SOCIAL PSYCHOLOGICAL INFLUENCES ON PARTICIPATION IN ONLINE COLLECTIVE ACTION

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ABSTRACT

Autumn Deer McClellan: Social Psychological Influences on Participation in Online Collective Actions
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Social networking sites and other internet-enabled technologies have had broad-reaching effects on American society, including effects on the nature of participation in social movement activities. This dissertation provides a quantitative evaluation of the impact of social psychological perceptions – such as collective identity, efficacy, and motivations – on individuals' decision to participation in various forms of online collective actions. These two forms of action – labelled "collective action" and "connective action" – are differentiated by their underlying strategies for organizing, with the former being more likely to rely on organizations and centralized decision-making whereas the latter emerges from individuals' self-expression using densely-connected online networks that exhibits a level of mass resonance (or "virality"). Social movements characterized by a strategy of "collective action" have been widely studied prior to the ubiquity of the internet; however, participation in "connective action" is less understood.

Analyses are based on survey data gathered from convenience samples of students at a large public university and from Workers on Amazon.com's Mechanical Turk. Survey items include indicators of collective identity (politicized and autonomous), efficacy (self-efficacy, collective efficacy, and tactical efficacy), and motivations (intrinsic and extrinsic). Respondents viewed Facebook posts that exemplify the strategies of "collective action" and "connective

action," and reported the likelihood of engaging with those posts. Results indicate that participation in "collective action" is associated with a politicized collective identity, support for traditional tactics, and both types of motivation but particularly extrinsic motivation. Participation in "connective action" is most strongly associated with extrinsic motivations and support for tactics that allow for greater self-expression, although there is some evidence that an autonomous collective identity is associated with this type of participation as well.

This dissertation offers several unique contributions, including an attempt to measure an autonomous collective identity and introducing the concept of tactical efficacy. It also contributes to the burgeoning literature on "connective actions" and the application of motivations to social movement participation. This work is the beginning of a research agenda which seeks to better understand the dynamics of online social movements through bringing together theoretical contributions from sociology, political science, psychology, communications, and other disciplines.

To every version of myself that ever was, and every version that ever will be –
you deserve this.

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CHAPTER 1: INTRODUCTION

The history of social movements cannot be told without giving significant attention to the role of mass media. As literacy rates rose and printing costs lowered in the 18th century, a new strategy for claims-making and collective action emerged. Printed materials, such as the pamphlet and newspaper, revolutionized the way people received and transmitted information by extending the geographical range over which messages were transmitted and creating a new kind of social life around the reading and exchange of printed materials (Tarrow 2011). Printed materials not only changed existing forms of association but constituted a unique form of associate itself; it was these "weak ties" among readers of the same newspaper, members of the same reading clubs, and people who occasionally met in the marketplace that became the bases for social movement mobilization (Granovetter 1973; Tarrow 2011). The combination of printed materials and associations gave Europeans the tools to realize their democratic potential through sustained campaigns of collective action against elites and authorities; print created the national social movement (King and Haveman 2008; Habermas 1962; Tarrow 2011).

Radio broadcasts gained popularity at the turn of the 20th century. While the printing press increased the rate and range of the diffusion of information and ideas over locally-embedded social networks, radio broadcasts allowed for instantaneous, national-level diffusion (Myers 2010). This unprecedented level of geographical diffusion helped spur collective action among groups that faced social divisions and local repression. In their study of the mass textile worker insurgency from 1929 to 1934 in the Carolinas, Roscigno and Danaher (2001) conclude

the strike campaigns were spurred by politically oriented broadcasts, like the Presidential "fireside chats" and music salient to the mill workers lifestyles that played on nearby radio stations; these features of Southern radio broadcasts helped shape a collective identity among textile workers and influence the workers' sense of political opportunity.

Television was the first medium to introduce the ability to reach people with simultaneous visual and auditory elements. By the mid-1950s, a majority of American households owned a television (Baughman 1993), and this technology was well-utilized by the American Civil Rights Movement, which was emerging in the same time period. Kielbowicz and Scherer (1986:83) described the Civil Rights Movement as "television's first recurring news story largely because of its visual elements." The news media was the main channel of diffusion for sit-ins throughout the South; although Andrews and Biggs (2006) specifically focus on newspaper circulation for its ease of tracing geographical reach, they recognize that all news media, including television, was likely to cover the unfolding events of the Civil Rights Movement. Television specifically aided the Civil Rights Movement by bringing the grievances of black Southerners to the nation's attention, by providing a strong, visual contrast between the peaceful actions of protesters and violent repressive tactics of the police, and by acting as a means of diffusion for information about the movement's goals and strategies (Tarrow 2011). In this way, television acts as a "co-producer of collective action" (Tarrow 2011:148) by assisting in the development of a collective identity – one of the social psychological factors that lie at the heart of social movement formation and participation (Snow and Soule 2010). The nature of television broadcasts has also had an effect on movement strategy. Gamson and Wolfsfeld (1993) claim that, due to television's reliance on visual materials, there is a stronger emphasis

on movements to produce "spectacle" than with print media – i.e., if movements want to receive television coverage, they will need to adopt tactics and strategies that provide drama, confrontation, and/or unpredictable events. These forces notably affected young leaders of the Students for a Democratic Society in the early 1960s as they battled the effects of celebrity status and unfairly selective news coverage while trying to promote their antiwar message (Gitlin 1980).

Despite technological changes over time, mass media has remained consistent in its ability to both assist movements in diffusing their messages and to fundamentally impact movement strategy and outcomes. The internet and social networking sites represent the most recently developed mass communication media, and the unique affordances of the internet have amplified both of these historical effects. Due to the dramatically lower costs of production compared to previous forms of mass media, the internet allows nearly anyone to become a producer of content. The ratio of producers-to-consumers in traditional forms of media is generally very low, and producers are likely to occupy positions of power or prestige. With sites like Facebook, Twitter, YouTube, and others, even young children have ubiquitous access to producing and distributing their own content online. The internet offers direct, global access to like-minded others, and social movement organizations and activists are likely to leverage other unique affordances of the internet in pursuit of their goals, such as its low startup and maintenance costs and the ability to coordinate without compresence in time and space (Earl and Kimport 2011).

As a communication medium, there is evidence that the internet has also impacted social movements on a fundamental level. For example, the role of movement leaders can be

dramatically different in online movements than in more traditional, offline settings. Whereas traditional movement leaders tend to devote significant attention to charismatic and motivational elements of leadership, online leadership tasks were more likely to focus on quotidian maintenance of their internet tools (Earl 2007). Furthermore, the nature of membership is shifting from ideologically-aligned "members" or "followers" toward a more short-term, consumer-oriented "user" framework (Earl and Schussman 2003; Earl 2007). Individuals may find formal organizations unnecessary as organizers are able to establish a direct link to like-minded others without first acquiring significant media attention elsewhere (Earl 2014). Some researchers are adamant that formal organizations will be unnecessary for future action. For example, Clay Shirky (2008) insists that the informal networks formed by the "self-synchronization of otherwise latent groups" online can accomplish tasks that formal organizations cannot because organizations are encumbered by managerial costs and cannot absorb the financial strain of limitless trial and error in the way loosely federated software developers and website creators can.

The evolving nature of social movement organization and participation due to advances in communication technologies warrants deeper investigation. Does the internet and its unique affordances fundamentally change the nature of participation in social movement activity? Or, do the same strategies and logics continue to bolster social movement activity even in the digital age? In this dissertation, I will examine different strategies for organizing collective actions online and investigate the characteristics that predict participation under each strategy. My research is based on quantitative analyses of primary survey data collected from two sources: a crowd-sourcing internet marketplace and a large public university. This dissertation

focuses on the relationship between three sets of social psychological concepts – perceptions of collective identity, efficacy, and motivations – and the self-reported intention to participate in various online social movement activities. My analyses are guided by several theories, some of which are based on evidence from traditional, offline social movements and others which are based on emergent dynamics in online spaces. By testing these theories using quantitative techniques and respondents who may not have participated in these actions before, I am contributing to the social movements literature and providing a more general test of the relationships between these social psychological influences and participation in online domains.

This dissertation consists of three substantive chapters, which investigate the relationship between each set of independent variables – collective identity, efficacy, and motivations – and the dependent variable – participation in online social movement activities – respectively. Although the substantive questions for each chapter are distinct, there are a few elements of which remain constant throughout the analyses. All variables were measured on a single survey, so the sample of respondents, the survey flow, and the way in which participation is conceptualized and measured do not differ between the chapters. As such, I will explain these elements in this chapter before continuing to the substantive analyses.

STRATEGIES FOR ACTION: COLLECTIVE ACTION VERSUS CONNECTIVE ACTION

The American anti-rape movement emerged in the late 1960s with the rise of second wave feminism, and it generally seeks to change attitudes, laws, and social norms that promote or enable violence against women. This movement has been sustained over time through the work of numerous individuals and organizations, and this work continues into the present day. However, there exists many differences in strategy and organization among these anti-rape

movement actors, as is found in all social movements. Even when movement actors use the same organizing resources, their underlying strategy for organization can be dramatically different. To illustrate these differences, consider these two cases in which anti-rape movement actors utilize Twitter: The National Organization for Women (NOW) and #MeToo.

NOW was founded in 1966 and strives to eliminate gender-based discrimination and ensure equal rights for all women and girls (www.now.org). One of their six core issue areas is called "Ending Violence Against Women," which includes domestic violence, sexual harassment, and sexual assault. NOW has a federated organizational structure, with over 600 local chapters that guide regional, state, and national decision-making bodies. The organization also has a professionally-staffed headquarters in Washington, D.C., and this office controls the official Twitter account for National NOW (https://twitter.com/nationalnow). The @NationalNOW account was created in December 2008, and it has authored several tweets related to their initiative to end violence against women. These tweets encourage readers to "read our newest paper on Black Women and Sexual Violence," to "contact your [member of Congress] and urge them to support [the International Violence Against Women Act]," and to visit another website which contains information about a new anti-harassment campaign.

This stands in sharp contrast to the way in which other anti-rape movement actors use Twitter with the hashtag "#MeToo." The phrase "Me Too" was first coined by community organizer Tarana Burke in 2007 but was quickly popularized in October 2017 in a tweet by actress Alyssa Milano, who encouraged survivors of sexual harassment or assault to reply using the phrase (The Associated Press 2017; Garcia 2017; Johnson and Hawbaker 2018). Within 48 hours of Milano's tweet, #MeToo had been tweeted nearly 500,000 times, and the phrase had

even begun to permeate Facebook, where over 12 million posts, comments and reactions were authored by 4.7 million users around the world in less than 24 hours of Milano's original tweet (The Associated Press 2017). The hashtag remains popular on Twitter five months after its initial surge. A review of #MeToo tweets shows they are mainly authored by individuals who have no formal affiliation to one another, and authors tend to personalize their message to share the details of their own experiences or their reasons for supporting the movement. For example, tweets using #MeToo include messages such as:

> "A year & a half ago I was sexually assaulted by a man. It was awful I was too weak & sick to defend myself. I trusted him because he was part of my cancer support team which I abandoned out of fear after. Today I feel vindicated because others have come forward & he's done #metoo"
>
> "[A]fter blaming myself for years, [I] know now that it's not my fault #MeToo"
>
> "Homeless women say #MeToo, but no one listens."

Notice that these tweets are significantly different from "canned," "pre-packaged," or exclusive messages tweeted by NOW, which are not readily available for personalization.

Despite #MeToo's relative infancy and informal nature compared to NOW, it is nonetheless a powerful social force. A number of high-profile men have had their employment terminated or resigned due to allegations prompted by the hashtag, including Harvey Weinstein (film producer), Kevin Spacey (actor), Senator Al Franken, and Larry Nassar (USA Olympics gymnastics coach); many of these men also face legal challenges and incarceration (Johnson and Hawbaker 2018). #MeToo has a sister-hashtag – "#TimesUp" – which has inspired the creation of the "Time's up Legal Defense Fund," designed to provide resources for those who have experienced sexual assault, harassment, and inequality in the workplace (https://www.timesupnow.com/).

Both NOW and #MeToo supporters are using Twitter to support the anti-rape movement. Both sets of actors have had tangible impacts on society, but their underlying strategies for organizing participation are wildly different. In trying to provide a collective good to society that is non-excludable and non-rival but nonetheless requires the contribution of many people to achieve, the anti-rape movement faces a classic free-rider problem, in which rational individuals do not have proper incentive to participate, even if they are ideologically in favor of the collective good (Olson 1965). To overcome this problem, movement actors can form an organization which, in part, distributes "selective incentives" to those who participate[1] (Olson 1965). These incentives can be material goods or intangible rewards, such as improved social status that may result from group membership or feelings of solidarity with fellow members (Fireman and Gamson 1979; Flesher Fominaya 2010a; Friedman and McAdam 1992). The "logic of collective action" is a strategy for organizing participation that is heavily brokered by organizations, which serve as resource hubs, distributing (among other things) selective incentives to encourage participation. This organizing strategy that have been effective for many social movements in the past, and this is the strategy which NOW employs. Under a logic of collective action, the internet and social networking sites are seen as another resource for the organization to use in their pursuit of members and participants (Bennett and Segerberg 2013).

#MeToo, on the other hand, employs a new kind of organizing strategy: a "logic of connective action" (Bennett and Segerberg 2013). There is little to no room for formal

[1] Or punishment for those who don't participate.

organizations under this organizing strategy; a logic of connective action relies on dense networks of individuals embedded in digital platforms, sharing personal expressions using emergent forms of communication (Bennett and Segerberg 2013). #MeToo was not a call to action developed by professional organizational staff, disseminated in a top-down fashion. It was a personal expression, posted online by an individual, using a digital platform whose primary function is to create dense social networks among its users. Once posted to Twitter, #MeToo served as a "personal action frame," or an inclusive, modifiable message that allows for different personal reasons for participation in the same action (Bennett and Segerberg 2013).

These two organizing strategies can be seen in other movements online. In the wake of the global financial crisis, international outrage over economic inequality and governmental austerity measures reached a fever pitch. In the fall of 2008, when the G20 leaders met in London to coordinate their economic responses, they were met with a large coalition NGOs who campaigned under the banner "Put People First" (PPF). The PPF demonstration drew in some 35,000 participants, in no small part due to the organizations that were coordinating the event, including Oxfam, Friends of the Earth, Save the Children, and World Vision (Bennett and Segerberg 2013). The campaign developed a website, which specified for readers the nature of the problem, who's to blame, and a call to action.[2] From that website:

> Even before the banking collapse, the world suffered poverty, inequality and the threat of climate chaos. The world has followed a financial model that has created an economy fueled by ever-increasing debt, both financial and environmental. Our future depends on creating an economy based on fair

[2] These three elements represent the three core framing tasks (Snow and Benford 1988).

> distribution of wealth, decent jobs for all and a low carbon future (Put People First 2009).

The PPF campaign was heavily coordinated by organizations, from the communication of collective action frames to their centerpiece tactic, the demonstration through London's streets. The internet and digital technologies did not have a fundamental impact on strategy, but instead was used as simple resource for communicating with participants. The PPF campaign's efforts to combat global inequality were organized using the logic of collective action. However, other successful anti-austerity mobilizations were organized using a logic of connective action and did not feature such heavy-handed organizational control. On May 15, 2011, *los indignados* ("the indignant ones") took over some 60 cities in Spain with mass protests aimed at local and regional governments. The 15M protests (named for the date, May 15) were largely organized online through a platform called *¡Democracia Real YA!* ("Real Democracy NOW!"), which featured more than 80 local city nodes that could be used to connect to other individuals nearby and coordinate actions (Bennett and Segerberg 2013). This digital technology was essential to the mobilizations, providing a space for individuals to express their personalized grievances as well as to coordinate local action.

Throughout this dissertation, I will rely on Bennett and Segerberg's (2013) typology of organizing strategies to conceptualize participation in online actions. This typology features two ideal types of strategies: organizationally-brokered collective action and crowd-enabled connective action.[3] Collective actions are characterized by the strong presence of organizations, which serve as resource hubs that broker cooperation and participation. These organizations

[3] Their typology also includes a third, "hybrid" type: organizationally-enabled connective action.

tend to promote exclusive collective action frames that are not well-suited to personalized interpretations of problems and actions. To be clear, this organizing strategy has existed long before the internet and a number of classic social movements have employed this strategy. However, when these organizations do use digital technologies, these technologies do not fundamentally alter the organizing strategy and they are treated as any other resource – as a means for mobilizing participants and other resources. On the other hand, digital technologies are essential for connective actions. Connective actions thrive in dense online social networks, where individuals communicate their grievances through inclusive personal action frames without "leaders" to direct the discourse. Instead, the discourse is shaped by the densely-layered technology networks themselves, based on the ways in which people come into contact with one another online across time and space and through filtering and algorithms. Connective actions feature an inclusive, emergent discourse, inviting other individuals to share their experiences and contribute in whatever manner they choose.

Both organizing strategies can produce successful, large-scale action, and neither is inherently better than the other. However, these underlying logics of action must be treated as empirically distinct. This dissertation focuses on the characteristics which predict participation in online actions, and I operationalize online actions as utilizing one of these two strategies. I question whether traditional relationships between social psychological variables and movement participation persist in an online context, or if the emergent forms of online organizing fundamentally alter the dynamics of recruitment and participation. First, I question the role of collective identity in online actions. The success of offline movements that utilize the logic of collective action has been linked to the formation of a strong sense of collective identity

among participants, and I would expect that relationship to persist online. However, Bennett and Segerberg's (2013:28) conceptualization of the logic of connective action "does not require… the symbolic construction of a united 'we'." I test this assertion using a measure for autonomous collective identity, which is a type of collective identity that rejects the "products" of a traditional collective identity, such as bureaucratic organizational structures and labels, and embraces principles of inclusivity, diversity, and heterogeneity with a centerless, horizontal, and distributed organizational form that rejects credentialism and representativity (Flesher Fominaya 2015; Monterde et al. 2015). Second, I explore the role of collective efficacy in online actions, where previous studies have found collective efficacy to have a direct impact on participation or intent to participate in protest actions (Grant et al. 2015; Klandermans 2013; Lee 2010; Simon et al 1998). I introduce a unique model for conceptualizing efficacious beliefs which states that collective efficacy is influenced by an evaluation of one's general sense of self-efficacy, and in turn influences one's perceptions of tactical efficacy, or the belief that group engagement in specific tactics is likely to lead to successful outcomes. Although I expect online collective action to be influenced by efficacious beliefs in a similar manner as offline collective action, there is no literature to support how these mechanisms operate in the emergent form of connective action. Finally, I explore the role of intrinsic and extrinsic motivations in one's decision to participate in online actions. These psychological variables, which refer to the extent to which we are motivated by internal gratification or the expectation of separate, external outcomes, have only recently been applied to the field of social movements despite being widely used in sociological studies of religion, education, and occupations. I contribute to this growing literature by incorporating the collective/connective action framework to offer more

robust evidence of the impact of these motivations on participation in movement actions online. Definitions for these key variables can be found in Table 1.1.

This dissertation investigates the predictors of participation for both online collective actions and online connective actions. In each of the three substantive chapters that follow, participation in these two types of action serves as the dependent variable, and it is measured based on the self-reported intentions of individuals to engage with online content which exemplifies each of these organizing strategies. Before going into more detail about the survey design, I will first introduce the two data sources from which I sampled my respondents.

Table 1.1: Key Terms and Definitions

Key Terms	***Definition***
Collective Identity	"An interactive and shared definition produced by several individuals" (Melucci 1995:44) that involves a "shared sense of 'one-ness' or 'we-ness' anchored in real or imagined shared attributes and experiences among those that comprise the collectivity… [and] a corresponding sense of collective agency" (Snow 2001)
Politicized Identity	A type of collective identity; identifying as either a member of a social movement organization or as an activist
Autonomous Identity	A type of collective identity; one "that has as a central defining characteristic a refusal to have a common central characteristic" and an "unwillingness to self-identify with the defining label or to engage in credentialism or representation as a prerequisite for political participation" (Flesher Fominaya 2015:66); a process identity (cf. a product identity) and a value identity (cf. a role identity)
Self-Efficacy	A measure of one's ability to succeed in a specific situation or task, but <u>not</u> an estimation or expectation of achieving the desired outcome
Collective Efficacy	"The shared belief that one's group can resolve its grievances through unified effort" (van Zomeren et al. 2008:507)
Tactical Efficacy	The belief or perception that engaging in specific tactics is likely to lead to successful outcomes
Intrinsic Motivations	A compulsion to act that results from an inherent sense of interest or pleasure in an activity, or an internal locus of causality
Extrinsic Motivations	A compulsion to act that results from the expectation of a separate outcome, like a reward or punishment; an external locus of causality; can be more or less self-determined or autonomous

DATA SOURCES AND SURVEY RESPONDENTS

College Student Sample

For this dissertation, I have collected data from students at a large, public university. Despite representing a fairly homogeneous pool of respondents, convenience samples of college students remain one of the most widely used data collection methods in the social sciences (Berinsky et al. 2012; Gosling et al. 2004). Student participation in protest is well-documented. Full-time college students in the United States often meet the characteristics for "biographical availability" to participate – young, no full-time employment, no spouse or children – but the strongest explanation for individual participation lies within social networks, information, and simply being asked to participate (Klandermans 1997; McAdam 1986; Schussman and Soule 2005; Verba, Schlozman, and Brady 1995). The youngest generation of adults – currently dubbed "Millennials" – are known as the "most connected generation" because many of these individuals have lived their entire lives with access to personal computers and the internet, and many of the social media pioneers themselves are members of the Millennial generation (e.g., Mark Zuckerberg of Facebook, Kevin Systrom and Mike Krieger of Instagram, Evan Spiegel and Bobby Murphy of Snapchat, etc.). A recent survey of 141,189 first-time, full-time students who entered 199 four-year U.S. colleges and universities of varying selectivity and type revealed that students' expectations of participating in protests or demonstrations has increased nearly three percentage points over the prior year, with 8.5% of students reporting they have a "very good chance" of participating (Eagan et al. 2015). The same survey revealed a substantial commitment to political engagement and keeping up to

date with political affairs; 22.3% and 40.4% of incoming college students view these life objectives as “very important” or “essential,” respectively (Eagan et al. 2015).

