used language or rhetoric consistent with identified frames. We also hand-labeled all images, video or embedded links depicting on-the- ground protests. In order to approximate the reach of particular frames within each period, we calculated the tweet and retweet frequency of each frame and compared those to tweet and retweet frequency of the top 100 retweeted tweets of that period.

5.5 Findings

In this section, we will first analyze protest coordination, finding distinct processes and ICT use for core organizers, local activist networks and distributed online networks. Next we investigate hybrid framing processes and their reach on Twitter, tracing the development of strategic, discursive and contested J4A frames, and the transformation and transmission of frames to the broader movement for Black lives. Then using social network analysis, we investigate the effects of hybridity on network growth on Twitter.

	Core Organizers	**Local Activists**	**Dispersed Networks**
Task	Movement strategizing and Coordination; security	Recruit and Mobilize; distribute protest info; coordinate attending protests/events	Mobilize; report on protests; amplify; express outrage and grief; form counter-narratives
ICTs	Secure group messaging apps, SMS/direct message, phone	Group chat apps, Slack, email d-lists, ephemeral media (e.g. Snapchat), FB Groups	Broadcast media, e.g. Twitter, Facebook, Instagram; fundraising apps (e.g. CashApp)
On-the-ground	Face-to-face meetings and closed events, two-way radios	working meetings (e.g. making felt roses; training) and events and discussions with limited audience	Protests, vigils, fundraisers, public events, public art

Table 5.1: Communication channels and tools for coordination used by three groups

5.5.1 Protest Coordination

Broadcast channels, such as Twitter and Facebook, were rarely used to coordinate protests. Instead organizers used secure and private messaging and appropriated existing communication channels where networks of trust were already established to plan, coordinate and distribute protest information.

In Table 5.1 we summarize types of coordination reportedly engaged by core organizers, the local activist network and the dispersed online network. As the number and diversity of people engaging with the information increases, the tasks also shift: most recruiting and protest information diffusion occurs through local Pittsburgh networks, while social media is used to amplify the movement, make sense of events and mobilize a dispersed public.

5.5.1.1 Core organizers

In J4A, due largely to concerns about safety and security reported by all 5 organizers, organizers rarely used public-facing social media platforms such as Twitter and Facebook, and only in limited ways, for recruitment. Organizers planned protests and engaged in strategic framing processes in face-to-face meetings and using direct messaging or encrypted messaging applications. Other direct messaging services including text and Facebook Messenger were also used for interpersonal communication between individuals who had high levels of trust.

O4 explained their conservative media strategy, "...you don't necessarily want to do protests where you're tipping off the police, so that they have such an advantage over you." O2 was also confident that the movement was under police surveillance, "The night of the protest (March 22), we knew there were going to be undercover officers. We knew there were going to be informants. We knew there were going to be plain-clothes officers. They were waiting for something to happen." To counter surveillance efforts, O2 and O4 described protest infrastructure that included a trained security team on walkie talkies, and precautions taken, such as collaboration with street medics. The protest participants whom we interviewed commented on the thoughtful and careful organization. P15 reported that "the leadership was very clear" and described the "thoughtfulness and thinking ahead," which was evident.

5.5.1.2 Local activist networks

Protest recruitment was accomplished by appropriating pre-established networks where there was already some degree of affinity and trust between members. This often involved group communication, for example, through a workplace Slack channel or an organization's Google group. Eight of 10 participants reported receiving protest information through existing group channels. The other two participants received protest information directly from a friend.

Although organizers recruited participants through trusted networks, participants sometimes shared information with other groups or broadcast them on Twitter. P15 described sharing protest information on a workplace Slack channel, and P14 shared a protest flyer on a club's Group Snapchat. In one example, P9 received a flyer for a vigil via email and then shared that flyer on Twitter. The participants (P9, P14, P15) did share the organizers' reservations about sharing protest information, but determined that recruiting protesters was worth the potential risk.

Organizers reported amplifying protests by posting updates as they unfolded on Instagram Stories, choosing this media because posts disappear after 24 hours and are difficult to find unless you already follow the user. Organizers directed their posts to other movement participants and potential participants, but may have withheld information or restricted communication (e.g. by posting a protest location after the protest had begun) for the sake of security.

5.5.1.3 Distributed online networks

Broadcast channels such as Twitter or Facebook were rarely used to recruit protesters, but were used to garner support for and express solidarity with Rose's family and the movement. P15, P10 and P9 all followed activists on social media who they perceived to be deeply embedded in the movement. P9 explains, "I knew that [redacted] was in contact with the family, so it's like, if he is at a protest, or he's telling people to go, then it's something that's supported by the family, and I didn't want to participate in actions that weren't, or share information about actions that weren't."

But not everyone who participated in J4A was "in the know" or had previous connections to J4A activists. When P6 realized that she was not connected to core actors in the movement and was not getting up-to-date information, it upset her: "I thought I was connected to all these people who'd know what's going on. Like why am I not getting this information? So it kind of stressed me out and was upsetting." After attending a protest, P6 could then identify activists and groups to follow on Twitter and Facebook.

5.5.2 Hybrid Framing Processes

Here we examine how framing processes occur through a combination of on-the-ground and networked forms of activism, migrating between backstage and frontstage processes and developing through the interaction between them.

Through close reading of tweets and informed by interviews, we tagged tweets according to their frame and tracked how the frame developed over time. Our analysis revealed three different patterns in framing processes. Some frames were developed strategically by a core group of organizers, and were sometimes manifest in on-the-ground actions, and then distributed and amplified through social media. Some frames were developed discursively through an interaction between online and offline processes. Through frame transmission local frames were transformed to resonate with the broader movement. We find that frames developed discursively or through frame transmission had the greatest reach on Twitter.

5.5.2.1 Strategic framing processes

Some frames were developed strategically by organizers and were then broadcast via social media or through on-the-ground actions, which were often reported by legacy media who posted links on social media. 1Hood Media created a series of digital flyers that included calls to "wear purple" in solidarity, and donate to Rose's family through Cash App. These were distributed to other local organizers through a secure group chat. Then the organizers broadcast the flyers on Twitter, Facebook and Instagram nearly simultaneously. Broadcasting flyers from multiple accounts made

	Core Organizers	Local Activists	Dispersed Networks
Task	Movement strategizing and Coordination; security	Recruit and Mobilize; distribute protest info; coordinate attending protests/events	Mobilize; report on protests; amplify; express outrage and grief; form counter-narratives
ICTs	Secure group messaging apps, SMS/direct message, phone	Group chat apps, Slack, email d-lists, ephemeral media (e.g. Snapchat), FB Groups	Broadcast media, e.g. Twitter, Facebook, Instagram; fundraising apps (e.g. CashApp)
On-the-ground	Face-to-face meetings and closed events, two-way radios	working meetings (e.g. making felt roses; training) and events and discussions with limited audience	Protests, vigils, fundraisers, public events, public art

Table 5.2: Communication channels and tools for coordination used by three groups.

it difficult to track these images through retweets or shares. The flyers are more difficult to manipulate than textual posts and hashtags alone, ensuring that the organizers retained control over both the content and visual language.

Neither the flyers nor their content had reach on Twitter. Among the top 100 most retweeted tweets from each period (300 in total), the flyers only appear in three tweets and references to "wear purple" or donate to the victim's family only occur four times, twice in the pre-protest period and twice in the protest period. Together these tweets make up less than 1% of the retweets of the top 100 tweets in the pre-protest period and protest period.

Reporting on-the-ground events broadcasts local frames to a geographically dispersed audience. The pre-protest period included reports of local actions, including public art and events involving Rose's family. Because these actions were relatively small, social media provided a glimpse into events that most people were not able to experience themselves. In the pre-protest period, reports of on-the-ground actions accounted for 6% of retweets in the top 100 tweets. Over half (9 of 17) of the tweets reporting on-the-ground actions were authored by local activists and organizations.

One such action, the purple rose project, a public art project initiated by a progressive Jewish group, involved hanging handmade purple felt roses from the trees surrounding the courthouse (and later outside of Rose's high school). References to the purple rose installation are isolated to the pre-protest period when the art was installed and include 6 tweets in the top 100 most retweeted tweets of the period, 5 reports from local news and 1 tweet from the group who organized the event accounting for 2% of the top 100 pre-protest tweets. The only evidence of purple roses as a motif or symbol of the movement on Twitter is the use of purple roses on digital flyers (Figure 5.1).

Interviewees reported few instances of posting to social media from protests. Two interviewees

reported tweeting directly from a protest or action, one of whom was employed by an organization to do so, and three reported posting to Instagram. O3 was engaged with on-the-ground activities, and posted only after the protest, when he realized that his "social media was blowing up" that he felt compelled to make public statements about J4A on Instagram and Twitter.

In the protest and post-protest period, accounts of on-the-ground actions on Twitter were prevalent; however, most of these accounts were from news agencies rather than protesters on-the-ground. While the media is pivotal in broadcasting a movement, they are also known to reframe protest events in ways that are misaligned with movement objectives [28] [32]. In the protest period 18 of the top 100 tweets were reports of protests, accounting for only 5% of the retweets in the top 100 tweets in the protest period. However, 14 of 18 of these tweets were reports from local or national news agencies, accounting for 86% of those protest-related retweets. In the post-protest period, 27 tweets were reports of on-the-ground actions, accounting for 20% of retweets in this period. However, 15 of 27 tweets were from news agencies, accounting for 64% of protest-related retweets in the post-protest period.

5.5.2.2 Discursive framing processes

Some framing processes developed discursively through conversation with others. In J4A, some frames developed through interaction with media online and others developed through interaction with messages conveyed at on-the-ground protests. Often an individual would share emotionally stirring content in a public setting, either on social media or at an action, and then that content would be repeated and sometimes transformed into a frame used by the movement writ large.

Unlike those developed through strategic processes, these frames did not contain direct calls to action (e.g. "wear purple") or reports of actions. Instead, these frames often included expressions of grief and outrage and countered mainstream news descriptions of Rose as a "thug" through humanizing counternarratives. Eight of the top 100 tweets in the pre-protest period and 6 in the protest period included the humanizing frame, accounting for 10% and 1% of retweets among the top 100 tweets in each period, respectively. The 11 accounts using this frame ranged from national media outlets, to public figures, to local activists and unknown individuals. The success of this frame is due in part to one crowdsourced elite, a local activist with a large Twitter following, his tweets alone (including the humanizing narrative), accounted for 76% of the retweets in the top 100 tweets of the protest period.

Another key framing process evolved around a poem written by Rose titled "I AM NOT WHAT YOU THINK!" The poem, written in his sophomore honors English class, describes watching mothers burying their sons and states that "people believe that I'm just a statistic... I say to them I'm different." P14 explained that hearing the poem was "re-centering;" it helped him relate to Rose as an individual, "It's hard to individualize– 'here's the individual who died today' rather

than 'Black people are dying.'" "I am not what you think" became a rallying cry that was used in chants, flyers, posters, and bracelets. Among the protest participants that I interviewed, the poem was the most frequently mentioned media, and reading or chanting the poem was cited by half of the participants as one of their most moving experiences with J4A. This frame was unique to J4A and Pittsburgh, as O2 describes, "'Hands up, don't shoot' existed in other cities...but this, 'I'm not what you think.' At one point, you literally had 12 hundred plus children in downtown Pittsburgh screaming, 'I'm not what you think!'"

"I am not what you think," a powerful frame locally, was not widely used on Twitter. I coded the top 100 tweets of each period for references, images, or quotes from "I am not what you think." Use of the frame peaks in the protest period (4 tweets of 100), accounting for 2% of the retweets of the top 100 tweets of that period.

Another popular frame emerged on Twitter in the protest period comparing the Pittsburgh police handling of the Tree of Life shooter to the police shooting of Rose. While the two above mentioned frames both encourage empathy and identification with the victim, this frame is an expression of outrage at injustice. This frame sometimes referenced a popular hashtag used after the Tree of Life shooting, #StrongerThanHate, and included variations of "Pittsburgh is stronger than hate unless you're a Black child." This accounted for 22% of the top 100 tweets in the protest period, and included the most retweeted tweet of the whole corpus which was by a non-local public figure.

5.5.2.3 Frame transmission on Twitter

Another distinct framing process occurred on Twitter independent of locally situated framing processes. On Twitter, J4A was often contextualized within the Black Lives Matter movement. Although J4A and Black Lives Matter are inextricably linked, J4A was organized independently, thus I describe the process of using J4A frames in the Black Lives Matter movement as frame transmission [91] [201]. Black Lives Matter frames are more prevalent among the most retweeted tweets than any of the local frames. However, I observed less use of Black Lives Matter hashtags and rhetoric among local users. This suggests that as J4A moved beyond the local sphere, it was transformed to resonate with the broader Black Lives Matter movement and with a geographically dispersed audience. In the pre-protest period, 54% of retweets of the top 100 tweets use Black Lives Matter hashtags or language and rhetoric associated with Black Lives Matter, such as "say his name," and "no justice for Black lives," or mentioned the names of other Black victims of police brutality. However, only 1 of these 9 tweets was by a local user, and that tweet only had 9 retweets. In the protest period, there was an increase in the use of Black Lives Matter hashtags and associated language. In the protest period 33% of retweets of the top 100 tweets referenced Black Lives Matter, and 5 of the 15 tweets were from local accounts. In the post-protest period 29% of the retweets referenced Black Lives Matter and another 31% of retweets related to national

	Super spreaders	Super friends
Pre-protest	6 news (l)	8 news (l)
	2 activist (l)	1 other
	1 public figure	1 suspended
	1 government	
Protest	4 news (l)	5 news (l)
	2 activists (l)	4 other
	2 public figures	1 deleted
	1 news	
	1 government	
Post-protest	3 activists	5 news (l)
	5 other	2 news
	1 public figure	1 other
	1 deleted	1 deleted
		1 public figure
Full corpus	7 news (l)	10 news (l)
	2 activists (l)	
	1 public figure	

Table 5.3: Top 10 influencers by period and in the full corpus. Local accounts indicated by "(l)". "Super spreaders" are those who are frequently retweeted and are part of large networks. "Super friends" have strong connections with others, measured by retweets, following, and mentions.

politics more broadly, which can be attributed to a tweet by one public figure. Of the 21 tweets referencing Black Lives Matter or U.S. politics, only one was from a local account. An analysis of hashtag co-occurrence reveals which hashtags are used alongside J4A hashtags. By examining the hashtags with highest degree centrality in each period, I observe that J4A was contextualized as part of the broader Black Lives Matter movement. However, #BlackLivesMatter and #BLM are less central to local networks than the overall networks. In hashtag co-occurrence network across the corpus and for each period, I see evidence of J4A hashtags being used alongside Black Lives Matter hashtags and language; however, among local accounts, only one Black Lives Matter hashtag is among the top 10 hashtags of a period. The hashtag, #SayHisName, appears in the protest period (ranking 9th).

5.5.2.4 How hybridity affects frame diffusion on Twitter

J4A used face-to-face communication and multiple ICTs for coordination and in framing processes. In this section, I examine how this hybridity affects the composition of the social network on Twitter and the diffusion of frames within it.

J4A organizers, concerned with safety and surveillance, did not use Twitter for coordination or distribution of protest information, preferring more secure and trusted channels. Therefore, there

is a paucity of retweeting or mentions between local activists on Twitter. In the vacuum left by the activists, local news agencies and journalists made up the core of the J4A network.

In social network analysis of the overall tweet corpus, the 10 users who demonstrated the strongest two-way communication ("super friends"), measured through total degree centrality, membership in cliques and large k-core, were all local news accounts [13]. Nearly all reciprocal tweeting, when two users retweet or mention each other, is between news agencies and journalists. In each period, the majority of super friends are journalists: 8 of 10 in the pre-protest period, 5 of 10 during the protest, and in the post-protest period 5 super friends were local 2 national news agencies (Figure 5.2). There is a stark absence of reciprocal tweeting between known activists in the corpus. In a sub-graph of user by user reciprocal tweeting, only 4 of 18 components, triads or larger, included local activists.
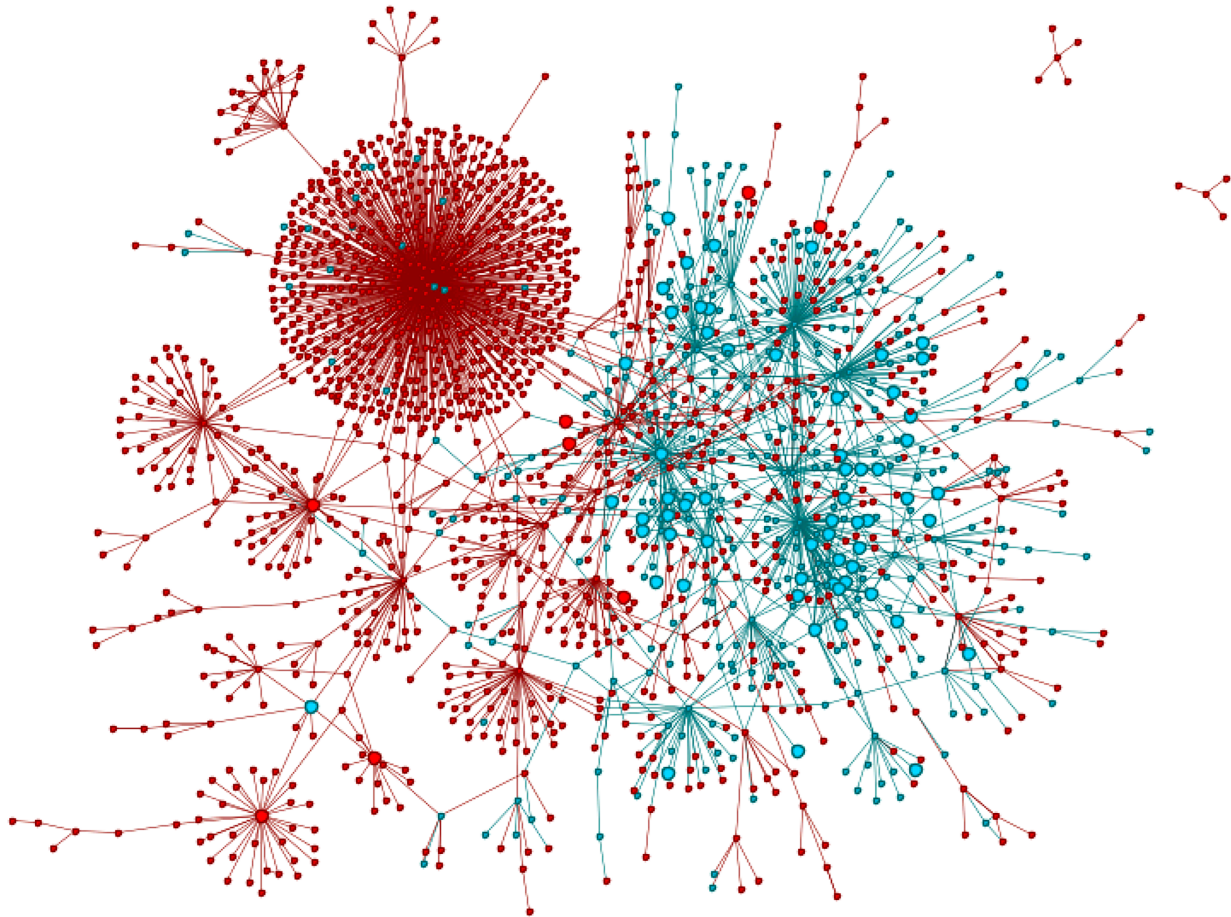
Figure 5.1: User x user network (retweets, mentions and replies) during the protest period. Blue nodes are local users and red nodes are non-local users. Larger nodes represent news agencies and journalists associated with those agencies.

During the protest period two local activist accounts were influential in spreading information,

ranking among the top 10 "super spreaders" (measured by out-degree centrality, page rank centrality and large k- core membership) in the tweet corpus (Figure 5.2). Of the two local activists, one had a large following, ranking third in total retweets during the protest period. He tweeted 21 times during the period and was retweeted a total of 4425 times, accounting for 12% of retweets in the protest period and representing the local user with the greatest individual reach. The tweets of this single user make up 36% of tweets by locals that were retweeted by non-locals across the entire corpus. The network of users (linked by retweets, mentions and replies) during the protest period, divide according to local and non-local users (Figure 5.3). This suggests that information being shared among locals may not be reaching non-local audiences. While the local users are densely connected, the majority of those nodes represent local news agencies and journalists (Figure 5.3). Starburst patterns indicate an account that is highly retweeted or mentioned by others. Two public figures, not news agencies, are the most highly retweeted non-local users.

The lack of interaction between activists, while it may have been strategic to avoid government surveillance, may also explain why locally developed frames struggled to have reach on Twitter. Because local journalists and media outlets make up the connected core of the network, they were highly influential in shaping the narrative of the movement. Non-local public figures played a key role in amplifying the movement's message beyond the local sphere.

5.6 Discussion

In this section, I discuss the benefits of J4A as a hybrid movement, as well as how the study of hybrid movements may make activists more vulnerable to surveillance and the steps I took to mitigate harm. I then discuss the levels of visibility and discoverability afforded by different coordination strategies and tools, hybrid framing processes, and the network characteristics and reach of J4A frames on Twitter.

5.6.1 Surveillance and Research

State and corporate surveillance efforts will continue to put activists at ever greater risk. Security risks and opportunities for data surveillance will increase as our social media ecologies grow and become more integral to our civic lives. As researchers, we have to examine our role in aiding surveillance.

The study of hybridity in social movements exposes activists to such risks. In this study, I have tried to minimize harm by obscuring the backstage processes of organizers and activists and avoiding naming activists, most organizations, and the specific platforms organizers used for secure and private communication–even when these details were offered in interviews. Instead, I used

context provided in the interviews to inform our analysis of the use of public-facing features of social media platforms, primarily Twitter.

When we understand movements as hybrid, and the use of specific ICTs for specific purposes as a choice, then we can understand hybrid movements as designed, even when those design choices are distributed and emergent. This corrects the perception that a social media platform, e.g. Facebook or Twitter, serves as movement infrastructure [219]. It allows us to properly credit activists for their strategies and labor, and gives researchers and technology designers insights to their ICT needs.

5.6.2   Continuum from Backstage to Frontstage

Coordination processes in J4A do not match prior work that describes the use of Twitter for protest coordination (e.g. [208]), and for facilitating coordination among geographically dispersed individuals (e.g. [213]). This is not the case in J4A, where logistical information about protests and timely information during protests was almost entirely absent from Twitter, and secure messenger services, ephemeral media, and group communication channels were often used.

I find that these communication channels do not fit neatly into the dramaturgical framework based on Goffman's conception of frontstage and backstage, where planning happens backstage and recruitment, mobilizing and protest occur frontstage [99] [129]. ICTs used by activists afford a spectrum of different levels of visibility and public accessibility. Ephemeral media and livestream channels, for example, are publicly accessible; however, they require participants to be "in the know" or already connected to the poster in order to locate the media. The limited discoverability of the media prevents it from being a frontstage action like, for example, a rally. Likewise, information distributed through backstage channels, such as through an organization's email distribution list, were easily shared on the recipient's other, more public networks as a recruitment strategy.

As our social technologies evolve to facilitate a spectrum of visibility and discoverability, so too should the dramaturgical framework. Future work on hybrid movements includes adapting the dramaturgical framework to reflect the expanding circles of trust and multiple audiences a movement reaches.

5.6.3   Hybrid Framing Processes

Hybrid framing involves interaction between on-the-ground and networked processes. However, not all framing processes produced frames with reach on Twitter. Strategic framing processes, including media and campaigns designed by local organizers through backstage processes and 'citizen reporting' of on-the-ground actions, had little reach in the Twitter network. Frames devel-

oped discursively, through interaction between on-the-ground and networked, and frontstage and backstage processes had greater reach on Twitter. However, the most successful frames were those that incorporated Black Lives Matter rhetoric and were tweeted by non-local users.

This successful transmission of a frame from one movement to the next [91] depends on bonds of shared sentiment between Twitter users [177], thus, tweets that elicit emotional responses, such as expressions of outrage are likely to be transmitted over other frames, as is demonstrated in the frame comparing the killing of Antwon Rose II to the arrest of the Tree of Life shooter. However, one wonders if the local context for "I'm not what you think" or the purple roses were more visible on Twitter, if these might have become galvanizing symbols not just in Pittsburgh but across the broader movement for Black lives.

5.6.4 The Reach of J4A Frames on Twitter

Because of activist attitudes toward government surveillance, the network lacked a committed activist core, which appears to have had negative effects on the amplification of offline actions and the reach of locally generated frames. Past research indicates that networked movements are made up of a highly committed core of activists who interact frequently, facilitating growth of information networks [18] [28]. In J4A the network core was instead composed of local journalists and news outlets, likely due to attribution patterns and self-promotion.

The movement spread with the help of public figures and by engaging existing Black Lives Matter frames and networks. When Black Lives Matter frames and hashtags were used in connection with J4A, it connected these movements and bolsters reach. It may also reinvigorate Black Lives Matter, influencing ongoing framing processes.

This suggests that hybrid movements have different network characteristics than previously studied networked movements. Further research is necessary to validate these findings and to design appropriate interventions in support of hybrid movements.

5.7 Conclusion

J4A is a hybrid movement; it engaged both local, on-the-ground organizing and networked organizing as evidenced by the hybrid coordination and framing processes described above. Concerns about safety and surveillance deterred organizers from using broadcast media such as Twitter and Facebook for protest coordination; this decision affected network growth on Twitter and online framing processes. As such, an analysis of J4A on Twitter reveals behavior that departs from past research on networked activism regarding coordination and the role of a highly connected core in protest networks. Future research includes developing frameworks to better understand hybrid

movements and identify activist needs for future movement technologies.

Part II

The Dramaturgical Approach to Networked Movements

CHAPTER 6

The Dramaturgical Perspective

6.1 Introduction

A metaphor is more than a literary device. It is an invitation to explore similarities across conceptual domains (Lakoff 1992). Kenneth Burke, a sociologist and influential dramaturgist, defines metaphor as "a device for seeing something in terms of something else. It brings out the thisness of that or the thatness of this" [47]. New metaphors can produce powerful insights (Lakoff, 1992). They help researchers discover and articulate new avenues for study and develop sensitizing concepts [216] to guide research [43].

In Chapter Three, I introduced Deleuze and Guitari's metaphor of the rhizome to describe networked activism [92]. The metaphor offers an alternative to the hierarchical, linear structure of a tree with clearly differentiated parts (i.e. root, trunk, branch), more typically used to describe the evolution of thought and organizational structure [69]. Thinking of growth in networked movements as rhizomatic illuminates how decentralized and multifocal movements, such as BLM, develop and grow over time using social technologies, forming a distributed network of activists. However, like rhizomes growing underground, the mechanisms for growth on the internet are often hidden (Buchanan, 2007) and the divergence of rhizomes appears chaotic (Mackness 2016).

As an HCI researcher, my objective is to uncover these hidden mechanisms, which include a tangle of affordances and algorithms of the social technologies used, individual behaviors, and movement processes. For me, this is where the conceptual metaphor of a rhizome falls apart (although not necessarily the Delueze and Guitari's underlying philosophy). It implies that networked growth is organic and, therefore, outside of the control of humans, when, in fact, networked growth is a complex amalgamation of the choices made by platform designers, movement organizers, journalists, local policy makers, activists and audiences.

In an attempt to untangle this web in the second part of this dissertation, I will revisit a metaphor that has been used both by social movement scholars and interaction designers: the metaphor of theatre. Theatre, or indeed any performance, is bound by time and space and is understood within

a cultural and historical context. It offers practices for understanding locally situated movements and theories to understand how performances are developed and performed across physical and virtual realms.

I will focus on how scripts are developed through collaborative processes and analyze communication on Twitter as if it is itself a script guiding movement participation, while simultaneously offering evidence of emergent scripting processes. To make this comparison, I will employ the dramaturgical perspective in sociology, which offers tools for integrating findings around identity construction, visibility in coordination, and framing processes—topics I addressed in the previous three chapters. Specifically, I will use Benford and Hunt's concept of scripting, which ties identity construction and framing processes to observable actions in movement-building. The dramaturgical perspective was developed before social media and the turn toward networked movements; therefore, it must be adapted. I will draw from performance studies and collaborative theatre practices which are themselves horizontal and distributed to provide insights into networked movements.

In this chapter, recognizing that HCI researchers are not likely to have training in either theatre or the dramaturgical perspective in sociology, I will provide background research on the dramaturgical perspective, and performance theory, and discuss their application to networked movements, using examples from my research and the literature.

6.2   Drama and Performance

As Richard Schechner, one of the founders of performance studies, explains, "Performance exists only as actions, interactions and relationships" [198]. The study of performance is inclusive; it extends beyond the stage to actions performed as part of rituals, play, and in everyday life.