The focus of the current study is to investigate predictors of participation in online actions. Given that college students are disproportionately comprised of younger individuals with fewer biographical commitments, and the youngest generation of adults today are the most likely to consume social media and contribute to the emergent norms and memes found online, data from this population can provide considerable insight into the dynamics of online participation. By studying the variation within this more homogenous population and comparing it to results obtained from the more diverse MTurk sample, I expect to gain insight on the future of online participation under both the “logic of collective action” and the “logic of connective action.”

Students were recruited from a large public university that has a large graduate and professional student population. As graduate and professional students tend to be older, more highly educated, and have more professional experiences than undergraduate students, their inclusion in the sample brings greater diversity and improves the external validity of the study. Students were sent a single email invitation to participate in short survey and enter into a drawing for one of two $25 Amazon.com gift certificates.

Amazon’s Mechanical Turk (MTurk)

This dissertation is also based on data collected via Amazon’s Mechanical Turk (MTurk). MTurk is a crowd-sourcing internet marketplace designed to facilitate the completion of

"Human Intelligence Tasks" (HITs), or tasks that cannot be completed by artificial intelligence.[4] The platform allows "Requesters" to post their HITs online with a description of the task, estimated length of time needed to complete the task, and the compensation available for dutifully completing the task. The entire list of available HITs is presented to MTurk "Workers," who can choose which HITs they would like to complete. As of this writing, there are over 350,000 HITs publicly available[5] to Workers, ranging in compensation from $0.01 to hundreds of dollars. The highest paying HITs often require transcribing lengthy audio or visual files and/or meeting specific "qualifications," or attributes based on completing specialized tests or Workers' past job performance. However, high-paying HITs are rare; the median hourly wage for MTurk Workers is $1.38 (Horton and Chilton 2010).

The pool of MTurk Workers is large and diverse. According to Amazon (https://requester.mturk.com/tour), there are more than 500,000 Workers from 190 countries, but these figures have not been updated in years and do not seem to differentiate between active and inactive users. Using capture-recapture analysis, an ecological technique developed to estimate the number of fish in a lake, Stewart and colleagues (2015) estimate that there are 7,300 active Workers available to Requesters in any given three-month period. The MTurk platform is only available in English, but there are no location restrictions on Workers. The Pew Research Center (Hitlin 2016) estimates that 80% of Workers are from the United States, 16% are from India, and 4% live in other countries.

[4] Using artificial intelligence (AI) to complete some tasks may be unavailable or unfeasible – such as creating software to accurately transcribe audio or visual files – or may be altogether inappropriate – such as using AI to complete research surveys.

[5] Requesters can choose to make their HITs "hidden" to Workers who do not meet their specified qualifications.

The major drawback to using MTurk Workers as survey respondents is that the platform represents a nonprobability convenience sample. As Gosling and Mason (2015:892) succinctly express, "Ideally, sample populations would be fully representative; however, the appropriate point of comparison is with conventional and viable alternatives." MTurk offers many attractive benefits to researchers over the typical convenience sample of college undergrads, such as greater respondent diversity and the ability to recruit large numbers of respondents in quick fashion – all without sacrificing reliability (Chandler and Shapiro 2016; Crump et al. 2013; Bartneck et al. 2015; Buhrmester, Kwang, and Gosling 2011; Casler et al. 2013; Gosling and Mason 2015; Weinberg et al. 2014). MTurk is the most widely studied nonprobability sample available to researchers (Chandler and Shapiro 2016), and respondents recruited via MTurk are often more representative of the U.S. population than other convenience samples (Berinsky et al. 2012). Convenience sampling techniques are widely used in political science (Berinsky et al. 2012) and psychology (Gosling et al. 2004) and represent the most common (or modal) data collection technique; convenience samples are typically comprised of university students.

Many researchers have compared data collected via MTurk to a variety of other sampling techniques, including other online and offline convenience samples and nationally representative samples. While nationally representative (Berinsky et al. 2012) or web-based probability samples (Chandler and Shapiro 2016) remain the "gold standard" in terms of data collection and reliability, MTurk clearly outperforms other convenience sampling methods in terms of respondent diversity, data reliability, and completion metrics. MTurk samples offer more diversity than college student samples (Chandler and Shapiro 2016). They are more representative than local in-person convenience samples, as representative as high-quality

internet samples, but not as representative as high-quality, “face to face” samples (Berinsky et al. 2012). MTurk Workers have higher completion rates than convenience samples from internet discussion boards (Paolacci et al. 2010), and faster completion times than lab-conducted experiments (Crump et al. 2013). They also outperform college students on attention check questions (Hauser and Schwarz 2016). Data obtained from MTurk Workers is at least as reliable as traditional convenience samples recruited on college campuses or through online forums (Bartneck et al. 2015; Buhrmester, Kwang, and Gosling 2011; Casler et al. 2013; Crump et al. 2013).

MTurk samples produce results that are closer to being nationally representative than other convenience samples, but it is important to enumerate the characteristics on which samples of MTurk Workers differ from other samples of respondents. The MTurk Worker pool represents a unique type of convenience sample because many researchers across a variety of disciplines can utilize it, and we can begin to understand the composition of this pool through the repeated sampling of MTurk Workers. Compared to nationally representative samples, MTurk samples tend to overrepresent females, the highly educated, and young people, and MTurk samples tend to overrepresent Asian people and underrepresent black and Hispanic people (Berinsky et al. 2012; Paolacci et al. 2010). Furthermore, while MTurk workers tend to have a similar income distribution (Goodman et al. 2013) or slightly underrepresent individuals from lower and upper classes (Gosling and Mason 2015), MTurk Workers are much less likely to have ever been married or to own their current dwelling than the general population (Berinsky et al. 2012). MTurk respondents are slightly more Democratic and substantially more liberal in their ideology than other convenience samples, and they are considerably more interested in

politics than the general population (Berinsky et al. 2012). The geographic dispersion of MTurk workers across the United States is relatively similar to national statistics, apart from slightly more MTurk workers residing in the Northeast (Berinsky et al. 2012). MTurk workers are much more likely to report having no religious affiliation (Berinsky et al. 2012), more likely to endorse depression and anxiety symptoms (Arditte et al. 2015; Chandler and Shapiro 2016) and report lower levels of extraversion and self-esteem (Chandler and Shapiro 2016; Goodman et al. 2013). However, Workers tend to have above average measures of cognitive aptitude, including civics knowledge (Berinsky et al. 2012), SAT scores (Cavanagh 2014), science knowledge (Cooper and Farid 2014), and financial literacy (Krische 2014). MTurk Workers are also highly computer literate, which makes this platform a useful site for studying computer-based phenomenon (Behrend et al. 2011; Davenport et al. 2014), such as the current study's aim to investigate participation in online social movement activity through social media. Berinsky et al. (2012) conclude that MTurk works best for conducting internally valid experiments, but researchers should be cognizant of the ways in which treatment effects may be influenced by factors for which MTurk is known to be skewed, such as greater support for liberal ideologies (Berinsky et al. 2012; Goodman et al. 2013). Although MTurk samples are not nationally representative, Bartneck and colleagues (2015) suggest that this platform may nonetheless be a viable option for conducting studies in which the general population is the target.[6]

[6] It should be noted that individual MTurk samples are not necessarily representative of the platform itself (Chandler and Shapiro 2016). For example, the gender composition of samples can vary widely (Gosling et al. 2004). These differences between MTurk samples may be due to Worker turnover. Approximately every three months, 26% of Workers retire and are replaced with new Workers, which means that half of MTurk Workers leave and are replaced about every seven (7) months (Stewart et al. 2015). With such a high turnover rate, samples drawn only one year apart would nonetheless be sampling a nearly entirely different pool of Workers altogether.

In order to obtain high-quality data from MTurk samples, researchers have provided several recommendations for conducting research on the MTurk platform. Researchers strongly advocate for the use of "attention check" questions to screen out the statistical noise that is introduced by inattentive Workers (Crump et al. 2013; Gosling and Mason 2015; Goodman et al. 2013). However, these attention checks should be unobtrusive, or else respondents may feel tricked or may begin to adopt a more deliberate cognitive processing style which biases their responses (Chandler and Shapiro 2016; Peer et al. 2014). Peer and colleagues (2014) instead recommend limiting one's sampling to high-reputation Workers, as this method ensures high-quality data without the need for attention checks. Experienced MTurk Workers may pay closer attention to attention check questions because, in many cases, compensation is tied to passing, and MTurk Workers have seen common measures in other surveys and have the opportunity to learn over time; the same cannot be said of most college student samples (Chandler et al. 2014; Hauser and Schwarz 2016). The motivation for pay also makes MTurk participants more likely to exhibit response bias (i.e., to "please the researcher"), so one should wait for the debriefing to disclose any study aims, as well as disclose any different treatment effects participants may have experienced in order to prevent participants from retaking the survey or experiment out of curiosity (Berinsky et al. 2012; Chandler and Shapiro 2016; Goodman et al. 2013; Gosling and Mason 2015; Paolacci and Shapiro 2014). Researchers can also prevent duplicate workers by assigning previous participants a unique qualification that indicates their past participation and preventing Workers with such qualifications from participating in future HITs (Chandler and Shapiro 2016). Researchers are also reminded to pay MTurk Workers a fair wage and to treat them as honorably as you would any lab-based participant (Chandler and Shapiro 2016; Gosling

and Mason 2015). A collective of MTurk Workers, under the name WeAreDynamo, has released a recommendation of $0.10 per minute, or $6.00 per hour; the current minimum wage is $7.25 per hour, or $0.12 per minute[7] (Chandler and Shapiro 2016). However, for subjective tasks (i.e., tasks for which there is no right/wrong answer, like a survey about one's perceptions or attitudes), there does not appear to be any relationship between data quality and pay rates (Buhrmester et al. 2011; Marge, Banerjee, and Rudnicky 2010; Mason and Watts 2009; Paolacci and Shapiro 2014).

I recruited MTurk Workers by posting a "Human Intelligence Task" (HIT) that contained brief instructions and a link to the survey. Workers were informed that everyone would be eligible to take the short screening questionnaire for $0.01 in compensation, and those who were deemed eligible for the full survey would be invited to participate for an additional $1.00 in compensation. When a worker was dismissed from the survey or otherwise completed it, they were assigned a random survey code to submit to the MTurk platform for payment. By matching the Worker-provided survey codes with the codes recorded in the Qualtrics survey, I was able to determine which Workers had submitted a valid survey code and the extent of their participation (screening questionnaire or full survey) and submit the appropriate level of compensation to each worker. After participating in the survey in any capacity, Workers were assigned a unique qualification that indicated they had participated in the survey, and the presence of this qualification also prevented Workers from submitting more than one survey response.

[7] Keep in mind that there are currently nationwide debates about raising the minimum wage to $10-15 per hour, which further highlights how little MTurk Workers are being paid and/or requesting to be paid.

SURVEY DESIGN AND FLOW

This dissertation focuses on three sets of social psychological variables as predictors of participation in online collective and connective actions. Given that the measurement of the dependent variable and the sampling pool remain the same for all three analyses, I have decided to consolidate all survey items into a single survey. Therefore, the analyses from the following chapters are based on data collected from a single survey, administered separately to my pool of college students and MTurk Workers. The full text for survey items can be found in Appendix A. I will now describe the survey design and flow before concluding with the chapter overviews.

Broadly speaking, the survey is designed to measure individuals' perceptions of collective identity and various forms of efficacy, as well as their intrinsic and extrinsic motivations for performing certain tasks. Although I am interested in these relationships at a macro-level, I cannot measure one's collective identity or motivational attitudes without first specifying an issue or social movement field. If the examples of action in the survey were to come from multiple social movements, it would become impossible to control for differences between non-participation based on low motivations and non-participation based on ideological incongruencies, for example. When based on a single social movement, I can control for ideology by only sampling respondents who demonstrate sympathies toward that movement. Therefore, this dissertation and the examples of action therein are based on a single social movement: the environmental movement. I have chosen to use the environmental movement for a variety of reasons. This is a long-standing social movement that has employed a diverse set of tactics and attracted a diverse set of private citizens, organizations, and

institutions to participate. The goals of various members of the environmental movement are not always united (i.e., are non-hegemonic), and goals can advocate change on a variety of levels, from international public policy to individual behaviors or choices. One of the primary concerns of the environmental movement is the increasing global temperature and the ecological and social consequences of climate change. Therefore, my survey items and examples are based on the environmental movement's general goal to reduce or eliminate global climate change.

The first section of the survey is a screening questionnaire containing four items.[8] In order to meet the inclusion criteria and participate in the full survey, all respondents were required to indicate or affirm that they are (1) a United States citizen, (2) over 18 years old, (3) an active Facebook account holder, and (4) agree with the following statement – "'Global warming' or 'climate change' is happening, and there may be something humans can do to stop it." If a respondent submitted a response which did not meet the inclusion criteria, they were immediately dismissed from the survey. I chose to limit respondents to American citizens to help ensure that respondents are familiar with the English language and idioms, as well as increasing the likelihood that respondents are familiar with the American examples of action that are included in the survey. The images that are shown to respondents are modeled after Facebook posts, and the types of available actions are modeled after Facebook's features, such as the Like, Share, and Comment features. Therefore, it is important that respondents have familiarity with the Facebook platform in order to properly interact with the survey. This is not

[8] For the student sample, a fifth item was included which asked respondents to identify their affiliation with the University. Non-students and otherwise non-affiliated respondents were dismissed from the survey.

a highly selective criterion given that there are well over one billion daily active users on Facebook, with approximately 181,760,000 of the daily active users residing within the US and Canada (Facebook n.d.). Finally, it is important to screen out potential respondents who do not believe in climate change because those views will fundamentally distort the results. As part of the measurement of the dependent variable, the examples of online collective action all utilize "frame bridging" as a frame alignment process. Frame bridging is intended for audiences that share an ideological disposition with the social movement organization (Snow et al. 1986). By excluding respondents who are not sympathetic to the environmental movement, I can eliminate a potential source of bias among respondents who report low or no intentions to participate in the collective action examples. In other words, if individuals who do not believe in climate change or do not believe it is possible to alter the course of climate change are allowed to participate in the survey, they are likely to report weak intentions to participate in the examples of collective and connective action because they do not perceive climate change as a problem or as having a solution. A weak commitment to participation in this case carries a far different implication than an individual who is ideologically-aligned with the movement exhibiting that same weak commitment. In order to determine which factors affect an otherwise ideologically-aligned individual's decision to participate, I must exclude respondents who do not believe that climate change is real or who believe that it is not possible to affect climate change through human action. Respondents who meet the inclusion are presented with an informed consent document, and only those who consent to participate are allowed to continue through to the full survey.

After consenting to participate, respondents report basic demographic information, such as race, gender, education, household income, and political affiliations and orientations. Then, respondents answer a set of questions designed to measure two types of collective identity: a "politicized identity" and an "autonomous identity." Responses are reduced to a single composite score using factor analysis. Then, respondents answer a series of questions designed to measure three types of efficacious beliefs: self-efficacy, collective efficacy, and tactical efficacy. Tactical efficacy is a unique contribution to the literature, which I define as the belief that a group engaging in specific tactics will lead to successful outcomes, and it is designed to bring conceptual and empirical clarity to the concept of collective efficacy. Perceptions of tactical efficacy are based directly on specific tactics, so respondents report their perceived efficacy of tactics associated with traditional, collective actions and the perceived efficacy of tactics associated with new, connective actions. Efficacious beliefs are also reduced to composite scores using factor analysis.

After reporting their efficacious beliefs, respondents are randomly and secretly assigned to one of three possible groups. These three groups represent the experimental and control groups used in Chapter 4. The first group receives no intervention and continues to the next set questions regarding intrinsic and extrinsic motivations. The second group receives a feedback message that is intended to be neutral in its effect; the message states, "You have completed 65% of the survey. The survey will take approximately four (4) more minutes to complete." The third and final group receives a feedback message that is intended to enhance feelings of intrinsic motivation, and therefore increase the likelihood of participating in the online actions; the message states, "Your responses indicate your level of concern for the environment

is: **above average**." [emphasis included]. The two groups who receive a feedback message must click through to continue to the next set of questions.

The next set of questions require respondents to indicate their emotional response to performing two tasks, one associated with collective actions and the other associated with connective actions. The different emotional responses, such as pleasure, enjoyment, pride, and guilt, correspond to different types of intrinsic and extrinsic motivations. Respondents are again randomly and secretly assigned to groups; although I have a pool of three collective tasks and three connective tasks, respondents are only shown one question from each pool. Like tactical efficacy, motivations are task-specific, so I must include (and delineate between) tasks that correspond to both types of organizing strategies. The random assignment of tasks here is not associated with the experiment in Chapter 4 but is instead intended to reduce the cognitive load and time burden for respondents. Responses are reduced using factor analysis and results in four variables: (1) intrinsic motivation for collective actions, (2) extrinsic motivation for collective actions, (3) intrinsic motivation for connective actions, and (4) extrinsic motivations for connective actions. It is also within these items measuring intrinsic and extrinsic motivations that I have included an unobtrusive attention check question; respondents are asked to choose a specific response item (e.g., "Please select Strongly Disagree."). This measure is included to reduce statistical noise from inattentive survey takers (Crump et al. 2013; Gosling and Mason 2015; Goodman et al. 2013).

The final set of questions provide the respondents' intended level of engagement or participation with the example Facebook posts. In this section of the survey, respondents are shown two Facebook posts, sequentially, and asked to consider how they would react if they

saw these posts on their own Facebook accounts. The first example Facebook post that a respondent views is randomly and secretly assigned from a pool of four possible examples of online collective action; this is done to reduce the cognitive load for respondents. All four exemplars of online collective action are authored by an environmental organization's account (e.g., Environmental Defense Fund or Sierra Club), and were purposively sampled from real social movement organizations' Facebook accounts without any alterations. These posts were selected based on the presence of the three core framing tasks that are required to produce collective action (i.e., diagnostic, prognostic, and motivational framing) (Snow and Benford 1988). The more core framing tasks one utilizes, as well as the degree to which they are interconnected/complimentary, the more likely respondents are to participate (Snow and Benford 1988).[9] The four examples in this survey were chosen to encompass the common set of social movement organizations' online activities: asking for money, signing petitions, letter writing, and sharing relevant news stories. All four example posts include a graphic and a link to an external website. The inclusion of both of these elements seems to be the most common format for environmental movement Facebook posts[10], which may be deliberate given that research demonstrates that the inclusion of photos in Facebook posts leads to a greater

[9] The first task is Diagnostic Framing, which is centered on identifying the problem and who is to blame. The second task, Prognostic Framing, identifies a potential solution to the problem. Finally, Motivational Framing provides a call to arms or a rationale for action that goes beyond the Diagnosis and Prognosis, as this task is to convince potential participants of both the need and the utility of becoming active in the cause (Snow and Benford 1988).

[10] Indeed, including both a picture and a hyperlink is nearly unavoidable in some cases. When posting a hyperlink, Facebook will attempt to automatically add a picture from the hyperlinked URL to the Facebook post. For example, when posting a hyperlink to an external news story, Facebook software will scan the news webpage for photos and automatically attach a photo (if any are found) to the Facebook post. It is possible to opt-out of the photo attachment.

number of Likes and Comments (Sabate et al. 2014). All four examples of collective action also use frame bridging as their frame alignment strategy; that is, they generally speak to people who already have pro-environmental views and they do not attempt to transform viewpoints or extend their frame to other issue areas (Snow et al. 1986). After reviewing the first Facebook post, respondents must indicate their likelihood of performing the following common actions: (1) Ignore the post or do nothing, (2) Like the post, (3) Share the post, (4) Comment on the post, (5) Click a link in the post to visit another website, and (6) Create my own post based on this content. These responses are reduced to a single composite score using factor analysis, where higher scores represent a richer level of participation or more time spent "engaging" with the post.

After indicating their intended behavior toward the collective action Facebook post, respondents are shown a second Facebook post that exemplifies the logic of connective action. Again, respondents are randomly and secretly assigned one of four possible posts in order to reduce the time and energy spent on the survey. The examples of connective action and personal action frames are all posted from individual accounts. When personal action frames are employed online through social media sites, they often incorporate the unique linguistic features of "internet English," such as abbreviations, acronymy, portmanteaus, and the use of symbols and numbers in place of letters (e.g., URL, LOL, BRB, netiquette, e-book, :), <3, etc.). Social media sites also use symbols such as @ and # to direct traffic to certain users or keywords. With the improved capability to quickly edit images and videos, a type of communication that relies on creating and sharing "memes" has also emerged in recent years. Memes are symbols or ideas that are easy to imitate, adapt personally, and share broadly

across large and diverse populations (Bennett and Segerberg 2012), and an Internet meme could be anything from an image to an email or video file; however, the most common type of meme is an image of a person or animal with a funny or witty caption. The four examples of connective action in this survey employ the common memes used in personal action frames: famous quotes, sign holding, profile photo filters, and a famous "reaction meme" (eye-rolling Robert Downey Jr) (see www.knowyourmeme.com). Sign holding was very common in the Occupy Wall Street and Bring Back Our Girls campaigns, and usually consists of a handwritten sign as part of a selfie. Profile photo filters[11] were made famous by campaigns such as the Facebook filter which allowed users to overlay a transparent French flag over their profile photo after the November 2015 Paris terrorist attacks, as well as the "Obama-izer" filter, which transformed profile photos to look like the iconic Obama 2008 campaign photo (Bennett and Segerberg 2013). Reaction memes are images or animated GIFs that are used to portray a particular emotional response to something that has been said, and they are often used in a similar fashion to emoticons.[12] These memes can be applied to both political and non-political issues and represent one of the ways in which the boundaries between social movement activity and quotidian life are blurring. After reviewing the connective action Facebook post, respondents indicate the likelihood of performing the six common actions (Ignore, Like, Share, Comment, etc.), and their responses are reduced to a single score using factor analysis.