Schechner defines commonly used terms that will be important for our understanding of scripting: drama, script, theatre and performance. He describes the relationship between these concepts as a series of concentric circles (Fig #) [197]. Drama is at the core of the model; drama is the text, scenario, plan or map. It is the domain of the author or shaman—drama is a tool for communication that can be carried across time and space. In order to grasp the important distinction between "drama" and "script," Schechner asks the reader in a 1973 essay not to think of a "script" in typical Western literary terms as the text of a play written by the likes of Sophocles or Tennessee Williams. Instead, the script is the knowledge of what to do and how to do it. This definition has more in common with the use of "scripts" as schemas in cognitive psychology [7]. This is the domain of the master or guru. The script is transmitted by someone who knows it and can teach it to others. Imagine if you had the text of a chant used at a tribal ritual, but there were no members of the tribe who knew how to do the accompanying dance, how to prepare the make-up or costumes, arrange

the performing space, or the spectators. You might understand the drama of the ritual—its purpose and the symbolic meaning expressed in text—but you would not be able to perform it because the script has been lost. In Western theatre, drama has supplanted the script, so that each production interprets how to do the drama in a new way. Avant-garde and postmodern theatre attempts to correct this by denying the primacy of the script and placing greater emphasis on "the doing" in the creation of new works and in the transmission of movement scripts and choreography scores [33].

Theatre is "the event enacted by a specific group of performers." It is a specific manifestation of the drama and script. Theatre has a clear beginning and ending, and is defined by the performance space, be that a traditional proscenium theatre or a patch of sidewalk used by a street performer. Performance is the most ill-defined of the circles as it encompasses both the performers and the audience. It includes all events and actions that take place from the moment that the spectator enters the field of performance until they leave [197]. In a traditional theatre setting, for example, this might include pre-show mingling among audience members or reading the program.
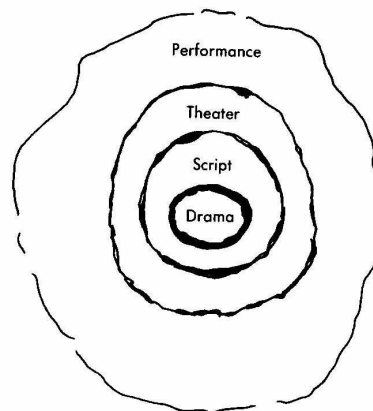
Figure 6.1: Model of concentric circles illustrating the relationship between concepts in performance studies by Richard Schechner

6.2.1 All the World's a Stage: Drama As Metaphor

Theatre has been used as a metaphor to make meaning out of life ever since Aristotle introduced the idea of mimesis, drama as a representation of human action, and Plato described the world as a stage controlled by the gods. Schechner, one of the founders of performance studies, described theatre as life "infiltrated by structure" [197]. Metaphors abound in interaction design, from the "desktop" interface to "cloud" computing. Brenda Laurel in *Computer as Theatre* compared computer interfaces—and by extension virtual worlds—to a stage in which the actors are users and computer agents. This premise allowed Laurel to explore other tools of the theatre to structure

virtual experiences, including dramatic forms and elements of stage design [137]. Metaphors continue to be important tools in HCI design; for example, Dan Lockton et al. and Nick Logler et al. have developed generative workshop methods using metaphors ([145]; [146]).

Theatre as metaphor came to prominence in sociology through the work of Erving Goffman [99]. Goffman used dramaturgy to analyze how individuals manage their social identities, assuming different roles, behaviors, manners of speech, and even costumes, depending on the audience. According to Goffman, social interaction happens either "frontstage" or "backstage." Backstage is where actors prepare for their frontstage performances; they step out of character and are their authentic selves [99]. In HCI, the theory of impression management is often used to explain user behavior on social technologies, perceived as a type of "frontstage." It has been used to understand how social media users curate their feed, make choices about what to post, manage their identity presentation over time ([233]; [232]) and through life transitions ([108]; [195]), and manage reputation [203] across platforms [223].

Dramaturgy is about making meaning through human behavior, which is variable and must be understood in relationship to others [80]. Edgely summarized the perspective as "our doings constitute our beings" [80]. The study of "performance," a broad and inclusive term used to describe any action that produces meaning, has been used as a heuristic to study human behavior in anthropology, sociology, linguistics, history, architecture and the burgeoning field of performance studies [79]. In the post-modernist perspective, society is both defined and constructed by performance, experience and its representations. There is an emphasis on the concrete experiences and actions of individuals rather than on abstract concepts or universal truths, which do not adequately take into account culture, economics, or power dynamics. The study of performance and performativity influenced the development of critical studies, queer studies, cultural studies and ethnic studies [198].

The post-modern performative turn extended beyond Goffman, deeply influencing the humanities and social sciences in the mid to late twentieth century [101]. Contemporaneous to Goffman, anthropologist Victor Turner used dramaturgy to understand the role of ritual, symbols, and rites of passage in the cultural life of tribal communities. Through conversation and collaboration with Turner, theatre director Richard Schechner, one of the founders of the interdisciplinary field of performance studies, came to understand performance theory as a social science: "My studies of anthropology, social psychology, psychoanalysis, and gestalt therapy are the bases of my belief that performance theory is a social science, not a branch of aesthetics. I reject aesthetics" [197].

Social scientists, such as Turner and Goffman, analyzed social interactions as if they were theatre, and Schechner used performance theory to analyze the theatrical experience as a social scientist. I pull both from the dramaturgical perspective in sociology and performance theory to gain a deeper understanding of performance and performativity in online protest and networked

movements.

6.3   Social Movement as Drama

"Power concedes nothing without a demand. It never did and it never will."

—Frederick Douglass, August 3, 1857

Social drama describes events in our social and/or political lives exemplified by conflict, competition or antagonism [214]. The fight for justice is inherently rife with struggle and conflict. By developing a collective identity, social justice movements not only define the "us" that makes up a movement, but the "them," the oppressive people or forces that stand in the way of liberation (or are perceived obstacles of liberation) [181], [8], [6]. This is critical in uniting the movement under a set of shared objectives and frames, and in identifying a specific target.

Movements can be thought of as social dramas "in which protagonists and antagonists clash as they seek to affect audiences' interpretations of power relations" [22]. Sociologist Jeffrey C. Alexander describes social movements as "powerful dramas" through which "Injustice must be dramatized, and so must hope for civil repair" [11].

Turner identifies four stages of a social drama: the breach, crisis, redress, and reintegration or schism. A breach is a violation of norms and/or relationships. A crisis is an event stemming from the breach that cannot be overlooked; it must be immediately addressed. Although a popular activist trope is that police killing of Black Americans is the system working exactly as designed [127], the ongoing issue of police brutality against Black Americans is a breach in the police promise to "protect and serve" the citizenry. The murder of George Floyd by Officer Derek Chauvin and the widely shared video showing three officers standing callously by as he died of asphyxiation is the crisis. Through redress, actors move from chaos to meaningful processes [215]. Redress includes the processes by which the actors attempt to heal the breach and resolve the conflict. Redress might include antagonistic actions like protest, revolt or war as means to right the wrong, the result of which will lead either to reintegration or schism [214].

Turner and Schechner investigated the relationship between social dramas and aesthetic or cultural dramas (Turner uses the term "cultural drama" and Schechner in later articles refers to it as "aesthetic drama." Both terms refer to drama as we typically encounter it in theatrical performance). Turner said that cultural drama draws meaning from social drama, and thus is the underlying force driving the dramatic action [197]. For example, in Shakespeare's *Romeo and Juliet*, the aesthetic drama is the story of two ill-fated young lovers, but the underlying social drama is an ongoing feud among prominent families that has plagued the town with violence. Through the deaths of Romeo and Juliet the breach is repaired, and the Capulets and Montagues are reintegrated into

civic life. Dramaturgy as it is used in theatrical production, works to make the social drama, the social and political context, more prescient, felt and consequential to the performance unfolding.
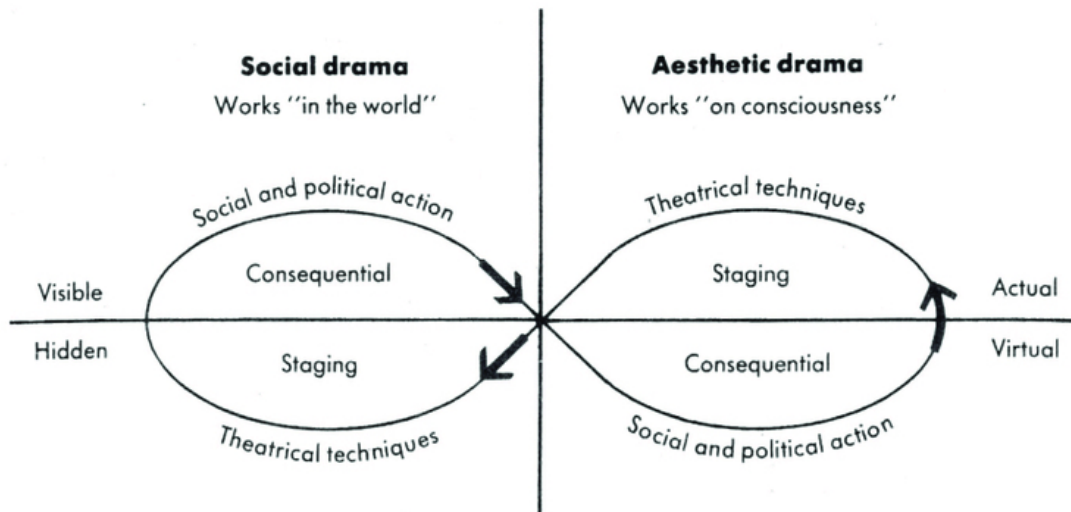
Figure 6.2: Turner-Schechner Infinity Loop Model

Schechner elaborated on Turner's theory, drafting the infinity loop model shown in Fig 6.2, which Turner later took up. In this model, theatrical techniques, i.e. Aesthetic drama, are the underlying forces driving social dramas. Later Benford and Hunt identified four dramatic techniques employed by movements: scripting, staging, performing and interpreting [23]. If the social drama is the movement, the four techniques represent the hidden theatrical techniques in the Schechner-Turner infinity loop model. Mapping these techniques to Schechner's concentric circles of performance, scripting is primarily concerned with the script, staging with creating the theatrical event, and performing with the performance. Interpretation is a process that occurs in every circle. However, because movements are dynamic and emergent and often lack a clear beginning and end, these four techniques are overlapping and concurrent. I will draw from these four techniques, primarily focusing on scripting, in the proceeding chapters.

6.3.1 Scripting

A playscript is comprised of three elements: the characters, the dialogue, and stage directions. In traditional Western theatre, the script is written by the playwright and is complete before the rehearsal process begins. Actors and directors often see their jobs as "bringing the text to life" and refer to their work as "in service of the text." Although highly simplified, this roughly mirrors centralized movement organizing, where strategies and frames are decided by a core group of activists

(constituting the script) and then masses of volunteers carry out these strategies (the performance) "in service" of the movement.

In movement scripting as Benford and Hunt describe it, the dialogue is analogous to movement frames. Roles, developed through identity construction processes, are like characters. Explicit and implicit calls to action are like stage directions. Scripting also extends beyond explicit calls to action and includes the "orchestration of emotion" at protest, events, or through advocacy campaigns [22].

Movement leaders are responsible for setting the scene by providing context on the broader social drama and shaping participant's behavior through persuasive speech and by modeling the behavior themselves. Scripts, however, do not dictate action, but guide it. Each actor who performs the script interprets it through their performance, transforming it—this too is an aspect of scripting. Picture a leader, such as United Farm Worker's Dolores Huerta, with a bullhorn to her mouth, leading protesters in repetitions of the chant "¡Sí se puede!" The crowd takes up her words, tone and accompanying actions, repeating it back to her. Soon, the crowd's voice is louder than Huerta's; she could stop chanting, and the crowd would continue. She has successfully transmitted the script to the protesters. A protester might add a gesture of their own, which their near neighbors mimic, until the gesture has spread through the crowd. A transformed script has emerged through the performance of the protesters.

6.3.1.1 Scripting in networked movements

Scripting as Benford and Hunt describe it, however, does not account for the variations in scripting that we find in networked movements. Some scripts in networked movements may be created strategically by movement leaders and transformed by degree through user interaction with the script on social media. However, scripts are also created through decentralized or collaborative processes on social media without input or backstage strategizing from movement leaders. In order to account for these variations, I propose that we update our notions of theatre, and theatre as a metaphor, and draw instead from contemporary collaborative theatre-making processes.

In some postmodern theatre, what is often referred to as devised theatre, a theatre group collaboratively develops the script. In this process the text, the actions or choreography and character development are emergent, often drawing from the actors' personal experiences, historical and classic texts, ethnographic research, or current events "ripped from the headlines," for example, the Tectonic Theater Company's *Laramie Project* about the murder of Matthew Shepard. As the dialogue, characters, choreography, and elements of design are being developed simultaneously, the text no longer has primacy and neither does the playwright; instead the actors and artists are empowered to shape the play according to their own interests and skills.

Devised theatre experiments with both the method of creating theatre and the forms that the-

atre can take. The results are often unpredictable, and the methods evolve according to the needs of the particular theatre troupe. Devised theatre produces a script which is unique to the theatre troupe and very difficult to transmit to a new group of actors even when video documentation of the performance exists. Often, there is no intention of transmitting the script to other troupes. Instead theatre companies may teach their methods for devising through workshops and residency programs, such as SITI Company's Saratoga International Theatre Institute or Cornerstone Theater Company's traveling residency that brings their community-based methods to new rural and urban communities. By transmitting the methods, it allows new troupes to create dramas that are particular to their experience and context. The method becomes a meta-script and developing the methods a scripting process in its own right. I have explored adopting devising methods in the design of networked movements [59], the design of transformational games [57], [58], and the design of future human-robot interactions [149]. I believe there is much more to explore in the application of devised scripting methods in HCI design, specifically in the design of networked movements and in the technologies that support them.

In the two types of scripting processes described above the relationship of the actors to the script is very different. In traditional theatre the actor performs "in service" of the script adding personality or variation through their performance. In devised theatre, the actors are co-authors of the script from the beginning of the process, as such their own skills, perspectives and experiences are folded into the scripting process. Similarly, in collective action, following this traditional model, movement leaders typically transmit the script through their performances, which volunteer protesters then mimic and through their performances transform. In networked movements, online participants are involved in scripting from the onset. Through emergent framing and identity construction processes, the script, comprised of frames, roles and expected behaviors are developed.

This analogy may illuminate why it is difficult for networked movements to transmit their scripts beyond their local network to the national stage without the help of news media or celebrities, as I found in J4A. It also suggests that there may be methods of scripting, beyond individual scripts, that are passed between movements. Analyzing and drawing attention to these methods will make it possible to share them with a broader activist community.

6.3.2 Staging

Benford and Hunt uses staging as a catch-all phrase to describe all of the preparation and design that goes into producing a protest or action. In theatre terms, this includes theatrical elements, such as stage design, costumes and make-up, and the arrangement of the audience. Benford and Hunt's definition also includes the work of the theater producer's back office: marketing, budgeting and resource allocation, fundraising, scheduling, and staffing. Therefore, movement staging occurs

both frontstage and backstage. Before a protest staging includes backstage labor to plan logistics, coordinate with stakeholders, and recruit participants—all of the mechanizations of coordination and mobilization. Staging also includes the strategic selection of the protest location and the props, costumes and symbols used. Elements of stage design symbolize the movement's beliefs and values [155]. Frontstage, staging includes developing and manipulating symbols, for example, flag waving, a raised fist, or use of props, such as the placement of the altar to Antwon Rose II in front of the Pittsburgh courthouse during the Rosfeld trial.

The use of space and the orientation of the protesters' bodies in space concretizes and communicates notions of social and political distance and power [114]. For example, in 2017, dozens of disabled people gathered outside of Senate Majority Leader Mitch McConnell's office to protest a new health care bill that would significantly limit coverage. The protesters staged a "die-in," lying on the floor until they were forcibly removed by police. The protesters were laying their bodies, health, and symbolic death at the door of McConnell. The choice of location and their physical arrangement was intended to make the politician, and by extension, the rest of the party and country, face the impacts of the bill: the death of many disabled citizens.

6.3.2.1 Staging in networked movements

In networked movements, significant aspects of staging on-the-ground protests may happen frontstage on social media platforms. Activists use social media to recruit participants and broadcast protest logistics [208]. They also might coordinate, delegate tasks, and openly debate movement strategies ([213]; [130]). In #90X90LA, for example, coordination of the festival was intentionally a frontstage task meant to encourage greater volunteer involvement in festival curation. Logistical planning happened in Facebook comment threads and ideas for events were openly discussed on social media with and without the festival organizers' involvement.

In devised theatre, scripting and the design elements of staging (differentiated here from the back office tasks of budgeting and scheduling) are intertwined. The script and the stage design emerge simultaneously through a collaborative, multidisciplinary process. This type of simultaneous scripting and staging sometimes occurs in networked movements and campaigns.

Letter for Black Lives is an example of a campaign that emerged and was largely staged on social media. It illustrates how scripting, staging and performance intertwine when unfolding on social media. After the shooting death of Philando Castile on July 6, 2016, his fiancé, Diamond Reynolds, live-streamed a video to Facebook describing the officer who shot Castile as Chinese (which was not accurate). By noon on July 8, the video had been viewed over 4.9 million times [157]. Some progressive Asian-Americans feared a repeat of the 2015 pro-Liang rallies (in support of the officer who killed Akai Gurley and was prosecuted for it) and wanted to do more to support Black Lives Matter. On July 7, Christine Xu, a Chinese-American ethnographer, tweeted as part

of a series of tweets, "Asian Americans who support BLM we need to get ahead of our community organizing another pro-Liang rally. Talk to your families today. In fact, let's draft letters in our native languages to our parents and our communities" [227].

Xu posted a link to a Google Doc and invited the internet community to contribute to a first draft of an open letter "to our parents." The crowdsourced effort instantly got hundreds of people involved in drafting the letter. A core group of about a dozen people emerged and moved backchannel conversations form the Google Doc comments to a Twitter group, made the Google doc comment-only, and individuals worked to edit and polish the letter.

On July 8, the letter "Dear Mom, Dad, Uncle, Auntie: Black Lives Matter to Us, Too" was published on Google Docs and on several blogs including washingtonpost.com [90]. The project solidified under the name "Letters for Black Lives" and the project's leaders worked to create an online presence, including a website, Twitter handle and Facebook page. When the project officially launched on July 11, it included a video featuring Asian-American activists reading the letter aloud, Medium publications of over 30 crowdsourced translations of the letter, and alternate versions by and for Latinx and African immigrants. Core members of the project also held a live press conference on Slack [116]. In the following weeks, the project was covered in online, cable and print press by publications, such as NBC News, Forbes, cnn.com, and native language press, such as World Journal. In response to the 2020 BLM protests, the project has been revived and a new letter published.

Using Twitter, Google Docs, Slack, Medium, and other blogs, a dispersed group of activists staged an entire movement. Much of the staging happened on public frontstage platforms. The staging process was designed to include as many activists as possible. This illustrates an important variation in staging networked movements.

6.3.3 Performing

In theatre, performing is the realm of the actor; it occurs both during rehearsals and at the theatrical event. Performing is inherently experiential and representative of meaningful aspects of the human experience. In movements, performing is the collective actions that activists take and the experience of carrying out those actions. By performing movement scripts, movement actors seek to persuade those in power to act according to those scripts or, in the case of antagonistic audience, illicit a desired response [22]. Performing, taking action to cause desired change, is empowering to the actor, and can bring about a "transformation of self, moving from a person who is acted upon by external forces to an agent actively shaping the scene" [22]. Turner refers to performing as a reflexive act ("in performing he reveals himself to himself"), not just individuals but collectives might know themselves better by performing or observing performances by others

[215]. As such, expected norms and scripts can emerge from the performance; however, if actors deviate severely from movement scripts, they run the risk of undermining the performance and being reprimanded by other movement participants. The collective performance of actions, such as stomping the ground or chanting, lends to feelings of belonging and the pride that comes of feeling part of something bigger than oneself [114] [103].

6.3.3.1 Performing in networked movements

In networked movements, performing includes actions taken on public-facing social media platforms. On video platforms like TikTok, it may be easy to associate user content with performance. Performing, however, occurs on any social media platform and might range from liking a post, sharing or commenting on a post, sharing personal experiences through text, images or video, changing a profile picture, or developing new or riffing on existing hashtags and memes. The question, debated by those who view online activism as "slacktivism" (e.g. [98]), is whether or not these low-effort performances are adequate enough to engender identity transformation [141] and feelings of belonging [126].

Here, again, the act of performing may overlap and intertwine with scripting and staging. Staging, as in the example of Letters for Black Lives, is also a performance by and with likeminded Asian Americans. In devised theatre, the rehearsal process includes improvisation, movement exercises and exploratory performances of text. Performance is one of the primary means of scripting and one of the tools used to experiment with staging. Likewise, it is through performance on social media sites that scripts emerge and staging happens. This raises further questions about hybridity and the relationship between networked performances and performances on-the-ground, such as at protests: e.g. is online activism a type of generative rehearsal for offline protest?

6.3.4 Interpreting

We typically think of interpreting as the realm of the audience [183], but in any theatre production interpretation is required of the actors who make decisions about how to deliver lines, the director who interprets the text into movements in space and time, and the numerous designers who interpret the text and the vision of the director into aesthetic and functional design choices. Interpreting, in both theatre and movements, is how the audience and actors make meaning of the event [22]. The audience and actors of a protest make meaning from the performance. How they interpret the performance goes beyond the events of a protest or movement. It is influenced by their own identities and experiences [118]. In movements, the goal of performing is often to shift the audience's perception on an issue and their position in relationship to those in power.

6.4　Protest as Theatre

While Benford and Hunt analyze social movements as dramas, other scholars focus on the performative aspects of protest [126]. In Mayo's 1978 study on the design of political rallies and propaganda, he analyzes Nazi rallies of the 1930's, pointing out how staging techniques, like the arrangement of the audience—lined up in rows like "architectural bricks"— and the placement of flags throughout the space to extend the symbolism of the stage, persuasively communicate and instill the movements' values [155].

Hatuka, in the *Design of Protest* breaks down different choreographies associated with types of protests, such as marches, sit-ins, die-ins, and occupations [114]. Each choreography uses different staging techniques and public spaces to convey particular power dynamics. For example, a march through the city gathers protesters from each neighborhood it passes, a symbol of unity across geography, finally amassing at the stairs of city hall, symbolically and literally collapsing the distance between the people and the seat of government power.

I refer back to the Turner-Schechner Infinity Loop diagram (Fig 4) to explain the relationship between social drama and protest. In the grounding definitions in Chapter 2, I differentiated between social movements, the ongoing work for collective social change, and a hashtag campaign, a typically short-lived online event. Social movements can be analyzed in terms of social drama, using the dramaturgical approach of sociologists Benford and Hunt to bring to light dramatic elements and theatrical techniques. A protest, a hashtag or other media campaign, is one event of many executed by a movement. These events are theatre and, I suggest best represented by the right side of the diagram, the "aesthetic drama." These events can be analyzed using the dramaturgical tools of the performance scholar to decode or unearth the underlying social drama.

In the following chapters, I will build on both the dramaturgical perspective from sociological and performance studies to further analyze networked movements and elaborate on hybridity. Employing a dramaturgical lens allows me to pull together different aspects of movement processes which I investigated in previous chapters into a single theoretical framework. It also guides the discovery of new elements and processes specific to hybrid movement processes using concepts such as scripting.

CHAPTER 7

Adapting the Dramaturgical Perspective for Networked Movements

7.1 Introduction

Much has been discussed in previous chapters about the effectiveness of social media in moving someone from an audience member to an actor (activist). I will use this chapter and the next to investigate this transformation and the effectiveness of scripts to transform a Twitter user into an activist on or off the platforms.

Scripts provide directions on how to behave during the act of protest. We can think of tweets as a type of protest script, communicating narratives, slogans, and actions for online and offline protests. Unlike playscripts that are complete before play rehearsals begin, or traditional social movements where leadership may work backstage to develop scripts before a protest, Twitter scripting happens simultaneous to the performance. Each time an actor interprets a script expressed in a tweet and then performs it by tweeting, retweeting, liking, donating, etc., their action serves as a script for other actors on the platform. It is like a game of virtual "telephone," with popular interpretations emerging as movement scripts writ large.

I elaborate on the script coding method, which draws from Stanislavski's method of finding an actor's objective through close reading and script analysis [207]. I then provide examples of script types and common objectives from the Pittsburgh BLM 2020 dataset, addressing the research questions: What are the characteristics of different script types? And how do scripts explicitly or implicitly communicate instructions for movement participation? I then discuss the potential insights and knowledge contributions that this method of analysis offers, posing questions about the ability of a script to transform an audience member into a movement participant online or off.

One of the strengths of this method of analysis is that the codes can be applied to any networked movement on any social media platform. The transferability of the method and coding scheme makes it ideal for contemporary rhizomatic networked movements which utilize a number of media and communication platforms.

7.2 Twitter As a Stage

Since Twitter launched in 2006, researchers have struggled to describe the microblogging site: Is it a social network or a news media [134]? In this section, I argue that metaphors of the theatre and stage are apt, because they better explain the event-driven and attention reliant nature of the platform.

Much of the research on Twitter uses either one or both of these metaphors to compare social media to pre-internet analogs. If Twitter is a social network, then it is compared to a conversation and researchers study its conversational qualities through replies, mentions, reciprocal behaviors, and retweets, especially quote retweets [39]. When researchers conceive of Twitter as a broadcast media, they employ the metaphor of a newspaper, focusing on the construction of users' news feeds, citizen reporting and the use of Twitter by journalists both as a source and as a broadcast medium. Critiques of Twitter-as-newspaper include the proliferation of fake news [105], the authenticity and credibility of sources [150] [199], subjectivity [177], and concerted disinformation campaigns [31].

At the intersection of conversation and news lies another popular notion that Twitter is or should be the "public sphere," a place where open, democratic societies can discuss political issues and ideologies [175]; [143] This extends the conversation metaphor from the interpersonal to the societal and situates journalism as central to our understanding of politics and society. If one imagines Twitter as the public sphere, then the critiques that follow include the exclusion of those with limited internet access or social media skills, "filter bubbles," or "echo chambers" [63].

If Twitter is a public sphere, it is a skewed representation of the public. Nielson's theory of participation inequality states that 90% of online community members are lurkers, 9% participate occasionally and 1% of users make most of the contributions [172]. Antelmi et al's, more recent study of Twitter breaks down participation using features, "liking" being the lowest level of participation. According to their study, 3 out of 4 Twitter users are either lurkers or participate through liking [14]. And studies of celebrity and crowdsourced elites suggest that their contributions significantly overshadow other users [39].

Baym and boyd discuss the complicated relationship between "audiences" and "publics' in social media [20]. While audiences are often thought of as belonging to a circumscribed domain—one reads the paper or watches TV from home, an audience for a concert is contained by the theatre—publics are more visible, more participatory and associated with rational thought in comparison to the emotional, cathartic experiences of audiences [144]. Social media blurs the lines between audiences and publics, making audiences more visible and the experience more collective, while also allowing for more personalized, affective and periphery forms of participation in the public sphere [144]. Neither "audience" nor "public" accurately describe using Twitter for

creative or entertainment purposes, as a place to play, riff, create and share humorous content, and other forms of self-expression.

Social movements take advantage of affordances of Twitter that allow ad hoc publics to form quickly [44], especially in response to events, and become visible or "trending" to large audiences of users. I propose expanding our metaphors to better explain the event-driven nature of attention and the transitive nature of the "publics" that form, beyond those of a conversation or newspapers to that of performance and the stage. A theatrical performance is bound by space, time and interaction with an audience [198]. Unlike a staged performance where the performers dictate the duration of the performance, in a virtual setting, the temporal bounds of a performance are dictated by the attention that the performance receives (the duration of the trending topic), much like the way an audience's applause starts, builds and dies down. The physical bounds of the "stage" can be compared to a social network where the performance is typically located at the core of the network with peripheral actors and audiences branching outward from it.

Because network formation on Twitter is ad hoc and emergent and narrative development pluralistic [159], [177], individual users on Twitter may be participating as an actor or audience in multiple performances at any one time. We can then use the dramaturgical approaches to tease out the complicated relationships between participants, publics and audiences, using concepts such as scripting, audience segmentation, and staging to communicate social and spatial relationships.

Looking at social networks as stages, and participation as performance, shifts how researchers and designers think about networked movements in two important ways. First, it provides a metaphor that more closely matches the event-driven nature of ad hoc social networks and allows terms like "online community" to be reserved for spaces where shared interest, strong ties, and sustained relationships over time are prevalent [133]. Online communities are important for local movement organizing and coordination. Organizers may use Twitter for communication, but as I observed in J4A and #90X90LA, the work of building trust and developing strategies often happens in more private and controlled online spaces. Second, it emphasizes the importance of the individual user's decision to attend or participate in the performance of networked activism, since it is their participation that extends the space and duration of performance. One way that social networks differ from a stage is that the boundaries of a stage are clear, as is the beginning and end of the performance. I see this as a strength of the metaphor, suggesting design opportunities to make the bounds of space and time more transparent for ad hoc social networks.

7.2.1 Script Types

In Chapter 5, I demonstrated that framing processes occur through interactions between emergent, social media processes, on-the-ground protest and strategic processes. In this study, I focus only

on what can be observed on Twitter. Networked movement scripts are emergent and develop over time through iteration and interpretation at the individual and group level. Every movement-related tweet plays a role in movement scripting processes by shaping movement frames and guiding action through implied and explicit calls. The more attention a script receives, the more it trends on Twitter, signaling convergence on the script among networked activists and providing instructions for how to take collective action [96].

Different scripts provide directions on how to act according to different script types: staging, performing or interpreting. For example, a tweet containing information for attending or preparing for a protest (e.g. "Wear purple," "write the phone number for legal aid on your arm in sharpie," or "turn off location tracking on your phone") is a staging script. A tweet sharing reports, images, or video from a protest extends the performance of protest to the virtual stage, and hence is a performance script. A performance script may also guide acts of protest on the platform through personal expression, statements of solidarity and pressuring public officials. A tweet providing additional context or interpretation of unfolding events is an interpretive script. These three types of tweets have been identified in past literature on networked movements; although there is occasional debate on the effectiveness of different approaches and uses of Twitter, the networked movement scholar will recognize each of these uses.

Staging scripts include sharing logistics about protests and other movement coordination activities. This might include fliers with the date and time of an action, but it also might include timely information about the location of police, changing curfews, or instructions on what to do if arrested. Staging directly relates to the coordination literature in the study of networked movements and crisis response. Staging relates to subjects such as Starbird and Palen's analysis of coordination and reporting from Tahrir Square in Egypt's 2011 revolution [208], Tufekci analyses of the strengths and weaknesses of virtual coordination during the Arab Spring [213], and algorithmic methods of extracting timely information on social media for disaster response [121] [194].

A movement-related online performance could either be native to the platform or an extension of on-the-ground protest into the virtual space. Performance scripts show up in the citizen reporting literature [165], affective reporting, sharing personal feelings and perspectives on the movements [177], and virtual protest, including changing a profile picture [209], posting a selfie [142], or sharing a personal experience. In each of these cases, the stage on which the protest is performed is an online network.

Interpreting is a way to make meaning of unfolding events, which includes shaping movement narratives or counternarratives. The literature on this is significant, including counternarrative research on highjacking #myNYPD, or Dimond et al's street harassment mapping tool [75][122].

Thinking of tweets as scripts that implicitly or explicitly guide activist behaviors, messages, and role development, and the act of tweeting as contributing to the emergent process of scripting,

allows researchers to examine how social media contributes to movement scripting at the micro-level (tweet by tweet), and the macro-level through trending topics and shifts in public opinion.

7.3   Methods

In this section, I describe how the Twitter data was collected, filtered and divided into subsets around spikes in tweeting that corresponded with protests on the ground. I then describe in detail the process of coding using dramaturgical techniques and the coding bible used.

As a resident of Pittsburgh who has been active in racial justice movements, and as a researcher who has been studying racial justice movements within and beyond Pittsburgh, I bring my own experience and insight to this study. While health issues prevented me from actively protesting or meeting with activists during the summer of 2020, my prior knowledge helped guide my searches on Twitter and introduced an element of autoethnography to the study in this chapter and the next.

When I share examples of tweets I have elected to include screenshots that show the full text, images and username. I have done so because the dramaturgical analysis requires a close reading of the text and images or video together as if the tweet is literature. In a close reading the specific language and images used make a significant difference in how the text is interpreted.

Secondly, because I am viewing the tweet as literature, it only seemed right to me that I properly attribute the text to the author. Unlike the previous studies (Chapter 5) in this thesis, this study did not incorporate interviews or fieldwork in the wild, so the username can not be tied to the identities of interview or field study subjects. However, this is an ethical gray area, and my obligation is always to minimize any possible harms to the research subjects [221]. To address the tension between crediting authors and protecting activists, I reached out to all of the tweet authors over Twitter whose tweets were published in this chapter and the next–except for the public figures, e.g. Mayor Peduto–for their consent and to ask their preference. Although I did not get a response from all tweet authors, those that I was able to contact preferred to have their profile image and username removed. Therefore, in order to minimize any possible harms, I have done so for all tweets included herein.

7.3.1   Data

Accessing the Twitter Search API using a Tweepy script, I collected tweets from May 25-Oct 1, 2020. The Twitter Search API collects tweets from the previous 7-9 days. I added hashtags and search terms over time, in response to events and based on observations of tends on Twitter (Appendix B). Because I started my data collection with only one developer account, there was too much data coming too quickly in the beginning to search on local Pittsburgh search terms.

(For example, a search on just #GeorgeFloyd took four days to run.) To supplement my data, I integrated data from 5/25-6/4 collected by a colleague at CMU.

I coded the top 100 most retweeted tweets from three different subsets, one capturing tweets in response to the murder of George Floyd from May 25-June 4, the second around Juneteenth and events in memory of Antwon Rose II from June 17-26 and August 15-26 during a period of intense protest after the kidnapping of a protester by local police.

7.3.1.1 Data filtering

To focus the dataset on Pittsburgh related issues, I filtered the data collected using hashtags or keywords specific to Pittsburgh (in Appendix B), plus "Peduto" and "Romir Talley," a Black man who was killed by Pittsburgh police in 2019. For the terms #PBP (Pittsburgh Borough of Police), Livable City, and Jaylen Brown (#JaylenBrown), I ran a community detection algorithm on the user x user retweeted by and metioned by network (Louvain) to find tweets that were specific to Pittsburgh. For example, "livable city" is a term used to describe many cities, and Jaylen Brown is the name of an NBA player, in addition to being a Duquesne University student who died by suicide in 2018 after a heated interaction with campus police.

I then filtered #Pittsburgh and "Pittsburgh" tweets using two methods. First, I searched for the use of BLM-related hashtags, starting with hashtags that included the words "police," "black," "justice," "defund," "abolish," "BLM," "Antwon" and "Jaylen." I then hand inspected the remaining hashtags and added any other tweets with BLM related hashtags to the dataset. I also ran a community detection algorithm using the user x user retweeted by and mentioned by network on the Pittsburgh/#Pittsburgh dataset. I inspected the 50 largest groups and integrated groups that discussed BLM, George Floyd or protests. I was conservative in the selection of groups to avoid too much noise. I then combined the hashtag filtered data and the data found using a community detection algorithm, removing any duplicates.

I combined the Pittsburgh/#Pittsburgh search data and the Pittsburgh-specific hashtag data to form one dataset, removing any duplicates, for a total of 98,905 tweets and 66,523 unique users.

7.3.1.2 Identifying subsets

In order to hone in on periods of time when protests were occurring in Pittsburgh and when the movement was receiving attention on Twitter, I created a timeline of tweets by day (Figure 7.1) and investigated each spike in the data.
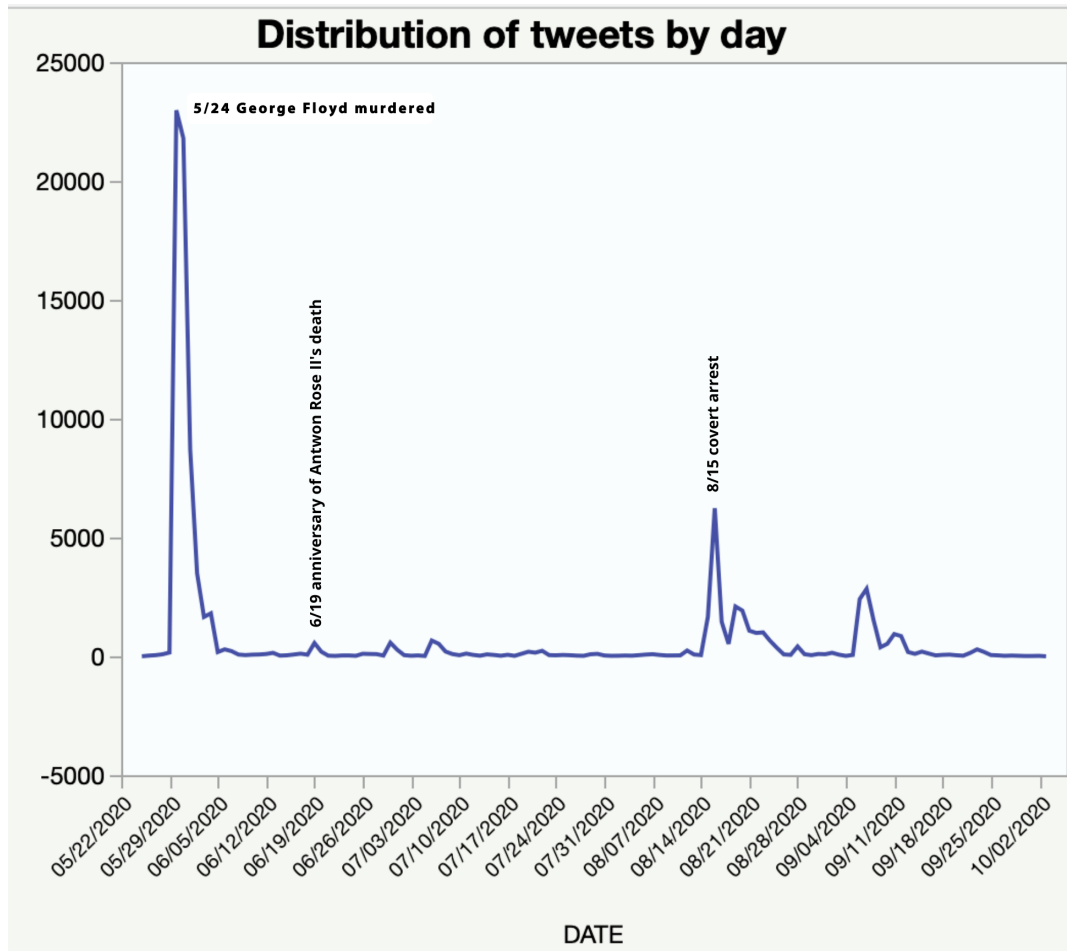
Figure 7.1: Tweet frequency by day from May 25 - Sept 30, 2020 in the Pittsburgh BLM dataset.

The spikes in tweeting in early September were due to President Trump tweeting about an incident in Pittsburgh where protesters yelled at an elderly couple eating at a sidewalk restaurant. Many of the tweets in this spike were anti-BLM and anti-Biden, using hashtags like #SlowJoe and #BidenRiots. The spike in tweeting in mid-September occurred when the Steelers put a tribute to Antwon Rose II on their helmets, but one player, Alejandro Villanueva refused, replacing the name with that of a fallen soldier. Since neither of these events corresponded with heavy protesting on-the-ground they were discounted. Similarly, the spike on June 30 was related to an effort by a conservative pundit, Scott Presler, organizing a public clean-up effort for the 4th of July weekend.

This left the spikes around May 30, June 19, and August 15, which all corresponded with times of intense local BLM protests. I started each subset at the the lowest point before the spike and continued until the lowest point before the next increase in tweets.

Dates	Number of Tweets	Number of Users
May 25-June 4	57,754	44,203
June 17-26	1264	1030
August 15-25	18,389	7488

Table 7.1: Number of tweets and users in each subset.

I then determined the 100 (inclusive) most retweeted tweets per period for qualitative coding. I set aside an additional 15 tweets per period (44 tweets total) as a verification dataset to determine inter-rater reliability, and the research team began coding the 312 tweets.

7.3.2 Scoring a Twitter Script

If each tweet is a script in an iterative scripting process, then it can be analyzed using dramaturgical techniques from theatre. I scored tweets much like an actor might score a script (Fig. 7.2) to find the underlying objectives of the author and the actions the reader can take to fulfill those objectives, transforming themselves from audience to actor. In some cases these actions are overt, what is typically called "calls to action" in social movements, but often the action is implied and might be shaped as much by the affordances of the platform, as the text of the tweet. For example, it is implied that if you agree with the statement in a tweet, you might be moved to like or retweet it, increasing the visibility of the tweet in your networks.

7.3.2.1 Objectives

If we accept the premise that tweeting is a form of movement scripting, then we can use dramaturgical techniques to analyze tweets as scripts which guide movement actors. Stanislavski developed a technique to help actors identify their objectives, or motivation for speaking, and then to make decisions on how to behave in ways that serve those objectives [207]. This objective is expressed in the form of an action, a transitive verb, e.g. "to persuade." The technique of identifying the underlying action is intended to help actors create more lively performances and "encourages performances with accurate and dramatic communications" [48]. In other words, it reveals and communicates the often conflicting underlying desires of characters in a scene, making the conflict palpable, even when the dialogue is mundane.

One function of social media in movements is providing individuals with multiple paths to participation [141]. Participants perform movement scripts on social media, not only displaying the meaning of scripts to others [11], but transforming themselves form someone who is acted upon (i.e. someone who is oppressed, ignored, violated, or marginalized) to someone who can act

[103]. Using dramaturgical techniques, we can analyze the meaning that the script communicates and also the qualities and capacity of a script to transform an audience member to an activist on Twitter and beyond.

Other networked movement coding schemes have focused on action words. The BEND model in social cybersecurity uses verbs such as, "back," "build," "bridge," and "boost" to describe ways to positively manipulate the social network [30]. The social cybersecurity perspective, however, focuses on the health of the information and the network as a whole, protecting it from manipulation by bad actors.

Alfonzo developed a topology of rhetorical and Twitter-enabled tactics from digital activism literature and from empirical study of BLM tweets [12]; the topoi are informative, but too broad to use as a classifier. Kaviani and Salehi created an "action keyword bank" of terms related to calls to action, which they used to classify infographics from blklivematter Instagram account [128]. This method captures explicit calls to action, but not implied or more subtle objectives, like the dramaturgical approach does.

Figure 7.2: Scene beats marked and objectives labeled from Oscar Wilde's *The Importance of Being Earnest*. From "Beat it: understanding beats in script analysis, " Dramatics Magazine.

7.3.2.2 Identifying beats

The first step in scoring a script is to identify the "beats." A beat is a somewhat ambiguous term that describes a chunk of text where a character has the same objective. When a character's objective changes, it marks the beginning of a new beat. Often beat changes coincide with plot revelations or the entrance or exit of a character, forcing others on stage to respond with a new objective. In this study, a "beat" usually constitutes one tweet, including all text, hashtags, and any images, video or articles linked or embedded in the tweet. When a tweet is part of a thread, our analysis extends to the thread. In very few cases a thread may take a turn, introducing a new objective. In these cases, we only coded the part of the thread that shared an objective with the initial tweet in the dataset. In most cases, we considered the contents of articles linked in tweets; however, if the article was complex, or seemed to contain several objectives, then we took my cue from the tweet author and focused on aspects of the article that the tweet author draws attention to in the body of the tweet.

Once the beat is identified, coders independently coded tweets for objectives and all objectives were stated as a transitive verb (e.g. "to inspire"). When possible, the objective was stated in terms of the desired action the author wants the reader to take. For example, if someone posts an article on the history of Juneteenth, this would likely be coded as "to learn," rather than "to teach."

In cases where multiple objectives were possible, the research team used context clues to determine a primary objective. For example, a tweet with an appeal to the readers' emotions plus a call to attend a protest, e.g. "We must remember Antwon Rose II as the promising young man that he was and could have been. Protest today in Squirrel Hill @ 2:00 pm." The objective in the message is to get the reader to attend the protest. In this case, the first sentence asking us "to remember" is not the primary objective, but a tactic used to encourage readers to attend. When a tweet or retweet is quote tweeted, it adds an additional layer of meaning to the original tweet. If the quote and the original tweet seem to have different objectives, default to the objective observed in the quote—the most recent addition. The only tweets that were coded for two objectives were tweets that called on a specific user, usually a public official, to respond. Here the objective was directed at the user mentioned, but by calling for a response in a public forum it is also implied that others reading the tweet may join in, putting additional pressure on the public official. So, the objectives might be to get the public official "to respond," and to get other movements participants "to antagonize."

Once the objectives were identified and described, and consensus reached among coders, then the researchers classified the tweets as either a staging script, a performance script or an interpretive script (Appendix C).

7.3.2.3 Describing objectives

In addition to coding each tweet by objective, we also labeled each objective as either explicit or implicit. The objective is explicit if the action is clear and actionable: "please retweet," or "attend the memorial Saturday"; otherwise it is "implicit," e.g. "They don't show any of this on the news!"

The objective is also coded as either one that can be completed online, for example, through retweeting, signing a document, donating, or sharing your own video or photo evidence, or as an action to be taken on-the-ground, for example, by attending a protest or other event.

7.3.2.4 Iterative coding process

A team of four coders developed the coding scheme using a subset of 50 highly retweeted tweets from across the Pittsburgh BLM dataset. After training the coders on scoring a script, identifying objectives and the three script types, each researcher coded 50 tweets independently using a ground-up approach to code objectives. We then compared our coding schemes, developed a coding book of objectives, and re-coded the 50 tweets using the code book. After comparing our codes again, and coming to consensus on each tweet, we collapsed codes when possible into a single coding book (Appendix C).

We then used that coding book to code the top 100 most retweeted tweets from three different subsets, one capturing tweets in response to the murder of George Floyd from May 25-June 4, the second around Juneteenth and events in memory of Antwon Rose II from June 17-26, and during a period of intense protest after the kidnapping of a protester by local police August 15-26. Tweets from deleted or suspended accounts were only excluded if they contained a broken url, preventing coders from understanding the full tweet content. Noticing a trend that many activist accounts, especially those active in the August subset, were deleted, I suspected that this was a protective measure to reduce the risk of being targeted by police. I decided to retain these accounts in the dataset whenever possible.

Two coders first coded the objectives for each of the subsets. The two coders responsible for a subset then compared their codes, reaching consensus on each tweet, and then coded the tweets by script type. All four coders then met, discussing tweets that were difficult to classify and reaching consensus on a set of codes and definitions across the three subsets. Coders then made adjustments to the coding scheme and re-coded their subset to reflect the new definitions. The coders maintained a Slack channel and frequently consulted with each other when they encountered a difficult to code tweet. Although this was an iterative process of consensus building with tweeks being made to the code book throughout the process, I did set aside an additional 45 tweets (15% per period) to test inter-rater reliability among two of the coders. For script types, Cohen's kappa was .75 and for objectives, it was .64, demonstrating statistical significance [109].

7.3.2.5 Coding scheme

For each tweet or thread the researchers identified the primary objective and then determined whether this objective was explicit or implicitly stated in the text and whether the objective communicated that the reader take action online or offline. After consensus was reached on these dimensions, coders classified the tweet or thread according to the three script types. In Appendix C, you can find the final list of objectives used and their definitions.

7.4 Findings

In this section, I will present examples of each script type and insight into the coding criteria and process. I will then analyze the frequency of tweets of each script type and objective for 356 of the most retweeted tweets in the dataset (by period) and the attention each script type and objective received in terms of retweets. I will then discuss the statistical relationship between objectives and script types in the Pittsburgh BLM 2020 dataset.

7.4.0.1 Staging examples

Frequently, the objective of staging scripts is to recruit readers to attend in-person protests or events. The script includes explicit instructions on how to behave at the event, when to arrive, what to wear (e.g. to wear masks), or to "bring a friend." 64.8% of staging tweets contained explicit calls to action. The tweet in Figure 7.3 was posted by an activist group made up of young people fighting for racial and social justice. Frequently, the objectives of their tweets was to recruit participants.

As in J4A, tweets with recruiting for upcoming protests, often included an image with details on the event or link to donate to the cause. Flyers included symbols, e.g. the raised fist in the flyer in the lower right in Fig. 7.4, or images of the person the protest is centered on, either the target of the protest, e.g. Mayor Peduto, or the victim, e.g. Antwon Rose II, pictured on the flyer in upper left of Fig. 7.4. Such graphics can be shared across platforms, but require extra effort and expertise to edit, ensuring that the message is presented as the organizers intended. However, other activists can quote tweet the flyer, adding additional messages or, in the case below, hashtags to express their opinions or concerns (e.g. "#Wearamask"). Activists might contextualize an event by including the flyer in addition to other related calls to action, as we see in the grouping of four flyers, each of the four events organized by different activist groups (Figure 7.4).

Figure 7.3: Tweet from an activ 06/17/20. Flyer for a Juneteenth celebration organized by an activist organization.

Figure 7.4: A listing of four different movement actions happening around Pittsburgh on June 19.

Other objectives common among staging tweets are "to protect" or "to prepare," these included the number to legal aid, sharing announcements about shifting city-wide curfews, and tracking attacks on protesters by police. This is critical and timely information shared in an effort to reach the protesters on the ground as quickly as possible.

In the data, I also found staging tweets from local news media. The objective of these were also "to recruit," but rather than recruit participants to the movement, they were recruiting readers to find suspect(s) accused of vandalism of a police car and downtown businesses during the first days of protest. In this capacity, news media is acting on behalf of the police, recruiting readers in service of police.

7.4.0.2 Performance examples

The objective of performance scripts was to extend the performance of protest to Twitter as virtual protest for a virtual audience. The objectives are less explicit than in staging scripts (8.1% explicit), and 80.4% of tweets were scripts for online action. Rather than give explicit instructions on how to perform protest, performing scripts serve as a template for others to follow. The tweets include reports from on-the-ground protests, often posted with images or video.

The objective in 32.5% of performance scripts was "to witness." These tweets were often written by journalists or were written in a journalistic style, with little emotion or added interpretation (e.g. Figure 7.5).
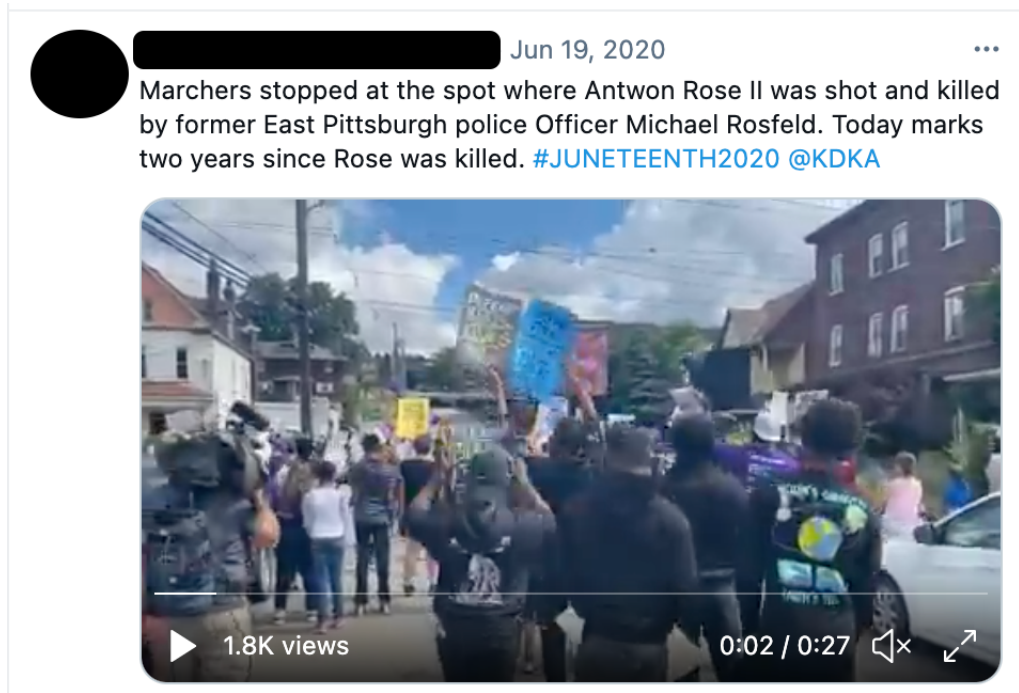
Figure 7.5: A local reporter for KDKA posts video of a J4A memorial and protest.

Other performing tweets were intended "to ignite" the readers, lighting a fire beneath them and encouraging to take action to stop the injustice (Figure 7.6A). Sadly, many of the performing tweets intending "to ignite," did so by sharing images of ongoing police violence toward protesters and reports of deaths of Black and brown people at the hand of the police across the country occurring over the summer of 2020. These tweets often used emotionally-charged language to ignite the reader, pointing out hypocrisy and injustice—for example, evoking the description of Pittsburgh as the "Most Livable City" in the US, while sharing video evidence of police using mace and pepper spray on protesters—sometimes also tagging public officials as a call for public accountability.

Less frequently, the objective of tweets reporting protests were "to inspire," as in Figure 7.6B. This hopeful message offers anecdotal evidence of progress regarding society's understanding of racism.
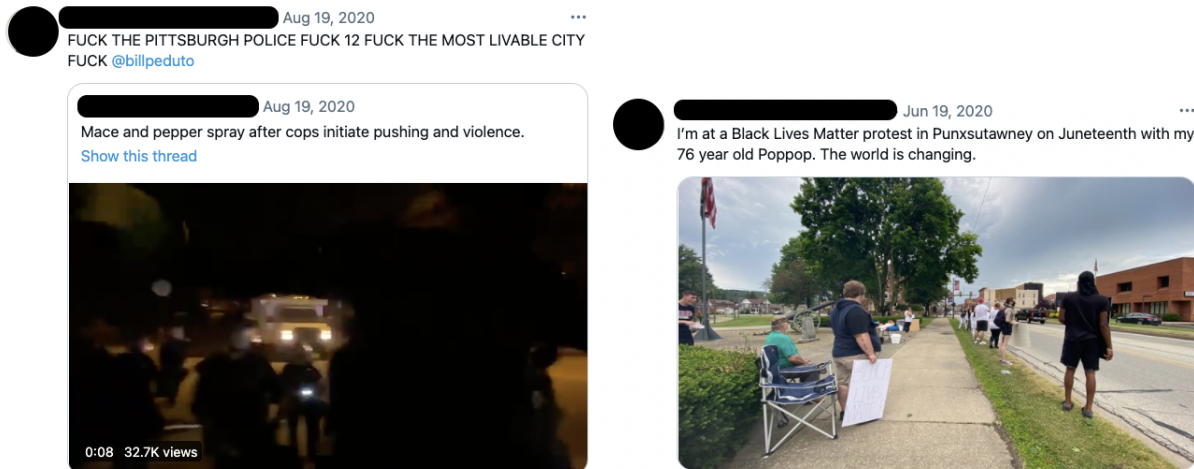
Figure 7.6: A comparison of two tweets reporting on protests. Tweet A. (left) intends to ignite the reader by showing an injustice. Tweet B. (right) attempts to inspire by suggesting progress is being made.

Sometimes activists used Twitter to perform protest, for example, to demand accountability from a public official, or to create and spread media. In Figure 8.6, Mayor Peduto posted an image of himself, smiling on his front porch and evoking Fred Rogers, a beloved Pittsburgher, with the quote "It's a beautiful day in the neighborhood," by writing "a beautiful night in the neighborhood." While appearing to be a pleasant message, it was posted while protesters rallied in his front yard demanding accountability after a protester was kidnapped off the street by plain clothes officers in an unmarked white van (what the police called a "covert arrest"). Understood in that context, the objective of this tweet is actually "to antagonize." In response activists created and shared a parody video attacking the Mayor. This is also a performance of protest that is inherently digital. I described the objective of the parody video (https://t.co/RGqrUVPB50) as "to ignite" others to protest.

7.4.0.3 Interpretive examples

Interpretive scripts present ways of making sense of an event that has occurred and leads the reader to share in this interpretation. The objectives of interpretive scripts were almost always implicit and focused on online actions (61.5% of objectives were online and implicit). Commonly the implied action that readers were encouraged to take was retweeting, spreading, or contributing to a growing counternarrative. For example, Figure 7.7 shows a tweet explicitly contradicting local news accounts regarding vandalism during a May 30th protest and providing an interpretation shared by many local activists. The objective of this tweet is "to counter" the mainstream media. This interpretation, that the man who vandalised a cop car was not a part of and did not represent

BLM activists, was a widespread opinion in the days following the event.

Interpretive tweets, like the one in Figure 7.8 help contextualize and draw connections between events to allow for broader interpretations, while also igniting outrage. In this tweet, the author is pointing out the hypocrisy of Mayor Peduto making a statement in support of Black Lives Matter, but then erasing sidewalk chalk by activists saying "Black Lives Matter" in front of his house. A common interpretive script around Juneteenth was contextualizing the holiday as both a celebration of emancipation and the anniversary of Antwon Rose II's death at the hands of a East Pittsburgh police officer. This interpreted the holiday, and the scripts for how one celebrates the holiday, through the lens of local tragedy and injustice.