Respondents typically needed 10-15 minutes to complete the survey. Respondents from the student sample were eligible to enter a drawing for gift certificates to Amazon.com. The

[11] See also http://www.rappler.com/move-ph/126440-earth-hour-2016-climate-action

[12] www.knowyourmeme.com/memes/reaction-images

randomly selected winners received the funds electronically, delivered to the email address they entered at the end of the survey. Respondents from MTurk were compensated at least $0.01 for participating in the screening questionnaire, and respondents who completed the full survey and passed the attention check question were awarded an additional $1.00, for a total possible compensation of $1.01. All compensation for MTurk Workers was completed through the MTurk platform.

The key variables of interest in this study are based on a number of questions, the responses to which are treated as observed variables that reflect an underlying, unobserved variable. Using factor analysis, I am able to construct latent variables based on the statistical interdependencies of the observed variables. Factor analysis is widely used in the social sciences, particularly psychology, and represents a simplified case of structural equation modeling. This method is superior to using each question as an independent variable, and it produces a more nuanced construct than would be achieved by a simple additive or multiplicative index because factor analysis can accommodate for measurement error in the observed variables. My factor solutions are also rotated, which simplifies the structure of the factors by identifying the loading pattern for each observed variable and loading them strongly on only one factor and weaker on other factors (if any). I use a promax rotation, which is an oblique rotation because I expect the factors for any one concept to correlate. For example, if the measurement of "autonomous identity" reveals a two-factor solution, I would expect these factors – while distinct components of the overall concept – to be correlated with another. My analyses use OLS regression to regress the participation variables on the social psychological and demographic variables.

CHAPTER OVERVIEWS

The remainder of this dissertation is organized into three substantive chapters and a concluding chapter. Table 1.1 defines the key terms used throughout this dissertation. Chapter 2 explores the role of collective identity in participation. Although scholars have long contended that collective identity is a necessary precursor for social movement participation, Bennett and Segerberg (2013) claim that participation in connective action requires no underlying collective identity. However, other qualitative researchers' work points to the presence of an "autonomous identity" or "multitudinous identity" (Flesher Fominaya 2015; Monterde et al. 2015) which I hypothesize to be the underlying collective identity which influences participation in connective actions. I use a self-constructed scale to measure respondents' affiliation with an autonomous identity and test its relationship to respondents' intention to participate in connective actions. I also test the relationship between a politicized collective identity and participation in online collective actions, a relationship hypothesized to exist by Bennett and Segerberg (2013).[13]

Chapter 3 explores the role of efficacy in decisions to participation in online actions. Contemporary social psychological analyses of social movement participation often use measures of collective efficacy to predict participation, where collective efficacy refers to "the shared belief that one's group can resolve its grievances through unified effort" (van Zomeren et al. 2008:507). I will attempt to build on this empirical foundation by including a measure of generalized self-efficacy and introducing the measurement of "tactical efficacy" as predictors of

[13] There is rich body of evidence that supports the claim that a politicized identity significantly predicts participation in offline collective actions, too; see van Zomeren et al. (2008) for a meta-analysis.

participation as well. Tactical efficacy is an important concept to study because it reveals information that individuals use in making their cost-benefits analysis of whether or not to participate in a form of collective action. Tactical efficacy can be conceived of as a more specific type of collective efficacy in that collective efficacy is a more general evaluation of the group, while tactical efficacy more specifically inquires if a particular behavior will be effective if the group engages in it. In other words, collective efficacy asks "can individuals come together to form a group and create change?" whereas tactical efficacy asks "if the group engages in this specific behavior, how likely are they to create the intended change?" I measure self-efficacy using a modified version of the 8-item General Self-Efficacy Scale from Chen et al. (2001) and my measure of collective efficacy is an adapted version of the 4-item Collective Efficacy Scale developed by van Zomeren, Saguy, and Schellhaas (2012). To measure tactical efficacy, I have developed a scale which lists several tactics ranging from instrumental to more expressive forms of action, and respondents will indicate how effective they perceive each tactic to be in achieving the stated goal.

Chapter 4 is the final substantive analysis, and within it I explores the role of intrinsic and extrinsic motivations on participation. The study of intrinsic and extrinsic motivations has been employed in other areas of sociology, such as organizations/work, education, and religion, but has yet to gain widespread analysis in the field of social movements. A recent attempt to incorporate these motivations into the study of social movements was undertaken by Lilleker and Koc-Michalska (2016), but their study fails to distinguish between the different logics of action defined by Bennett and Segerberg (2013). Furthermore, their operationalization of intrinsic motivation has serious flaws, which I address in my own operationalization of the

concept. Together, these issues may have resulted in the misestimations of the role of intrinsic motivation in online actions, and therefore requires further study. In this analysis, intrinsic and extrinsic motivations are measured by separate scales, which were adapted from Lilleker and Koc-Michalska (2016) and modified.

Chapter 5 brings together the major findings of the previous three chapters and offers concluding remarks on practical applications of the current study and considerations for future research. This dissertation as a whole contributes to both the study of social movements and the social psychological influences on participation therein. By incorporating concepts such as self-efficacy and intrinsic/extrinsic motivations into the study of social movements, this dissertation begins to address recent criticisms of insufficient dialogue between the discourses of social movements, political science, and social psychology (Jasper 2017; van Zomeren 2016).

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CHAPTER 2: EXPLORING THE ROLE OF COLLECTIVE IDENTITY IN DIGITALLY-NETWORKED ACTION

Social movement activity is occurring more frequently online, and the forms and tactics of social movement activity are merging with the everyday interactions in our personal lives on social networking sites like Facebook, YouTube, and Twitter. These new media obscure the relationship between personal communication and mass media, and as such, has been classified as a new form of communication that Castells (2007) calls "mass self-communication." Given the unique media dynamics of social networking sites, it is not surprising that scholars are having difficulty applying theories of traditional protest dynamics to the online sphere. One such element is the concept of collective identity, which admittedly suffered from imprecise definitions and applications long before the rise of the Internet.

Some scholars are attempting to do away with collective identity all together, saying it is absent in the personalized action frames of online connective action (Bennett and Segerberg 2012, 2013). This attempt is misguided because it demonstrates the inability or unwillingness of the authors to recognize new forms of an old phenomenon. Their attempt to answer the question "*What is the role of collective identity in online protest activity?*" by concluding it does not exist ignores that basic design of social networking sites in which people are literally embedded in the very networks through which various types of information flow. Furthermore, by stating collective identity is absent in these forms of action, Bennett and Segerberg show how narrowly constrained their own definition of collective identity is. The form of collective

identity demonstrated within connective action may be harder for some to detect because it is a value-based identity as opposed to a role-based identity, because it exemplifies collective identity as a *process* while explicitly rejecting collective identity as a *product* (Flesher Fominaya 2015), and because some of the accompanying identity work may be taking place in the "digital backstage" (Treré 2015) that is often unobservable to researchers.

Just as scholars accepted the changing nature of collective identity with the cultural turn of so-called "New Social Movements (NSMs)," so too should they now embrace these new forms of collective identity. The values and ideologies present in digitally-networked connective action are not new either. Yet interestingly enough, they stem from the values and ideologies of the early NSMs that defended local autonomy, plurality, grassroots politics, horizontal organization, direct representation, and expressive (cf. strategic) action (Cohen 1985). Seen in this light, the demands of new social movement actors online are not new at all.

Collective identity should be understood to still exist in online connective action, but scholars should recognize the different form it takes given historical considerations (such as moving away from institutional and Old Left dynamics toward more progressive agendas) and technological advancements (such as the Internet and social networking sites). This form of collective identity – an *autonomous collective identity* – demonstrates the deep cultural bonds that undergird the original concept. One can see this culture shared through the ways in which personalized actions frames are innovated upon and rewarded by other users through positive feedback (e.g., Likes, Shares, Comments, mimicry). Also, researchers commonly refer to themes of unity in these online movements, which implies the cultural shared sense of "one-ness" or "we-ness" necessary for collective identity. Even the meme-like expressions of personal action

frames can be said to be part of the language, symbols, and cultural icons and artifacts of the collective in question.

This chapter investigates the underlying collective identity that influences participation in contemporary connective actions as compared to more-traditional collective actions online (Bennett and Segerberg 2012, 2013). Results are based on quantitative analyses of survey data collected from students at a large public university and from workers recruited from an online marketplace, Amazon's Mechanical Turk (MTurk). The purpose of this study is to assess the competing claims about the role of collective identity in collective action. More specifically, the claim that collective identity is absent in connective action (Bennett and Segerberg 2013) versus the claim that emergent social movement activity can take on an autonomous collective identity (Flesher Fominaya 2015).

COLLECTIVE IDENTITY AND SOCIAL MOVEMENT PARTICIPATION

Why do some people participate in social movement activities while others do not? There are innumerable answers to this question, but a prominent line of research points to social psychological factors as key determinants of participation. Social psychological theories examine the relations between the social and the personal (Stryker, Owens, and White 2000), and participation in social movement activities offers "enlargement of personal identity" and "fulfillment and realization of the self" (Gamson 1992:56). The most often studied social psychological variable related to movement participation is "collective identity." Given its usage across a variety of disciplines (e.g., sociology, psychology, political science, etc.), the conceptualization and measurement of "collective identity" is far from standardized.

Although definitions of collective identity vary across disciplines, a common theme is an underlying, shared culture. Within the field of cognitive social psychology, a distinction is established between a social identity – i.e., one's view of self as a member of a social category – and a collective identity – i.e., emergent shared beliefs about membership, boundaries, and activities held by members (Stryker, Owens, and White 2000). In other fields, explicit definitions of collective identity are altogether absent, but references to cultural elements (such as ideas, beliefs, and practices) remain (Stryker 2000). Cultural elements lay at the heart of sociological understanding of collective identity as well. Seen as "an interactive and shared definition produced by several individuals" (Melucci 1995:44), collective identity involves a "shared sense of 'one-ness' or 'we-ness' anchored in real or imagined shared attributes and experiences among those that comprise the collectivity… [and] a corresponding sense of collective agency" (Snow 2001). This shared definition is derived from the common interests, experiences, and solidarity of group members (Taylor and Whittier 1992). Collective identity both precedes and results from collective action (Klandermans 1992).

> Collective identity exists at the cultural level, not the personal level, and as such:
>
> > it is manifested through the language and symbols… through cultural icons and artifacts displayed by those who embrace it… in styles of dress, language, and demeanor... To measure it, one would ask people about the meaning of labels and other cultural symbols, not about their own personal identity (Gamson 1992:60).

Collective identities are carriers and transmitters of ideology, which is a system of values, beliefs, myths, and symbols that provide group members with a common vocabulary for understanding the world and justifications for either maintaining or changing it (Gecas 2000:98). The relationship between collective identity and ideology is particularly important for

a class of collective identities known as "value identities." Value-based identities can be contrasted with role-based identities; whereas the latter is based on group membership or structural position, the former describes an identity based on common moral commitments, standards of livings, goals, and aspirations (Gecas 2000). Collective identity is a subjective identification with some broader group (Jasper and McGarry 2015) where the subjective identification is based on roles and structural positions or on values and beliefs, as both represent a type of collective identity.[14]

The distinction between value identities and role identities is useful because it allows one to better understand the role of collective identity in the NSMs that emerged in the mid-1960s. The defining characteristic of NSMs is the focus on identity conflicts as opposed to the more structural (often class-based) conflicts of past social movements; NSM conflicts are grounded in philosophical and ideological differences (Gecas 2000). NSMs emphasize change at the cultural level (Gamson 1992), and the target of their actions is civil society rather than the economy or state (Cohen 1985). In these movements, collective identity does not emerge from a set of given of structural characteristics, but rather as "the product of conscious action and the outcome of self-reflection" (Melucci 1995:50). Early scholars of NSMs often debated if this form of collective action was indeed new to the 1960s and 1970s, but the continued prominence of NSMs and identity conflicts make clear the case for studying the underlying culture, values, and ideologies of collective identities and their role in social movement participation.

[14] Gecas (2000:94) intends for these definitions to be treated as "ideal types," stating that "There is certainly overlap between value-based identities and identities grounded in social relationships and group memberships, since most role identities and group identities have value components."

Collective identities are neither fluid nor fixed[15], as the shared definitions of group members are often evolving. There is a great deal of work that goes into creating, sustaining, and transforming collective identities, even for structural or role-based identities (Buechler 2000; Jasper and McGarry 2015). This identity work encompasses a wide range of activities and processes that establish the shared symbolic resources upon which the collective identity is built, including identity convergence and identity construction processes (Snow and Anderson 1987; Snow and McAdam 2000). Even in cases where the individual's personal identity and the movement's collective identity are isomorphic (as with identity convergence), there is still identity work to be done insofar as the connection between the individual and the movement must be established though an identity seeking process on behalf of the individual or an identity appropriation process by the movement (Snow and McAdam 2000). The process of identity construction can be much more complex than identity convergence because the personal identities of individuals must be modified in some way to improve alignment with the collective identity (Snow and McAdam 2000).

These processes of identity convergence and construction are ongoing because the world itself is continually changing. For example, individuals who comprise the collective may experience personal changes, the recognition or reactions from the larger society may spur changes for the group, or new events may challenge previously held beliefs. Therefore, the character of the collective identity must also continually change to maintain the process of aligning the personal and the cultural. As part of the identity construction process, groups

[15] This is particularly true for value-identities.

engage in boundary work, which refers to the social, psychological, and physical structures that establish the differences between the collective in-group members and the out-group (Taylor and Whittier 1992). Groups are constantly engaging in boundary work between themselves and outsiders (like the dominant group or challenger groups) and within the movement itself (Gamson 1997). In these ways, collective identities are a site of tension, trade-offs, and contestation (Jasper and McGarry 2015).

Exploring New Forms of Collective Identity: Product vs. Process

The shifting nature of individual and collective identities creates what Jasper and McGarry (2015) refer to as the identity dilemma; that is, collective identities are politically useful for recruiting members and engaging targets, but not all members fit or accept the identity label in the same way. Collective identities appear stable and permanent, but their content changes. The identity label, which was formed as site of resistance, becomes reified and fixed; the search for public recognition becomes a trap in which heterogeneous individuals become branded as "the collective" with a single, fixed (and constraining) identity (Hekman 2000).

This paradox arises because collective identities can be thought of as either (or both) a *product* or a *process* (Flesher Fominaya 2010a, 2010b, 2015; Melucci 1995). The common sociological understanding of collective identity is that of a *product*: a more-or-less unified banner or shorthand label for those with perceived shared attributes, issues, and goals. A product identity is often subsumed under the name of an organization or an acronym used to represent the group (Flesher Fominaya 2010a, 2015). Stated another way, a product identity serves as "the constructed social object to which movements' protagonists, adversaries, and

audience(s) respond" (Snow 2001:4). As a product, collective identities become a public good-of-sorts, such that it is produced by a movement and available for consumption by everybody. This public pronouncement of status is an important banner for recruitment or to provide selective incentives to motivate participation (Flesher Fominaya 2010a; Friedman and McAdam 1992). However, "what appears as a given reality, more or less permanent, is always the result, at least to a certain extent, of an active process that is not immediately visible" (Melucci 1995:45-46).

On the other hand, a process identity is more concerned with shared meaning, experiences, and reciprocal emotional ties experienced by movement members through their interactions with one another (Flesher Fominaya 2010a). According to Alberto Melucci, a collective identity is the "process of 'constructing' an action system" (1995:44), which in turn "produces" collective action.[16] Actors are able to produce collective action only because they are able to define themselves and their relationship with the broader environment (Melucci 1995:43). In other words, collectives can be identified by (or their collective identity can be defined as) the *processes* which create the sense of having a collective, unified group, as well as the *product* of those processes (or, the collective action produced by having that sense of unity). In turn, these products (i.e., instances of collective action) *influence the process* of the (ongoing) identity formation, where instances of collective action contribute to the "reflexive understanding of [a collective's] relation to the context or environment" (Melucci 1995:47).

[16] As social movements become less focused on structural identities as the basis for movement participation, scholars are increasingly confronting the fact that collectivities are not monolithic, and Melucci (1995) advocates for increased attention toward *how* a collective becomes a collective – the process of collective identity. For example, he advocates that the empirical unity of a social movement (or, the *product*) should be considered as a movement success or result, as something to be explained rather than a starting point or preconfigured given.

Collective identity both precedes and results from collective action (Klandermans 1992). The social construction of the collective is an ongoing process; a failure or break in the process makes collective action impossible (Melucci 1995:44). In this way, the product is part of the process, but the process comes first: you must address *how* a collective is formed to undertake any observation of action on behalf of "the collective," and if the *process* ceases to function (through a failure or break), the collectivity is unable to engage in action (or create *product*). "The process of collective identity is thus also the ability to produce new definitions by integrating the past and the emerging elements of the present into the unity and continuity of a collective actor" (Melucci 1995:49). Because the process of collective identity is ongoing, it is constantly adjusting to shifts in the internal environment (e.g., the changing views and experiences of individual members) and the external environment (e.g., responses from other groups in a similar field of action, countermobilizations, and/or targets); "attempts to study it at one point in time and make inferences about its character at a later time are limited; collective identity is not an 'essential subject,' but rather a system of relationships" (Melucci 1995:56).

Rejecting Product: Autonomous Collective Identities

The distinction between collective identity as a process versus a product helps to provide a certain insight to the identity dilemma. If tension exists between the ongoing reflexive *process* of collective identity formation and the *product* or monolithic labels applied to the collective, one may attempt to eschew the label altogether in favor of fostering the processual aspects of collective identity. This approach can be observed in a variety of contemporary movements, including Occupy Wall Street, 15M / *Los Indignados*, the Global Justice Movement (GJM), and *Kullena Khaled Said* (We are all Khaled Said). In a mixed-methods

network study of 15M in Spain, Monterde et al. (2015) conclude that the underlying collective identity – what they call a "multitudinous identity" – of the movement arose with few attachments to pre-existing identities and was largely:

> the result of processes by which a dynamic network of recursive interactions among heterogeneous, autonomous actors emerges and differentiates itself, as a macroscopic unit, with respect to its environment, showing high degrees of distributed cohesion, transversal participation and transient adaptive poles of reference (a form of non-representational and temporally distributed leadership driven by action initiatives) (944).

Multitudinous identities do no subscribe to a product view of collective action (as their emergence was not based on direct, upward identification with a symbol, person, or cause), but rather it emerged from large-scale processes of self-organized, continuous interaction (Monterde et al. 2015). This process was heavily influenced by the use of social media and other digital tools.

Similarly, Flesher Fominaya (2007, 2010a, 2010b, 2015) describes an "autonomous collective identity" or an "anti-identitarian identity" present in a variety of movements in Madrid, including the Global Justice Movement, 15M, and other anti-globalization movements. She describes this identity as a paradox: "a collective identity that has as a central defining characteristic a refusal to have a common central characteristic" (Flesher Fominaya 2015:66). Just as all collective identities are site of tension and contestation, so too is the autonomous identity based on a series of negations and refusals; this collective identity is based on an "unwillingness to self-identify with the defining label or to engage in credentialism or representation as a prerequisite for political participation" as well as "a rejection of the 'shopping list' approach to mobilizing identities (i.e., mobilizing on the basis of a fixed or defined identity, even when that identity is defined in an open way, such as an ethnic or sexual

orientation label)" (Flesher Fominaya 2015:66-67). This autonomous approach is based on a set of ideological principles, one of which is the refusal to define politics as ideology in lieu of an insistence on heterogeneity and diversity (Flesher Fominaya 2015, 2007). Single or fixed identities associated with strong identitarian movements of the 1990s were criticized as being prescriptive and constraining because they failed to recognize that activists are not limited to single identities; autonomous thinking rejects the idea of a single or primary identity being the best basis for collective action on ideological and strategic grounds (Flesher Fominaya 2015, 2007).

Autonomous movements are generally organized as horizontal networks driven by principles of self-organization, direct or participatory democracy, decision-making by consensus, autonomy, diversity, and direct action (Flesher Fominaya 2007:336).[17] These networks are "biodegradable"[18] in that they are capable of dissolving and regenerating into new forms of organization and action (Flesher Fominaya 2007). The use of boundary markers has traditionally been seen as a central aspect of collective identity formation (Flesher Fominaya 2010a; Taylor and Whittier 1992), but these processes can be interpreted as exclusionary and reductionist in autonomous movements, akin to credentialism and tokenism (Flesher Fominaya 2007, 2015). For example, some collectives in Madrid refused to label or name their group because "the absence of acronyms is seen as a way to increase diversity and

[17] This stands in opposition to the institutional Left, which is characterized by its representative democracy model, vertical structures, and clear divisions of labor which are based on political and ideological credentials and memberships and embrace the notions of intellectual vanguards and party leadership (Flesher Fominaya 2007).

[18] Similar to abeyance structures. "Social movement abeyance then is not necessarily a retreat from political mobilization, but may also include mobilization on different, more promising- or urgent-political issues" (Meyer and Whittier 1994:280).

participation" (Flesher Fominaya 2007:340). However, as a consequence, autonomous movements risk "auto-invisibilizing" themselves from challengers, targets, and the general public, which may hinder recruitment but also countermobilizations (Flesher Fominaya 2015). Because the *product* of collective identity often results in labels – which, even when intended to be inclusionary and open, establish boundaries and can feel exclusionary – autonomous movements actively resist attempts to "patrol the boundaries" (Gamson 1997:181) and thus their collective identity becomes rooted in *process* and is decidedly not a public good, and therefore it is often overlooked by outsiders who cannot identify a coherent set of actors or mobilizing principles (Flesher Fominaya 2015).

In summary, an autonomous collective identity can be said to prioritize principles of inclusivity, diversity, and heterogeneity with a centerless, horizontal, and distributed organizational form that rejects credentialism and representativity (Flesher Fominaya 2015; Monterde et al. 2015). These actors exhibit neither identification nor solidarity with social movement organizations. They avoid the identity dilemma (Jasper and McGarry 2015) by resisting a *product* collective identity and instead fully embracing a *process* identity (Flesher Fominaya). It is a value-based identity, not one based on social roles or structural positions (Gecas 2000). Those subscribing to an autonomous collective identity bear resemblance to what Bayram (2015:471) calls "world citizens": "humanitarians, multiculturalists, freedom seekers, and egoists at the same time."

While some may see an autonomous collective identity as new (or nonexistent: see Bennett and Segerberg 2012, 2013), the values and ideologies underlying autonomous collective identities are quite similar to those advanced by NSMs. According to Cohen (1985),

NSMs were organized around principles of local autonomy, plurality, grassroots politics, horizontal organization, direct representation, and expressive (cf. strategic) action. Autonomous identities have existed in some form since the 1960s, often resulting from divisions between the Institutional Left and more progressive social movements (Flesher Fominaya 2015). Just as NSMs were criticized for not being new at the time, so too should we criticize any attempts to classify autonomous movements as being "new" today. As Melucci (1995) points out:

> Contemporary movements [referring to NSMs], like all collective phenomena, are not 'new' or 'old' but bring together forms of action that involve various levels of the social structure. They comprise different orientations that entail a variety of analytical points of view. Their components belong to different historical periods (53-54).

That is to say, there is reason to believe that collective identity formation processes and products would look different in the contemporary age of the Internet, social media, and social networking sites.

Online Action: Collective or Connective?

Communication technologies have long been understood to influence the communication process rather than acting as neutral transmitters (e.g., the medium is the message: McLuhan 1964). As a communication medium, the Internet has blurred the lines between producers and consumers, and between relational and non-relational channels of diffusion (Givens, Roberts, and Soule 2010; McAdam and Rucht 1993). In fact, Shirky (2011) claims that social media technologies have moved us beyond one-to-one and one-to-many communications to a state of many-to-many tools that support and accelerate cooperation and action. Internet-enabled communication networks can support "both top-down, hierarchical

structures as well as looser person-to-person communications" (Cullum 2010:49). In other words, the types of devices we use do not prescribe the type of communication network, as the Internet has opened up a style of communication that was not possible with traditional mass media (e.g., radio, newspaper, television).

The Internet is changing the way we interact and helps facilitate the type of process identity known as an autonomous collective identity. The Internet offers unique benefits (or affordances) over more traditional media technologies, including lower costs, eliminating the need for co-presence, and increased ability to find like-minded individuals for recruitment (Earl and Kimport 2011). Although online contributors may not have high levels of affective commitment like conventional action creates due to the extension dilemma (Jasper and McGarry 2015), there is evidence that online collective action can be very successful in achieving desired outcomes and should not be dismissed as mere "clicktivism" (Earl and Kimport 2011). Perhaps due to the ubiquitous nature of the Internet, researchers have noticed a sort of social movements spillover effect (Meyer and Whittier 1994) wherein the "diffusion of protest in its many forms [has become] a problem-solving heuristic to new populations" online (Earl 2010:209). Examples include using protest and petition tactics to make demands on producers of culture such as movie studios, record labels, and television producers. In this way, social movement tactics themselves have become more routine aspects of popular culture. Ownership of personal computers and mobile-enabled phones is widespread, thus enabling near-constant interaction on social media tools (if one so chooses). As our medium of communication has changed and opened up new forms of communication, and as social movement tactics and ideologies permeate the popular culture, it is necessary to examine

these emerging forms of participation online to determine ways in which our traditional understandings of movement dynamics may need to expand. We should also examine the ways in which our current theories are insufficient to address these emergent dynamics.

Bennett and Segerberg (2012, 2013) attempt to address these issues by comparing the logic of collective action with what they call the logic of connective action in online domains. According to Bennett and Segerberg (2012, 2013), the logic of connective action differs from the more traditional logic of collective action primarily based on the role of technology (Internet, social media, etc.); under the former, the role of technology fundamentally changes the core dynamics of action by employing easily-personalizable content that is created, disseminated, diffused, and innovated upon through the vast networks of social media sites like Facebook, Twitter, YouTube, and others. This stands in contrast to the more familiar logic of collective action, which is strongly coordinated by organizations with traditional collective action frames that offer prepackaged content and predefined strategies of action. Under the logic of collective action, technology does not radically transform or redefine the relationship between organizations, participants, and the actions they take. Bennett and Segerberg provide convincing evidence that these two logics are conceptually distinct and deserve attention. For example, action coordinated under a logic of connective action has the ability to scale up more quickly, produce record-breaking mobilization participation, and exhibit greater flexibility in tracking targets and bridging together different issues compared to action executed under a logic of collective action (Bennett and Segerberg 2013). In contrast, the logic of collective action is exemplified by hierarchical institutions and organizations that seek members and therefore must attend to organizational dilemmas and free-rider concerns. Thus, the logic of connective

action does not require strong organizational control and is understood to be carried out by fragmented, individualized populations using personal action frames" (cf. traditional collective action frames) (Bennett and Segerberg 2013).

Personal action frames may evoke some of the same concerns and issues as collective action frames, but ideas and mechanisms for organizing action are much more personalized (Bennett and Segerberg 2012). These frames offer easily personalizable content (such as "We are the 99%" and "I am indignant about [X, Y, Z]") and have the ability to be shared across a variety of platforms, like Facebook, Twitter, YouTube, text, email, etc. (Bennett and Segerberg 2012, 2013). Personal action frames would most likely be recognized as politically-motivated "memes" – symbolic packets of information that travel easily across large and diverse populations due to their ability to be easily imitated, adapted to personal circumstances, and shared broadly with others (Bennett and Segerberg 2013). This approach is fundamentally different from collective action frames, which offer more clear, exclusive calls to action that require joining established groups or ideologies (Bennett and Segerberg 2013).

Perhaps the most controversial defining aspect of the logic of connective action is that, according to Bennett and Segerberg (2013:28), "[this] logic does not require… the symbolic construction of a united 'we'." This assertion is revolutionary in that collective identity has long been understood to be a fundamental aspect of collective action. However, this conclusion appears to be based on a limited definition of collective action and collective identity. Bennett and Segerberg's (2013) understanding of collective action is heavily influenced by the organization-centric Resource Mobilization Theory, and they define collective identity as the identification with social movement organizations. This definition of collective identity could

best be described as a politicized identity or identifying as either a member of a social movement organization (SMO) or as an activist. Politicized identities have been found to produce stronger effects on collective action participation than other types of social identity (van Zomeren et al. 2008). This sort of identification with a group is different from a sense of identity derived from socially-shared understandings of group membership. Furthermore, given the decreased or absent role of organizations under logics of connective action, a narrow definition of collective identity as politicized identity or identification with an SMO would by definition preclude the logic of connective action from having a collective identity of this sort. Bennett and Segerberg's definition of collective identity is thus too narrow, even within the sociological tradition. It is as Bakardjieva (2015) notes: "The process of collective identity as conceptualized by Melucci… is not incompatible with individual autonomy and personalization of expression" (986). Although politicized identities have been shown to exhibit stronger effects on participation than other types of identities, this does not preclude other types of identity from affecting participation, and prior studies of politicized identity are not likely to have been conducted on movements with an underlying logic of connective action.

Furthermore, collective identity must be present on some level in order for meme-like personal action frames to scale up so rapidly. Absent from Bennett and Segerberg's discussion of personal action frames is the concept of frame resonance, which explains that some frames achieve their intended goal because they represent ideational elements in the wider cultural milieu that seem natural and familiar (Snow and Benford 1988). The personal action frames must resonate with the audience in order to be successful. Although not all memes represent a personal action frame, all memes travel or diffuse based on imitation and personal

appropriation, and as such require the co-production and co-distribution of the information to be considered a meme. That is, an individual alone cannot create a meme and they do not spread automatically – it is fundamentally a process of co-production and co-distribution. This co-production and co-distribution of personal action frames illuminates the identity work being done, which shows others how to appropriate, shape, and share these memetic frames. This clearly constitutes the process of collective identity formation as described by Flesher Fominaya. In other words, as a *process*, a collective identity is achieved through mass participation in the memetic messages, and new messages contribute to the character of the collective identity. Without resonance based on underlying culture and values (and therefore, a collective identity), personal action frames would not diffuse.

Finally, we should not view personal action frames as spontaneously emerging or isolated products, as these frames and messages are the product of collaborative identity work which may or may not be easily visible to wider publics and researchers. In some cases, this work is purposely conducted in the digital backstage (Treré 2015) for pragmatic or safety reasons. Research on the *Kullena Khaled Said* (We are all Khaled Said) Facebook page, which honored the young Egyptian man whose death while under police custody is said to have sparked the Egyptian Revolution of 2011, reveals the high level of management and direction performed by anonymous "connective leaders" that would have been invisible to the casual user or group member (Poell et al. 2016). Although social networking sites have brought a great deal of our private information into the public sphere, there still are private forms of communication that can contribute to the identity work associated with collective identities.

Although Bennett and Segerberg (2012, 2013) study some of the same movements as Flesher Fominaya (2007, 2010a, 2010b, 2015), Monterde et al. (2015), and Treré (2015), they seem to have come to a different conclusion. Whereas the latter proclaim an emerging autonomous collective identity and the accompanying processes of identity work, the former claim an absence of collective identity altogether. Bennett and Segerberg may have reached this erroneous conclusion for a variety of reasons, including the use of a narrow definition of collective identity as politicized identity, failure to recognize collective identity as a process versus a product (Flesher Fominaya 2015), failure to recognize the identity work inherent in the co-production and co-distribution of personalized action frames, and failure to recognize that identity work may be occurring in the digital backstage away from the view of the public and researchers (Treré 2015). Engagement with personal action frames goes beyond "personal expression of the self" (McDonald 2002) and includes engagement with and resonance of the cultural and identity processes that are fundamental to collective identity. Collective identities in movement participation were predominantly status-based in the past but have become more opinion- or value-based (as is seen with New Social Movements). If we expanded our conceptualization of collective identity once with NSMs, can we not expand it again to include autonomous identities under a logic of connective action?

RESEARCH DESIGN

This chapter investigates whether there is an underlying collective identity motivating participation in connective action and personal action frames; namely, the *autonomous identity* as described by Flesher Fominaya (2007, 2010a, 2010b, 2015) and Monterde et al. (2015) Previous research has been based on qualitative research and participant observation at offline

protest events; therefore, this study will attempt to quantitatively measure the characteristics of an autonomous identity and evaluate the effect this identity has on various forms of digitally-networked action.

I expect that respondents who report stronger affiliation with a politicized identity will be more likely to engage in online collective actions, but there will be no significant relationship between politicized identity and connective action. The basis for a politicized identity is some level of affiliation with social movement organizations and their members. Therefore, I predict those with stronger group affiliations will be more likely to engage with Facebook posts from environmental organizations. Although respondents with strong affiliations to SMOs or their members may also choose to engage with Facebook posts exemplifying connective action, there is no clear theoretical indication that SMO-affiliated respondents would systematically engage in connective action.

Likewise, I expect that respondents with stronger affiliations to an autonomous collective identity will be more likely to engage in connective action examples than respondents who have weak or nonexistent affiliations to this type of collective identity. However, respondents with a strong autonomous identity will not display of pattern of engagement with collective action examples from social movement organizations. Autonomous identities characteristically reject labels and membership boundaries, as well as the prescribed hierarchical relationship between an SMO and its members. A strong sense of autonomous identity may even have a statistically significant *negative* relationship with participation in collective action examples. In summary, this research will show that those with an autonomous identity are more likely to participate in connective actions online, whereas those with a pro-

environmental politicized identity will be more likely to participate in instances of online collective action.

Survey Measures

Respondents were asked to report their level of agreement with a number of statements, on a 7-point Likert-style scale ranging from "Strongly Disagree" to "Strongly Agree." Responses to four of these statements were combined into a single score using factor analysis: "I see myself as a member of a pro-environment organization," "I identify with members of pro-environmental organizations," "I have strong ties to members of pro-environmental organizations," and "Being a member of a pro-environmental organization is important to me." The other six statements were used to construct a measurement of autonomous identity: "Large organizations are not good at achieving their goals," "The strongest decisions are made when different sets of opinions are considered first," "I believe my personal experiences are worth sharing with others," "Labels are restrictive," "I am skeptical of large organizations," and "It is important to hear all voices in the room before making a decision."

In both the student and MTurk samples, the survey items for autonomous identity produced a 2-factor solution. The first factor loaded onto three statements that promoted the inclusivity of diverse experiences and thoughts: "The strongest decisions are made when different sets of opinions are considered first," "I believe my personal experiences are worth sharing with others," and "It is important to hear all voices in the room before making a decision." I label this factor "Inclusivity" in the following analyses. The second factor, which I've labeled "Organizational Distrust," loads strongest on the remaining three statements: "Large organizations are not good at achieving their goals," ""Labels are restrictive," and "I am

skeptical of large organizations." In the subsequent analyses, I include both factors for autonomous identity and the single factor solution for politicized identity.

To measure participation, respondents view two Facebook posts, one which exemplifies the logic of collective action and the other an exemplar of the logic of connective action. After viewing each Facebook post, respondents report their likelihood of performing six common actions, ranging from the lowest levels of engagement ("Ignore the post or do nothing") to increasingly deeper levels of engagement in terms of time and cognitive commitments: "Like the post," "Share the post," "Comment on the post," "Click a link in the post to visit another website," and "Create my own post based on this content." The reported likelihood for performing each of these six actions is then reduced to a single-factor solution (where "Ignore the post or do nothing" loads negatively onto the factor). The following analyses are based on the single-factor solutions for participation in collective actions and participation in connective actions.

Control Variables

The control variables for this study include basic demographic characteristics, like age, gender identity, race/ethnicity, education, income, political affiliation, and political orientation. Due to the relative recent research interest in autonomous identities and its qualitative nature, very little is known demographically about individuals who associate with autonomous collective identities. Because autonomous identities have been associated with movements that have generally sought progressive reforms, such as the Occupy Wall Street, 15M, and Arab Spring protests, I hypothesize that respondents with a strong autonomous collective identity will be more likely to express democratic and/or liberal political affiliations. The present study

will help to quantitatively assess the relationship between autonomous identities and these basic demographic characteristics.

However, these variables are important controls because they have established relationships with participation in collective action. Younger persons are more likely to participate in collective action (McAdam 1986; Wiltfang and McAdam 1991). Biographical availability, also known as structural availability, refers to conditions that may hinder participation, such as full-time employment, marriage, the presence of children (McAdam 1986), or "a lack of alternative commitments and obligations that might limit an individual's ability to participate" (Rochford 1985: 45). Generally speaking, younger persons do not have as many of these commitments and therefore are more available for social movement activity. However, biographical availability is thought to be much more important for participation in high-risk actions than low-risk actions (Tindall 2002), so there is reason to believe that age will be less important in explaining participation in low-risk online actions.

Although gender does not appear to have a direct effect on participation in collective action, it does moderate relationships between other social beliefs and participation (Kelly and Breinlinger 1996; Pandolfelli, Meinzen-Dick, and Dohrn 2008; Velasquez and LaRose 2015). For example, the motivations for participation and the forms of participation or roles within organizations can be highly gendered (Pandolfelli, Meinzen-Dick, and Dohrn 2008).

The relationship between political participation and socioeconomic status points to greater involvement of wealthier and more highly educated persons. These persons tend to vote, donate money, and participate in political activities more often than the poor and less educated (Paletz, Owen, and Cook 2012). This relationship between income, education, and

participation exists for both online and offline actions (Smith et al. 2009). Persons in managerial and professional positions are the most politically active, whereas the unemployed are least likely to participate (Paletz, Owen, and Cook 2012). Education remains the strongest determinant of participation, presumably because it provides knowledge on how the political system works (Paletz, Owen, and Cook 2012).

Although black and other non-white persons were historically barred from political participation (both as a matter of law and through social control processes), recent data suggests that black and white Americans of similar socioeconomic status tend to engage in the political process at similar levels, although the exact nature of their participation differs as white Americans are more likely to contact public officials and join political organizations and black Americans are more likely to join election campaigns and social movements (Paletz, Owen, and Cook 2012). However, Latino and Asian Americans' participation lags behind that of black and white Americans (Paletz, Owen, and Cook 2012).

RESULTS

Sample Summary Statistics

The following tables show the distribution of common demographic variables for both the student sample and the MTurk sample. As expected, the student sample is significantly younger (M=25.12, SD=6.18) with less age diversity than the MTurk sample (M=36.47, SD=11.53). Political orientation is a 7-point Likert-style scale that ranges from "Extremely Liberal" (1) to "Extremely Conservative" (7). Summary statistics indicate that the student

Table 2.1: Summary Statistics of Student Demographics – Age, Political Orientation

Variable	*N*	*Mean*	*Std. Dev.*	*Min*	*Max*
Age	1288	25.117	6.177	19	77
Political Orientation	1288	2.692	1.268	1	7

Table 2.2: Summary Statistics of Student Demographics – Gender, Race, Education, Income, Political Affiliation				
Variable	***Categories***	***Frequency***	***Percent***	***Cumulative***
Student Status	Undergraduate Student	638	49.53	49.53
	Graduate Student	534	41.46	90.99
	Professional Student	116	9.01	100.00
Gender	Male	277	21.51	21.51
	Female	994	77.17	98.68
	Transgender	7	0.54	99.22
	Other / Prefer not to say	10	0.78	100.00
Race	White (only)	976	75.78	75.78
	Black (only)	52	4.04	79.81
	Hispanic (only)	45	3.49	83.31
	Asian (only)	119	9.24	92.55
	Native American (only)	5	0.39	92.93
	Other (only)	12	0.93	93.87
	Multiracial	79	6.13	100.00
Education	Less than HS diploma	0	0.00	0.00
	HS diploma / GED	66	5.12	5.12
	Some college, no deg.	497	38.59	43.71
	Assoc. Deg. or Prof. Cert.	50	3.88	47.59
	Bachelors Deg.	444	34.47	82.07
	Masters Deg.	183	14.21	96.27
	Doctorate or Professional Deg.	48	3.73	100.00
Income	Less than $10,000	204	15.84	15.84
	$10,000 - $19,999	102	7.92	23.76
	$20,000 - $29,999	154	11.96	35.71
	$30,000 - $39,999	102	7.92	43.63
	$40,000 - $49,999	83	6.44	50.08
	$50,000 - $59,999	76	5.90	55.98
	$60,000 - $69,999	61	4.74	60.71
	$70,000 - $79,999	61	4.74	65.45
	$80,000 - $89,999	52	4.04	69.49
	$90,000 - $99,999	53	4.11	73.60
	$100,000 - $149,999	169	13.12	86.72
	$150,000 or more	171	13.28	100.00
Political Affiliation	Republican	105	8.15	8.15
	Democrat	679	52.72	60.87
	Libertarian	24	1.86	62.73
	Unaffiliated / Independent	456	35.40	98.14
	Other	24	1.86	100.00

Table 2.3: Summary Statistics of MTurk Demographics – Age, Political Orientation					
Variable	*N*	*Mean*	*Std. Dev.*	*Min*	*Max*
Age	1009	36.471	11.534	19	82
Political Orientation	1009	3.250	1.554	1	7

Table 2.4: Summary Statistics of MTurk Demographics – Gender, Race, Education, Income, Political Affiliation				
Variable	*Categories*	*Frequency*	*Percent*	*Cumulative*
Gender	Male	313	31.02	31.02
	Female	688	68.19	99.21
	Transgender	6	0.59	99.80
	Other / Prefer not to say	2	0.20	100.00
Race	White (only)	732	72.55	72.55
	Black (only)	68	6.74	79.29
	Hispanic (only)	44	4.36	83.65
	Asian (only)	74	7.33	90.98
	Native American (only)	11	1.09	92.07
	Other (only)	13	1.29	93.36
	Multiracial	67	6.64	100.00
Education	Less than HS diploma	6	0.59	0.59
	HS diploma / GED	66	6.54	7.14
	Some college, no deg.	228	22.60	29.73
	Assoc. Deg. or Prof. Cert.	124	12.29	42.02
	Bachelors Deg.	390	38.65	80.67
	Masters Deg.	159	15.76	96.43
	Doctorate or Professional Deg.	36	3.57	100.00
Income	Less than $10,000	58	5.75	5.75
	$10,000 - $19,999	77	7.63	13.38
	$20,000 - $29,999	110	10.90	24.28
	$30,000 - $39,999	124	12.29	36.57
	$40,000 - $49,999	105	10.41	46.98
	$50,000 - $59,999	115	11.40	58.37
	$60,000 - $69,999	75	7.43	65.81
	$70,000 - $79,999	91	9.02	74.83
	$80,000 - $89,999	59	5.85	80.67
	$90,000 - $99,999	46	4.56	85.23
	$100,000 - $149,999	110	10.90	96.13
	$150,000 or more	39	3.87	100.00
Political Affiliation	Republican	172	17.05	17.05
	Democrat	476	47.18	64.22
	Libertarian	39	3.87	68.09
	Unaffiliated / Independent	306	30.33	98.41
	Other	16	1.59	100.00

sample is more liberal than the MTurk sample, although both samples lean toward more liberal orientations, as evidenced by mean scores that are both lower than the midpoint of the scale. Both samples overrepresent Americans who identify as women, white or Asian, more highly educated, higher income, and those who identify as Democrats. The demographic skews of these samples compared to a representative sample of Americans may be the result of the inclusion criteria, which required that respondents both believe in climate change and believe that there may be something humans can do to reduce or eliminate these environmental changes, or these respondents may be reflective of the population from which they were drawn and neither MTurk nor the university are representative of the larger American population. The subsequent analyses are based on this data, collected via convenience sampling, and it is important to keep these sample demographics in mind when attempting to generalize results.