Figure 7.7: A tweet distancing a vandal from other protesters.
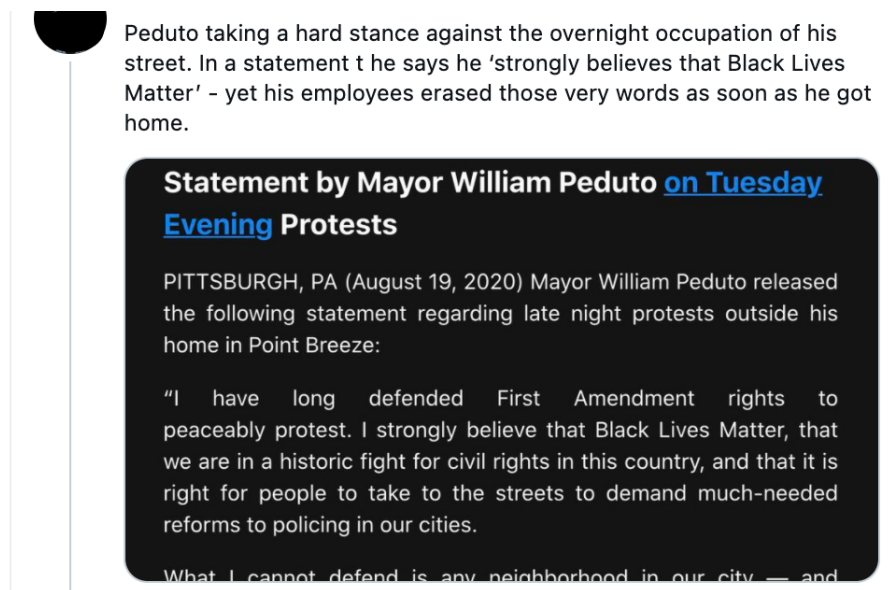
Figure 7.8: A quote tweet providing an activist perspective to a statement from Mayor Peduto.

7.4.1 Frequency and Attention

In terms of the number of tweets of each script type, 46.4% are performance scripts, 33.4% are interpretive scripts, and 20.2% of the 356 coded tweets are staging scripts. However, when I consider the attention that each of these script types received through retweets, the percentage of interpretive tweets nearly doubles to 63.8%, performance scripts drop to 30.7%, and staging scripts are the least likely to be highly retweeted, making up only 5.5% of total tweets.
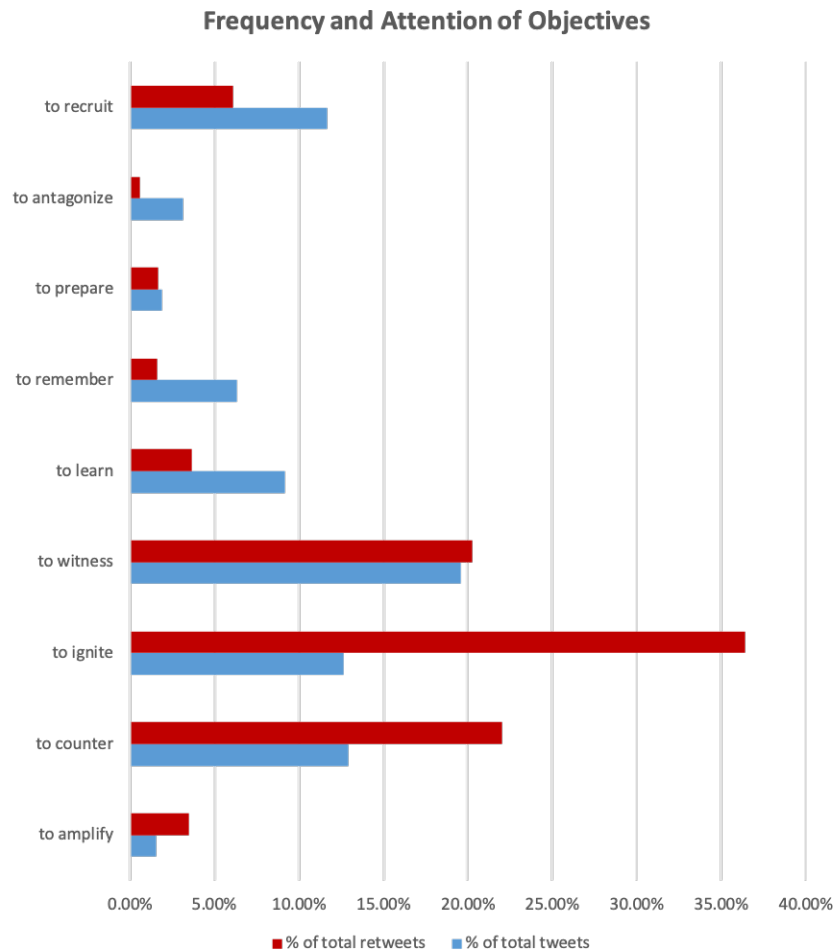
Figure 7.9: The top objectives across the three data subsets by code frequency and the attention each code received via retweets.

This trend also plays out among the objectives; "to recruit," which is highly associated with staging scripts (p-value: 3.7E-15), occurred with a frequency of 11.7%, but received 6% of the attention (a 5.6% difference) through retweets. "To learn," and "to remember," received relatively less attention than the frequency of tweets would suggest; however, tweets coded as "to ignite," as in "to ignite the reader's anger, outrage or sense of injustice," associated with both interpretive

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and performance scripts, made up 13.2% of the tweets, but received 36.4% of the attention based on retweets. Tweets with the objective of countering a mainstream narrative, public opinion or those in power, highly associated with interpretive scripts (p-value=0.010392544), also received significant attention through retweets (22%) while comprising only 12.6% of coded tweets.

7.4.2   Online/Offline, Implicit/Explicit

In addition to coding the objectives of each Twitter script, the research team also coded whether the objective is implied or is an explicit call to action and whether an activist could carry out this objective online or offline. In a few instances, when more than one objective is communicated in a tweet, a tweet could be coded as containing both implicit and explicit or online and offline objectives.

In over 90.2% of interpretive scripts and 91.4% of performance scripts, the objective is implied. However, in 68.8% of staging scripts, the call to action was specific, e.g. "Donate here," "attend this event," or "spread the word." In a similar trend, most of the scripts guide online behaviors, 70.8% of interpretive scripts and 78.9% of performance scripts, while only 31.2% of staging scripts can be performed online. Overall, most often objectives are implicit and can be performed online (57.7%). When the tweet did not include clear instructions on how to perform the script, it was assumed that one is expected to engage with the tweet using the features of this platform, primarily retweeting and liking.

Implicit/Explicitness and Online/Offline of Script Types: All Data		Interpreting	Performing	Staging	Total
Online	Implicit	75	117	11	203
	Explicit	9	8	11	28
	Both		1		1
Offline	Implicit	32	27	9	68
	Explicit	3	5	35	43
	Both	0	0	0	0
Both	Implicit	3	5	1	9
	Explicit	0	0	0	0
	Both	0	0	4	4
Total		122	163	71	356

Figure 7.10: Table of tweets with implicit or explicit objectives that can be fulfilled online, offline, or both, by script type.

7.4.3 The Relationship Between Script Type and Objective

Although script type and objectives were coded independently, strong associations between the two exist. Many of these relationships are intuitive; for example, "to recruit" is highly associated with staging scripts (p-value: 3.7E-15), and "to counter" is highly associated with interpretive scripts. The objectives that are most highly associated with a script type are "to recruit," associated with staging, "to counter" associated with interpretive scripts (p-value: 1.9E-5, 23 interpretive and 14 performance but positive residual +10.6 only with interpretive), and "to witness," associated with performance scripts (p-value: 1.6E-12, 16 interpretive and 47 performance, but positive residual of 18.6 only with performing). Objectives with low association with script types were those that were rarely occurring, e.g. "to share," and "to respond." Codes "to amplify" and "to antagonize" were each applied to at least 5 tweets, but were associated with both interpretive and performance

scripts.[8]

The Venn diagram provides a visualization of how associated objectives are with different script types. This illustrates the connection between objectives and the processes of staging, performing, or interpreting movement-related events using Twitter.
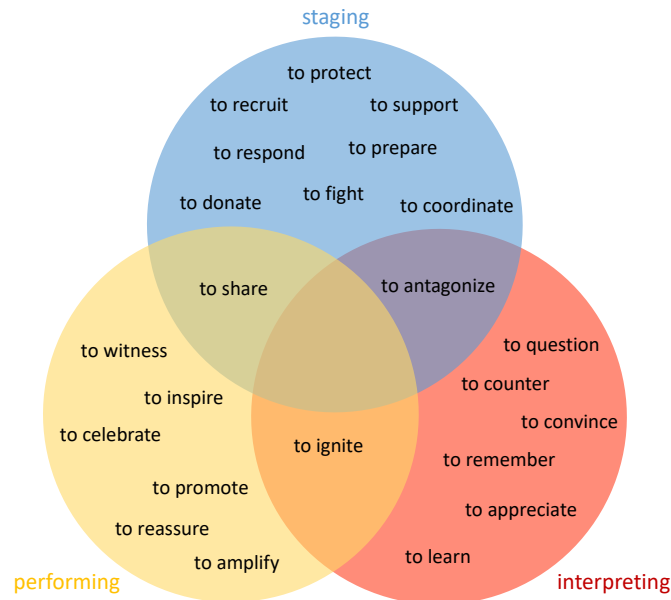
Figure 7.11: Venn diagram of the relationship between objectives and script types. Objectives further from the center have a higher association with the script type, those closer to the center have associations with multiple script types.

7.5 Discussion

In this section I discuss the power of a script to transform an audience member into an activist through online or offline participation. The transformative power of a script is mediated by the reach that it has on Twitter; some script types and objectives receive more interactions and retweets. I close the chapter with a discussion of the strengths of the dramaturgical method for analyzing networked movements and transferability.

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[8]further descriptive statistics, including all p-values, can be found in Appendix C.

7.5.1 From Audience to Activist

The dramaturgical framework understands tweets as scripts that communicate an objective to the reader. If the reader chooses to fulfill that objective, they are transformed from an audience member to an activist. This transformation has the potential to empower the individual [218], leading to greater identification with the movement, and motivating future involvement [24]. The more salient the identity, the more likely that individuals will extend their movement identity into other aspects of their lives.

Because of its participatory nature, social media is a space where audiences are transformed into actors through the simple actions of a retweet or a hashtag. However, not all actions have the same impact on a movement; a retweet is not the same as protesting on the Mayor's lawn. Through dramaturgical analysis, we can map the potential of different objectives to lead to on-the-ground action.
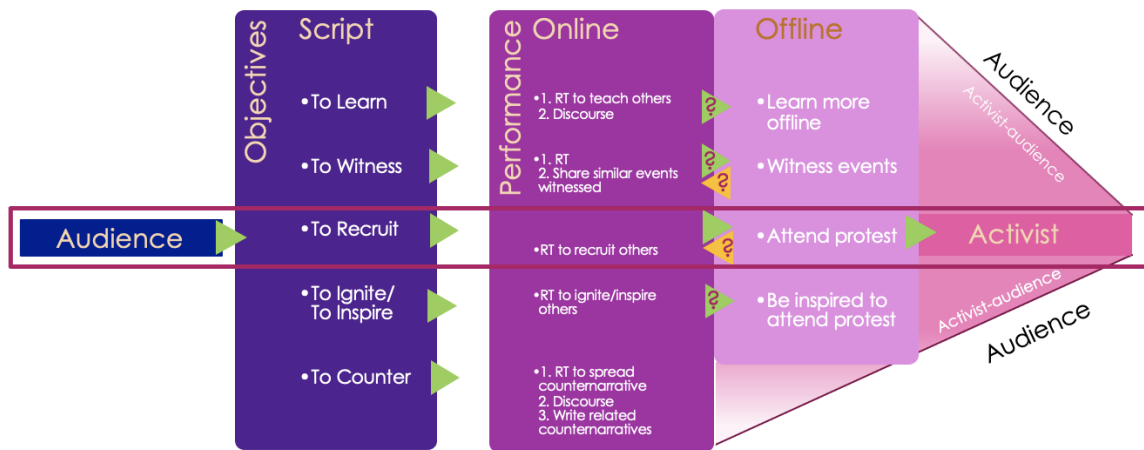
Figure 7.12: Diagram illustrating movement from audience member to activist through interaction with movement scripts and performance of protest online or offline.

In Figure 7.13, I mapped the transformation of audience to activist through engagement with networked movement scripts on Twitter. All objectives can be at least partially fulfilled through engagement with the platform, primarily through retweets. Some objectives suggest direct action offline, e.g. "to recruit." While the primary objective of a recruitment script is to recruit participants to attend an event, a secondary objective is likely for others to interact with it, so that the message reaches other possible recruits. In "to ignite" or "to inspire," the action is implied: "if one is inspired/ignited, then they will be moved to act" either by spreading the persuasive message online or by participating in on-the-ground protests. In some cases, there are multiple ways to fulfill the objective of a script. If the objective is "to witness," one might retweet the report so that others can witness the event, or it might be used as a template for others who are documenting protest events

and sharing them for audiences to witness.

While engagement with movement scripts on Twitter may transform an individual from an audience member into a movement participant, that is to say, into an activist, it does not necessarily follow that those individuals coalesce to form a collective capable of fighting for change at the local level. In "Twitter and Tear Gas," Tufekci questions whether online activism is capable of organized collective action and developing the leadership and infrastructure necessary to sustain a movement [213]. In the following chapters, I will continue to investigate this process of moving from a group of connected, like-minded individuals into a movement with local influence and political power.

7.5.2 Effectiveness of Script Types and Objectives

Among the three script types, interpretive scripts receive the most attention through retweets. Interpretive scripts are associated with objectives, such as "to ignite" and "to counter," which often involve expressions of outrage. This matches conventional wisdom about the popularity of negative news reports in journalism (e.g. "If it bleeds, it leads") [171], and studies of the effectiveness of Twitter in social movements as a tool to express grievances [119] and collective outrage [170]. Criticisms of event-driven Twitter responses includes Han's description of a "shitstorm," where users pile on, exacerbating a debate [111].

Staging scripts received the least retweets, despite the importance of social media in distributing timely protest information [208]. This also aligns with previous literature that, at least, finds "calls to action" to have little impact on a tweet's likelihood to be retweeted [40].

In J4A, I discussed how activists used more private communication channels to distribute logistics, especially when there was a perception of danger or risk. But what about events like the Juneteenth actions described in this chapter, which have been publicly advertised, suggesting low-risk? How can activists use social media to more effectively distribute logistical information? This is an area for future design research.

7.5.3 Transferability of Dramaturgical Codes

While the coding scheme developed here is likely not a comprehensive list of all objectives present in networked movements, it provides a solid base from which to grow a dictionary of networked movement objectives. Because objectives are not tied to topics, A major benefit of this method is that it is transferable across movements and can be used to compare different phases of a movement or different factions within it—as I will demonstrate in the next chapter. This perspective can also be used to reveal the different goals and objectives of local instantiations of national or global movements and the differences between objectives for offline and online forms of protest.

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The coding scheme is also platform-agnostic. A script could be a text-only tweet or a TikTok video. While objectives might be the same across platforms, how an activist carries out an objective online is dependent on the features of the platform. Some types of scripts or objectives may be more or less effective depending on the platforms' affordances, and some objectives might make specific use of the features—on Twitter retweeting is a way of expressing alignment with the movement message, but on Reddit it is upvoting. It is possible that there are different objectives, for example on Reddit, that specifically persuade readers to vote on the post.

Hand coding the tweets makes it possible for researchers to consider all media and links in a tweet or tweet thread together. Automating such a process would be expensive. However, as a dramatist, I know how to choose the language, images and behaviors to communicate an underlying objective. If my training has prepared me to reason about this, then it's possible to develop algorithmic tools that can detect dramaturgical features.

CHAPTER 8

Applying the Dramaturgical Perspective to Local Black Lives Matter Activism

8.1   Introduction

Black Lives Matter, like #MeToo, Occupy, and the anti-globalization protests of the 1980's and 90's, is a global movement. The summer of 2020 saw BLM protests erupt around the US and worldwide. Spurred by the horrific murder of George Floyd, local instantiations of BLM also took up issues of policing and racial injustice particular to their cities. In this chapter, I apply the dramaturgical techniques described in the previous chapter to analyze a local instantiation of BLM in Pittsburgh, Pennsylvania.

When we consider the participatory nature of social media, an audience on Twitter is composed of potential actors. In the last chapter, I offered close readings of movement scripts on the micro-level, the level of the tweet, and discussed the potential of different scripts to transform an audience member into an activist. In this chapter, in an effort to understand the shifting drama, conflict, and players, I use social network analysis in tandem with dramaturgical analysis to understand the social drama at the local level, identify primary actors, and gain insight into their scripting processes during three periods of active on-the-ground protests in the summer of 2020. I will reveal how actors, script types, and objectives shifted over time to focus on local issues, and how the George Floyd protests intersected with ongoing racial justice movements.

As illustrated in Chapter 5, Twitter is one of the many social technologies that activists use to support protest. Twitter facilitates the swift formation of groups around an issue. These groups are sometimes thought of as publics or communities. I suggest conceiving of these groups as stages, representing the bounds of a performance and audience. Thinking of the groups formed through Twitter interactions as temporary sites of a performance offers a metaphor that is analogous to offline protests—which also gather at a particular site temporarily to collectively demand change.

Finally, I will discuss the contributions of the dramaturgical perspective to analyze smaller data sets and data sets where social media identity does not necessarily align with a user's objectives.

8.2 Context: The Social Drama
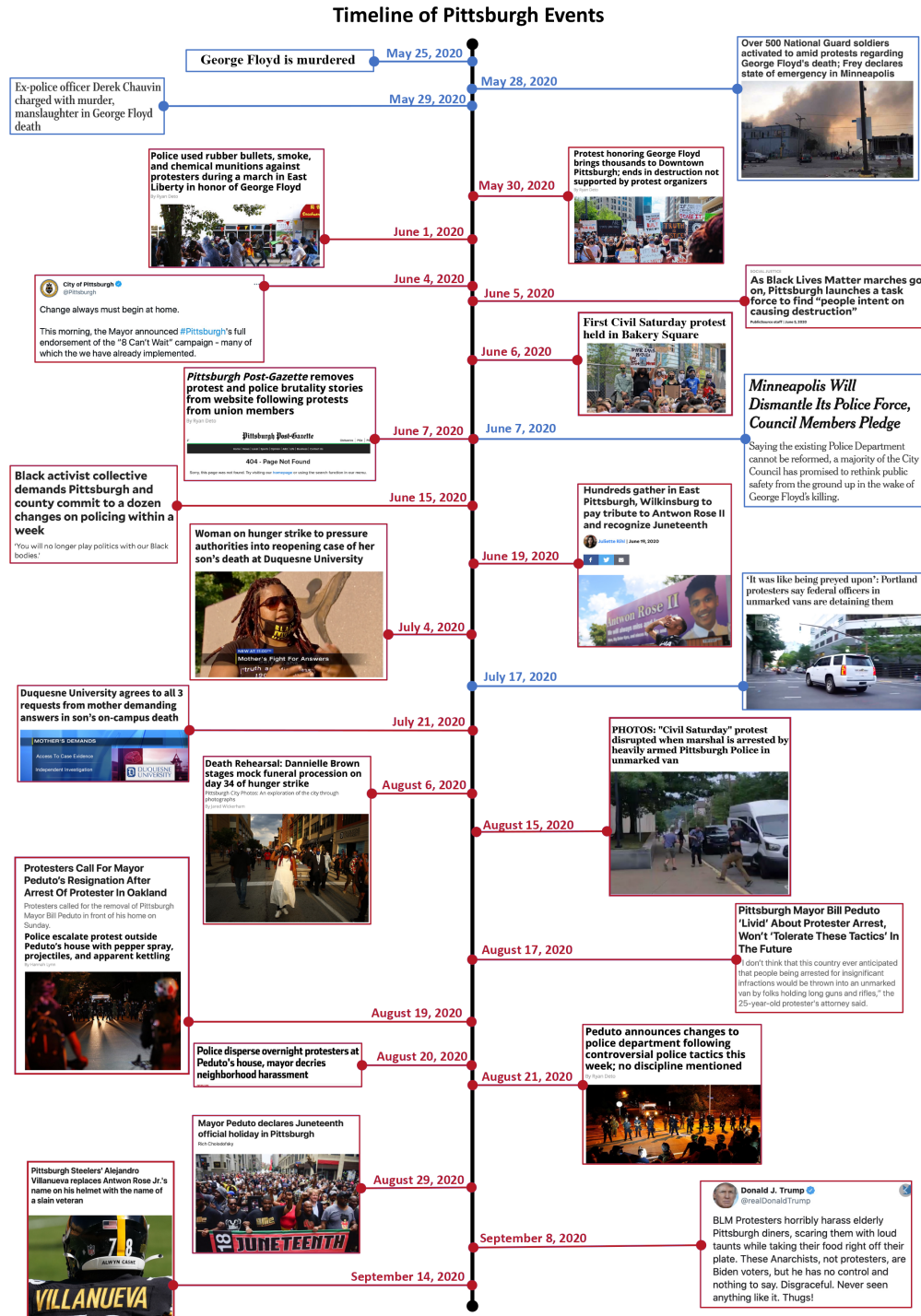
Figure 8.1: A timeline of major BLM-related events from May 25-September 30, 2020. Dates in blue text correspond to events outside of Pittsburgh; purple text corresponds to Pittsburgh events [3] [196] [140] [50] [70] [71] [147] [187] [35] [5] [151] [148] [4].

Before I discuss events of the summer of 2020, it is important to understand the backdrop of the social drama. Pittsburgh is a growing hub of white supremacy [72], evidenced in Pennsylvania having the most arrests after the Capitol siege than any other state [222]. This, paired with the tragic 2018 Tree of Life Synagogue shooting, the most deadly anti-Semitic attack on US soil, paints a picture of both a rising white supremacist movement and a propensity of this movement for violence. The decimation of local news in the region [231] increases the importance of social media to follow local events and increases opportunities for misinformation [72]. The largest newspaper in the city, the Pittsburgh Post Gazette removed a Black reporter, Alexis Johnson (and later a photojournalist, Michael Santiago), from protest coverage in early June, claiming that she could not report on the protests objectively because of her race, leading to a lawsuit and national controversy [164]. Each of these events were breaches of trust for local residents.

In Chapter 5, I briefly discussed the history of police brutality and racial discrimination in Pittsburgh going back to the murder of Jonny Gammage by suburban police in 1995. On June 19, 2018, 17-year-old Antwon Rose II was shot in the back and killed while fleeing by Officer Rosfeld, re-igniting local efforts to reform the local and state criminal justice system.

On May 30, 2020, over 3,000 protesters marched through the streets of downtown Pittsburgh, outraged at the murder of George Floyd [72]. During the protest, two police cars were vandalized. The vandalism was initiated by a young white man, despite pleas by protesters for him to stop. By 5:00 pm fewer than 100 people remained; they returned to downtown, clashing with police, and by some reports vandalized over 60 businesses [72]. BLM protesters and organizers distanced themselves from the vandalism and denounced the use of violence by protesters and police (e.g. [62].

On June 1st, peaceful protests ended in police violence, over 20 arrests and use of tear gas in the neighborhood of East Liberty [106]. Mayor Peduto, in a press conference on June 4, stated that the use of tear gas had not been approved and called for an investigation of police. He voiced support for police reform and endorsed the national "8 Can't Wait" campaign [132].

On June 6th, an organization started by a group of Black high school students, Black Young and Educated, organized the first Civil Saturday protest [115]. Every Saturday for the duration of the summer this group organized protests all over Pittsburgh, many focusing on specific local issues or advocating for specific victims of racialized violence.

Being both a day celebrating emancipation and the anniversary of the death of Antwon Rose II, Juneteenth was an active time of protests, Black-centered celebrations, and memorial events. July 2nd was the beginning of Danielle Brown's 237-day hunger strike, demanding an independent investigation into the death of her son, increased mental health resources, and policy changes at Duquesne University.

Protests continued, especially on the weekends, throughout the summer. On August 15, mim-

icking the covert arrest of protesters in Portland, Oregon the month before, plain-clothes officers dragged a protester, Matthew Cartier, off the streets during a Civil Saturday protest and into an unmarked white van. The simmering anger between protesters and Mayor Peduto, who made statements of support for Black Lives Matter but took few actions to curb police violence and discrimination, boiled over. Peduto himself became the target, as protesters gathered nightly outside of his home in an upscale neighborhood. On August 19, police came to the Mayor's aid, corralling protesters into a local park, using pepper stray and making arrests [138]. Any good will between the mayor and BLM activists and allies dissipated, and in the May 2021 Democrat mayoral primary, Peduto lost his bid for re-election.

In September, Pittsburgh made the national news for two events, only tangentially related to protests. On September 8, President Trump tweeted about an incident where an older couple dining at an outdoor restaurant was harassed by protesters. On September 14, Steeler Alejandro Villanueva refused to wear a helmet in memory of Antwon Rose II, replacing Rose's name with that of an Iraq war vet.

8.3 Methods

In Chapter 7, I detailed the data collection and filtering process, the development of three subsets, and qualitative coding of tweets. In this section, I will discuss the statistical and social network analysis that followed.

8.3.1 Community Detection and Labeling

I used Louvain, a community detection algorithm, to determine the top ten groups in each data subset based on the edges between users in the network. Edges consisted of retweets, mentions (including replies), or tweeting the same url [87]. I included urls in this analysis because images and video, represented as urls, are a key form of communication during times of protest and sharing the same media signals a significant alignment. I calculated the number of users and tweets in each group and the number of edges between groups.

I then hand inspected the Twitter bios, profile pics, header image and pinned tweets of the 5-10 most central (based on total in-degree centrality) users in each group to determine a label that best described the group of users [89]. The lists of the most central users in the top ten groups of each period can be found in Appendix D. I identified the groups as either local BLM activists, distributed BLM activists, city officials, state officials, or local news. Distributed BLM groups often involved tweets from distant users that contextualized events in Pittsburgh in the broader movement using lists of city hashtags or naming victims of police violence that included those

from Pittsburgh. Local news reports tended to be clustered in groups with other reporters from the same publication, for example KDKA, the local CBS affiliate, or Trib Live, a regional newspaper and website.

For each group detected by the community detection algorithm, I randomly sampled ten percent of quote tweets, replies, tweets that were retweets, and original tweets for coding. Because many of the tweets coded were repeated in the data set as retweets (in the same group or in another group), this sampling method resulted in 27% to 100% of tweets in each group being coded.

8.4 Findings

In this section, I analyze three different periods of protest during the summer of 2020: the initial protests after George Floyd's murder (May 25-June 4), protests and actions around Juneteenth, which was also the two year anniversary of the death of Antwon Rose II (June 17-26), and a period of protest primarily at Mayor Peduto's residence in response to the treatment of activists (August 15-25). I integrated social network analysis, identifying groups within each period, with dramaturgical analysis to determine the script types that each group engaged and the objectives that they used. I then analyzed the role of local news across the three periods.

Applying these dramaturgical techniques allows for comparison in Twitter usage by local activists, news media and public officials. It also reveals the evolution of uniquely local movement scripts over the course of summer 2020, moving from general outrage at the murder of George Floyd, to integrating local J4A scripts, to making targeted demands of city officials. As this process of localization unfolds, Twitter is also used for more targeted and public purposes, i.e. pressuring the Mayor. When this happens staging scripts visible in May and June subsets disappear, suggesting that activists are using more private communication channels for strategizing and coordination.

8.4.0.1 May: the Breach

In the days that followed the murder of George Floyd and the distribution of the disturbing video documenting his death, BLM protests erupted around the world, including in Pittsburgh. In social drama terms, the murder of George Floyd represented the most recent breach in trust in police [198]. Activists worked to bring the breach to the public's attention through sharing a video of the agonizing last 9 minutes and 29 seconds of Floyd's life and through public protest in Minneapolis and around the world.
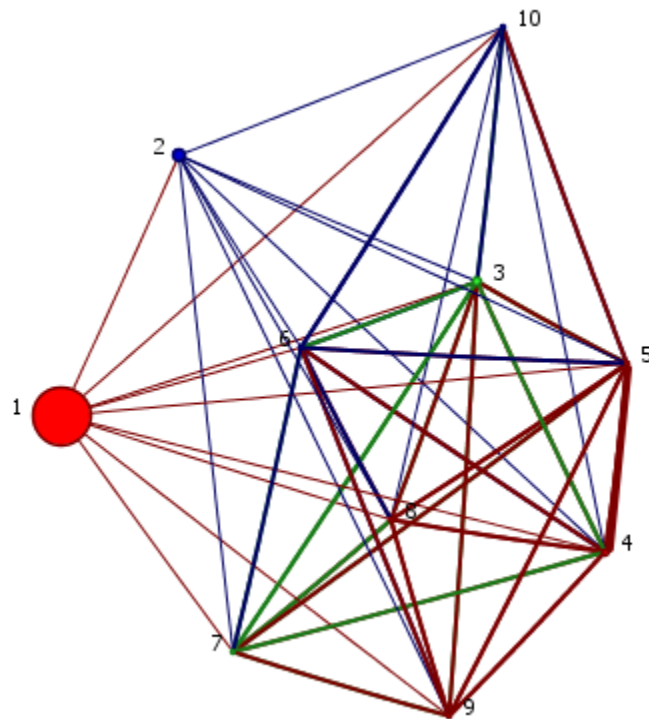
Figure 8.2: Sociogram of ten largest groups detected in the May subset. 57,754 tweets total, representing 100% of tweets in the May subset. The size of the nodes represents the number of users in the node. The width of the edges represents the number of links the two groups share. Red=Local BLM, Blue=Distributed BLM, Green=Local News.