The key variables of interest in this chapter are the variables for politicized identity, autonomous identity (2-factor solution), and participation in both collective and connective actions. The factor loadings for these variables can be found in Table 2.5 and Table 2.6 below, and visualizations of the distributions for these variables can be found in the box plots below (Figures 2.1 and 2.2). These variables were constructed using factor analysis, and the resulting scales tend to range from approximately -2 to 2 (a 4-point range), with a mean of near-zero and a standard deviation of 1. The box plots demonstrate the scores which fall at the minimum, maximum, and each of the quartiles; these box plots exclude a small number of outlier values.

Finally, correlation matrices are presented in Tables 2.7 and 2.8. Politicized identity has a moderately strong, positive correlation with participation in collective actions (student r = 0.3409, MTurk r = 0.4920), and weaker, positive correlation with participation in connective

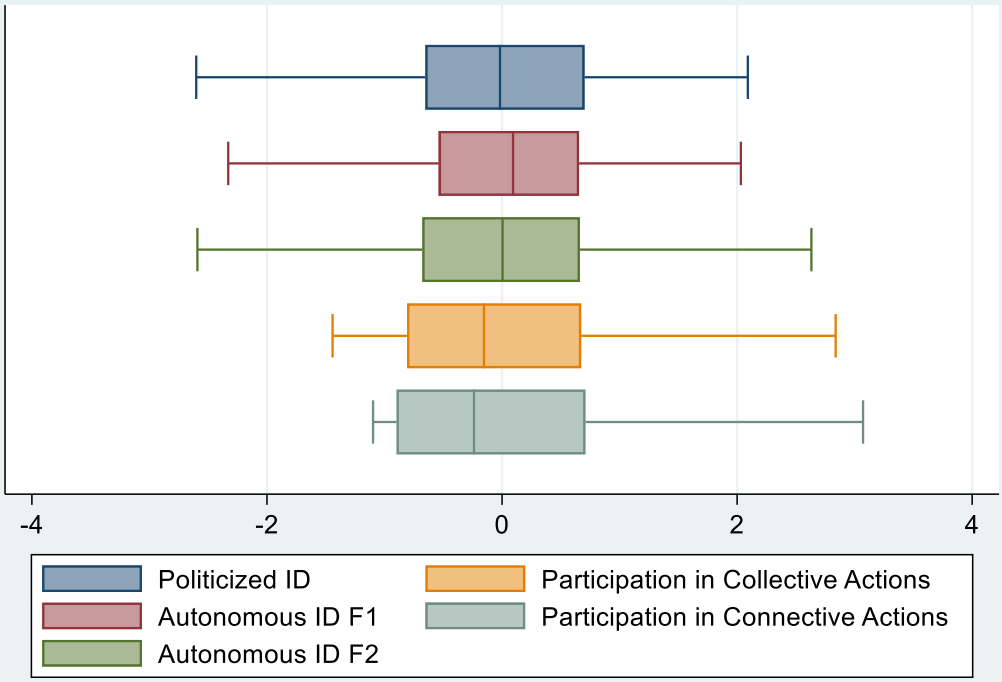
actions (student r = 0.2084, MTurk r = 0.3526). Autonomous identity produced a 2-factor solution, which I have labeled "Inclusivity" (Factor 1) and "Organizational Distrust" (Factor 2). The Inclusivity factor has a weak positive correlation with participation in connective action, and the Organizational Distrust factor has a near-zero correlation with connective participation. In fact, the two factors themselves are uncorrelated (student r = -0.0006, MTurk r = 0.0049).

Table 2.5: Factor Loadings for Student Identity and Participation Variables

Items	***Loadings***
Politicized Identity	
I see myself as a member of a pro-environment organization.	0.7921
I identify with members of pro-environmental organizations.	0.7672
I have strong ties to members of pro-environmental organizations.	0.7903
Being a member of a pro-environmental organization is important to me.	0.8724
Autonomous Identity – "Inclusivity"	
Large organizations are not good at achieving their goals.	-0.1641
The strongest decisions are made when different sets of opinions are considered first.	0.7139
I believe my personal experiences are worth sharing with others.	0.5916
Labels are restrictive.	0.3577
I am skeptical of large organizations.	-0.1633
It is important to hear all voices in the room before making a decision.	0.7055
Autonomous Identity – "Organizational Distrust"	
Large organizations are not good at achieving their goals.	0.7285
The strongest decisions are made when different sets of opinions are considered first.	0.0453
I believe my personal experiences are worth sharing with others.	-0.2142
Labels are restrictive.	0.4489
I am skeptical of large organizations.	0.7830
It is important to hear all voices in the room before making a decision.	0.2569
Participation in Collective Actions	
Ignore the post or do nothing	-0.7529
Like the post	0.7271
Share the post	0.8489
Comment on the post	0.7316
Click a link in the post to visit another website	0.5652
Create my own post based on this content	0.7425
Participation in Connective Actions	
Ignore the post or do nothing	-0.7624
Like the post	0.7947
Share the post	0.8227
Comment on the post	0.7678
Click a link in the post to visit another website	0.7245
Create my own post based on this content	0.7234

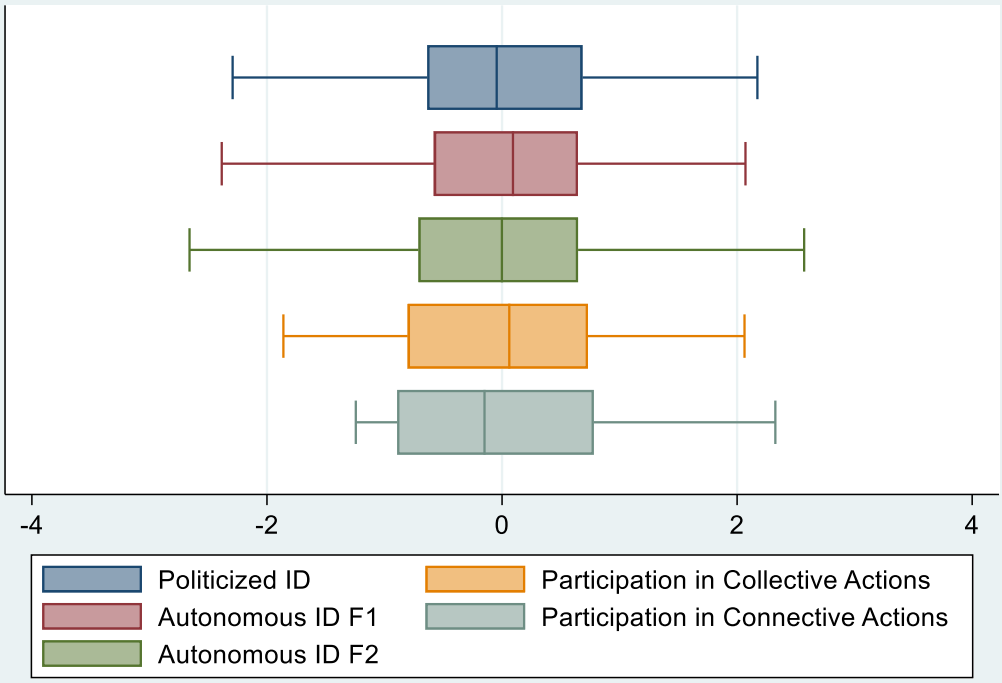
Table 2.6: Factor Loadings for MTurk Identity and Participation Variables	
Items	***Loadings***
Politicized Identity	
I see myself as a member of a pro-environment organization.	0.8383
I identify with members of pro-environmental organizations.	0.7557
I have strong ties to members of pro-environmental organizations.	0.8351
Being a member of a pro-environmental organization is important to me.	0.8610
Autonomous Identity – "Inclusivity"	
Large organizations are not good at achieving their goals.	-0.1391
The strongest decisions are made when different sets of opinions are considered first.	0.7283
I believe my personal experiences are worth sharing with others.	0.5505
Labels are restrictive.	0.4330
I am skeptical of large organizations.	0.0345
It is important to hear all voices in the room before making a decision.	0.7352
Autonomous Identity – "Organizational Distrust"	
Large organizations are not good at achieving their goals.	0.7745
The strongest decisions are made when different sets of opinions are considered first.	0.0098
I believe my personal experiences are worth sharing with others.	-0.2753
Labels are restrictive.	0.3795
I am skeptical of large organizations.	0.8323
It is important to hear all voices in the room before making a decision.	0.0804
Participation in Collective Actions	
Ignore the post or do nothing	-0.8004
Like the post	0.7287
Share the post	0.8620
Comment on the post	0.8057
Click a link in the post to visit another website	0.6457
Create my own post based on this content	0.7616
Participation in Connective Actions	
Ignore the post or do nothing	-0.7878
Like the post	0.7804
Share the post	0.8806
Comment on the post	0.8190
Click a link in the post to visit another website	0.8049
Create my own post based on this content	0.8023

Figure 2.1: Box Plots of Student Identity and Participation Variables



excludes outside values

Figure 2.2: Box Plots of MTurk Identity and Participation Variables



excludes outside values

Table 2.7: Correlation Matrix of Student Identity and Participation Variables					
	Politicized ID	***Autonomous ID, F1***	***Autonomous ID, F2***	***Collective Participation***	***Connective Participation***
Politicized ID	1.0000				
Autonomous ID, F1	0.1273	1.0000			
Autonomous ID, F2	0.0435	-0.0006	1.0000		
Collective Participation	0.3409	0.1398	-0.0160	1.0000	
Connective Participation	0.2084	0.1262	-0.0070	0.4502	1.0000

Table 2.8: Correlation Matrix of MTurk Identity and Participation Variables					
	Politicized ID	***Autonomous ID, F1***	***Autonomous ID, F2***	***Collective Participation***	***Connective Participation***
Politicized ID	1.0000				
Autonomous ID, F1	0.2050	1.0000			
Autonomous ID, F2	0.0128	0.0049	1.0000		
Collective Participation	0.4920	0.2649	-0.0737	1.0000	
Connective Participation	0.3526	0.2086	-0.0820	0.5362	1.0000

OLS Regression

Table 2.9 presents the regression results for intended engagement among students for Facebook posts that utilize a logic of collective action, and Table 2.10 presents the results for MTurk Workers. In the regression analyses, I have recategorized the gender variable to represent "non-males," that is respondents who identified as either female, transgender, or "other / prefer not to say." While income and education are measured ordinally in the survey, I treat them as continuous variables in the analyses because this method is more appropriate than treating the categories as nominal, and these variables are used as controls for which a continuous approximation is not highly consequential.

Politicized identity has a strong effect on participation in collective actions, as expected, and this effect is stronger for MTurk Workers (b=0.492, p<0.001) than for students (b=0.341, p<0.001). Politicized identity alone predicts a significant proportion of the variance in participation (student R^2=0.1162, MTurk R^2=0.2414), and the inclusion of the control variables

improves the explanatory power of the model (student R^2=0.1762, MTurk R^2=0.3219). With the inclusion of the control variables, the coefficient for politicized identity among students decreased slightly (*b*=0.319, *p*<0.001), but increased for MTurk Workers (*b*=0.515, *p*<0.001). Even controlling for demographic characteristics, respondents who report stronger affiliations with a politicized identity are more likely to participate in online collective actions, or to engage more deeply with these posts. Among the student sample, non-males were also more likely to participate (*b*=0.359, *p*<0.001), as were black (*b*=0.379, *p*<0.01) and Hispanic students (b=0.366, *p*<0.01). Students with higher levels of education were statistically less likely to participate in collective action, but the effect is relatively weak (*b*= -0.105, *p*<0.001). A similar relationship was found with MTurk Workers between education and collective participation (*b*= -0.105, *p*<0.001), and MTurk Workers reporting a black, Hispanic, or "other" racial identity were also statistically more likely to engage with the collective action Facebook posts. Wealthier MTurk Workers were less likely to engage (*b*= -0.0236, *p*<0.01), as were politically unaffiliated Workers (*b*= -0.187, *p*<0.05).

Regression results for participation in connective action Facebook posts are found in Tables 2.11 and 2.12. Autonomous identity, based on my measurement items, resulted in a 2-factor solution which represent "Inclusivity" and "Organizational Distrust." I have regressed participation in connective action on both of these factors separately (Models 1 and 2), combined (Model 3), and with all the control variables (Model 4). Between the student and MTurk samples, some general patterns emerge. Both samples indicate a weak but statistically significant effect of Inclusivity on participation in connective actions, even in the later models which include both autonomous identity factors and the controls. The relationship between

Table 2.9: Regression Results for Student Participation in Collective Actions on Politicized Identity		
	(1) Collective Participation	*(2) Collective Participation*
Politicized Collective Identity	0.341***	0.319***
	(0.0262)	(0.0273)
Age		0.00209
		(0.00572)
Non-Males		0.359***
		(0.0626)
Race (white omitted)		
Black (only)		0.379**
		(0.133)
Hispanic (only)		0.366**
		(0.140)
Asian (only)		-0.125
		(0.0896)
Native American (only)		0.0929
		(0.410)
Other (only)		0.485+
		(0.267)
Multiracial		0.111
		(0.107)
Education		-0.105***
		(0.0279)
Income		-0.00146
		(0.00690)
Political Affiliation (Rep. omitted)		
Democrat		0.0845
		(0.127)
Libertarian		-0.156
		(0.211)
Unaffiliated / Independent		-0.0280
		(0.113)
Other		-0.0664
		(0.225)
Political Orientation		-0.0118
		(0.0284)
Constant	0.000	-0.266
	(0.0262)	(0.237)
N	1288	1288
R^2	0.1162	0.1762
(standard errors in parentheses)		
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001		

Table 2.10: Regression Results for MTurk Participation in Collective Actions on Politicized Identity		
	(1) Collective Participation	*(2) Collective Participation*
Politicized Collective Identity	0.492***	0.515***
	(0.0274)	(0.0271)
Age		0.0124***
		(0.00237)
Non-Males		0.0599
		(0.0583)
Race (white omitted)		
Black (only)		0.477***
		(0.108)
Hispanic (only)		0.469***
		(0.130)
Asian (only)		0.142
		(0.104)
Native American (only)		0.379
		(0.259)
Other (only)		0.692**
		(0.236)
Multiracial		0.220*
		(0.108)
Education		-0.105***
		(0.0215)
Income		-0.0236**
		(0.00880)
Political Affiliation (Rep. omitted)		
Democrat		-0.0824
		(0.0973)
Libertarian		0.0718
		(0.153)
Unaffiliated / Independent		-0.187*
		(0.0894)
Other		-0.371+
		(0.223)
Political Orientation		0.0469*
		(0.0226)
Constant	0.000	-0.0901
	(0.0274)	(0.221)
N	1009	1009
R^2	0.2414	0.3219
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**		

the Inclusivity factor for autonomous identity and participation in connective actions provides support for the hypotheses of this chapter, however, the Organizational Distrust factor displays a negative relationship with connective participation (relationship is non-significant for student sample). Although the relationship between Inclusivity and participation is rather weak in both samples, the relationship between Organizational Distrust and connective participation is weaker still. In the student sample, age had a negative effect on participation (b= -0.0174, p<0.01), and non-males were significantly more likely to participate than males (b=0.385, p<0.001). Among MTurk Workers, a number of non-white racial groups were more likely to engage in connective action, including Workers who identify as black, Hispanic Native American, and multiracial. Despite the significant effects of these variables on participation in connective action, the proportion of variance in participation explained by these variables does not exceed 12% for either sample in any of the models.

I have also regressed participation under each logic on the type of identity associated with the other participation variable. In other words, I have regressed collective participation on autonomous identity and regressed connective participation on politized identity. The conceptualization of online actions as having differing, distinct logics is relatively new, and I wish to more fully explore what drives participation under each logic. Tables 2.13 and 2.14 display regression results for the student sample, and Tables 2.15 and 2.16 display results for the MTurk sample. In Tables 2.13 and 2.15, the Inclusive factor for autonomous identity has a positive, statistically significant relationship with participation in collective actions, but the effect is mediated and far outweighed by the effects of politicized identity when it is added to the model. Organizational Distrust has a weak negative relationship with participation in

Table 2.11: Regression Results for Student Participation in Connective Actions on Autonomous Identity				
	(1) Connective Participation	*(2) Connective Participation*	*(3) Connective Participation*	*(4) Connective Participation*
Autonomous Connective Identity, Factor 1: Inclusivity	0.126***		0.126***	0.105***
	(0.0277)		(0.0277)	(0.0272)
Autonomous Connective Identity, Factor 2: Organizational Distrust		-0.00704	-0.00696	-0.00137
		(0.0279)	(0.0277)	(0.0274)
Age				-0.0174**
				(0.00603)
Non-Males				0.385***
				(0.0663)
Race (white omitted)				
Black (only)				0.176
				(0.140)
Hispanic (only)				0.00557
				(0.147)
Asian (only)				0.0331
				(0.0946)
Native American (only)				-0.245
				(0.433)
Other (only)				0.0412
				(0.282)
Multiracial				0.0411
				(0.113)
Education				-0.0630*
				(0.0294)
Income				0.00194
				(0.00728)
Political Affiliation (Rep. omitted)				
Democrat				0.0895
				(0.134)
Libertarian				0.0839
				(0.222)
Unaffiliated / Independent				-0.0153
				(0.119)
Other				-0.284
				(0.237)
Political Orientation				-0.0446
				(0.0292)
Constant	0.000	0.000	0.000	0.0760
	(0.0277)	(0.0279)	(0.0277)	(0.251)
N	1288	1288	1288	1288
R^2	0.0159	0.000	0.0160	0.0847
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**				

Table 2.12: Regression Results for MTurk Participation in Connective Actions on Autonomous Identity				
	(1) Connective Participation	*(2) Connective Participation*	*(3) Connective Participation*	*(4) Connective Participation*
Autonomous Connective Identity, Factor 1: Inclusivity	0.209***		0.209***	0.199***
	(0.0308)		(0.0307)	(0.0304)
Autonomous Connective Identity, Factor 2: Organizational Distrust		-0.0820**	-0.0830**	-0.0727*
		(0.0314)	(0.0307)	(0.0305)
Age				0.00329
				(0.00272)
Non-Males				-0.0228
				(0.0665)
Race (white omitted)				
Black (only)				0.461***
				(0.124)
Hispanic (only)				0.416**
				(0.149)
Asian (only)				0.408***
				(0.119)
Native American (only)				0.804**
				(0.292)
Other (only)				0.362
				(0.269)
Multiracial				0.372**
				(0.123)
Education				-0.0178
				(0.0246)
Income				-0.0329**
				(0.0100)
Political Affiliation (Rep. omitted)				
Democrat				0.148
				(0.112)
Libertarian				0.210
				(0.175)
Unaffiliated / Independent				-0.0756
				(0.103)
Other				0.109
				(0.255)
Political Orientation				0.0177
				(0.0257)
Constant	0.000	0.000	0.000	-0.0324
	(0.0308)	(0.0314)	(0.0307)	(0.252)
N	1009	1009	1009	1009
R^2	0.0435	0.0067	0.0504	0.1158
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**				

Table 2.13: Regression Results for Student Participation in Collective Action on Autonomous Identity		
	(1) Collective Participation	*(2) Collective Participation*
Politicized Collective Identity		0.330***
		(0.0263)
Autonomous Connective Identity, Factor 1: Inclusivity	0.140***	0.0978***
	(0.0276)	(0.0263)
Autonomous Connective Identity, Factor 2: Organizational Distrust	-0.0159	-0.0303
	(0.0276)	(0.0261)
Constant	0.000	0.000
	(0.0276)	(0.0261)
N	1288	1288
R^2	0.0198	0.1266
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**		

Table 2.14: Regression Results for Student Participation in Connective Action on Politicized Identity		
	(1) Connective Participation	*(2) Connective Participation*
Politicized Collective Identity	0.208***	0.196***
	(0.0273)	(0.0274)
Autonomous Connective Identity, Factor 1: Inclusivity		0.101***
		(0.0274)
Autonomous Connective Identity, Factor 2: Organizational Distrust		-0.0155
		(0.0272)
Constant	0.000	0.000
	(0.0273)	(0.0271)
N	1288	1288
R^2	0.0427	0.0538
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**		

Table 2.15: Regression Results for MTurk Participation in Collective Action on Autonomous Identity		
	(1) Collective Participation	*(2) Collective Participation*
Politicized Collective Identity		0.458***
		(0.0274)
Autonomous Connective Identity, Factor 1: Inclusivity	0.265***	0.171***
	(0.0303)	(0.0274)
Autonomous Connective Identity, Factor 2: Organizational Distrust	-0.0750*	-0.0804**
	(0.0303)	(0.0268)
Constant	0.000	0.000
	(0.0303)	(0.0268)
N	1009	1009
R^2	0.0758	0.2767
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**		

Table 2.16: Regression Results for MTurk Participation in Connective Action on Politicized Identity		
	(1) Connective Participation	*(2) Connective Participation*
Politicized Collective Identity	0.353***	0.324***
	(0.0295)	(0.0297)
Autonomous Connective Identity, Factor 1: Inclusivity		0.143***
		(0.0297)
Autonomous Connective Identity, Factor 2: Organizational Distrust		-0.0868**
		(0.0291)
Constant	0.000	0.000
	(0.0295)	(0.0290)
N	1009	1009
R^2	0.1243	0.1513
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**		

collective action, and this effect is only significant in the MTurk sample. Therefore, the evidence suggests that participation in collective actions is best predicted by an affiliation with a politicized identity, and affiliation with an autonomous identity has a weak, negative, and/or statistically insignificant effect on participation in collective action. Tables 2.14 and 2.16 display the regression results for participation in connective actions. Despite my own hypotheses and those of Bennett and Segerberg (2013), politicized identity has strong, positive, statistically significant effect on participation in connective actions. In fact, politicized identity has a stronger effect on participation in connective action than autonomous identity does! Even when the autonomous identity factors are added to the model, the effect size of politicized identity does not change significantly, indicating it exerts a unique effect on connective participation that is not capture by either of the autonomous identity factors.