Group Description	User Count	Tweet Count	Primary Script Type	Primary Objective
1. Local BLM	13048	13055	1 interpreting	1 to ignite
2. Distributed BLM	4282	4335	1 staging	1 to counter
3. Local News (KDKA)	3278	3632	.81 interpreting .1 staging	.74 to recruit .22 to learn
4. Local BLM	2862	6354	.71 performing .25 interpreting	.49 to witness .15 to ignite .12 to amplify
5. Local BLM	2195	3886	.76 interpreting .13 staging	.6 to ignite .15 to witness
6. Distributed BLM	1114	1965	.96 interpreting	.95 to ignite
7. Local News (Trib Live)	1655	2641	.91 performing	.89 to witness
8. Local BLM	1488	3594	.6 staging .2 performing .2 interpreting	.22 to prepare .2 to recruit .14 to witness
9. Local BLM	1349	2364	.52 staging .39 interpreting	.34 to witness .14 to recruit
10. Distributed BLM	1114	1777	.96 performing	.96 to witness

Table 8.1: Names of the ten largest groups in the May subset, the number of users and tweets in each group; the most prominent script types and objectives in each group; the ratio of tweets in the group classified as the script types, and the ratio of tweets in the group classified as the most frequently observed objectives.

In the initial days of protest in Pittsburgh, Twitter use was at its height. Of the 10 groups detected through social network analysis, five of them were groups of local BLM activists and two were distributed groups of activists (not local to Pittsburgh). Using Freelon et. al's method of examining bios and headers, there were no discernible differences between groups of BLM activists. However, through dramaturgical analysis, I was able to distinguish between the groups on the basis of the scripts, their objectives, and the links between groups.

One of the most striking aspects of this period is that there are no groups opposing the movement. While individual tweets may be anti-movement, anti-movement tweets received little attention; only two of the top 100 most retweeted tweets of the May period were anti-movement. However, many pro-BLM users criticized vandals who damaged a police car and downtown businesses. The vandalism was committed by a small group who were described as young, white, mostly male, and dressed in black, some with anarchy insignia. BLM distanced themselves from this group, and many on Twitter expressed support for BLM while decrying the vandals. The most

rewteeted tweet of the period (Fig 8.3A) distances BLM from the vandals and provides an interpre-
tation of why the vandalism is a problem (BLM will be blamed for the actions of a "white man")
and includes a video in which you can clearly hear and see protesters try to stop the vandal from
attacking a police car. He ignores their pleas and responds by giving the crowd the finger before
busting the police car's windshield. Group one is composed of this single tweet, an interpretive
script, and its retweets. The author of the tweet, cmdougie_, does not reply or otherwise interact
with any other user in the period and no other tweets by this author appear in the data set.

While local BLM groups four and five make use of different script types and objectives, the two
groups are highly linked with 949 links, representing retweets, mentions/replies, and shared urls
between them, suggesting that the two groups were in sync. On closer examination, both groups
largely contain tweets that report from the protests on the ground; however, they differ in tone and
objective. Tweets in group four include impressive images and video of large crowds of protesters
as seen in Fig. 7.5. The most prominent script type of the group is performing (71%), as users
were extending the performance of protest on the ground to Twitter with the objectives to witness
(49%), to ignite (15%), or to amplify (12%). Tweets in group five contained more details, context
and perspectives to help the audience interpret unfolding events. For example one tweet read:

> "Here are visuals from the #pittsburghprotest yesterday. I witnessed officers galloping
> horses through a calm crowd & nearly trampling numerous people, and armed officers
> and SWAT relentlessly tear gassing us peaceful protesters while kneeling and standing
> with our hands up."

The author includes four images, including one of peaceful protest and two featuring police
SWAT teams. The text and images together counter mainstream and right-wing media reports
of widespread rioting and instead place blame on the police. It asks the reader to not just bear
witness to the events, but to join in and spread the author's perspective, keeping with the most
prevalent objective in group five: "to ignite," accounting for 60% of the sample.

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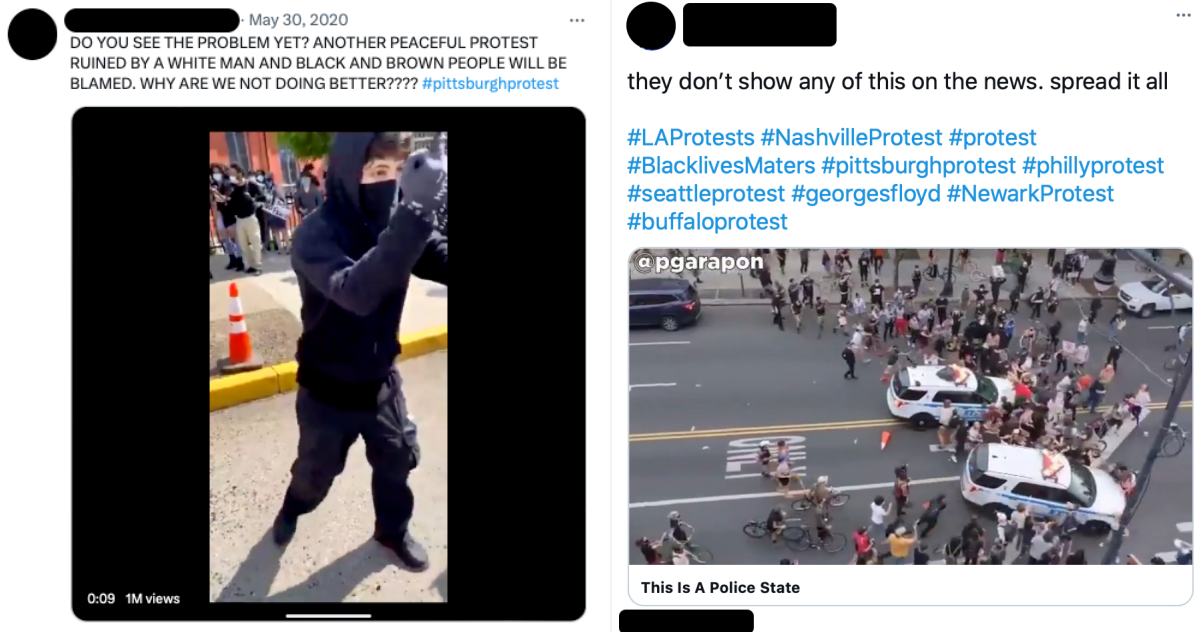
Figure 8.3: A: The primary tweet from May group one: pictured is a young man dressed in black giving the finger to the protesters around him. B: The primary tweet from group two showing police vehicles in Brooklyn driving through a crowd of protesters.

Although staging scripts are not the only type of script found in local BLM groups eight and nine, they are the most prevalent. A close dramaturgical reading of the staging scripts reveals the greatest distinction between the groups. Both groups provided protesters with information like changing curfews and provide phone numbers for legal aid or offer general advice on protest safety. These tweets were coded as "to prepare," the most frequent code for staging scripts in both groups (22% in group eight and 33% in group nine). More staging scripts in group eight were focused on protecting protesters on the ground from harm, namely from the police by tweeting live updates on the location of SWAT teams and the use of tear gas. This is reflected in the code "to protect" which accounted for 14% of tweets in group eight and just 1% of tweets in group nine. Another point of difference between the two groups is recruitment. Group nine contains announcements and schedules of protests and other actions—material that is typically associated with recruiting. Much attention, however, in group eight and spilling over into group nine is given to a tweet where the author is asking for help to find a man who assaulted her at the protest. This too is recruitment, but like other group eight tweets, it is intended for protesters on the ground at that point of time. Staging in group eight and nine has a different relationship to the protest performance; in group eight, it is more immediate, happening during the performance, while in group nine, staging is in preparation for the performance.

Both of the distributed BLM groups (groups two and ten) are comprised almost entirely of a

single tweet and its retweets. These two tweets offer counternarratives to the mainstream narratives and stereotypes of BLM protesters. Tweets in group two and group ten include #pittsburghprotest in a list of cities where BLM protests occurred. The group two tweet (Fig. 8.3B) includes a video from Brooklyn of police cars driving through a crowd of protesters. The objective here is clearly "to counter" what "they" show on the news. It is classified as a staging script because it includes an explicit call to action for the reader to share the tweet. The group ten tweet is a video of Black men riding horses down Chicago city streets. The text claims that the men stole the horses from police. This, however, is not true, and is the only known misinformation to gain significant attention in the data set.

8.4.0.2   June: integrating local scripts

In 2020, Juneteenth marked the second year the holiday was recognized by the state of Pennsylvania and the second anniversary of the killing of Antwon Rose II. At this point in the summer, the BLM protests spurred by the murder of George Floyd intersected with these local BLM and racial justice movements. Both activists and politicians took advantage of the spirit of unrest, Juneteenth, and the anniversary of Antwon Rose II's murder to further their agendas. Scripts, especially for Justice for Antwon Rose II memorial events, were well-established and local activist collectives organized events in advance. In this context, Twitter was used to commemorate the holiday (group five), remember Antwon Rose II (group one), and spread information about protests, memorials and celebrations (groups four, eight, and ten). Overall, the tweets and the protests in this time period rarely reference George Floyd, but instead focus on local victims of police violence, such as Rose.
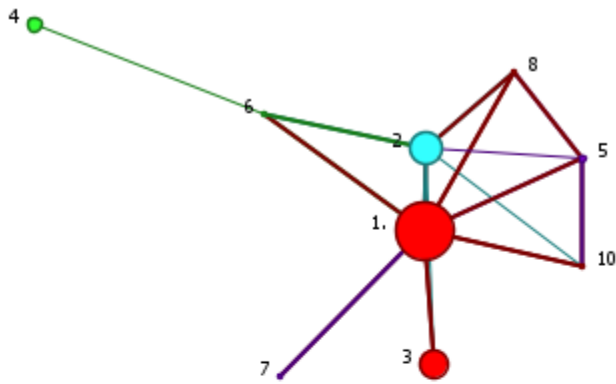
Figure 8.4: Sociogram of ten largest groups detected in the June subset, 1260 tweets in total (100% of tweets in the June subset). The size of the nodes represents the number of users in the node. The width of the edges represents the number of edges the two groups share. Red=Local BLM, Violet=Public Official, Green=Local News, Teal=Anti-movement.

Group Description	User Count	Tweet Count	Primary Script Type	Primary Objective
1. Local BLM	248	142	.90 performing .08 staging	.79 to remember .08 to recruit .07 to witness
2. Anti-movement	148	79	1 interpreting	1 to learn
3. Local BLM	133	85	.99 performing	.9 to ignite .09 to remember
4. Local News (KDKA)	76	30	.56 staging .28 interpreting .16 performing	.52 to learn .28 to witness .16 to remember
5. City Officials	47	52	1 performing	.94 to learn
6. Local News (KDKA)	12	50	1 interpreting	.74 to learn .27 to witness
7. State Officials	10	42	.73 interpreting .27 staging	.73 to remember .27 to donate
8. Local BLM	9	47	.86 staging .14 performing	.83 to recruit .11 to ignite .03 to remember
9. Local News (Public Source)	8	34	.57 performing .43 staging	.57 to witness .43 to recruit
10. Local BLM	7	25	1 staging	1 to recruit

Table 8.2: Names of the ten largest groups in the June subset, the number of users and tweets in each group; the most prominent script types and objectives in each group; the ratio of tweets in the group classified as the script types, and the ratio of tweets in the group classifed as the most frequently observed objectives.

Several new types of groups emerge in the Juneteenth period. An anti-movement group, group two, spread reports of the arrest of Brian Bartels, the man who vandalized a police car, using hashtags such as #Antifa and #DomesticTerrorism. Pennsylvania Democrats, along with several Pennsylvania Representatives (group seven), made public statements contextualizing Juneteenth in light of police brutality, especially the killing of Antwon Rose II. This interpretive script called on readers to remember Antwon Rose II ("to remember" 73%). Group five, on the other hand, was composed of tweets from the official city of Pittsburgh account and the Pittsburgh Penguins account (and their retweets), which acknowledged Juneteenth, providing historical information about the holiday, without mentioning the anniversary of Rose's death. The objective of these tweets were for the reader to learn (94%) about the holiday.

Performance scripts from local BLM groups demonstrate how the global BLM movement intersected with local instances of police brutality. Local BLM group one mostly consists of documentation of on-the-ground actions for online audiences; however, because the actions were framed as memorial events for Rose, despite addressing broader issues of police brutality, the primary objective was "to remember" (79%). Local BLM group three was primarily composed of retweets of Antwon Rose II's poem—literally recirculating J4A scripts from 2018 to re-ignite outrage over Rose's death.

Unlike the May period when staging was happening concurrent to the initial protests, the actions around Juneteenth were pre-planned. The prevalence of flyers, such as those in Figure 7.7, articles listing events, and threads about BLM actions (group eight) suggest that there was greater backstage coordination (off Twitter) than was visible in the May dataset. These pre-planned events were more organized, less volatile than the May protests, and were likely perceived to be less risky to attend, thus less Twitter discourse was devoted to the events.

8.4.1 August: Developing New Local Scripts

In August, the struggle for racial justice came home to roost as activists pushed for police reform and accountability from Pittsburgh city officials and local institutions. If the June subset reflected a renewed focus on ongoing local racial justice issues, August saw renewed outrage and a push to see these issues addressed. Notably, the local news did not report on these protests from the ground, nor were these events publicized beforehand.
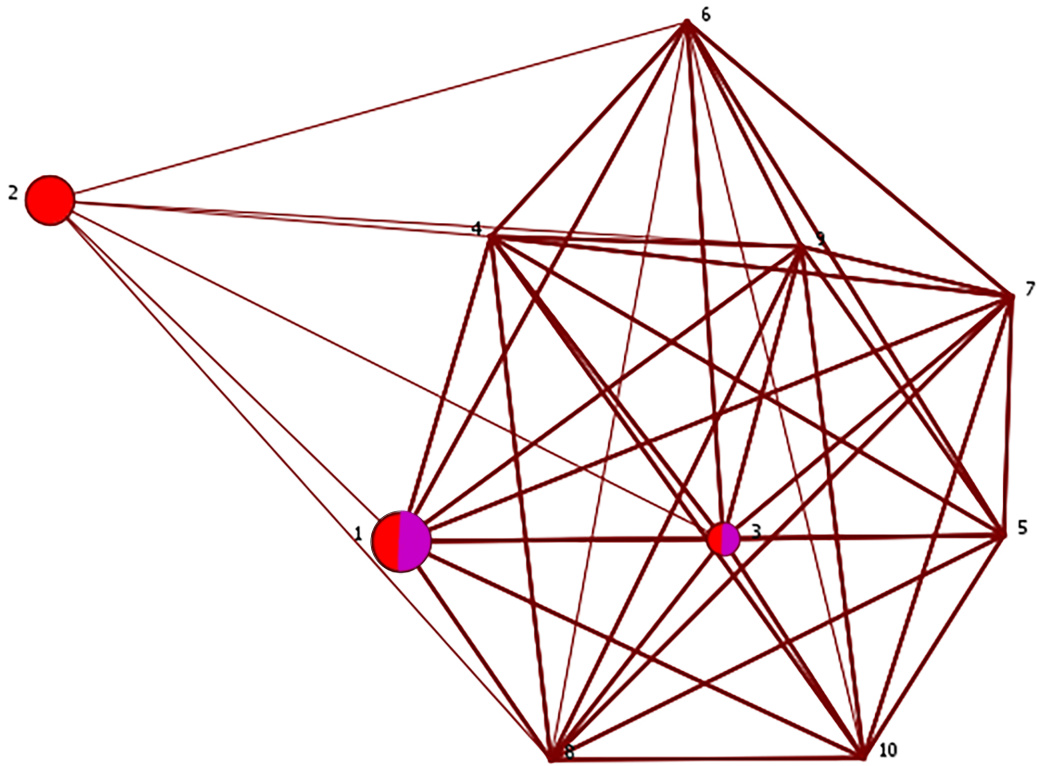
Figure 8.5: Sociogram of ten largest groups detected in the August subset, included 18,389 tweets (100% of the tweets in the August period). The size of the nodes represents the number of users in the node. The width of the edges represents the number of edges the two groups share. Red=Local BLM, Violet=Public Official.

Group Description	User Count	Tweet Count	Primary Script Types	Primary Objectives
1. Local BLM vs. Mayor Peduto	1345	7126	.84 performing .14 interpreting	.32 to counter .24 to ignite .10 to criticize
2. Local BLM (Justice for Jaylen)	1172	1175	1 performing	1 to witness
3. Local BLM vs. Anti-BLM	886	1246	.94 performing	.84 to ignite .05 to counter .03 to criticize
4. Local BLM	344	662	.51 performing .48 interpreting	.32 to counter .3 to ignite .16 to witness
5. Local BLM	312	1341	.70 performing .27 interpreting	.35 to ignite .23 to counter .1 to criticize
6. Local BLM	338	390	.95 performing	.92 to counter .06 to ignite
7. State Official & Local BLM	331	412	.87 interpreting .13 performing	.87 to counter .08 to ignite .02 to criticize
8. Local BLM	315	386	.97 performing	.87 to counter .08 to ignite .01 to witness
9. Local BLM	305	522	.77 performing .22 interpreting	.67 to counter .2 to ignite .04 to criticize
10. Local BLM	272	421	.94 performing	.77 to ignite .13 to counter .02 to criticize

Table 8.3: Names of the ten largest groups in the August subset, the number of users and tweets in each group; the most prominent script types and objectives in each group; the ratio of tweets in the group classified as the script types, and the ratio of tweets in the group classifed as the most frequent objectives.

In the May and June periods, Twitter was mainly used to spread urgent information and to report events happening on the ground. In August, Twitter became a site of protest, as it was used to put public pressure on Mayor Peduto, who was frequently tagged into tweets demanding account-

ability for the "covert arrest" of protester Matthew Cartier on August 15th. The online attacks on Peduto ran parallel to the on-the-ground protests targeting Peduto's home and neighborhood. Because Mayor Peduto and his supporters argued with BLM activists' criticism and demands, several groups (groups one, three) contain both BLM activists and their opponents.

Peduto responded to the Twitter attacks, sometimes trolling activists with tweets such as the one in Figure 8.6A of him calmly sitting on the porch waiting to meet with BLM activists to discuss the covert arrest. A meeting that BLM activists, namely Lorenzo Rulli, had been demanding for months became unavoidable when the protests moved to Peduto's front lawn. In the tweet (Fig. 8.6A) Peduto is referencing a Pittsburgh icon, Fred Rogers, who opened his children's television show with the lyrics, "It's a beautiful day in the neighborhood/A beautiful day for a neighbor/Could you be mine?/Would you be mine?" A refrain that would be an outright insult by the morning of August 20th.

The night of August 19th, Peduto finally met with BLM protesters briefly on his front porch. He agreed that the covert arrest was out of line before the conversation broke down, and Peduto retreated inside. A few hours later, police cleared protesters from Peduto's lawn, corralling them into a nearby park, where they were then cited for trespassing. Chaos ensued as police doused protesters with pepper spray and bean bag rounds [224].

Online activists retaliated with scathing replies to the "beautiful night in the neighborhood" tweet, created customized memes and an original parody video cutting together the opening credits of *Mister Rogers' Neighborhood* with images of the violent attacks on protesters by the Pittsburgh police. These acts of protest were essentially mediated by Twitter and other social media platforms (e.g. YouTube), and were classified as performance scripts in group one (84%) with the objective to either counter Peduto's narrative that the police were responding appropriately to protesters or to ignite outrage at the breach in rights that the covert arrest of Matthew Cartier represented. Groups nine and ten are mostly composed of retweets of the most scathing and effective tweets from the discourse in group one.

Figure 8.6: A: Screenshot of tweet from Mayor Peduto's account. Pictured here is Peduto sitting on the front steps of his home in Pittsburgh. B: Opening of parody video using the credits of *Mister Rogers' Neighborhood* spliced with video of police tear gassing and corralling protesters.

Group three is composed of both BLM activists and anti-movement users mentioning Mayor Peduto, demanding he respond to issues ranging from stopping the protests occurring in his neighborhood ("...so far your 'movement' has caused nothing but increased death and destruction."), to stopping the use of tear gas, and the unjust arrests of protesters for as little as possessing a megaphone.

During the August period, a second BLM protest developed on the campus of Duquesne University where Danielle Brown was on a hunger strike to demand an investigation into the apparent death by suicide of her son Jaylen Brown after his encounter with university police. Group two is mostly composed of tweets in support of Justice For Jaylen and includes Duquesne students and members of the historically Black sorority that Danielle Brown belongs to, Delta Sigma Theta. The Justice for Jaylen tweets were mostly isolated to group two; however, users in group two were connected to other groups in the period.

Group seven is the only group that is not primarily composed of performing script types. This group is mostly comprised of a single tweet and its retweets by state Representative Summer Lee, who had been appearing at BLM actions and speaking out on behalf of BLM protesters on social media throughout the summer. Rep. Lee tweeted condemning the covert arrest of Matthew Cartier and the lack of response from city leaders. This was coded as an interpretation of events intended to counter the official position of the city and Mayor.

8.4.2 Local News

Local news accounts and the accounts of that company's reporters tended to be grouped together, as we see in May groups three and seven and June groups four, six and nine. In May, Trib Live's (a local paper) reporting (group seven) is highly connected to local BLM groups four, five, and eight, suggesting that their reporting was frequently shared among BLM activists. A closer examination of tweets in group seven reveals that Trib Live reporters were on-the-ground at the protests taking photos in real time, thereby extending the protest performance to Twitter for others to witness. KDKA, the local CBS affiliate, on the other hand, used Twitter to call on readers to help find the man who vandalized a police car (i.e. "to recruit").

In June KDKA covered one of the many Antwon Rose II memorial events happening around the city, posting photos and interviews and encouraging other to come out and join in (group four). However, according to the sociogram, KDKA's reporting was distant from the other local BLM groups and only linked to the other KDKA group (group six), which reported on the arrest of a vandal from the May protests. Public Source, another local news site, also documented an action (group nine); group nine was not connected to any other group.

In August, there are no news media among the top ten groups. This might be part of a general trend of fatigue or faltering interests in BLM protests as the summer went on, or it may be that local news stories were sympathetic toward the Mayor, so activists did not share links. Activists' focus was on using Twitter to target Peduto, rather than to spread information about the local news reports.

8.5 Discussion

8.5.1 Relationship Between Twitter and Protest

The three periods of Pittsburgh 2020 BLM protests illustrate three different relationships between on-the-ground protest and Twitter activism. In the initial weeks of the protests, Twitter discourse was very focused on protest on the ground, serving simultaneously as a "backstage" for urgent coordination and information dissemination and as a global stage to broadcast local events. In the period around Juneteenth and the anniversary of Antwon Rose II's death, staging on Twitter was less dynamic and was mostly composed of event flyers and listings for predetermined events. Twitter was still used for staging, but these activities were less associated with "backstage" coordination and used more like a PR tool for the movement. Twitter discourse was also less centered on events on-the-ground. Twitter served as a second stage for discussion of the history, values, objectives and context of both Juneteenth and J4A. In the August protests, Twitter became a second site for protest as activists used Twitter to put pressure on the Mayor and other public officials.

This shifting relationship was most obvious in the different use of staging scripts. Staging shifted from a real-time activity in May used to warn protesters of changing conditions, to the spread of pre-planned flyers and event listings in June, to being non-existent in August. A priority among local activists in May was protecting protesters by providing timely information like changing curfews, the use of tear gas by police, the location of SWAT teams, providing phone numbers for legal aid, or offering general advice on protest safety. In June, the percentage of staging scripts, including event flyers, increased 6.7% and received over 20% more attention via retweets than in the May subset. The prevalence of flyers, such as those in Figure 7.7, articles listings movement-related events, and threads (group eight) suggest greater pre-planning and backstage coordination (off-Twitter) than was visible in the May dataset. Although there was clearly coordination of on-the-ground protests, there is a dearth of staging scripts in August, and the flyers that were popular in Juneteenth period are non-existent here. This suggests that staging, including recruiting protest participants and warning protesters, was happening on other more private communication channels, much as I observed in J4A. As the summer progressed, Pittsburgh BLM activists likely became more organized and developed communication protocols beyond Twitter.

Figure 8.7: The top graph shows the frequency of each script type among the 100 most retweeted tweets in each period and in the three subsets combined ("total"). The second graph shows the attention each script type received via retweets in each subset and in all three subsets combined.

8.5.2 The Activist-Audience

In Chapter 7, I suggested that metaphors of the stage and performance were applicable to networked movements on Twitter. In this chapter I have used vocabulary stemming from that metaphor, namely "objectives" and "scripting," to analyze three periods of local protest during the summer of 2020. I'd like to briefly discuss the advantages and challenges of the metaphor more broadly.

I used a "community detection" algorithm for a more nuanced comparison of the shifts in the

network over time. The algorithm generated groups of users that interacted with each other. An artifact of Louvain is that if many nodes (in this case, users) are each connected to a single node, they are grouped together; if user A retweets user B and has no other interactions, it groups all the users who retweeted user B together, even if user A and user C do not interact with each other. The largest groups in the dataset, e.g. group one in May, are composed of a single tweet retweeted by thousands of other users. This configuration bears little resemblance to online communities as we understand them on other online platforms or in collective movements. There is no commitment or effort expended on behalf of the community, and their common bond, agreeing with someone else's tweet, is weak and may be fleeting [133]. Applying performance theory, rather than think of this configuration as a community, we can think of it as a one-tweet long performance and those retweeting it as activist-audience. Each time an audience member is motivated to act by interacting with the (one-tweet) performance, they are transformed from audience to activist. This type of action, however, bears a greater resemblance to audience participation than marching through the streets, so I describe this type of participant as "activist-audience." By retweeting or otherwise interacting with a tweet, the activist-audience is extending the stage, i.e. network (sometimes referred to in social media-speak as "platforming" a user). As the stage grows, so too does the audience that it reaches.

Given that Twitter is event-driven, it is reasonable to expect that there are temporal limitations to an activist-audience's attention; audiences gather to a performer/performance during an event, i.e. a moment of crisis, but may lose interest in posts from this source or about this topic once the event is over. Metaphors of the theatre are more able to incorporate the temporal boundaries of these events than notions of "community."

Identifying groups formed by local news organizations and their audiences were fairly straight-forward. In the case of news organizations, there is a recognizable distinction between those core performers, those generating the content, and the activist-audience, those spreading the content. The activist groups were more difficult to classify based on the identity of the central actors. Perhaps because Pittsburgh is a relatively small city (population approx. 300,000), or because Black Lives Matter has grown over the years to include a diversity of people, it was difficult to distinguish groups of activists by ethnicity, age or affinity group (e.g. [89]), often indicative of communities with a shared social identity. Instead distinctions between BLM groups were made based on script type and shared objectives.

Being a polyvocal platform, stages and performances on Twitter are bound to overlap in space and time. A single user may be acting in simultaneous performances, i.e, participating in simultaneous or intersecting objectives, scripts, or movements. There are not analogous experiences in the theatre; an actor can not be performing in two shows at the same time. A single performance becomes visible through a process of filtering and segmenting the Twitter data, but may not be

evident to the everyday Twitter user because of context collapse [39]. However, the metaphors that theatre offers, may suggest future designs that draw attention to the bounds of a performance without locking in those divisions as defined communities, such as a Facebook group.

8.5.3   Scripting Processes

In order to discuss how scripting processes emerge and formalize, we will need to return to the metaphor of theatre, expand our understanding of how scripting occurs in theatre, and draw out the conceptual similarities to scripting processes in local movements.

When Benford and Hunt wrote about the dramaturgical approach to social movements, they, like Goffman before them, used metaphors from traditional Western theatre [23] [99]. This is a type of theatre where divisions between frontstage, backstage and the audience are clearly delineated, and where scripts are born from the genius of a single author, whose vision directors, designers, and actors work to bring to life. These metaphors fall apart when applied to movements that are decentralized and use participatory and polyvocal social media.