These results lend further support to the theory that a stronger affiliation with a politicized identity, as a specific form of collective identity, is associated with a higher likelihood of participation in social movement activities, even in an online context. What is surprising is that a politicized identity also predicts participation in connective actions, and it is a stronger

predictor of participation than an autonomous identity. This result casts doubt on Bennett and Segerberg's (2013) assertation that there is no underlying collective identity that motivates participation in connective action, but it also casts doubt on my theory that participation in connective actions is motivated by an affiliation with an autonomous identity. While the Inclusivity factor of autonomous identity was a significant, positive predictor of participation in connective actions, the effect size tends to be weak; the Organizational Distrust factor was negatively associated with participation in connective action and results were often non-significant. The Inclusivity factor appeared to be a positive predictor of participation in collective actions as well, but this effect was mediated by the inclusion of politicized identity.

DISCUSSION

With this chapter, I set out to investigate one of the most widely understood predictors of participation in offline actions in an online context: collective identity. Furthermore, my analyses distinguish between different types of online action, and I predict that different types of collective identity will predict participation in different types of online actions. Politicized identity remains a strong predictor of online social movement participation, for both collective and connective actions. That politicized identity predicts participation in connective actions is quite surprising. Bennett and Segerberg (2013) have claimed that participation in connective actions requires no underlying form of collective identity, but I hypothesized that an autonomous identity would undergird participation under this organizing strategy. Although an autonomous identity is a statistically significant predictor of participation in connective actions (specifically, the "inclusivity" factor of autonomous identity), the strength of the effect of politicized identity on participation in connective actions is far greater, and thus a better

explanation of connective participation than autonomous identity. These results cast doubt on Bennett and Segerberg's claims that there is no united "we" among participants of connective action.

This work represents a novel attempt to measure autonomous identity, but I recommend further research to improve the measurement of this variable. The set of measurement items I developed and pilot tested were successful identified in the factor analysis, but the subsequent correlation and regression results based on these factors was not satisfactory. Future research should work to identify the aspects of an autonomous identity that are most likely to affect participation and continue to test these theories quantitatively.

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CHAPTER 3: EFFICACIOUS BELIEFS AND SOCIAL MOVEMENT ACTIVITY ON FACEBOOK

Efficacy refers to the ability to produce desired or intended results. Social scientists tend to measure *perceptions* of efficacy, and these perceptions have been found to be related to social movement participation, as well as positive outcomes in health, education, and occupational domains. Individuals hold a variety of efficacious beliefs related to different contexts and domains, and one's sense of efficacy in one domain is not necessarily related to their sense of efficacy in another. For example, an individual might have a high level of *self*-efficacy – which is a measure of one's ability to succeed in a specific situation or task – coupled with a weak sense of *collective* efficacy – which is "the shared belief that one's group can resolve its grievances through unified effort" (van Zomeren et al. 2008:507). An example of this would be a highly-skilled climate scientist who nonetheless believes humans are incapable or unwilling to make the necessary changes to halt climate change. Along these same lines, a person may feel a strong sense of self-efficacy in one domain, such as their occupation, but a weak sense of self-efficacy in another, like parenting. An example of this comes from the work of Bandura (2012) who notes how a corporate executive can have high self-efficacy for managing a company, but also has low self-efficacy for managing family life. We each manage a matrix of efficacious beliefs, and these beliefs can change over time based on the acquisition of new information or skills (Chen, Gully, and Eden 2001; Sherer et al. 1982).

In this chapter, I will study the impact of a variety of efficacious beliefs on participation in social movement activity online. Through a web-administered survey, I will measure

individuals' perceptions of their overall self-efficacy, collective efficacy, and "tactical efficacy" to determine the influence of these variables on individuals' intentions to participate in a variety of online actions on Facebook. Online actions, or what Bennett and Segerberg (2012, 2013) call "digitally-networked action," are thought to be influenced by two distinct logics: the logic of collective action and the logic of connective action. I will study the influence of efficacious beliefs on each of these logics separately.

DIGITALLY-NETWORKED ACTION

As social movement activity has migrated online, it has merged into more mundane and ubiquitous avenues, such as Facebook, Twitter, and other social media and social networking sites. This increased exposure has led to increased participation, although the nature of "participation" itself can change in an online domain. Whereas traditional "offline" collective action participation takes the form of letter writing, protests, marches, demonstrations, and even violence, social movement activity can take many forms online, including using social networking tools to organize these offline activities, online versions of the more traditional activities (email writing campaigns, online petitions, denial-of-service attacks, and "hacktivism"), and forms of activity limited to the online domain, such as Likes, Shares, and Comments on Facebook, or engaging in a denial-of-service (DoS) attack. Social movement activity online can also come in the form of creating and distributing messages via "memes," i.e., symbolic packets of information that travel easily across large and diverse populations due to their ability to be easily imitated, adapted to personal circumstances, and shared broadly with others (Bennett and Segerberg 2013:37-38). This latter type of activity has been dismissed by some as "slacktivism," or actions that are low in cost to participants that are also considered

nearly meaningless contributions toward a larger goal. However, the true effects of online action are yet unknown due to the relative recency of the medium, and it should also be noted that the true efficacy of traditional offline protest is empirically underspecified (Earl 2016). While some online actions bear great resemblance to traditional offline action, there are unique types of social movement activity that occur exclusively online and warrant unique consideration and study.

The seminal texts which guide this analysis comes from Lance Bennett and Alexandra Segerberg (2012, 2013) and their conceptualization of different forms of digitally-networked action known as collective action and connective action. The purpose of their work was to distinguish between different types of social movement activity that are occurring online. They propose a three-category typology: collective action through organizationally-brokered networks, connective action through crowd-enabled networks, and a hybrid form of connective action through organizationally-enabled networks. For the purposes of the current study, I will be limiting the scope of the investigation to the first two types, which are collective action and connective action. According to Bennett and Segerberg (2013), collective action features strong organizational coordination of action that uses social networking technologies to manage participation and coordinate goals. Tactically, communication employs collective action framing that feature clear calls to action in elaborately packaged and ritualized messages or "frames." Ultimately, this type of online action resembles the familiar form of offline collective action with a top-down management of activities coordinated by an organization.

In contrast, the logic of connective action involves little to no organizational involvement (and in some cases, organizations are actively discouraged), and as a result, the

"coordination of action" is very open, large-scale, and dependent upon personal access to social networking technologies (Bennett and Segerberg 2013). The tactics of connective action are centered on personal expression shared over social media; that is, "personalized action frames" which are emergent and personal calls to action that are inclusive of different personal reasons for engaging said action and are easily shared over the variety of technological platforms such as Facebook, Twitter, YouTube, or text messaging (Bennett and Segerberg 2013).

Bennett and Segerberg provide convincing evidence that these two logics are conceptually distinct and deserve attention. For example, action coordinated under a logic of connective action has the ability to scale up more quickly, produce record-breaking mobilization participation, and exhibits greater flexibility in tracking targets and bridging together different issues compared to action executed under a logic of collective action (Bennett and Segerberg 2013). In contrast, the logic of collective action is exemplified by hierarchical institutions and organizations that seek members and therefore must attend to organizational dilemmas and free-rider concerns. The logic of connective action does not require strong organizational control, and as a result, is understood to be carried out by fragmented and individualized populations (Bennett and Segerberg 2013).

Due to the distinct logics underlying these actions, the current study will test the relative influence of efficacious beliefs on participation with respect to online collective action and connective action separately. Due to the relatively new emergence of connective action, it is important to explicitly study what effect these efficacious beliefs have on participation, and if participation differs from collective action online. Currently, theories developed for and tested using offline traditional collective actions may be applied to online collective action successfully

because the underlying logic is the same, despite occurring in two different domains (offline versus online). However, given the differences in underlying logic, it would be shortsighted to assume these traditional theories would be equally well applied to instances of online connective action. This study therefore aims to demonstrate the differential influence of efficacious beliefs on participation in both types of online action.

EFFICACIOUS BELIEFS

Self-Efficacy

Self-efficacy is an evaluation of the cognitive ability to perform an action; it is not an estimation or expectation that a desired outcome will be achieved (i.e., an outcome expectation) nor a valuation of one's worth (i.e., self-esteem) (Bandura 2006; Gecas 1989). While the term "self-efficacy" is more commonly associated with the field of psychology, the term "internal efficacy" that is popular in political science bears a striking resemblance. Internal efficacy is considered one of the two components of political efficacy (the other component being external efficacy or system responsiveness) and is defined as beliefs about one's own competence to understand politics and act effectively in the political realm (Hart and Feldman 2016; Moeller et al. 2013; Niemi, Craig, and Mattei 1991). Internal efficacy has been found to be positively related to political participation (Hart and Feldman 2016; Moeller et al. 2013); similarly, high self-efficacy combined with perceived system unresponsiveness is associated with participation in efforts at political change (Gecas 2000).

A central feature of the discourse on self-efficacy (and related concepts like internal efficacy) concerns the merits of different measurement strategies. Bandura (2006, 2012), a preeminent psychology scholar on the concept, advocates for the measurement of specific self-

efficacy (SSE) over more global measures of general self-efficacy (GSE). SSE is considered to be more malleable because it is an evaluation based on task-specific beliefs, whereas GSE is considered more stable like a personality trait (Chen et al. 2001, 2004). SSE is argued to be a stronger predictor of behavior because the items are tailored to the specific domain of functioning, as opposed to generalized statements that apply across a variety of domains (Bandura 2006, 2012). However, some researchers have modified GSE indexes to address specific domains, such as education or health behaviors (Morrell 2003). Furthermore, researchers tend to construct their own SSE indexes in order to ensure items are truly task-specific, which leads to poor generalizability; GSE indexes, on the other hand, are much easier to replicate across studies mainly because the psychometric properties have been subject to peer-review.

In political science, internal efficacy is measured as generalized expectancies about the self and society, but not in terms of task-specific items as advocated by Bandura (Gecas 1989). A widely-used measure of internal efficacy in political science is the Niemi Internal Efficacy Index. Scores are derived from responses to four questions developed in the 1987 American National Election Studies (NES) survey. These items provide a valid and reliable measure of internal efficacy that has been supported by additional waves of NES data collection, as well as original data collection by other researchers (Morrell 2003; Niemi, Craig, and Mattei 1991). One of the most widely used scales to measure GSE comes from psychologists Sherer et al. (1982). The authors advocate for the measurement of a generalized set of expectations that result from past experiences of success and failure that are used when confronted with new situations or those with which the individual has little to no information. GSE is not intended to

replace SSE measures, but rather act as a supplement in situations where the performance under scrutiny is generalized (Chen et al. 2001; Sherer et al. 1982). The Sherer et al. (1982) scale contains 23 items divided into two subscales – the General Self-Efficacy subscale (17 items) and the Social Self-Efficacy Subscale (6 items) – and demonstrates strong internal consistency and criterion validity across a variety of domains. Despite appearing in over 200 peer-reviewed studies, criticisms of the Sherer GSE scale tend to center on the facts that the scale is multidimensional and too lengthy. These criticisms prompted the creation of a new GSE scale by Chen et al. (2001). The Chen GSE scale contains only 8 items, is unidimensional, and boasts higher construct validity and somewhat higher predictive validity than the Sherer GSE scale (Chen et al. 2001). The 5-point Likert-style response categories for the Chen scale range from *strongly disagree* (1) to *strongly agree* (5). In additional analyses, the Sherer GSE scale, the Chen GSE scale, and a scale from Schwarzer and Jerusalem (1995) were tested against one another for reliability and validity. While all scales demonstrated acceptable internal consistency, the results indicate that the Chen GSE scale outperformed the others on item discrimination, item information, and the relative efficiency (Scherbaum, Cohen-Charash, and Kern 2006). All three scales were more precise for individuals with average or below-average levels of general self-efficacy and were less precise for individuals with above-average levels of GSE (Scherbaum et al. 2006). Bandura (2012) has criticized the Chen GSE scale for using the phrase "I will…" instead of "I can…" in a couple of items because self-efficacy is intended to measure ability, not intention. A comparison of the Niemi Internal Efficacy Index to the Chen General Self-Efficacy Scale reveals a similar attempt to measure an individual's sense of ability. That said, the Niemi Index is more domain-specific than the Chen GSE Scale, although not specific enough to meet

the SSE measurement standards set by Bandura (2006). Figures 3.1 and 3.2 provide the items for both scales.

Figure 3.1: Chen et al. (2001) GSE Scale

New General Self-Efficacy Scale

1. I will be able to achieve most of the goals that I have set for myself.
2. When facing difficult tasks, I am certain that I will accomplish them.
3. In general, I think that I can obtain outcomes that are important to me.
4. I believe I can succeed at most any endeavor to which I set my mind.
5. I will be able to successfully overcome many challenges.
6. I am confident that I can perform effectively on many different tasks.
7. Compared to other people, I can do most tasks very well.
8. Even when things are tough, I can perform quite well.

Figure 3.2: Niemi et al. (1991) Internal Efficacy Index

The Internal Efficacy Items

The four new internal efficacy items tested in 1987–88 read as follows:

1. "I consider myself to be well qualified to participate in politics." (SELFQUAL)
2. "I feel that I have a pretty good understanding of the important political issues facing our country." (UNDERSTAND)
3. "I feel that I could do as good a job in public office as most other people." (PUBOFF)
4. "I think that I am better informed about politics and government than most people." (INFORMED)

Response options are *agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat,* and *disagree strongly.* In each case, agreement with the statement is the more "efficacious" answer.[1] Retained in the 1988 election

Although some studies fail to find significant effects of self-efficacy on participation in collective action (e.g., van Zomeren, Saguy, and Schellhaas 2012), self-efficacy is generally found to be a significant predictor of participation. However, the effect sizes tend to be rather weak. Niemi and colleagues (1991) report a correlation of 0.4 between their Internal Efficacy Index and an index of several forms of conventional, campaign-related participation activities. Additional analyses using the Niemi Internal Efficacy Index also found a moderate relationship with participation (Morrell 2003). Moeller et al. (2013) reported that internal efficacy was an abnormally strong predictor of first-time voter turnout, but the measurement used was

agreement with a single indicator ("*Sometimes politics seem so complicated that a person like me can't really understand what's going on*."). This has led to criticisms of weak psychometric properties, namely that the measure taps aspects of both internal and external efficacy (Morrell 2003). Likewise, Moeller et al. (2013) failed to include any other measures of efficacy in their analysis, and these other efficacious beliefs may mediate the effects between self-efficacy and participation. Recently, Hart and Feldman (2016) analyzed the effects of three measures of efficacy on convention acts of political participation. All three efficacious beliefs exert a unique influence on participation, but external efficacy (b = .29) and response efficacy (b = 0.37) had stronger effects than internal efficacy (b = 0.28) on participation.

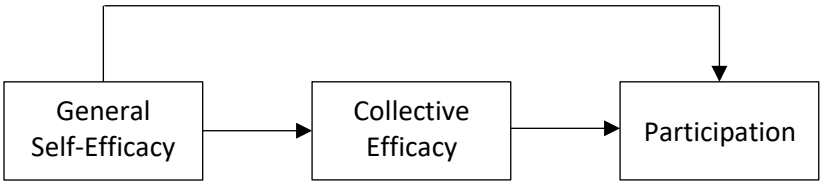
Another criticism is that these studies focus on a particular type of political participation, namely traditional, offline, collective action. While it may be appropriate to make inferences from these offline actions to online collective actions, it would be inappropriate to generalize these findings to new forms of online connective action. Connective action is centered on personal expression shared over social media, and participation is not brokered by organizations but rather personal access and motivation (Bennett and Segerberg 2013). Based on prior research, I expect to find that self-efficacy is a weak predictor of participation in online collective. However, based on its more individualized nature, I expect self-efficacy to be a moderately strong predictor of participation in online connective action.

Collective Efficacy

Collective efficacy is defined as "the shared belief that one's group can resolve its grievances through unified effort" (van Zomeren et al. 2008:507). Collective efficacy is not the sum of individual self-efficacies, but rather is an emergent property of the group (Bandura

2000, 2006). However, evaluations of collective efficacy are often measured using *individuals' perceptions* about members of the group or the group as a whole to perform a task or complete a goal, as opposed to other possibilities such as an aggregated measure of members' perceptions (Bandura 2000, 2006). When collective efficacy is measured at the individual-level, we can expect that these perceptions will be skewed by individual personality traits. Personality traits are "generalized and personalized determining tendencies - consistent and stable modes of an individual's adjustment to his environment" (Allport and Odbert 1936:26). As previously mentioned, perceptions of general self-efficacy (GSE) are considered to be stable personality traits (Chen et al. 2001, 2004). Although self-efficacy is not a component of the Five-Factor Model (FFM), it is strongly correlated with those measures (Judge, Erez, Bono, and Thoresen 2002). That said, it is important to note that the FFM is criticized for not capturing many relevant dimensions of personality (Ryan and Xenos 2011). As a trait, GSE should have a direct effect on evaluations of collective efficacy. In this way, we can consider collective efficacy a facet or component of one's general self-efficacy because evaluations of the group are being made by individual members whose perceptions are influenced by personality traits. Bandura (1997) has hypothesized that collective efficacy is rooted in self-efficacy, and subsequent studies find that perceptions of collective efficacy increase as the average level of group members' self-efficacies increased (Gibson 2003). As such, it can be argued that collective efficacy mediates the relationship between general self-efficacy and participation (see Figure 3.3).

Figure 3.3: Proposed Relationship between GSE and Collective Efficacy



Humans are constantly modifying the social world around them. While some of these changes may be achievable by individual effort alone, others seem to require the coordinated actions of a group in order to achieve change. Collective efficacy (also called group efficacy) is a measure of how strongly individuals believe that concerted efforts by a large group of people can produce change. Collective efficacy can be measured in a variety of ways, varying from general to task-specific evaluations[19] as well as individual- and group-level[20] measurements (Gibson 2003). Measuring collective efficacy at the individual level recognizes that members of a single group would nonetheless vary in their judgments of the group's capabilities (Lee 2010). Survey items that measure collective efficacy often ask respondents to gauge their level of agreement with statements such as "If we work together, we can achieve our goals" (Grant et al. 2015) or "the collective efforts of a group can influence authorities" (Lee 2010), although the actual wording of questions is often tailored toward specific groups and their specific goals (such as "If they work together, skilled immigrants can influence government leaders and policy makers recognize the value of their non-Canadian credentials and work experience" (Grant et

[19] See Velasquez and LaRose 2015: Respondents were asked how certain they were that their group was capable of using social media and the Internet to perform these activities: "let other people know about the advocacy work it performs"; "convince people to support the group"; "find the support of other organizations"; "increase the awareness of the ideas it advocates"; "coordinate its activities"; "help its members with group related tasks".

[20] The group responds as a single unit – a consensus-based answer, rather than varying individual levels.

al. 2015) or "The collective actions of Hong Kong people have much influence on public affairs" (Lee 2010)). This level of specificity ensures that respondents are referencing the appropriate group and goals when making their evaluations as opposed to measuring a more general sense of collectivism or communal orientation where generalized beliefs are that people ought to value other people's feelings and take action to ensure the general welfare of the group (Clark et al. 1987).

Collective efficacy is a key component of the instrumental pathway to participation, which is based on cost-benefits analyses (Simon et al 1998; Klandermans 2013). Generally, an individual is more likely to participate in collective action when they believe such participation will be an effective way to achieve their desired goals (Klandermans 2013). Feelings of collective efficacy may have little to no influence on participation in situations which require low interdependence of group members[21], but collective efficacy does significantly predict participation in situations which require team members to closely interact and coordinate their efforts (Katz-Navon and Erez 2005; Velasquez and LaRose 2015). Individuals with a strong sense of collective efficacy tend to participate in normative forms of protest, such as signing petitions and attending demonstrations, whereas those with a weaker sense of collective efficacy tend to participate in non-normative forms (Tausch et al. 2011). An individual's sense of collective efficacy is influenced by their estimations of perceived civic competency of the general public, as well as the degree to which politicians and the media represent and endorse the views of the individual (Lee 2010). While collective efficacy has a direct impact on participation or intent to

[21] In fact, self-efficacy is more influential for participation under these conditions: see Katz-Navon and Erez (2005).

participate in protest actions (Grant et al. 2015; Lee 2010), collective efficacy does not appear to influence the perceived chance of success of a movement. However, the relationship between collective efficacy and participation is stronger among individuals that believe success is likely (Lee 2010).

Studies of traditional collective action have found that a strong sense of collective efficacy is a better predictor of participation than a strong sense of self-efficacy (Mummendey et al. 1999; van Zomeren et al. 2008; van Zomeren, Saguy, and Schellhaas 2012); that said, given that Bennett and Segerberg stress the personalized and expressive nature of connective action, it seems appropriate to include measures of self-efficacy in order to rule out self-motivated expressions that are believed undergird the concept of personal action frames under connective action. Therefore, I expect to find that collective efficacy is a strong predictor of participation in online collective action. Furthermore, I expect collective efficacy to be a better predictor of participation in collective action than self-efficacy. I also expect that perceptions of collective efficacy will predict participation in online connective action, but I believe this relationship will be of moderate strength but weaker than the relationship between collective efficacy and collective action.