What is required to bridge the gap between the dramaturgical perspective in sociology and networked movements is an updated, more inclusive understanding of theatre and its processes. The modernist understanding of theatre excludes forms of popular contemporary theatre, such as improv comedy and site-specific interactive theatre, like PunchDrunk's long running adaptation of Shakespeare's *Macbeth*, *Sleep No More*. It also excludes more experimental and postmodern work, where physical movement and multimedia displays are as vital as the dialogue, and collaboratively created plays based on ethnographic research or the weaving together of the company's personal experiences on a theme. Each of these types of theatre rely on different scripting processes.
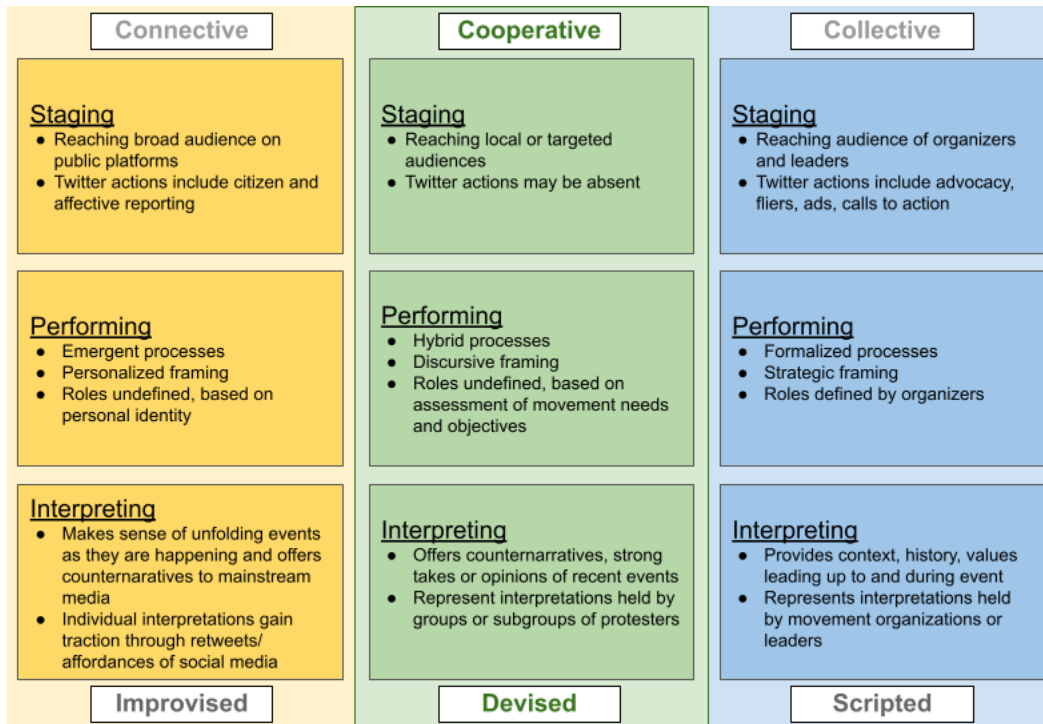
Figure 8.8: Diagram illustrating the spectrum of connective, cooperative to collective scripting processes and comparing them to theatrical scripting processes.

8.5.3.1 Collective action and formalized scripts

In collective action, key elements of the frame and script is negotiated by the movement's leadership and members [205], but through performance activists interpret the script, adapting it as needed to the immediate context. Although Benford and Hunt describe scripting as emergent, they qualify this with, "while the bulk of scripting activity occurs prior to a performance, it can be improvised as actors interact with each other and the audience" [23]. This is similar to traditional, scripted theatre, where the script is developed through a centralized process, but each individual that interacts with the script interprets and adapts it to the particular circumstances.

Interpretation of an existing script lends to the scripting process. In performances, thoroughly rehearsed and meticulously staged, the actor makes interpretive choices on how to perform specific lines. This interpretation through performance alters the script, slight as the alteration may be. Although the performance is temporary, some actors' interpretations of lines are lasting, even surpassing the script. For example, Marlon Brando's tortuous yell, "Stella!" in *A Streetcar Named Desire* or Laurence Olivier raising Yorick's skull in his outstretched hand. Interpretation is also the job of the director and designers who extrapolate the play in 3-dimensional space and time. Though interpretations on how to stage the play are based on the script, they too alter the script for a particular theatrical event.

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An example of interpreting movement scripts at the local, community-level is interpreting June-teenth through the tragic loss of Antwon Rose II, or the moving evocation of Rose's poetry adapted into a protest chant. On Twitter, individual users converged on these interpretations and helped proliferate them among locals.

The Juneteenth memorial events for Antwon Rose II, reflected forethought and planning. On Twitter, both the flyers produced and the listings in local newspapers received little attention, but signal pre-planning and group coordination. Based on photos and video, turn out for Antwon Rose II memorial events was substantial. A core group of organizers had to plan these events, such as a balloon release, make flyers to recruit participants, and write and distribute PR statements to the local news. When individuals arrived, even if they were newcomers, they could pick up on clues and instructions designed by the organizers, and draw from their past experience of similar common cultural scripts for memorials or vigils.

Past networked movements have used formalized scripts to guide performances of protest. For example, Black Poets Speak Out published the script that they expected participants to say at the beginning of their poetry video. Although participants made individual choices about what poems to read, the movement script was reinforced by movement organizers that posted every video in their Twitter feed and on a Tumblr blog in the same minimal format. In #ILookLikeAnEngineer the script was fairly well-established. Women scientists posted selfies of themselves engaged in engineering activities, often wearing a lab coat or posing with lab equipment. While the script for online participation was formalized, individual participants in the movement interpreted how to enact it, deciding what costume to wear or props to pose with, sometimes also representing other aspects of their identity in the pictures [142].

8.5.3.2 Connective action and improvised scripts

If the formalized scripts of traditional Western theatre are at one end of the spectrum, improvisation lies at the other. In improvisation, the individual actor interprets through performance, as all actors do, but also interprets their own staging and scripting. When actors are new to the improv troupe or do not share the same training, the various interpretations made by actors during improvisation are difficult to sync and the scene falls apart. It requires years of training, ensemble-building, trust, and thorough knowledge of your fellow players to be able to create coherent and entertaining improvised scripts.

An improvised script emerges from interaction between the players, which may include ensembles of actors, audiences and teams of designers and artists. It is in these horizontal, negotiated processes, that structured, well-defined collaboration and processes are important. Improv training, for example, includes extensive training on dramatic structure and practiced formulas for constructing jokes and gags—a tradition that goes back at least to the lazzis of commedia dell'arte in 16th

century Italy. With a shared understanding of elements of dramatic structure, individual performers are prepared to make split-second decisions on what to say and how to enact the performance, depending on what the scene demands.

The emergent scripting processes in the early days of the protest can be compared to improvisation. In improvisation, the individual actor interprets through performance, as all actors do, but also interprets their own staging and scripting. When actors are new to the improv troupes or do not share the same training, the various interpretations made by actors during improvisation are difficult to sync and the scene falls apart. There is evidence of a similar scenario in the initial days of BLM protest. Local BLM leadership was not visible at protests or on Twitter as protesters took to the streets. Therefore, activists at protests drew from their identities and past experiences to inform their improvised responses. Protesters who had previous experience with BLM were prepared to encounter police, and given the J4A protests of the last several years, one could expect that many protesters either had personal experience or associations with BLM protests, but others were newcomers. For example, a group of young people vandalized a police car, despite other protesters' attempts to stop them. On Twitter, some reports described the police car as suspiciously abandoned along the protesters' route, as if it was a trap—whether or not this is true, it signals an awareness of police tactics that newcomers did not have or value. Enacting protest based on personal interpretations or interpretations shared by other groups in which one belongs, is aligned with Bennett and Segerberg's theory of connective action [26].

The May Twitter subset is the only data analyzed for this thesis in which there was not some level of advance planning and coordination by a committed group of organizers. It is also the dataset that is most aligned with Bennett and Segerberg's theory of connective action [26] and with research on use of Twitter for protest coordination, such as Starbird and Palen's 2012 findings [208]. For these reasons, I liken improvised scripting processes with connective action (Fig. 8.8).

8.5.4 Cooperative Action and Devised Scripts

Between the emergent scripting processes of improvisation and the formalized scripts of traditional theatre, lies the collaborative processes found in devised, community-based and interactive theatre.

In a devising process, the script is created collaboratively by a diverse group of theatre artists. Improvisation is often used in this process, allowing actors to contribute to the script (developing their own lines and movements) and through the performance. Individuals lend to scripting processes by offering personal interpretations through scripting and performing, while staging processes are largely negotiated collectively. Devising is very process-oriented, because ultimately staging decisions have to be made and agreed upon by the group in order to execute complex interactions without catastrophe. Therefore, protocols are established to facilitate collaboration, such

as composing, a method I have drawn from for other technology design activities [33] [57] [58] [174] [149] .

The scripting processes a theatre company uses reflects their values and worldview. For example, Cornerstone Theatre in Los Angeles creates plays based on the concerns of a given community. Before they begin shaping a play, they hold open forums to learn about pressing issues. A recent series of plays focused on the unhoused in downtown Los Angeles [1] Unhoused community members were integrated into every aspect of theatre production, from participating in ethnographic research, commenting on early drafts of the script, and performing in the shows alongside professional actors. Cornerstone's former artistic director Michael John Garcés stated that "any theatre that has a result in mind is not having a conversation" [1]. This ethos is baked into their scripting processes which they teach to others through workshops and residencies. These scripting processes contain within them collaborative scripts that embed the values and goals into the process and the product.

It is also helpful to think of these processes in terms of theatre with creation and rehearsal periods, execution of the scripts through performance, and then disbandment. When a show ends its run, the particular configuration of performers, designers, and technicians disband, but the theatre company remains and is poised to launch the next production, which will likely, although not necessarily, include some of the same players as the previous production. Not only do these players have established relationships and trust, but they have knowledge of the company's processes and ethos that they can pass on [21].

An example of a cooperative staging script from a networked movement is the 'human megaphone' or 'people's megaphone' used during Occupy, a process in which a crowd of people repeat the words of an individual giving a speech, so that others in the crowd can hear them. The human megaphone was developed as a workaround to regulations preventing amplified sound. The human megaphone can be adopted by any group to convey any message, but it especially embodies the spirit of solidarity and cooperation in the Occupy movement.

There is evidence of similar cooperatively created scripts to the targeted attacks of Mayor Peduto on and off Twitter in August of 2020. Benford and Hunt placed "organizationally mediated connective action" in the middle of their model, imagining campaigns like #timesup, which were strategically developed by an organization or loose network of organizations. However, I do not see the hand of an organization at work behind the attacks on Peduto. What is visible is the convergence on a shared objective among different activists on-the-ground and on Twitter, suggesting that behind-the-scenes staging decisions were being made by a connected group of activists. The shared objective of activists was evident: put pressure on Mayor Peduto to address the police's treatment of protesters. Having a shared objective made it possible for Twitter audiences to create a script together, transforming from an audience to activist through retweets or by attacking Peduto

in direct replies and through original tweets, without directions from organizers. Having a clear objective also made it possible for activists to respond creatively, adapting the script in ways that allowed them to use their skills and integrate their personality and cultures. For example, some activists cooperated to make a parody video in response to one of Peduto's tweets, demonstrating some level of backstage scripting and, based on the number of contributors mentioned in the tweet, coordination. Another Twitter account responded to one of the Mayor's statements simply with, "Girl." These improvised responses contributed to a larger cohesive performance/protest.

8.5.5   Localization In the Pittsburgh BLM Movement

Bennett theorized the "personalization of politics" in networked movements, suggesting social fragmentation and abandonment of collective action frames in favor of personally expressive action frames [25]. While individuals may choose which movements to participate in based on alignment with their personal values, the data presented in this study suggests trending scripts and objectives at the community level. I refer to this process of harnessing global movements to amplify and grow local grassroots efforts as "localization." Localization is a process that has the potential to shed light on some of the more mysterious factors of rhizomatic growth in networked movements: how a movement shifts from global outrage to targeted fights for local policy change.

In response to the tragedy of the murder of George Floyd, Pittsburghers took to the streets and to Twitter to voice their outrage. Despite vandalism in the early days of protest, Mayor Peduto remained supportive of the movement. After all, the betrayal of trust occurred in Minneapolis, and the outrage was perceived to be with a distant or abstract opponent. However, as the summer progressed, both the issues being discussed and the targets of protests became more localized, and as this happened local subgroups and campaigns formed.

It is a coincidence that Juneteenth and the anniversary of Antwon Rose II's death occurred a few weeks into the summer's protests. Both the J4A movement and local recognition of Juneteenth had grown over the preceding two years. Movement scripts and events had time to develop, and activist organizations had time to prepare the events and recruit participants. A core group of organizers had planned a balloon release, made flyers and wrote and distributed PR statements to the local news. When individuals arrived, even if they were newcomers, they could pick up on clues and instructions designed by the organizers and draw from their past experience of similar common cultural scripts for memorials or vigils. The intersection of global BLM scripts with local ones was pivotal in increasing the focus on local issues and fanning the flames of grassroots dissent.

Based on a lack of staging tweets in the August subset and informed by understanding of the local communication ecosystem in J4A, I hypothesize that coordination within these subgroups happened using other, more private ICTs. With the growth of local activist networks, the activists'

objectives became more oppositional and targeted, attacking city officials and pushing counternarratives demanding accountability from the city and its institutions.

National BLM protests became increasingly localized and targeted, intersecting with ongoing efforts to reform policing and the J4A movement. As they became more localized, activists relied on communication channels other than Twitter for staging activities and exhibited a more concerted, targeted use of Twitter to attack government officials. These activities suggest increased coordination among local activists and the development of scripts and scripting processes.

However, it is necessary to compare this process of localization in Pittsburgh with that of other cities during the summer of 2020. Perhaps intersecting with established local scripts is an essential step in localization, or perhaps it was an influencing factor in Pittsburgh, but not essential.

8.5.6 Methodological Contributions and Limitations

The primary methodological contribution of this work is a method of combining dramaturgical analysis of social media data, including text, hashtags, images, video and metadata, with social network analysis, to understand the objectives of a group within a movement or a local instantiation of a movement. Identifying trends in the types of mobilizing activities being carried out on Twitter and their objectives, reveals opportunities to disrupt current processes and to develop tools to aid grassroot movements. For example, getting information to protesters on the ground as quickly as possible may be a priority, but as we've seen in this study, staging tweets do not receive many retweets. This is a specific problem that activists, designers and researchers can work to solve.

This method builds on Freelon et al.'s method of community detection, and may be especially useful in smaller data sets or data sets where there is not great diversity among the users or where identity is not a useful proxy for belief or stance. Dramaturgical analysis works best when based in a strong understanding of the social context, which may be difficult to maintain when analyzing national or global movements. However, here in the local context, it has uncovered differences in *how* groups of Twitter users use Twitter to accomplish activist work and participate as audiences to that work.

While this study was conducted using Twitter data, nothing about the coding process is particular to Twitter. Dramaturgical analysis is platform agnostic, and the code book developed in Chapter 7 can be applied to any topic.

I want to note another methodological choice made in this process. Although other studies may exclude tweets from deleted or suspended accounts based on assumptions of inauthenticity [37], I chose to retain all of the tweets that were still legible, i.e. did not have broken urls. I found that several people prominent in the August Twitter attacks on Peduto had removed their accounts or were suspended by the spring of 2021 when I investigated their profiles. During the summer

of 2020, it was rumored that Pittsburgh police were using social media to identify protesters. In May 2021, this rumor was confirmed: Pittsburgh police, in violation of city ordinances, used facial recognition technology, Clearview AI, to identify protesters using images posted on social media [188]. If I had removed those accounts, the analysis, particularly of August, would look very different. With state and corporate surveillance of social media becoming more common, researchers need to rethink the significance of removed accounts.

Limitations of the research in this chapter and Chapter 7, include limitations in data collection. Twitter was so active in the days immediately following the murder of George Floyd, that I may have missed some of the Pittsburgh-specific content in these first few days.

More examples of BLM in different cities are necessary to understand the factors that influence localization. The movement in Pittsburgh did not garner sustained national news coverage, nor was it attacked by conservative media or mainstream right-wing pundits, such as Alex Jones. The combination of staying out of the line of fire, so to speak, and the coincidence of intersecting with ongoing local organizing efforts early in the summer, may make events in Pittsburgh unique. It may also provide insights for organizers looking to avoid media attacks or put the spotlight on local struggles.

8.6   Future Work

In order to continue to develop dramaturgical techniques and properly apply this method to the analysis of community-level interpretations of global movement scripts, it is necessary to study how the protests in response to the murder of George Floyd unfolded on Twitter in other cities. Comparison across cities would surface trends in scripts and scripting process, and the factors that affect localization.

Research suggests that right-wing activists engage in disinformation on social media and manipulation of legacy media more than leftist movements [88]. I am curious to learn if different objectives are detectable in right-wing movements or in BLM counter-movements; or, if it is essentially the same set of objectives used in different measures for different purposes.

In an effort to understand the relationship between on-the-ground protest and use of Twitter, I have focused on periods that corresponded with protests. In future work, I am curious about applying dramaturgical techniques to organizationally mediated networked campaigns that do not necessarily correspond to offline protest.

CHAPTER 9

Contributions, Future Work and Conclusion

9.1 Contributions

This thesis contributes new scientific knowledge about rhizomatic networked movements, including role development, coordination, and framing processes. The first half of the thesis discusses the hybridity of each of these processes, how they involve both online and offline aspects. It also contributes theoretical perspectives on Bennett and Segerberg's Logic of Connective Action and methodological contributions in the form of adapting the Benford and Hunt's dramaturgical approach into a set of codes and a process that can be applied to networked movements.

9.1.1 Roles

Professional identity shapes how activists participate in social movements and construct their movement identities on Twitter. I identified three activist roles: organizer, storyteller and advocate. Organizers persuade others to act in their self-interest and for the common good, and create the conditions that allow for collective actions to have impact in the public arena. They take a relational approach to Twitter, often mentioning others and using movement hashtags. Storytellers contribute to movement narratives and direct the public's attention to social issues. They use Twitter as a publishing tool and are fiercely independent. Advocates focus on networking and building bridges to increase a movement's visibility. Advocates are associated with positions across industries in public relations, marketing, and public policy. On Twitter, advocates amplify the voices of other by expanding their personal networks through retweeting and mentions and bridging affected communities to other networks.

These roles are a lens to better understand how movement identities are constructed and how they might function together during a hashtag campaign. Because the roles are shaped by individuals' professional and personal identities, they are relatively stable from campaign to campaign.

9.1.2 Coordination

During a grassroots community curated festival, social media, especially Facebook comment threads, provided a site for social interaction around event coordination. However, this was not sufficient to build trust between networks and amongst groups with either opaque or conflicting values and goals. Personal relationship building often required one-on-one interactions via email, phone or direct messages, and sometimes in-person meetings. Brokers played a pivotal role in facilitating relationships across networks; however, sometimes organizers had to demonstrate extra effort and commitment in new relationships by adapting to participants' needs and communication norms.

Having multiple avenues for communication and coordination helped organizers adapt to the needs and communication norms of diverse participants. While essential to building trust, approach to coordination in a decentralized process created a lack of awareness and opportunities for miscommunication among the organizers. This led to the development of alternate coordination strategies (i.e. one organizer becoming the hub of many collaborations) and possibly corroded trust with community partners.

When we understand movements as hybrid, and the use of specific ICTs for specific purposes as a choice, then we can understand hybrid movements as designed, even when those design choices are distributed and emergent. This corrects the perception that a social media platform, e.g. Facebook or Twitter, serves as movement infrastructure [219]. It allows us to properly credit activists for their strategies and labor, and gives researchers and technology designers insights to their ICT needs.

9.1.3 Framing

Hybrid framing involves interaction between on-the-ground and networked processes. However, not all framing processes produced frames with reach on Twitter. Strategic framing processes, including media and campaigns designed by local organizers through backstage processes and 'citizen reporting' of on-the-ground actions, had little reach in the Twitter network. Frames developed discursively, through interaction between on-the-ground and networked, and frontstage and backstage processes had greater reach on Twitter. However, the most successful frames were those that incorporated Black Lives Matter rhetoric and were tweeted by non-local users. When Black Lives Matter frames and hashtags were used in connection with J4A, it connected these movements and bolster reach. It may also reinvigorate Black Lives Matter, influencing ongoing framing processes.

Lacking a committed activist core appears to have had negative effects on the amplification of offline actions and the reach of locally generated frames. Past research indicates that networked

movements are made up of a highly committed core of activists who interact frequently, facilitating growth of information networks [18] [28]. In J4A the network core was instead composed of local journalists and news outlets, likely due to attribution patterns and self-promotion. This suggests that hybrid movements have different network characteristics than previously studied networked movements. Further research is necessary to validate these findings and to design appropriate interventions in support of hybrid movements.

9.1.4 Methodological Contribution

I built upon Benford and Hunt's dramaturgical perspective of social movements. I adapted dramaturgical tools used to analyze social movements on-the-ground [23] for a distributed and polyvocal media environment like Twitter. Using metaphors and analytic techniques from theatre is vital for understanding the performativity of social media and the role of performative expressions in social movement mobilization.

Applying Benford and Hunt's definition of scripting, I coded tweets as either staging scripts, performance scripts or interpretive scripts. Using script analysis techniques commonly used by actors, I also coded tweets based on the objective it conveys to the reader and whether that objective is explicit, "Join us downtown on Saturday," or implicit, "We can't let them get away with this."
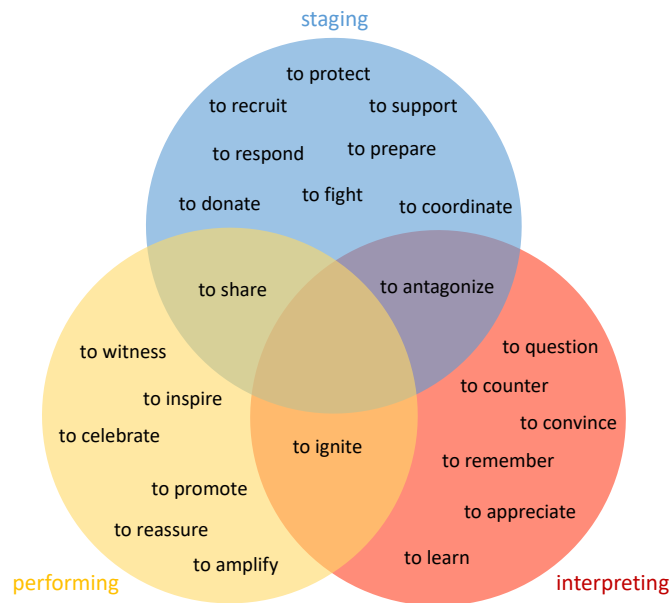
Figure 9.1: Venn diagram of the relationship between objectives and script types. Objectives further from the center have a higher association with the script type, those closer to the center have associations with multiple script types.

Adapting the dramaturgical approach for application in networked movements and combining dramaturgical analysis with community detection algorithms, allows us to apply metaphors from the theatre to analyze social media use over time as part of a movement's hybrid scripting processes and Twitter as both the site of scripting and a stage for protest. The dramaturgical approach understands tweets as scripts that communicate an objective and contain information that either directly or indirectly instructs the reader on how to fulfill that objective. If the reader chooses to take action, then they are transformed from an audience member to an activist or an activist-audience (if the action is the equivalent to clapping in the audience, e.g. liking or retweeting). This transformation is empowering to the individual [218], leads to greater identification with the movement, and motivates future involvement [24]. The more salient the identity, the more likely that individuals will extend their movement identity into other aspects of their lives.

Because objectives are not tied to topics, a major benefit of this method is that it is transferable across movements and can be used to compare different phases of a movement or different factions within it. Together the three scripting types and objectives provide a meso-level of analysis, less specific than topics or content, but providing more nuance than social network analysis alone. While the coding scheme of objectives is likely not a comprehensive list of all objectives present in networked movements, it provides a solid base from which to grow a dictionary.

The coding scheme is platform-agnostic. A script could be a text-only tweet or a TikTok video. While objectives might be the same across platforms, how an activist carries out an objective online is dependent on the features and affordances of the platform. Some types of scripts or objectives may be more or less effective depending on the platforms' affordances, and some objectives might make specific use of the features—on Twitter retweeting is a way of expressing alignment with the movement message, but on Reddit it is upvoting.

9.1.5 Theoretical Contribution

Through dramaturgical analysis, I found two related phenomena that build on existing theory: co-operative action and localization. In Bennett and Segerberg's "Logic of Connective Action," they discuss a continuum from collective action to connective action. Connective action is characterized by the diversity of opinions and approaches within a networked movement and personalized politics, where collective movement identities may be absent, broadly defined, or secondary to other social identities [25] [27].

Bennett and Segerberg's connective action theory states that networked movements are composed of individuals using infrastructure afforded by social technologies to act in a connected way [26]. Individuals personalize their online movement participation to reflect their personal identities, values and goals [25]. Connective action theory recognizes that there is a spectrum of organizing

processes from connective to collective, but offers little empirical evidence for what falls between these two poles. In this thesis, I have presented a number of cases of locally situated networked movements that do just that. These movements use social technologies as communication infrastructure and to expand their networks, but they do so by strategically choosing which ICT to use for what purpose and to reach certain audiences, suggesting some level of coordination, convergence, and group decision making among activists.

What I observed in the Pittsburgh BLM August 2020 data, while admittedly a brief period of time, was cooperative action, where individual activists converged around a shared objective and each contributed to it according to ability and personal identity. In Bennett and Segerberg's spectrum, cooperative action would lie between "connective action self organizing" and "connective action organizationally enabled"; self-organizing as they describe it does not account for what I observed: online crowds coming together to cooperatively perform a protest action. In 2012, at the time Bennett and Segerberg were writing, they had not yet experienced similar technology mediated protests, such as K-pop fans converging to register for tickets to a Trump rally, or spam a Dallas police app created to enable citizens to report on protesters [56] [2].
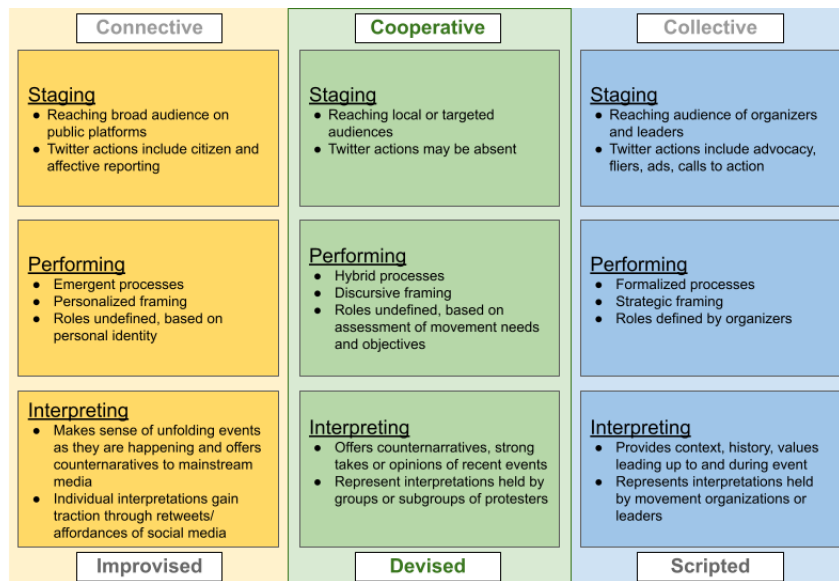
Figure 9.2: Diagram illustrating the spectrum of connective, cooperative to collective scripting processes and comparing them to theatrical scripting processes.

Extending the dramaturgical analysis by comparing organizing processes to theatrical scripting processes, between the emergent scripting processes of improvisation and the formalized scripts of traditional theatre, lies the collaborative processes found in devised, community-based and interactive theatre. In a devising process, the script is created collaboratively by a diverse group of theatre artists. Improvisation is often used in this process, allowing actors to contribute to the script, devel-

oping their own lines and movements. Individuals lend to scripting processes by offering personal interpretations through scripting and performing, while staging processes are largely negotiated collectively. Devising is very process-oriented, because ultimately staging decisions have to be made and agreed upon by the group in order to execute complex interactions without catastrophe. Once the devising process is established the troupe often repeats it from show to show, tweaking it as they go.

Rather than personalized politics, what I observed in the August data was a convergence of scripts and objectives at the community level. A process that I described as "localization." Especially considering that in May the protests began because of the death of George Floyd in Minneapolis, and as the summer progressed, the protests became more focused on local issues and politicians. Although further studies are needed to verify that this a common and generalizable process, localization has the potential to shed light on some of the more mysterious factors of rhizomatic growth in networked movements: how a movement shifts from global outrage to targeted fights for local policy change.

While individuals may choose which movements to participate in based on alignment with their personal values, the data presented herein suggests trending scripts and objectives converge at the community level. I refer to this process of harnessing global movements to amplify and grow local grassroots efforts as "localization." Localization is a process that has the potential to shed light on some of the more mysterious factors of rhizomatic growth in networked movements: how a movement shifts from global outrage to targeted fights for local policy change. However, it is necessary to compare this process of localization in Pittsburgh with that of other cities during the summer of 2020 and in other widespread networked movements.

9.2 Future Work

The studies in this thesis, drawing from the dramaturgical perspective, and informed by my understanding of hybrid processes in rhizomatic networked movements, suggest two areas for future research: theory development and design for cooperative action. In this thesis, I have built upon existing theory to suggest that cooperative action and a sometimes related process of localization are separate processes from connected action; however, further empirical research is needed to validate and expand on this theory.

While further reasoning is necessary to move from the analysis offered in this thesis to design recommendations, I have identified a number of challenges for activists and networked movements that suggest that design interventions may be appropriate. I will address each of these questions briefly in the design for cooperative action section that follow.

9.2.1 Theory Building

Much social movement theory of the last fifteen years has focused on how social media, smartphones, and other ICTs have transformed mobilizing processes [77]. As movements embraced new technologies, old practices were uprooted and researchers, organizers, and policy makers are still trying to catch up to the rapid changes and ripple effects this produced in our social and political realities. As the dust settles on social technologies, it is becoming increasingly clear that grassroots movements are making strategic and intentional choices about which technology they use for which purpose to reach which audience [130] [131]. These choices and processes, however, are difficult to identify from a distance or from the interactions on a single platform, especially a public platform like Twitter.

In order to validate and elaborate on the characteristics of cooperative action and the process of localization, it requires more than analyzing the Twitter data of another city during the summer of 2020 BLM protests or of the next major protest. It requires ethnographic research and a deep knowledge of the political and social context in which the on the ground protests and actions are taking place—the same knowledge that I bring to my work on Pittsburgh. Not only is this necessary to read the nuances of the social drama as it unfolds on Twitter (or another public facing platform), but also to understand what's missing and where activists have made choices about what to keep out of the public eye.

9.2.2 Designing with a Dramaturgical Lens

The dramaturgical approach not only provides a lens by which to analyze a networked movement as a mediated performance, but it also provides us with a vocabulary to design the performance itself and the tools needed to support it. The metaphor of the theatre provides a shared common language that activists, designers, and HCI researchers can use despite their diverse fields and objectives. In this section, I speculate on how activists, designers, and HCI researchers might use the dramaturgical lens to further their work.

9.2.2.1 As an Activist

There are a number of ways that the dramaturgical lens may prove beneficial to activists and movements. First, when considering whether improvisation, devising, or formal scripting is an activist group's goal at a particular time. Second, to determine online campaign objectives and train members for how to respond to common oppositional scripts. Lastly, activist groups could consider localization as a valid strategy for growth.

The metaphor of theatrical scripting processes may be a useful shared language for diverse activist groups. A group operating like an improve troupe is building an ensemble that is work-

ing toward establishing trust by developing shared understandings, values, organizational culture and protest behaviors. These rehearsed narratives and behaviors lay the groundwork to improvise protest scripts in response to breeches in the social fabric. However, if the activists recognize that the breech has been well identified and received sufficient attention, and it is now time for them draw from their wider networks to focus on a specific conflict, then they move into devised scripting phase where the emphasis is coordinating the efforts of a network of allies. As the movement works toward repair, it transforms into a longterm strategic effort, the scripts and roles become more formalized, replicable and sustainable.

Training in dramaturgical reading of social media posts for objectives would help activists understand the transformative power of posts to move a reader from an audience member to an activist. This would help activist make informed decisions about how to frame their own social media posts and how to make calculated choices about whether to engage in discussions (or arguments) with other users.

We often think of grassroots movements as starting with small local communities and growing organically into larger, sometimes national movements. What I observed in Pittsburgh BLM 2020 is the opposite. In May and early June there were worldwide protests in response to the murder of George Floyd at the hands of the police, as global attention waned, activists in Pittsburgh focused the conflict on local racial justice issues with the police and within local government. This process I termed "localization," may not be unique in a world where our major social media platforms and cable news channels are highly event driven. Activists may accept this as a valid strategy alongside more typical grassroot growth.

9.2.2.2 As a Designer

Using the metaphor of the theatre can provide designers and activists who may operate according to different value systems and use different jargon a shared vocabulary from which to operate.

One of the least explored areas of design for movements and activists is software that facilitates an intense collaboration among a network of networks for a limited amount of time. Taking Pittsburgh BLM 2020 as a guide, they may only collaborate for four to eight weeks, as they work like a theatre company devising a new play together with the community over a limited rehearsal period.

Coalition building and acts of solidarity are characteristics associated with horizontal, rhizomatic, and intersectional activism. This kind of cooperation, knitting together the values and expertise of different groups and individuals (e.g. video editing (August 2020) or crafting (J4A)) toward the fulfillment of shared goals was explicit in #90X90LA. It was conceived of as a crowd-curated festival with the intention of building relationships between disparate but politically aligned groups to build power. As discussed in Chapter 4, establishing and maintaining communication with multiple stakeholders with varying levels of familiarity and trust was complex, labor inten-

sive, and demanded the use a whole ecosystem of social technologies. It was so labor intensive, that some processes, such as scheduling, that were intended to be distributed ended up collapsing in on one person. Organizer burnout is a real problem [104] and this is part of the issue. How can we prevent communication ecosystem collapse in distributed and horizontal systems?

Secondly, how do activists build trust within such a collaboration software without risking arrest or attracting worse acts of violence? Once the collaboration is over, can the communication be destroyed without losing all trace of the digital social connections?

If, as was the case in J4A, activists consciously move their conversations to more clandestine ICTs, how do they manage to populate the core of a more public social media in order to accurately broadcast their message and extend their protest performance without relying on the media?

While further reasoning is necessary to hone in on these design spaces, I have been developing participatory design processes that draw from theatre techniques and correspond with the dramaturgical perspective [174]. Over the last chapters, I have been comparing cooperative action to devised theatre, but throughout my career as a graduate student, I have also used devising techniques in technology design [57] [58] [149].

Using a specific technique, Viewpoints and Composition, based on principles for directing attention on the stage through spatial and durational relationships [33], I developed a one-off workshop for activists that encouraged participants to design platform-agnostic networks and campaigns [174]. Activists can view social media platforms as a material for design [135], which they can use to design the protest and build the type of networks that will best serve its enactment, including aspects like the rate of growth, the desired level of participation, the duration of communications, relationship to on-the-ground actions, etc.

Using Viewpoints and related theatrical techniques, designers and activists can explore difficult to understand abstract features of networks, their underlying mechanisms, and their relationship to social media features and algorithms physically in time and space. Through movement one gains a greater understanding of a user's embodied, affective, felt-experience. Through Composition, the companion method to Viewpoints, designers and participants can "sketch through performance" new interaction designs. I hope to have the opportunity to work for an extended period of time on such design methods with an activist group.

9.2.2.3 As a Researcher

With the proliferation of ICTs and the continued sophistication of networked movements, researchers are in need of classification systems that work cross-platform and take into consideration not just text and hashtags, but also images, video, and links.

The close, dramaturgical readings of tweets as scripts, which can be classified by type and objective, is a step toward a generalized code book that can be used by researchers of any networked

movement, potentially on any social media platform. Working together with a computational social scientist, it may be possible to automate much of the classification process, and make this labor intensive process more practical.

Dramaturgy requires reading in context, and asks HCI researchers to couple their research of online movements with research of the local, social or organizational context in which the networked movement is occurring. Reading the entire social drama, the breech, the conflict and the progress toward or failure to repair, allows the HCI researcher to view activists as engaged in their own unique kind of work. It raises questions about how social media platforms operate as stages and mechanisms for action for both activists and audiences, suggesting such research as algorithm audits.

Updating metaphors for the theatre to include more improvisational, participatory, and immersive definitions provides HCI researchers the freedom to apply dramaturgical theory building from Goffman without being confined to strict boundaries of "backstage" and "frontstage." These alternate metaphors are more fitting to the many varieties of social medias available today that are polyvocal, participatory and allow for varying degrees of transparency from other users, from the platform and from the authorities.

9.3 Conclusion

In the first half of this dissertation I presented three studies that explored different aspects of rhizomatic networked movements: role development, coordination, and framing. In doing so I learned that what was happening online was intimately intertwined with what was unfolding on the ground, whether that be an individual's professional identity, shifting neighborhood power dynamics, or protest. In the second half of the dissertation, based on what I learned about the hybrid nature of rhizomatic movements and the affects of hybridity on Twitter networks, I built upon the dramaturgical approach, and conducted a dramaturgical analysis of tweets related to the Pittsburgh BLM movement during the summer of 2020.

In chapters 6 through 8, I illustrated how I adapted dramaturgical approaches and techniques for a distributed and polyvocal media environment like Twitter. There are a multiplicity of opinions on an issue as it affects specific communities or social identities. Bennett characterized the diversity of opinions and approaches within a networked movement as personalized politics, where collective movement identities may be absent, broadly defined, or secondary to other social identities [25] [27]. In Pittsburgh 2020, national BLM protests became increasingly localized as they intersected with ongoing efforts to reform policing, including the Justice for Jaylen and the Justice for Antwon Rose II movements. As they became more localized, activists retained their own personalities, using their individual skills, such as video editing, but became unified under a shared objective and

converged on a target: the mayor and police chief. These activities suggest increased coordination among local activists and the development of targeted cooperative scripts and scripting processes.

I proposed that these processes, rather than connected action, can more accurately be described as cooperative action, in which coalitions of individuals align on goals and targets. Comparing these localized movements to devised theatre processes offered models for understanding how cooperative movements may establish communication channels and protocols, but remain pluralistic in their messages and tactics.

As the landscape of social technologies continues to grow and diversify, and as state and corporate surveillance of commercial social media platforms exacerbate the need for alternative communication channels, activists will more actively make decisions about which social technologies to use for which task, in effect designing backstage and frontstage processes and scripts, and providing mechanisms to support the ongoing scripting processes found in cooperative action. Finally, I have suggested future research to further elaborate and validate the idea of cooperative action and localization using dramaturgical analysis and applying the vocabulary of dramaturgy to guide design spaces suggested by the challenges experienced by activists, designers, and HCI researchers in this thesis.

APPENDIX A

Chapter Five: Data Collecticn Search Terms for J4A 2019 Corpus

- antwanrose / antwan rose

- antwonrose / antwon rose

- antwonerose / antwone rose

- antownrose / antown rose

- antwonroseII/ antwon rose II

- antwonrosejr / antwon rose jr

- j4a / j4a

- justiceforantwon

- justiceforantwonrose

- justiceforantwonroseII

- justiceforantwonrosejr

- justice4antwon

- justice4antwonrose

- justice4antwonroseII

- justice4antwonrosejr

- nojusticeforantwon

- antwonrosetrial

- michaelrosfeldtrial

- michaelrosfeld / michael rosfeld

- zappala / zappala

- byezappala

- pittsburghprotest

- pittsburgh

- 1hoodmedia

- 1hood / 1hood

- Iamnotwhatyouthink

- IamnotwhatyouthinkIam

APPENDIX B

Chapter Seven: Data Collection Search Terms for Pittsburgh BLM 2020 Corpus

Search Term	Date First Collected
George Floyd/#GeorgeFloyd	5/25/20
#GeorgeFloydProtest(s)	5/25/20
#BLM/#BlackLivesMatter	5/25/20
Minneapolis	6/5/20
#BlkLivesMatter	6/6/20
#Minneapolis	6/7/20
#MinneapolisProtest(s)	6/7/20
#PittsburghProtest(s)*	6/7/20
#Protests2020	6/7/20
#JusticeForGeorgeFloyd	6/8/20
#MinneapolisPolice	6/8/20
#DefundthePolice/#DefundPolice	6/9/20
#GeorgeFloydMemorial	6/9/20
#Pittsburgh**	6/9/20
#BirthdayforBreonna	6/9/20
#BlackTransLivesMatter	6/10/20
#BlackQueerLivesMatter	6/10/20
Breonna Taylor/#BreonnaTaylor	6/10/20
Abolish/#AbolishthePolice	6/10/20
#ftp	6/14/20
Pittsburgh**	6/15/20
#Pbp*	6/15/20
#Antifa	6/15/20
#Defund	6/15/20
Peoples Budget	6/15/20
#J4A*	6/16/20
Antwon Rose*/#AntwonRose*	6/16/20
#Abolish	6/23/20
#Juneteenth/#Juneteenth2020	6/23/20
#PeacefulProtest	6/24/20
#BlackDisabledLivesMatter	6/25/20
#AllBlackLivesMatter	6/28/20
#ProtectPeopleNotPolice	7/6/20
#BlackoutDay2020	7/7/20
#BlackoutTuesday	7/11/20
#DawnManson*	7/12/20
#SayHerName	7/13/20
Jaylen Brown**/#JaylenBrown*	7/13/20
#Justice4Jaylen*/#JusticeforJaylen*/#JusticeForJalenBrown*	7/13/20
Danielle Brown*	7/13/20
#Drop12*/#Got12*	7/18/20
Gammage*	7/20/20
Livable City**	8/20/20

Table B.1: Search terms used to collect data and the date on which data collection of that term began. Terms with asteriks are Pittsburgh-specific searches. Double asteriks terms were filtered before integrating them in the Pittsburgh BLM 2020 dataset.

APPENDIX C

Chapter Seven: Coding Scheme for Script Types and Objectives

C.0.1 Script Types

- **Staging** – staging scripts provide logistical information about protests and actions. This might include spreading time and place of protests, but also instructions on how to change your profile pic, share an image or use a hashtag in alignment with online protest. Staging scripts are also used to recruit actors to offline or online protests. Staging may be performed by movement leaders or may be coordination between two or more friends, for example, coordinating rides or meal-sharing.

- **Performing** – There are two types of performance scripts. One type is the sharing of offline protest images, information or reporting movement-related offline events. In this way it extends on offline performance into the digital realm. The other type of performance is an online performance. This often takes the form of expressions of emotion, sharing experiences, humor or satire. A meme, for example, could be a performance script.

- **Interpreting** – Interpreting is the process of contextualizing or making meaning out of events. Interpreting current events for the public. This includes interpreting current events in the context of movement philosophy, narratives or objectives, and offering counternarratives to mainstream media reporting. Interpreting also contextualizes a broader movement messages within a particular community, place, history or culture. For example, many tweets interpret Juneteeth in the context of the anniversary of Antwon Rose II's murder. Humor and satire could also be employed in the meaning making process.

C.0.2 Objectives

- To amplify—a call to share and spread information

- To antagonize—to provoke a hostile response from someone

- To appreciate—to admire or show gratitude toward a person or group

- To celebrate—drawing attention to something positive has happened or an accomplishment.

- To convince—to persuade the reader of the validity of a statement.

- To coordinate—to arrange logistics or synchronize tasks

- To counter—to oppose, especially to counter mainstream or prevailing narratives

- To donate—a call to donate money, goods or services.

- To fight—demanding opposition to an oppressive force; often accompanied by explanation of an unjust situation.

- To ignite—taking up emotional language and imagery to ignite the readers passion and sense of outrage

- To inspire—taking up emotional language and imagery to encourage or empower the reader

- To learn—desire for the reader to learn or be informed about movement related information. Generally, adopts a neutral rather than emotional tone.

- To prepare—advice to the reader on how to prepare for an event. For example, providing protesters with safety information.

- To question—to ask questions of prevailing explanations or authority figures.

- To reassure—easing worries and potentially downplaying the seriousness or magnitude of an event

- To recruit—a call for protesters, volunteers, or petitioners

- To remember—looking back on an event or memorializing someone who has died

- To respond—primarily used when calling on a public figure to respond publicly and be accountable for their actions

- To share (one's story)—a call to share a personal experience or story

- To support—a call to offer emotional or financial support; sometimes by buying products. Also calls for help with providing rides, meals or other types of help.

- To witness—viewing and understanding an event (usually a hardship) that has occurred; especially images of police violence

APPENDIX D

Chapter Seven: Coding and Analysis of 100 Most Retweeted Tweets in Three Periods, Summer 2020
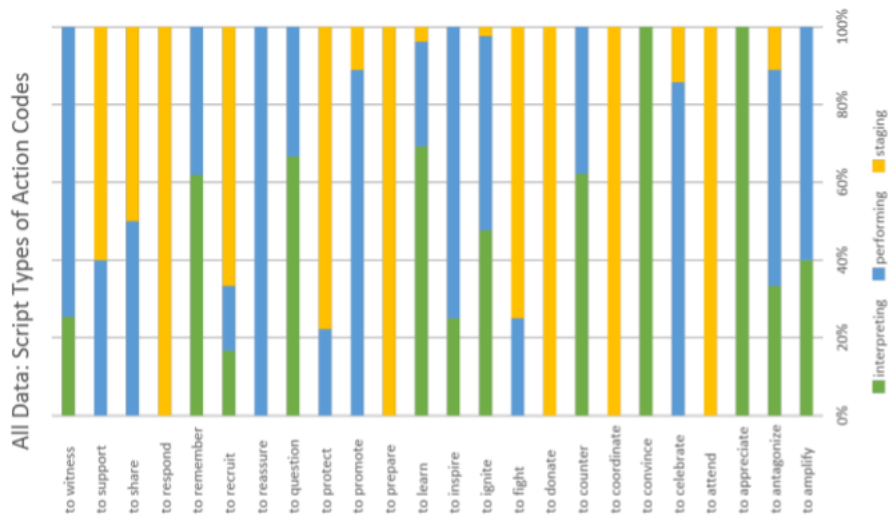
Action	interpreting	performing	staging	Total
to amplify	2	3		5
to antagonize	3	5	1	9
to appreciate	2			2
to attend			29	29
to celebrate		6	1	7
to convince	3			3
to coordinate			3	3
to counter	23	14		37
to donate			4	4
to fight		1	3	4
to ignite	20	21	1	42
to inspire	3	9		12
to learn	18	7	1	26
to prepare			8	8
to promote		8	1	9
to protect		2	7	9
to question	2	1		3
to reassure		7		7
to recruit	1	1	4	6
to remember	13	8		21
to respond			1	1
to share		1	1	2
to support		2	3	5
to witness	16	47		63
Total	**106**	**143**	**68**	**317**

p-value: 3.39599E-43
interpreting only: 1.23528E-46
performing only: 1.8308E-70
staging only: 1.88518E-48

All Data: Script Types of Action Codes

May: Script Types of Action Codes

Action	interpreting	performing	staging	Total
to amplify	1	2		3
to antagonize			1	1
to appreciate				
to attend			2	2
to celebrate	3			3
to convince				
to coordinate				
to counter	10	3		13
to donate			2	2
to fight				
to ignite	9	5		14
to inspire				
to learn	3	3		6
to prepare			7	7
to promote				
to protect		2	7	9
to question	1	1		2
to reassure		2		2
to recruit	1	1	4	6
to remember	1	2		3
to respond				
to share				
to support				
to witness	7	16		23
Total	36	37	23	96

p-value: 0.018995079
interpreting only: 4.06448E-27
performing only: 1.92555E-23
staging only: 1.47944E-09

Action	interpreting	performing	staging	Total
to amplify		1		1
to antagonize		1		1
to appreciate	2			2
to attend			20	20
to celebrate		3	1	4
to convince				
to coordinate			3	3
to counter	2			2
to donate			1	1
to fight	3	4	1	8
to ignite	8	1	1	10
to inspire	1	9		10
to learn			1	1
to prepare			1	1
to promote		8	1	9
to protect				
to question	1			1
to reassure				
to recruit				
to remember	10	6		16
to respond				
to share		1	1	2
to support		2	3	5
to witness	6	21		27
Total	**33**	**57**	**34**	**124**

Juneteenth: Script Types of Action Codes

Legend: interpreting — performing — staging

August: Script Types of Action Codes

Action	interpreting	performing	staging	Total
to amplify	1			1
to antagonize	3	4		7
to appreciate				
to attend			7	7
to celebrate		3		3
to convince				
to coordinate				
to counter	11	11		22
to donate			1	1
to fight		1	2	3
to ignite	8	12		20
to inspire	2			2
to learn	7	3		10
to prepare				
to promote				
to protect				
to question				
to reassure		5		5
to recruit				
to remember	2			2
to respond			1	1
to share				
to support				
to witness	3	10		13
Total	37	49	11	97

p-value: 0.000253497
interpreting only: 6.59567E-13
performing only: 2.78821E-16
staging only: 1.50428E-11
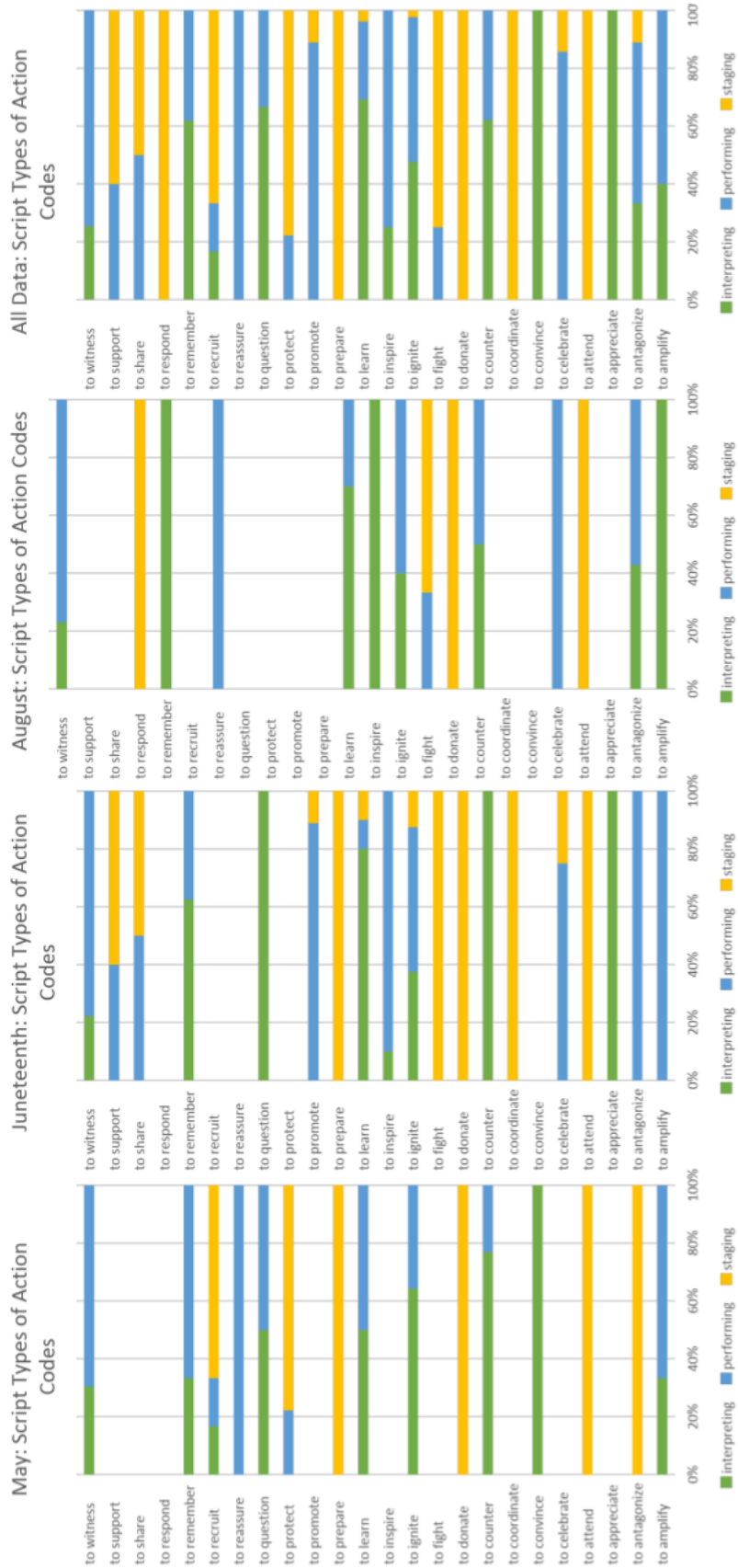
155

All Data: Script Types of Action Codes

Juneteenth: Script Types of Action Codes

August: Script Types of Action Codes

May: Script Types of Action Codes

Script Type vs Online/Offline: 5/25-6/4

Script Type vs Online/Offline: Juneteenth

Script Type vs Online/Offline: 8/15-25

Script Type vs Online/Offline: All Data
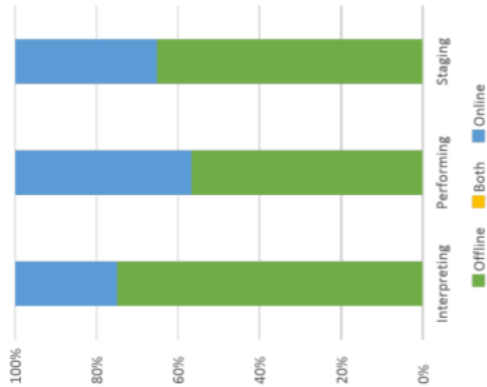
5/25-6/4 Data	Interpreting	Performing	Staging	Total
Offline	27	21	15	63
Online	9	16	8	33
Both	0	0	0	0
Total	36	37	23	96

p-value: 0.259990854
interpreting only: 2.68563E-11
performing only: 1.95533E-07
staging only: 5.19065E-06
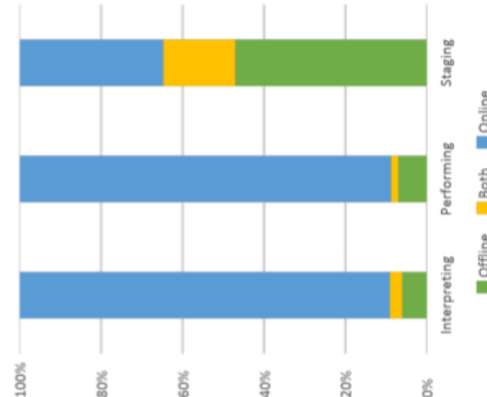
Juneteenth Data	Interpreting	Performing	Staging	Total
Offline	2	4	16	22
Online	30	52	12	95
Both	1	1	6	8
Total	33	57	34	124

p-value: 3.49007E-08
interpreting only: 1.09264E-06
performing only: 2.04723E-10
staging only: 0.492716677
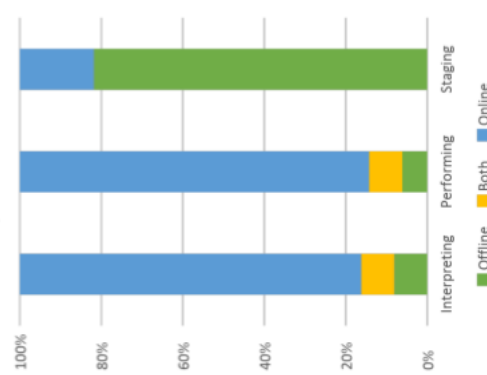
8/15-25 Data	Interpreting	Performing	Staging	Total
Offline	3	3	9	15
Online	31	42	2	75
Both	3	4	0	7
Total	37	49	11	97

p-value: 1.30751E-07
interpreting only: 4.16105E-06
performing only: 2.52659E-08
staging only: 0.034808479

All Data	Interpreting	Performing	Staging	Total
Offline	32	28	40	100
Online	70	110	22	203
Both	4	5	6	15
Total	106	143	68	317

p-value: 1.27736E-08
interpreting only: 0.000223474
performing only: 7.02309E-12
staging only: 0.029049022

Implicit/Explicitness of Script Types: May Data

Implicit/Explicitness of Script Types: Juneteenth Data

Implicit/Explicitness of Script Types: August Data

Implicit/Explicitness of Script Types: All Data

5/25-6/4 Data

	Interpreting	Performing	Staging	Total
Implicit	34	36	18	88
Explicit	2	1	5	8
Both	0	0	0	0
Total	36	37	23	96
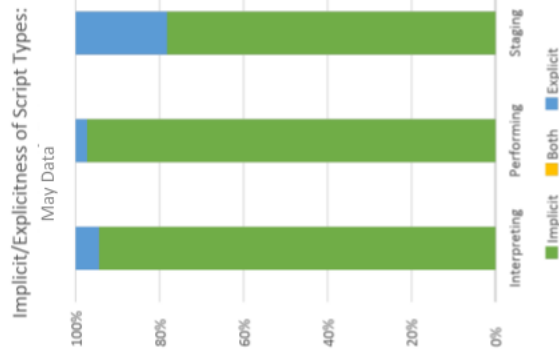
p-value: 0.025857229
interpreting only: 9.64261E-08
performing only: 8.71744E-09
staging only: 0.00671439

Juneteenth Data

	Interpreting	Performing	Staging	Total
Implicit	30	53	11	94
Explicit	3	4	18	25
Both	0	0	5	5
Total	33	57	34	124
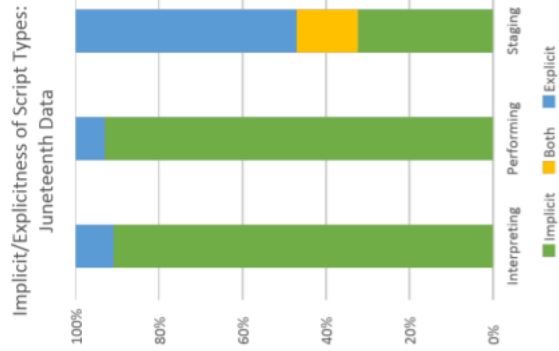
p-value: 2.66495E-09
interpreting only: 2.60038E-06
performing only: 8.57176E-11
staging only: 0.299949057