Tactical Efficacy

The final type of efficacious belief that will be studied in this investigation is tactical efficacy, which is the belief that engaging in specific tactics is likely to lead to successful outcomes. Despite the wealth of literature on strategy and tactics, no locatable articles have conceptualized tactical efficacy as a measure of individual beliefs. A closely related study on the topic comes from David Colby (1982), in which he tests the relative effectiveness of voting,

nonviolent protest, and rioting for achieving welfare policy concessions in 1960s Mississippi. This study, however, tests the *actual* efficacy of various tactics rather than individuals' *perceptions* of their tactical efficacy. The purpose of measuring tactical efficacy as currently conceptualized is to predict future participation; by measuring actual efficacy, Colby (1982) does not provide any insight on motivations for participation. Information about the actual efficacy of certain tactics would surely influence individual's perceptions of tactical efficacy. By studying media effects using an experimental design, Hart and Feldman (2016) found that manipulations of efficacy information in news articles can have significant effects on individuals' perceptions of internal and external efficacy (or self-efficacy and system responsiveness, to use the terms of the current study).

A closely related concept to tactical efficacy can be found in the term "response efficacy" used by health behavior models. Response efficacy is defined as the extent people believe a recommended response will be effective in deterring or alleviating a health threat (Casey et al. 2009; Lam 2006; Witte 1992, 1994). Similar assumptions underlie both tactical efficacy and response efficacy, insofar as a person is unlikely to change a behavior without the belief the change will be effective (Casey et al. 2009). However, response efficacy is often conceptualized as the property of a message, i.e., does the message provide useful and effective strategies for responding to health threats (Lewis et al. 2010). Furthermore, response efficacy is based on people's beliefs about their own personal health outcomes and is therefore not an estimation of the outcomes of others (CHIRr n.d.). In many ways, the concept of response efficacy fails to address the same concerns of tactical efficacy: it is not an attribute of

an individual, but rather of a message, and as such, estimations are limited to personal outcomes as opposed to group-level outcomes that are sought through collective action.

Tactical efficacy is an important concept to study because it reveals information that individuals use in making their cost-benefits analysis of whether or not to participate in a form of collective action. At the organizational level, social movement organizations choose tactics they believe are efficacious (Carmin and Balser 2002). Individuals are likely to make similar decisions because potential contributors to a movement make their choices in part based on a desire to avoid making wasted contributions (Gould 1993). If an individual believes that a particular tactic is unlikely to achieve the desired outcome, the individual will be less likely to participate in that action. Tactical efficacy can be conceived of as a more specific type of collective efficacy in that collective efficacy is a more general evaluation of the group while tactical efficacy more specifically inquires if a particular behavior will be effective if the group engages in it. In other words, collective efficacy asks "can individuals come together to form a group and create change?" whereas tactical efficacy asks "if the group engages in this behavior, how likely are they to create the intended change?" Therefore, individual evaluations of tactical efficacy can be said to be influenced by individual perceptions of collective efficacy.

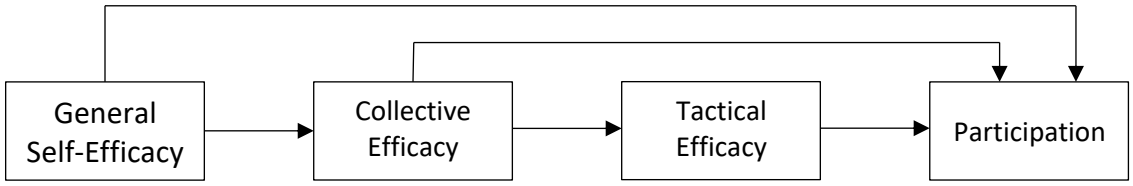
The literature will benefit from the increased specificity of tactical efficacy over traditional measures of collective efficacy which can conflate the two beliefs. For example, some researchers who employ cost-benefits analyses to measure collective action will often reference a specific tactic in their measurement of collective efficacy; in other words, some researchers measure collective efficacy as the percentage of group members that respondents believe will join in a particular tactic (see Lam 2006) or believe that participation will only occur

if a particular tactic is perceived as efficacious (see Grant et al. 2015). Because participation can take many forms (i.e., can employ many different tactics), research which limits the scope of participation to a single tactic are conflating perceptions of collective efficacy (or the extent to which one believes a concerted group effort will lead to desired changes) with perceptions of tactical efficacy (or the extent to which one believes a particular tactic will be effective in achieving the desired change). By measuring collective efficacy with survey items that reference a particular type of tactic (most often “protest participation”), scholars are ignoring the diversity of tactics available to individuals and groups, as well as the diversity of avenues to participation. This in turn may incorrectly identify individuals as having a weak sense of collective efficacy when in fact the respondent simply has a weak sense of tactical efficacy.

Individual perceptions of tactical efficacy take on increased importance under the logic of connective action due to its more individualized and personalized nature, as opposed to actions which are brokered by organizations under the logic of collective action. Although perceptions of tactical efficacy are likely to influence participation under both logics, I expect tactical efficacy to exert a greater influence on participation under a logic of connective action, which is inherently a more individualized decision as it is made without the presence or influence of social movement organizations. Individual perceptions of tactical efficacy may be moderated by the presence of an SMO; members of SMOs invest in these groups and develop a sense of trust and goodwill that can affect their decision to participate apart from their perceptions of tactical efficacy. For example, an individual may not perceive a particular tactic to be highly efficacious, but may participate regardless due to trust invested in the organization (e.g., "I'm not sure if this will work, but Greenpeace knows best"); this trust may be even more

influential in the decision to participate when costs are low, as is the case with many online actions (e.g., "You're planning to lobby Congress for increased environmental protections? Pssh, good luck! I'll Share this post on Facebook though…"). Furthermore, the efficacy of recruitment is increased if initial contributions represent sunk costs (Gould 1993), which may be demonstrated by the creation of websites, online petitions, and other online movement activities, all of which are arguable to the most "costly" aspects of engaging in online activism (Earl and Kimport 2011). For example, meme creation is the most "costly" aspect, but once created, it is easy to capitalize on by either innovating the meme to a new context or by simply Liking, Sharing, or Commenting on the meme. Therefore, I expect to find that tactical efficacy will be a moderately strong predictor of participation in collective action; however, tactical efficacy will be a strong predictor of participation in connective action, and tactical efficacy will be a stronger predictor of participation in connective action than collective efficacy. Figure 3.4 provides a graphical representation of the model to be investigated.

Figure 3.4: Proposed Relationship between Efficacious Beliefs



RESEARCH DESIGN

A web survey was administered to students at a large public university and workers using Amazon.com's Mechanical Turk platform. After reporting some demographic information, respondents must indicate their level of agreement with a series of statements to gauge their

various efficacious beliefs. Then, respondents view a two Facebook posts, one representing the familiar logic of collective action and the other representing the newer logic of connective action.

Survey Measures

The three independent variables in this study are self-efficacy, collective efficacy, and tactical efficacy. *Self-Efficacy* will be measured using a modified version of the 8-item Chen General Self-Efficacy Scale (Chen et al. 2001). This scale will be modified to address Bandura's (2012) criticism that some items use the phrase "I will…" instead of "I can…"; this modification is necessary because self-efficacy is a measurement of one perception of ability, not their intention. Responses categories range from "Strongly Disagree" (1) to "Strongly Agree" (7).

Collective efficacy will be measured using an adapted version of the 4-item scale developed by van Zomeren, Saguy, and Schellhaas (2012). This scale has many advantageous qualities. First, it is designed to be easily adapted across research projects by allowing researchers to "fill-in-the-blank" when it comes to referencing the specific group and goal. By referencing the specific group and goal, responses are less likely to capture a more general sense of collectivism or communal orientation. The specific wording of the four items are also limited to capturing individual beliefs about the group's ability to work together, as opposed to other measurement items which conflate collective efficacy with tactical efficacy by referencing specific tactics within the items. Although adaptations of this scale across different domains introduces issues for generalizability, there will nonetheless be greater external validity for this scale than others, which are commonly self-constructed for the specific project at hand. Finally,

this scale is short, which reduces the burden on respondents and helps prevent survey fatigue. Each item is measured on a 7-point scale from "Strongly Disagree" (1) to "Strongly Agree" (7).

Figure 3.5: van Zomeren, Saguy, and Schellhaas (2012) Collective Efficacy Scale

Group Efficacy Beliefs

1. I believe that (students), as a group, can (stop the financial cuts to higher education).
2. I believe that (students), together, can (stop the financial cuts to higher education).*
3. I believe that (students), through joint actions, can (stop the financial cuts to higher education).*
4. I believe that (students) can achieve their common goal of (stopping the financial cuts to higher education).

**Note: the authors' example uses "students" as the group and "stop the financial cuts to higher education" as the group goal.*

Tactical Efficacy is measured using a newly constructed scale of my own design that asks respondents to rate the likelihood of achieving the group's goal through engaging in a variety of different tactics. The present study aims to explain participation in two types of digitally-networked action: collective action and connective action (Bennett and Segerberg 2012, 2013). Therefore, the tactics that are included will represent actions typical of online collective action, such as requesting donations, signing petitions, email campaigns, and sharing relevant news stories, as well as actions typical of connective action, such as creating and sharing memes, changing one's profile photo in solidarity, and otherwise engaging using built-in features of the social media platform (for Facebook, this includes Likes, Shares, and Comments). Respondents will be asked "How effective do you think the following behaviors are in reducing global warming?" Possible responses follow a 5-point Likert-style scale from "Not Effective at All" (1) to "Extremely Effective" (5). Respondents will rank the effectiveness of eleven tactics, six of which are associated with collective actions, such as "contacting elected representatives," and

"attending a community meeting or rally about environmental issues," and five which are associated with connective action, such as "using social media to share news articles about environmental issues," and "changing personal habits to be more environmentally-friendly." Therefore, the survey produces two measures of tactical efficacy: a measure of traditional tactical efficacy associated with collective actions and a measure of new tactical efficacy associated with connective actions.

The factor analysis of the six traditional tactical efficacy indicators produced a two-factor solution in both the student and MTurk samples. The first factor for traditional tactical efficacy loads heavily on four items: contacting elected representatives, donating time to environmental organizations, donating money to environmental organizations, and attending a community meeting or rally about environmental issues; I refer to this factor as "Organizational Response" because the items indicate a shared sense of effectiveness among the items that explicitly mention organizations or institutions. The second factor for traditional tactical efficacy loads onto the final two items: changing personal habits to be more environmentally-friendly and changing American values and culture to be more environmentally-friendly; I refer to this factor as "Changing Habits & Values."

The dependent variables are based on respondents' reactions to two Facebook posts, one which represents collective action and a second that represents connective action. Respondents then indicate the likelihood pf performing six common actions on Facebook: Ignore the post or do nothing, Like the post, Share the post, Comment on the post, Click a link in the post to visit another website, and Create their own post based on the content presented. Responses are reduced to a composite score using factor analysis.

Control Variables

Although individual self-efficacy remains fairly stable over time, there is evidence that self-efficacy has a curvilinear relationship with age, such that beliefs about one's one self-efficacy reach their peak in middle age and begin to decline after age sixty (Gecas 1989). Collective efficacy also has a positive relationship with age (Browning et al. 2008; Sampson, Raudenbush, and Earls 1997). Age is also an important predictor of participation in collective action, with younger persons being more likely to participate (McAdam 1986; Wiltfang and McAdam 1991). Biographical availability, also known as structural availability, refers to conditions that may hinder participation, such as full-time employment, marriage, the presence of children (McAdam 1986), or "a lack of alternative commitments and obligations that might limit an individual's ability to participate" (Rochford 1985: 45). Generally speaking, younger persons do not have as many of these commitments and therefore are more available for social movement activity. However, biographical availability is thought to be much more important for participation in high-risk actions than low-risk actions (Tindall 2002), so there is reason to believe that age will be less important in explaining participation in low-risk online actions.

Gender plays a role in perceptions of self-efficacy, with boys and men reporting higher levels of self-efficacy than girls and females (Gecas 1989). However, this gender disparity in self-efficacy beliefs lessens with increasing age, which is likely to due to decreased adherence to stereotypes and increased identification with cross-sex traits as we age, such as men identifying as warm and loving or women who identify as competitive or strong (Gecas 1989). The relationship between gender and collective efficacy is not well established, with many authors finding no significant results (e.g., Sampson, Raudenbush, and Earls 1997; van Zomeren, Leach,

and Spears 2010), although some find that women have a weaker sense of collective efficacy than men (Fernández-Ballesteros et al. 2002). Similarly, there does not appear to be a direct effect of gender on participation in collective action, but gender does moderate relationships between other social beliefs and participation (Kelly and Breinlinger 1996; Pandolfelli, Meinzen-Dick, and Dohrn 2008; Velasquez and LaRose 2015). For example, the motivations for participation and the forms of participation or roles within organizations can be highly gendered (Pandolfelli, Meinzen-Dick, and Dohrn 2008).

Socioeconomic status is positively related to self-efficacy, and the most important factor therein appears to be education (Gecas 1989). Perceptions of self-efficacy increase as socioeconomic status increases (Fernández-Ballesteros et al. 2002). Although there does not appear to be any significant differences in perceptions of collective efficacy between low- and middle-socioeconomic status individuals, those with high-socioeconomic status hold significantly stronger perceptions of collective efficacy (Fernández-Ballesteros et al. 2002). Individuals with high educational and occupational statuses are considered to be better informed and have social and financial means and connections that can be leveraged to effect governmental policies and practices. This in turn affects their perceptions of collective efficacy (Fernández-Ballesteros et al. 2002). There is a similar relationship between socioeconomic status and social movement participation, such that wealthier and more highly educated persons tend to vote, donate money, and participate in political activities more often than the poor and less educated (Paletz, Owen, and Cook 2012). This relationship between income, education, and participation exists for both online and offline actions (Smith et al. 2009). Persons in managerial and professional positions are the most politically active, whereas the

unemployed are least likely to participate (Paletz, Owen, and Cook 2012). Education remains the strongest determinant of participation, presumably because it provides knowledge on how the political system works (Paletz, Owen, and Cook 2012).

There is also evidence that race and ethnicity have an association with self-efficacy beyond social class effects, with white respondents reporting higher levels of self-efficacy than black respondents (Gecas 1989). However, Sampson, Raudenbush, and Earls (1997) find no association between ethnicity and collective efficacy. Although black and other non-white persons were historically barred from political participation (both as a matter of law and through social control processes), recent data suggests that black and white Americans of similar socioeconomic status tend to engage in the political process at similar levels, although the exact nature of their participation differs as white Americans are more likely to contact public officials and join political organizations and black Americans are more likely to join election campaigns and social movements (Paletz, Owen, and Cook 2012). However, Latino and Asian Americans' participation lags behind that of black and white Americans (Paletz, Owen, and Cook 2012).

I will also measure political affiliation and political orientation. Although responses to these items may introduce multicollinearity issues, it is nonetheless important to study both of these identifications to best capture the political position of respondents. In terms of political affiliation, there is an increasing number of Americans who report an Independent affiliation, and an Independent affiliation now surpasses both Republican and Democratic affiliations (Pew Research Center 2015). Furthermore, those who identify as Independent tend to lean toward one of the larger parties; most recently available data show that 48% of Independents lean

Democratic, whereas 39% lean Republican (Pew Research Center 2015). Therefore, the category of "Independent" alone is quite muddied, and the additional survey items that request information on political orientation will be used to further differentiate between the political leanings of respondents. *Political affiliation* will ask respondents to identify their affiliation with a party, whereas *political orientation* will place respondents on a continuum from liberal to conservative as a means of general orientation. Conservative orientation has a negative effect on intended participation in climate-related activities that represent traditional collective actions such as contacting government officials and signing petitions (Hart and Feldman 2016).

RESULTS

Sample Summary Statistics

Tables showing the distribution of common demographic variables for both the student sample and the MTurk sample can be found in Chapter 2 (Table 2.1 – Table 2.4). The following tables and figures show the distribution of the key variables of interest for this study. Factor loading information can be found in Tables 3.1 and 3.2, and Figures 3.6 and 3.7 provide box plot visualizations of the variables.

Table 3.1: Factor Loadings for Student Efficacy and Participation Variables

Items	***Loadings***
Self-Efficacy	
I can achieve most of the goals I set for myself.	0.7452
When facing difficult tasks, I am certain that I will accomplish them.	0.7783
In general, I think I can obtain outcomes that are important to me.	0.7628
I believe I can succeed at most any endeavor to which I set my mind.	0.7685
I am able to successfully overcome many challenges.	0.7872
I am confident that I can perform effectively on many different tasks.	0.7731
Compared to other people, I can do most tasks very well.	0.6963
Even when things are tough, I can perform quite well.	0.7485

Collective Efficacy	
I believe that people, as a group, can achieve difficult goals.	0.7582
The collective actions of a large group of people can change society.	0.7621
A large group of people cannot persuade the government or corporations to make changes.	0.6327
I believe that people can achieve their common goals if they work together.	0.7953
People are more likely to get what they want when they work with others to achieve their goals.	0.5848
Traditional Tactical Efficacy – "Organizational Response"	
Contacting elected representatives	0.8476
Donating time to environmental organizations	0.7751
Donating money to environmental organizations	0.7371
Attending a community meeting or rally about environmental issues	0.5827
Changing personal habits to be more environmentally-friendly	-0.0005
Changing American values and culture to be more environmentally-friendly	-0.0254
Traditional Tactical Efficacy – "Changing Habits & Values"	
Contacting elected representatives	-0.2278
Donating time to environmental organizations	0.1391
Donating money to environmental organizations	0.0529
Attending a community meeting or rally about environmental issues	0.2312
Changing personal habits to be more environmentally-friendly	0.8292
Changing American values and culture to be more environmentally-friendly	0.8289
New Tactical Efficacy	
Using social media to share news articles about environmental issues	0.8120
Using social media to share your personal grievances about environmental issues	0.8399
Using social media to create or share "memes" about climate change	0.7786
Changing your profile photo on social media to show solidarity with the environmental movement	0.7932
On Facebook, using the Like, Share, and Comment features to express your views on environmental issues	0.8215
Participation in Collective Actions	
Ignore the post or do nothing	-0.7529
Like the post	0.7271
Share the post	0.8489
Comment on the post	0.7316
Click a link in the post to visit another website	0.5652
Create my own post based on this content	0.7425
Participation in Connective Actions	
Ignore the post or do nothing	-0.7624
Like the post	0.7947
Share the post	0.8227
Comment on the post	0.7678
Click a link in the post to visit another website	0.7245
Create my own post based on this content	0.7234

Table 3.2: Factor Loadings for MTurk Efficacy and Participation Variables	
Items	***Loadings***
Self-Efficacy	
I can achieve most of the goals I set for myself.	0.8016
When facing difficult tasks, I am certain that I will accomplish them.	0.8075
In general, I think I can obtain outcomes that are important to me.	0.7982
I believe I can succeed at most any endeavor to which I set my mind.	0.8467
I am able to successfully overcome many challenges.	0.8072
I am confident that I can perform effectively on many different tasks.	0.8017
Compared to other people, I can do most tasks very well.	0.6742
Even when things are tough, I can perform quite well.	0.7725
Collective Efficacy	
I believe that people, as a group, can achieve difficult goals.	0.7909
The collective actions of a large group of people can change society.	0.7975
A large group of people cannot persuade the government or corporations to make changes.	0.6175
I believe that people can achieve their common goals if they work together.	0.8371
People are more likely to get what they want when they work with others to achieve their goals.	0.7273
Traditional Tactical Efficacy – "Organizational Response"	
Contacting elected representatives	0.6771
Donating time to environmental organizations	0.8229
Donating money to environmental organizations	0.7660
Attending a community meeting or rally about environmental issues	0.7567
Changing personal habits to be more environmentally-friendly	0.6220
Changing American values and culture to be more environmentally-friendly	0.5115
Traditional Tactical Efficacy – "Changing Habits & Values"	
Contacting elected representatives	-0.3690
Donating time to environmental organizations	-0.2007
Donating money to environmental organizations	-0.3072
Attending a community meeting or rally about environmental issues	-0.0422
Changing personal habits to be more environmentally-friendly	0.5380
Changing American values and culture to be more environmentally-friendly	0.6796
New Tactical Efficacy	
Using social media to share news articles about environmental issues	0.8620
Using social media to share your personal grievances about environmental issues	0.8854
Using social media to create or share "memes" about climate change	0.8386
Changing your profile photo on social media to show solidarity with the environmental movement	0.8349
On Facebook, using the Like, Share, and Comment features to express your views on environmental issues	0.8726
Participation in Collective Actions	
Ignore the post or do nothing	-0.8004
Like the post	0.7287
Share the post	0.8620
Comment on the post	0.8057
Click a link in the post to visit another website	0.6457
Create my own post based on this content	0.7616

Participation in Connective Actions	
Ignore the post or do nothing	-0.7878
Like the post	0.7804
Share the post	0.8806
Comment on the post	0.8190
Click a link in the post to visit another website	0.8049
Create my own post based on this content	0.8023