8/15-25 Data

	Interpreting	Performing	Staging	Total
Implicit	33	42	0	75
Explicit	4	5	11	20
Both	0	2	0	2
Total	37	49	11	97
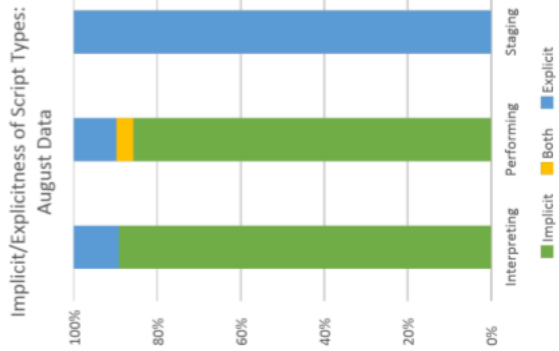
p-value: 1.75479E-10
interpreting only: 1.86461E-06
performing only: 1.25215E-07
staging only: 0.000911119

All Data

	Interpreting	Performing	Staging	Total
Implicit	97	131	29	257
Explicit	9	10	34	53
Both	0	2	5	7
Total	106	143	68	317
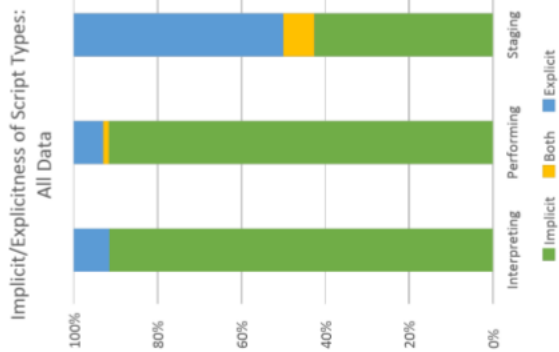
p-value: 3.13282E-17
interpreting only: 1.25984E-17
performing only: 4.57239E-24
staging only: 0.544289624
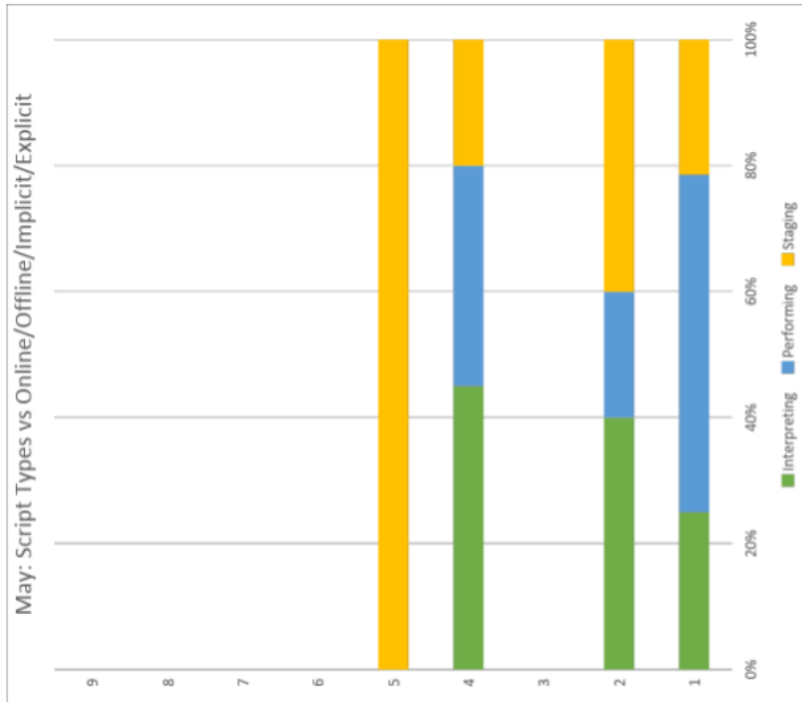
Implicit/Explicitness and Online/Offline of Script Types: May Data			Interpreting	Performing	Staging	Total
Online		Implicit	7	15	6	28
		Explicit	2	1	2	5
		Both	0	0	0	0
Offline		Implicit	27	21	12	60
		Explicit	0	0	3	3
		Both	0	0	0	0
Both		Implicit	0	0	0	0
		Explicit	0	0	0	0
		Both	0	0	0	0
Total			36	37	23	96

p-value: 0.021183811

May: Script Types vs Online/Offline/Implicit/Explicit
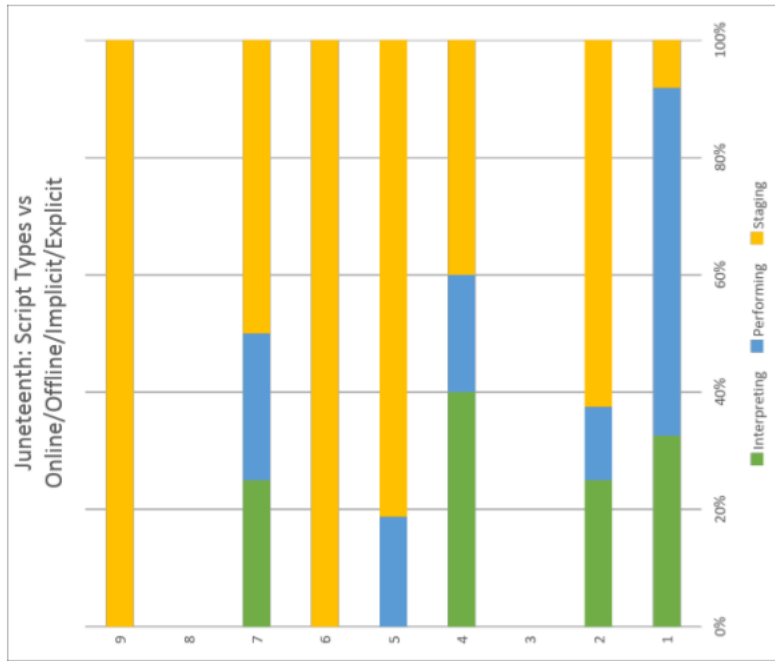
Implicit/Explicitness and Online/Offline of Script Types: Juneteenth Data			Interpreting	Performing	Staging	Total
Online		Implicit	28	51	7	86
		Explicit	2	1	5	8
		Both	0	0	0	0
Offline		Implicit	2	1	2	5
		Explicit	0	3	13	16
		Both	0	0	1	1
Both		Implicit	1	1	2	4
		Explicit	0	0	0	0
		Both	0	0	4	4
	Total		33	57	34	124

p-value: 1.67015E-08

Juneteenth: Script Types vs Online/Offline/Implicit/Explicit

Interpreting ■ Performing ■ Staging

		Interpreting	Performing	Staging	Total
Online	Implicit	27	38	0	65
	Explicit	4	4	2	10
	Both	0	0	0	0
Offline	Implicit	3	2	0	5
	Explicit	0	1	9	10
	Both	0	0	0	0
Both	Implicit	3	4	0	7
	Explicit	0	0	0	0
	Both	0	0	0	0
Total		37	49	11	97

p-value: 1.0344E-12
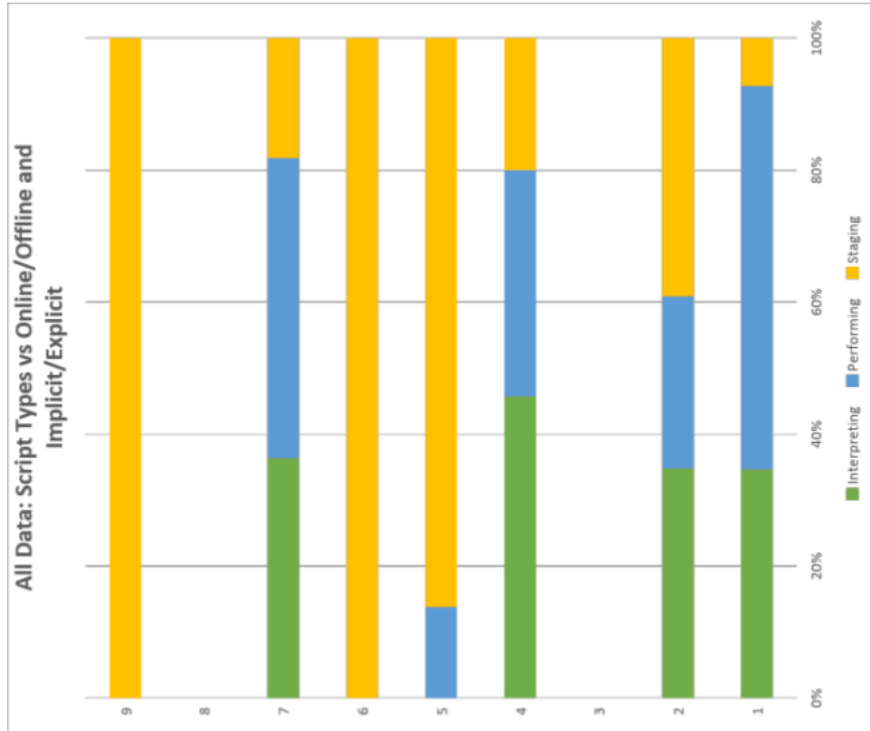
August: Script Types vs Online/Offline/Implicit/Explicit

Interpreting Performing Staging

Implicit/Explicitness and Online/Offline of Script Types: All Data

			Interpreting	Performing	Staging	Total
Online	Implicit		62	104	13	179
	Explicit		8	6	9	23
	Both		0	0	0	0
Offline	Implicit		32	24	14	70
	Explicit		0	4	25	29
	Both		0	0	1	1
Both	Implicit		4	5	2	11
	Explicit		0	0	0	0
	Both		0	0	4	4
		Total	106	143	68	317

p-value: 1.22754E-21
interpreting only: 2.24629E-20
performing only: 4.23539E-42
staging only: 0.037721815

All Data: Script Types vs Online/Offline and Implicit/Explicit
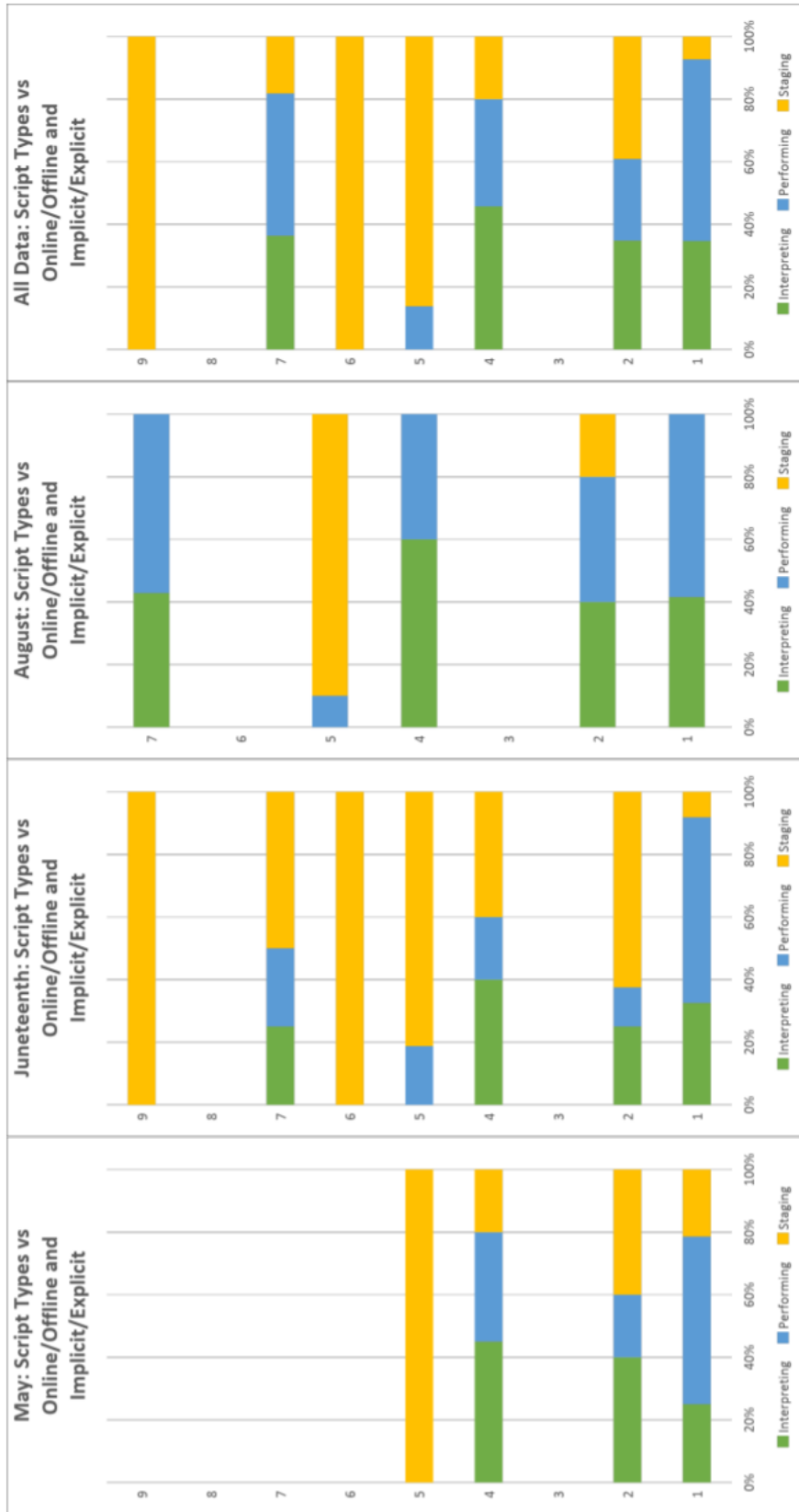
Action Codes with high p-values

Action	interpreting			performing			staging			Script Chosen
	Observed	Expected	Residual	Observed	Expected	Residual	Observed	Expected	Residual	
to amplify	2	1.67192429	0.32807571	3	2.2555205	0.7444795	0	1.07255521	-1.07255521	interpreting and performing
to antagonize	3	3.00946372	-0.0094637	5	4.05993691	0.94006309	1	1.93059937	-0.93059937	performing and interpreting
to appreciate	2	0.66876972	1.33123028	0	0.9022082	-0.9022082	0	0.42902208	-0.42902208	interpreting
to fight	0	1.33753943	-1.3375394	1	1.8044164	-0.8044164	3	0.85804416	2.141955836	staging
to question	2	1.00315457	0.99684543	1	1.3533123	-0.3533123	0	0.64353312	-0.64353312	interpreting
to recruit	1	2.00630915	-1.0063091	1	2.70662461	-1.7066246	4	1.28706625	2.712933754	staging
to respond	0	0.33438486	-0.3343849	0	0.4511041	-0.4511041	1	0.21451104	0.785488959	staging
to share	0	0.66876972	-0.6687697	1	0.9022082	0.0977918	1	0.42902208	0.570977918	performing and staging
to support	0	1.67192429	-1.6719243	2	2.2555205	-0.2555205	3	1.07255521	1.927444795	staging

APPENDIX E

Chapter Eight: Network Analysis

All networks AgentxAgent, edges consist of retweets, mentions (including replies), or tweeting the same url.

May Corpus Social Network Analysis

Louvain Method Clustering Algorithm	Global Clustering Coefficient	.867
	Newman Modularity	.808
Group Statistics	Number of Groups	1346
	Number of Isolate Groups	914
	Number of Diode Groups	240
	Number of Triad Groups	83
	Number of Groups larger than 3	109
	Minimum Size of larger groups	4
	Maximum Size	13,048
	Average Size	390
	Standard Deviation Size	1,394

Table E.1: Statistical description of groupings in the May 2020 dataset using the louvain clustering algorithm.

May Group 1

Size	13,048
Internal node count	13,047
External node count	1
Username	**Total Internal Degree**
cmdougie_	13,039
gomtokki	3
onelove1723451	2
_Bulat8	2
RainWetzel	2
AmericaTheBrav	2
StormBringer45	2
dickarnold007	2
kookieliscious	1
jovanystweets	1

Table E.2: Top ten user accounts by total internal degree centrality in May group one.

May Group 2

Size	4,282
Internal node count	4,237
External node count	45
Username	**Total Internal Degree**
CUTMYLlPLlVE	4,269
Shellbeebop	5
terrabeara1	4
KTicoune	3
PrincesssTeagan	2
all_naturoid	2
Brdyswn	2
alexz90	2
evilenby	2

Table E.3: Top ten user accounts by total internal degree centrality in May group two.

May Group 3

Size	3,278
Internal node count	4,174
External node count	104
Username	**Total Internal Degree**
realtimwilliams	2,764
KDKA	519
ismithKDKA	9
GoldSaltFlour	8
KurtBW_WTRF	8
wjz	7
MeghanKDKA	7
roycejonesnews	7
KDKAHeather	7
yinzerlesbian	7

Table E.4: Top ten user accounts by total internal degree centrality in May group three.

May Group 4

Size	2,862
Internal node count	2,009
External node count	853
Username	**Total Internal Degree**
AndrewPutnam15	895
Will_Koz	643
BrittanyHailer	576
PghCurrent	333
nvuqi	326
LOVEHAPPYBTS	229
Millennial23	217
rsantanabandanas	179
msantiagophotos	69
alicious426	68

Table E.5: Top ten user accounts by total internal degree centrality in May group four.

May Group 5

Size	2,195
Internal node count	1,567
External node count	628
Username	**Total Internal Degree**
peachdekuu	818
NKhorey	458
JoeBidenIsZaddy	138
hiddencolrs	106
EvilEidolons	104
andruvvu	103
ryxiewuff	96
rrockcandy87	90
queeryinzer	88
phoenixnotwhite	73

Table E.6: Top ten user accounts by total internal degree centrality in May group five.

May Group 6

Size	1,699
Internal node count	1,615
External node count	84
Username	**Total Internal Degree**
SteveRustad1	1,529
CDSWallace	105
GovernorOopsies	23
TaylorMcFayden	12
MHDavisNewYork	10
yoongimeow666	7
quazmo	7
quazmo	6
MC_Mathews716	3
NotDanPotash	3

Table E.7: Top ten user accounts by total internal degree centrality in May group six.

May Group 7

Size	1,655
Internal node count	1,403
External node count	252
Username	**Total Internal Degree**
dillonswriting	1,340
TribLIVE	205
Jshanedunlap	187
NewsNatasha	64
Ematt_shipman	16
bencschmitt	14
kellyteague30	13
ariteer	11
KatieGreenTrib	9
Lynn_Shep	8

Table E.8: Top ten user accounts by total internal degree centrality in May group seven.

May Group 8

Size	1,488
Internal node count	1,057
External node count	431
Username	**Total Internal Degree**
drgoddess	209
billpeduto	163
cowtheybebop	156
sadplum	101
leandrakmira	74
twenty20k	59
PghPolice	49
PghPublicSafety	49
ShottieStreams	48
CityPGH	45

Table E.9: CTop ten user accounts by total internal degree centrality in May group eight.

May Group 9

Size	1,349
Internal node count	1,015
External node count	334
Username	**Total Internal Degree**
gautamyadav818	310
LivFor13	307
AMIRAWASHERE	147
1hood	90
coleprstn	86
nolifebilly	45
jasiri_x	44
wafflebeard	40
DrJoebro	29
tnasty118	28

Table E.10: Top ten user accounts by total internal degree centrality in May group nine.

May Group 10

Size	1,114
Internal node count	1,065
External node count	49
Username	**Total Internal Degree**
PlayoffZendaya	940
CAMISKING21	154
Tenafly_Viper	10
Black_floral_	4
ChaddSinclair	3
brainwashed444	3
NephthysPhoenix	2
eaglesfilmstudy	2
Crystal86055468	2
Bswan82	2

Table E.11: Top ten user accounts by total internal degree centrality in May group ten.

June Corpus Social Network Analysis

Louvain Method Clustering Algorithm	Global Clustering Coefficient	.854
	Newman Modularity	.776
Group Statistics	Number of Groups	319
	Number of Isolate Groups	293
	Number of Diode Groups	10
	Number of Triad Groups	5
	Number of Groups larger than 3	11
	Minimum Size of larger groups	4
	Maximum Size	248
	Average Size	63
	Standard Deviation Size	76

Table E.12: Statistical description of groupings in the June 2020 dataset using the louvain clustering algorithm.

June Group 1

Size	248
Internal node count	159
External node count	89
Username	**Total Internal Degree**
billpeduto	139
CityPGH	63
dillonswriting	38
JoshuaTrapp86	37
PghAutonomy	33
PghProtests	33
pghDSA	27
TheNextPGH	22
SummerForPA	18
IIMatchyII	17

Table E.13: Top ten user accounts by total internal degree centrality in June group one.

June Group 2

Size	148
Internal node count	117
External node count	31
Username	**Total Internal Degree**
KDKA	157
Oceman1427	75
KennethHowardC3	75
NewsmanChris	75
ZachWag33	74
chrisbriem	74
MikeDarnay	74
michele78137594	74
Larko_9	74
alenaxuan	74

Table E.14: Top ten user accounts by total internal degree centrality in June group two.

June Group 3

Size	133
Internal node count	128
External node count	5
Username	**Total Internal Degree**
Realstevib	141
VelissaVaughn	2
The_MakingsofMe	2
GizzleBuck1300	2
ThaReal_Lace	2
Grimey_Grimez	2
usofootball	2
nylabbaby	2
ComedianRizz	2
SCReamPrincesz	2

Table E.15: Top ten user accounts by total internal degree centrality in June group three.

June Group 4

Size	76
Internal node count	75
External node count	1
Username	**Total Internal Degree**
antifa_public	75
AlMace8	1
JustMe36485575	1
Timelord528hz	1
CaseyDE86658915	1
paulderby11	1
Freedom2b1	1
petersingh206	1
Pickle84596097	1
Globalist_Watch	1

Table E.16: Top ten user accounts by total internal degree centrality in June group four.

June Group 5

Size	47
Internal node count	30
External node count	17

Username	Total Internal Degree
1hood	22
PghCurrent	12
PublicSourcePA	11
_jaymanning	6
PghCHR	5
mrsmoats52	5
Helen$_G erhardt$	4
anti_flag	4
ripway2	4
VendSpin	3

Table E.17: Top ten user accounts by total internal degree centrality in June group five.

June Group 6

Size	12
Internal node count	1
External node count	11

Username	Total Internal Degree
realtimwilliams	10
scrummysquirrel	2
jjess$_l ee$	1
simplify77	1
SousLeRadar	1
lorimlo	1
breakingnewsbo1	1
rickbkylex	1
mikeyp3258	1
JKPgh	1

Table E.18: Top ten user accounts by total internal degree centrality in June group six.

June Group 7

Size	10
Internal node count	8
External node count	2

Username	**Total Internal Degree**
pghSA	9
ueunion	9
fbholdings	2
condensedmik	2
OneEss	2
rachelthecommie	2
OccuWorld	2
PeoplesPartyPA	2
LadySnow1920	2
KeleCable	2

Table E.19: Top ten user accounts by total internal degree centrality in June group seven.

June Group 8

Size	9
Internal node count	6
External node count	3

Username	**Total Internal Degree**
PittsburghPG	5
nayniejaynie25	4
RJHuf	2
BarrEsteven	2
Rob_{Rogers}	1
shaunking	1
SenBobCasey	1
ConorLambPA	1
Pickle84596097	1

Table E.20: Top nine user accounts by total internal degree centrality in June group eight.

June Group 9

Size	8
Internal node count	8
External node count	0
Username	**Total Internal Degree**
spark_radio_net	5
KevinCo75893675	3
oasisvsseneca	3
KiLLiNGiSWaCK	1
Breaking24_7	1
ChefforaDay1	1
SayrevilleT	1
ArwenElerondiel	1

Table E.21: Top eight user accounts by total internal degree centrality in June group nine.

June Group 10

Size	7
Internal node count	1
External node count	6
Username	**Total Internal Degree**
PGHCityPaper	7
WickPhoto	5
ahmari_lab	4
lovemybosox	4
mojustice	3
Larry_N_Snyder	3
AngelaLynn2017	2

Table E.22: Top seven user accounts by total internal degree centrality in June group ten.

August Corpus Social Network Analysis

Louvain Method Clustering Algorithm	Global Clustering Coefficient	.676
	Newman Modularity	.647
Group Statistics	Number of Groups	492
	Number of Isolate Groups	385
	Number of Diode Groups	36
	Number of Triad Groups	13
	Number of Groups larger than 3	58
	Minimum Size of larger groups	4
	Maximum Size	1,999
	Average Size	171
	Standard Deviation Size	397

Table E.23: Statistical description of groupings in the August 2020 dataset using the louvain clustering algorithm.

August Group 1

Size	1,999
Internal node count	1,339
External node count	660
Username	**Total Internal Degree**
billpeduto	1,869
PghPublicSafety	310
TheNextPGH	155
CityPGH	118
YankeeGoesSouth	113
scene_destroyer	103
sam_shur	100
bombsfall	92
PghPolice	89
CCameron71	82

Table E.24: Top ten user accounts by total internal degree centrality in August group one.

August Group 2

Size	1,629
Internal node count	1,597
External node count	32

Username	Total Internal Degree
samm_bones	1,606
pashleywave3	7
MorganOttley_	5
Alshline	5
CopsRBad	3
ccoloredgreenss	2
thunter777	2
sssssssaaaammmm	2
TeamMitchMoscow	2
SamRStory	2

Table E.25: Top ten user accounts by total internal degree centrality in August group two.

August Group 3

Size	1,359
Internal node count	1,308
External node count	51

Username	Total Internal Degree
aboutavery_	1,201
farmereva_	82
duqedu	52
xxNino_Brownxx	36
Cdanniebrwn	19
QveenKaee_	16
tewc	16
_kitcat03	13
javellehana	13
RosiMakesMusic	13

Table E.26: CTop ten user accounts by total internal degree centrality in August group three.

August Group 4

Size	1,126
Internal node count	782
External node count	344

Username	Total Internal Degree
orphir_	964
TedderRM	98
hanfranny	70
stopthestation	19
kileykoscinski	10
CenterLeftPgh	8
dlppgh	4
haggerik	4
trailmanNate	4
dumblawcumtwink	4

Table E.27: Top ten user accounts by total internal degree centrality in August group four.

August Group 5

Size	559
Internal node count	397
External node count	162

Username	Total Internal Degree
savlucy420	392
beccatasker	224
pghDSA	147
knjrth	92
jagoffbrewer	87
aclupa	87
OldBayMason	87
jbpribanic	86
stevieeegallooo	86
ZFunkYeah	85

Table E.28: Top ten user accounts by total internal degree centrality in August group five.

August Group 6

Size	451
Internal node count	335
External node count	116
Username	**Total Internal Degree**
SummerForPA	370
OhHi$_{Mark}$	81
matthe$_{wi}$ld11	
andypuede	11
SamSchurer24	11
ulkasachdevost	11
alisontterrell	11
TheSongofStars	11
Oldlatrobe331	5
MontriciaHubba1	4

Table E.29: Top ten user accounts by total internal degree centrality in August group six.

August Group 7

Size	386
Internal node count	73
External node count	313
Username	**Total Internal Degree**
JoshuaTrapp86	319
DOMISMONEY	36
RealCeeJai	32
Boi19Bread	25
looseboneslarry	22
Challruss	22
bill$_b$artlett	19
l9621roberto	19
colindean	19
HingleMcKring18	19

Table E.30: Top ten user accounts by total internal degree centrality in August group seven.

August Group 8

Size	317
Internal node count	281
External node count	36

Username	Total Internal Degree
ayyy_vuh	339
TheDaveHart	49
JoeySupe	48
christielouwho	48
_JenniferLyn	48
BrownEyed_Babee	48
grdeffenbaugh	48
bdmiller95	48
AngelosTzelepis	48
JustNickKolo	48

Table E.31: Top ten user accounts by total internal degree centrality in August group eight.

August Group 9

Size	283
Internal node count	36
External node count	247

Username	Total Internal Degree
jasiri_x	328
arbybeast	225
PhilipYovan	222
FanPlank	221
mikeb8637	220
PostCubicleKyle	220
twenty20k	219
PghGreenLeft	217
Jessi_said_what	217
rmw428	217

Table E.32: Top ten user accounts by total internal degree centrality in August group nine.

August Group 10

Size	263
Internal node count	245
External node count	18

Username	Total Internal Degree
KDKA	154
jeffcapel	76
camp7185	19
NewsmanChris	12
JillianWPXI	12
LindsayWardTV	7
realtimwilliams	7
AmyWadas	7
WPXI	7
NicoleFordTV	6

Table E.33: Top ten user accounts by total internal degree centrality in August group ten.

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