Figure 3.6: Box Plots of Student Efficacy and Participation Variables

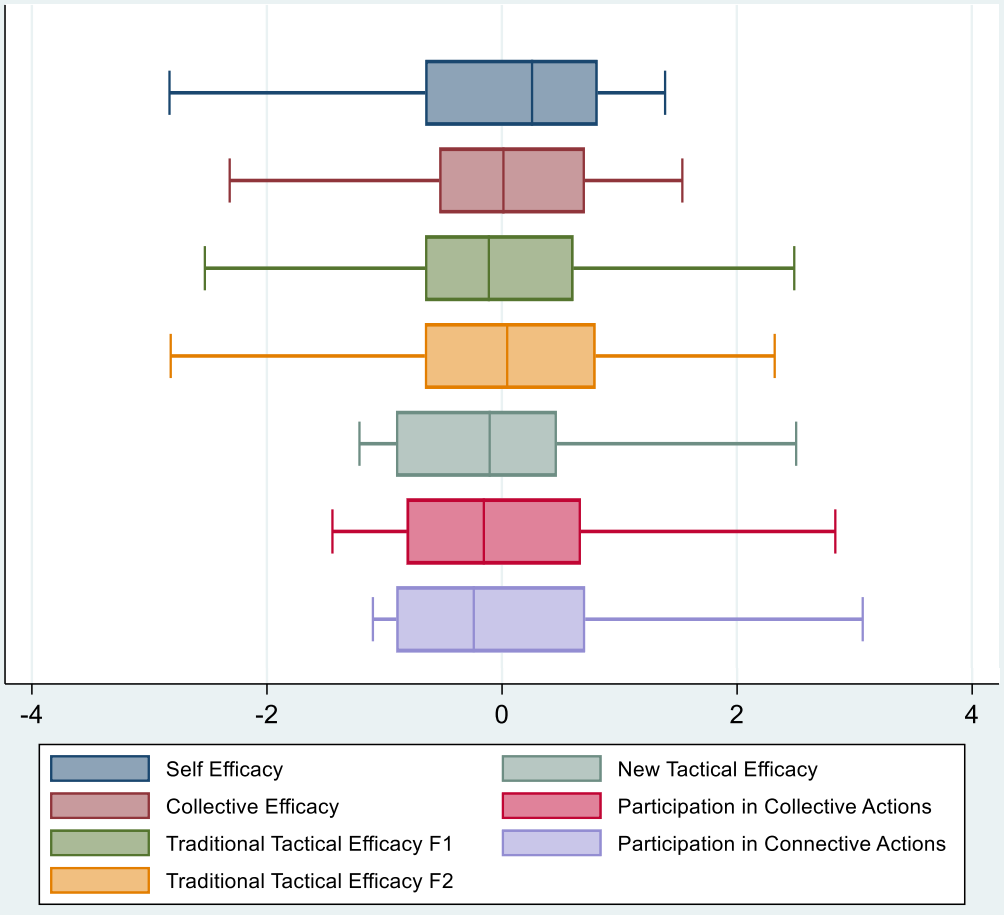
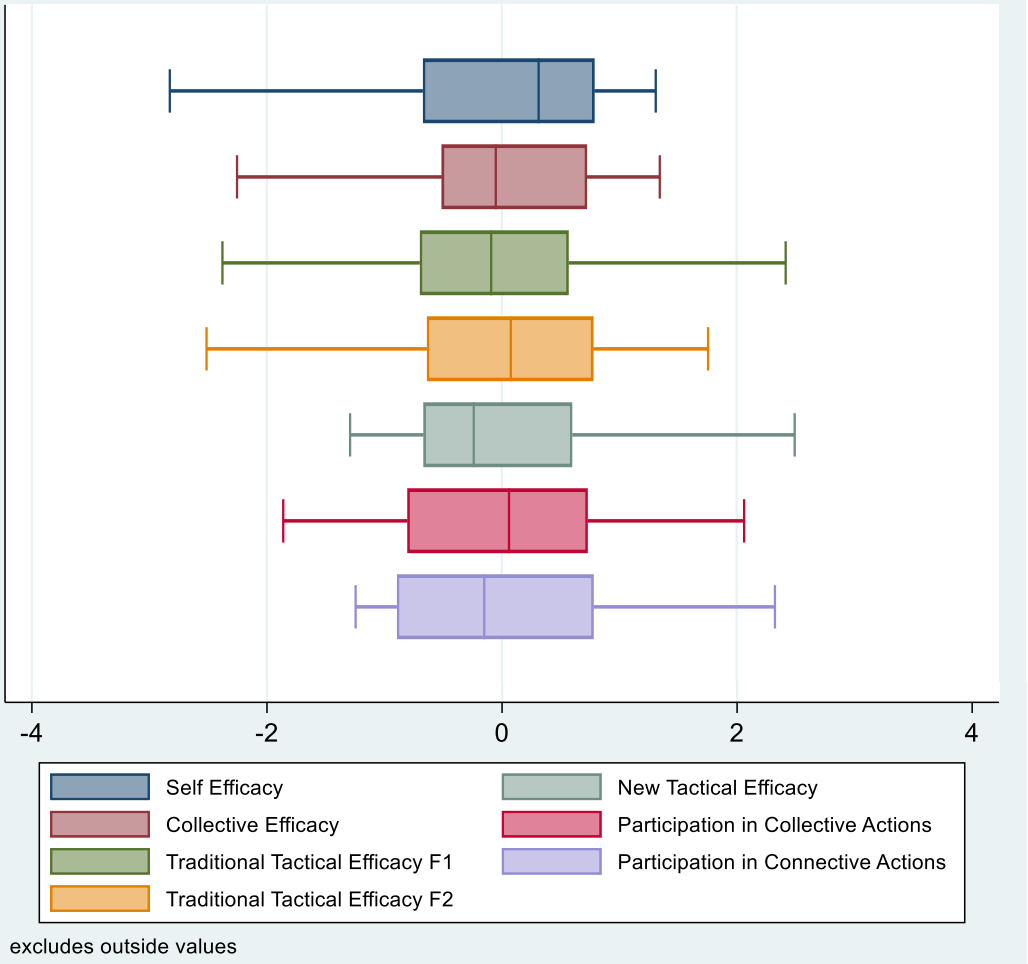


Figure 3.7: Box Plots of MTurk Efficacy and Participation Variables



Correlation matrices are provided in Tables 3.3 and 3.4. Self-efficacy and collective efficacy share a positive, moderate strength correlation (student *r*=0.2612, MTurk *r*=0.3249), as do collective efficacy and the two measures of traditional tactical efficacy. The correlations between collective efficacy and new tactical efficacy is weak, but positive (student *r*=0.1324, MTurk *r*=0.1600), as are the correlations between self-efficacy and both traditional and new forms of tactical efficacy. In general, the efficacy variables in both samples share stronger correlations with participation in collective actions than with participation in connective actions.

Table 3.3: Correlation Matrix of Student Efficacy and Participation Variables							
	Self-Efficacy	*Collective Efficacy*	*Traditional Tactical Efficacy, F1*	*Traditional Tactical Efficacy, F2*	*New Tactical Efficacy*	*Collective Participation*	*Connective Participation*
Self-Efficacy	1.0000						
Collective Efficacy	0.2612	1.0000					
Traditional Tactical Efficacy, F1	0.1153	0.2948	1.0000				
Traditional Tactical Efficacy, F2	0.1370	0.2700	0.3986	1.0000			
New Tactical Efficacy	0.0613	0.1324	0.4523	0.3404	1.0000		
Collective Participation	0.0326	0.1249	0.3352	0.2423	0.3896	1.0000	
Connective Participation	0.0114	0.0751	0.2364	0.1847	0.3561	0.4502	1.0000

Table 3.4: Correlation Matrix of MTurk Efficacy and Participation Variables							
	Self-Efficacy	*Collective Efficacy*	*Traditional Tactical Efficacy, F1*	*Traditional Tactical Efficacy, F2*	*New Tactical Efficacy*	*Collective Participation*	*Connective Participation*
Self-Efficacy	1.0000						
Collective Efficacy	0.3249	1.0000					
Traditional Tactical Efficacy, F1	0.2351	0.2949	1.0000				
Traditional Tactical Efficacy, F2	0.2744	0.3781	0.3980	1.0000			
New Tactical Efficacy	0.1899	0.1600	0.5871	0.3196	1.0000		
Collective Participation	0.1711	0.1479	0.4052	0.2741	0.5032	1.0000	
Connective Participation	0.1341	0.1289	0.2994	0.1746	0.4345	0.5362	1.0000

OLS Regression

Tables 3.5 through 3.8 provide regression results for predicting online collective action for both the student and MTurk samples. In the regression analyses, I have recategorized the gender variable to represent "non-males," that is respondents who identified as either female, transgender, or "other / prefer not to say." While income and education are measured ordinally in the survey, I treat them as continuous variables in the analyses because this method is more appropriate than treating the categories as nominal, and these variables are used as controls for which a continuous approximation is not highly consequential.

Self-efficacy alone is a weak predictor of collective participation in the MTurk sample, but the effect is statistically significant (b=0.171, p<0.001); it is not a significant predictor of participation in collective action for the student sample. In both samples, collective efficacy is a significant predictor of participation, as are the two factors for traditional tactical efficacy, both independently and combined. In regards to the measures of traditional tactical efficacy, Organizational Response appears to mediate the effects of Changing Habits & Values because the strength of the coefficient for Changing Habits & Values is nearly halved when Organizational Response is added to the model (Table 3.5 and Table 3.7, Models 4 and 5). Furthermore, Organizational Response offers far greater explanatory power of the total variance in collective participation than does Changing Habits & Values.

Tables 3.6 and 3.8 provide the opportunity to test the relationships between the efficacy variables and their respective effects on participation under a strategy of collective action. In the student sample, self-efficacy was not an independently significant predictor of collective participation, and the addition of collective efficacy does not alter that relationship (Table 3.6,

Model 6). However, in the MTurk sample, the inclusion of collective efficacy into the model (Table 3.8, Model 6) diminishes the strength of the coefficients for both self-efficacy and collective efficacy, although self-efficacy remains the stronger predictor of collective participation (b=0.138, p<0.001) compared to collective efficacy (b=0.103, p<0.01). In Tables 3.6 and 3.8, Model 7 provides evidence that tactical efficacy mediates the relationship between collective efficacy and participation in collective actions as the coefficients for collective efficacy decrease dramatically while the coefficients for the traditional tactical efficacy factors retain the strength of their effects. Model 8 in these tables shows the effect of each type of efficacy on participation in a combined model. In the student sample (Table 3.6), only the two factors measuring traditional tactical efficacy remain statistically significant predictors of participation in collective actions. For MTurk Workers (Table 3.8), self-efficacy remains statistically significant in Model 8, in addition to both measures of traditional tactical efficacy.

In Tables 3.6 and 3.8, Model 9 is the full model, incorporating all measures of efficacy and the demographic characteristics as controls. The student and MTurk samples have a number of differences regarding the statistical significance of various control variables, but the strength of the efficacy variables is surprisingly similar for both samples. For students, Organizational Response (b=0.249, p<0.001) and Changing Habits & Values (b=0.0940, p<0.01) have very similar effects on participation in collective actions compared to MTurk Workers (O.R. b=0.322, p<0.001; C.H.V. b=0.127, p<0.001). In Model 9, self-efficacy continues to be a statistically significant predictor of participation for MTurk Workers but not students. Participation in collective action online is primarily driven by perceptions about the effectiveness of traditional tactics, not perceptions of self-efficacy or collective efficacy.

Tables 3.9 and 3.10 provide regression results for predicting participation in online connective action in the student and MTurk samples, respectively. Once again, results indicate that self-efficacy – whether alone in or combination with other independent variables – fails to produce a statistically significant effect on participation in the student sample (Table 3.9) but does produce statistically significant results in the MTurk sample (Table 3.10). As expected, the effect of self-efficacy on connective participation is mediated by the inclusion of collective efficacy in the model (Model 4). Collective efficacy has a weak statistically significant effect on participation in connective actions independently (student b=0.0 751, p<0.01; MTurk b=0.129, p<0.001) and that effect is mediated by the inclusion of new tactical efficacy such that the effect size of collective efficacy is weakened and fails to produce a statistically significant effect on connective participation in the full model (Model 7) for both student and MTurk samples. New tactical efficacy has the strongest effect on connective participation independently (Model 3), and the strength of the its effect is only minimally affected by the inclusion of all efficacy variables (Model 6) and the full panel of control variables (Model 7).

In the full regression model for the student sample (Table 3.9, Model 7), neither self-efficacy nor collective efficacy exert a statistically significant effect on connective participation, whereas new tactical efficacy exerts a strong, statistically significant effect (b=0.319, p<0.001). Older and male students are also less likely to participate in connective actions. For MTurk Workers, self-efficacy exerts a statistically significant effect on connective participation, but the effect is weak (b=0.0617, p<0.05). New tactical efficacy has a strong, statistically significant effect in the full model (b=0.380, p<0.001), and MTurk Workers who identify as black, Hispanic, and lower income are also more likely to participate in connective actions.

Table 3.5: Regression Results for Student Participation in Collective Actions on Efficacy Variables					
	(1) Collective Participation	*(2) Collective Participation*	*(3) Collective Participation*	*(4) Collective Participation*	*(5) Collective Participation*
Self-Efficacy	0.0326				
	(0.0279)				
Collective Efficacy		0.125***			
		(0.0277)			
Traditional Tactical Efficacy, Factor 1: Organizational Response			0.335***		0.284***
			(0.0263)		(0.0284)
Traditional Tactical Efficacy, Factor 2: Changing Habits & Values				0.242***	0.129***
				(0.0271)	(0.0284)
Constant	0.000	0.000	0.000	0.000	0.000
	(0.0279)	(0.0277)	(0.0263)	(0.0270)	(0.0261)
N	1288	1288	1288	1288	1288
R^2	0.0011	0.0156	0.1124	0.0587	0.1264
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**					

Table 3.6: Regression Results for Student Participation in Collective Actions on Efficacy Variables and Controls				
	(6) Collective Participation	*(7) Collective Participation*	*(8) Collective Participation*	*(9) Collective Participation*
Self-Efficacy	-0.0000317		-0.0209	0.0105
	(0.0287)		(0.0271)	(0.0278)
Collective Efficacy	0.125***	0.00722	0.0122	0.000758
	(0.0287)	(0.0277)	(0.0285)	(0.0285)
Traditional Tactical Efficacy, Factor 1: Organizational Response		0.282***	0.283***	0.249***
		(0.0291)	(0.0291)	(0.0294)
Traditional Tactical Efficacy, Factor 2: Changing Habits & Values		0.128***	0.129***	0.0940**
		(0.0289)	(0.0289)	(0.0291)
Age				0.00569
				(0.00577)
Non-Males				0.310***
				(0.0636)

Race (white omitted)				
Black (only)				0.137
				(0.133)
Hispanic (only)				0.220
				(0.142)
Asian (only)				-0.153+
				(0.0903)
Native American (only)				0.265
				(0.413)
Other (only)				0.212
				(0.270)
Multiracial				0.108
				(0.108)
Education				-0.101***
				(0.0283)
Income				-0.000489
				(0.00696)
Political Affiliation (Rep. omitted)				
Democrat				0.140
				(0.128)
Libertarian				-0.0230
				(0.213)
Unaffiliated / Independent				0.0613
				(0.114)
Other				0.268
				(0.227)
Political Orientation				-0.0516+
				(0.0283)
Constant	0.000	0.000	0.000	-0.234
	(0.0277)	(0.0261)	(0.0261)	(0.240)
N	1288	1288	1288	1288
R^2	0.0156	0.1265	0.1269	0.1690
(standard errors in parentheses)				
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001				

Table 3.7: Regression Results for MTurk Participation in Collective Actions on Efficacy Variables					
	(1) Collective Participation	*(2) Collective Participation*	*(3) Collective Participation*	*(4) Collective Participation*	*(5) Collective Participation*
Self-Efficacy	0.171***				
	(0.0310)				
Collective Efficacy		0.148***			
		(0.0312)			
Traditional Tactical Efficacy, Factor 1: Organizational Response			0.405***		0.352***
			(0.0288)		(0.0311)
Traditional Tactical Efficacy, Factor 2: Changing Habits & Values				0.274***	0.134***
				(0.0303)	(0.0311)
Constant	0.000	0.000	0.000	0.000	0.000
	(0.0310)	(0.0312)	(0.0288)	(0.0303)	(0.0285)
N	1009	1009	1009	1009	1009
R^2	0.0293	0.0219	0.1642	0.0752	0.1793
(standard errors in parentheses)					
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001					

Table 3.8: Regression Results for MTurk Participation in Collective Actions on Efficacy Variables and Controls				
	(6) Collective Participation	*(7) Collective Participation*	*(8) Collective Participation*	*(9) Collective Participation*
Self-Efficacy	0.138***		0.0619*	0.0714*
	(0.0327)		(0.0308)	(0.0315)
Collective Efficacy	0.103**	0.00784	-0.0227	-0.0240
	(0.0327)	(0.0313)	(0.0321)	(0.0323)
Traditional Tactical Efficacy, Factor 1: Organizational Response		0.353***	0.346***	0.322***
		(0.0316)	(0.0317)	(0.0321)
Traditional Tactical Efficacy, Factor 2: Changing Habits & Values		0.137***	0.128***	0.127***
		(0.0326)	(0.0329)	(0.0323)
Age				0.0112***
				(0.00254)
Non-Males				-0.0245
				(0.0623)

Race (white omitted)				
Black (only)				0.364**
				(0.116)
Hispanic (only)				0.322*
				(0.139)
Asian (only)				0.170
				(0.111)
Native American (only)				0.478+
				(0.277)
Other (only)				0.547*
				(0.252)
Multiracial				0.0946
				(0.116)
Education				-0.0481*
				(0.0231)
Income				-0.0337***
				(0.00948)
Political Affiliation (Rep. omitted)				
Democrat				-0.0532
				(0.105)
Libertarian				0.245
				(0.163)
Unaffiliated / Independent				-0.0669
				(0.0961)
Other				-0.186
				(0.239)
Political Orientation				-0.00327
				(0.0244)
Constant	0.000	0.000	0.000	0.0339
	(0.0309)	(0.0286)	(0.0285)	(0.236)
N	1009	1009	1009	1009
R^2	0.0388	0.1794	0.1827	0.2292
(standard errors in parentheses)				
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001				

Table 3.9: Regression Results for Student Participation in Connective Actions on Efficacy Variables							
	(1) Connective Participation	*(2) Connective Participation*	*(3) Connective Participation*	*(4) Connective Participation*	*(5) Connective Participation*	*(6) Connective Participation*	*(7) Connective Participation*
Self-Efficacy	0.0114			-0.00880		-0.0189	0.00604
	(0.0279)			(0.0288)		(0.0270)	(0.0277)
Collective Efficacy		0.0751**		0.0774**	0.0285	0.0333	0.0203
		(0.0278)		(0.0288)	(0.0263)	(0.0272)	(0.0276)
New Tactical Efficacy			0.356***		0.352***	0.353***	0.319***
			(0.0261)		(0.0263)	(0.0263)	(0.0274)
Age							-0.0168**
							(0.00576)
Non-Males							0.309***
							(0.0634)
Race (white omitted)							
Black (only)							-0.0377
							(0.135)
Hispanic (only)							-0.106
							(0.141)
Asian (only)							-0.0734
							(0.0907)
Native American (only)							-0.218
							(0.413)
Other (only)							-0.160
							(0.270)
Multiracial							0.0511
							(0.108)
Education							-0.0254
							(0.0284)
Income							-0.00112
							(0.00697)
Political Affiliation (Rep. omitted)							
Democrat							0.143
							(0.128)

Libertarian							0.215
							(0.213)
Unaffiliated / Independent							0.103
							(0.114)
Other							-0.171
							(0.227)
Political Orientation							-0.0410
							(0.0282)
Constant	0.000	0.000	0.000	0.000	0.000	0.000	-0.00755
	(0.0279)	(0.0278)	(0.0260)	(0.0278)	(0.0260)	(0.0261)	(0.240)
N	1288	1288	1288	1288	1288	1288	1288
R^2	0.0001	0.0056	0.1268	0.0057	0.1276	0.1279	0.1668
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**							

Table 3.10: Regression Results for MTurk Participation in Connective Actions on Efficacy Variables

	(1) *Connective Participation*	*(2)* *Connective Participation*	*(3)* *Connective Participation*	*(4)* *Connective Participation*	*(5)* *Connective Participation*	*(6)* *Connective Participation*	*(7)* *Connective Participation*
Self-Efficacy	0.134***			0.103**		0.0384	0.0617*
	(0.0312)			(0.0329)		(0.0303)	(0.0313)
Collective Efficacy		0.129***		0.0954**	0.0610*	0.0494	0.0405
		(0.0312)		(0.0329)	(0.0287)	(0.0301)	(0.0309)
New Tactical Efficacy			0.435***		0.425***	0.419***	0.380***
			(0.0284)		(0.0287)	(0.0290)	(0.0310)
Age							0.00317
							(0.00255)
Non-Males							0.0107
							(0.0628)
Race (white omitted)							
Black (only)							0.221+
							(0.118)
Hispanic (only)							0.278*

							(0.141)
Asian (only)							0.107
							(0.114)
Native American (only)							0.270
							(0.279)
Other (only)							0.187
							(0.254)
Multiracial							0.173
							(0.117)
Education							0.00353
							(0.0233)
Income							-0.0298**
							(0.00956)
Political Affiliation (Rep. omitted)							
Democrat							0.111
							(0.105)
Libertarian							0.294+
							(0.164)
Unaffiliated / Independent							-0.00466
							(0.0969)
Other							0.192
							(0.240)
Political Orientation							-0.00900
							(0.0246)
Constant	0.000	0.000	0.000	0.000	0.000	0.000	-0.0545
	(0.0312)	(0.0312)	(0.0284)	(0.0311)	(0.0283)	(0.0283)	(0.237)
N	1009	1009	1009	1009	1009	1009	1009
R^2	0.0180	0.0166	0.1888	0.0261	0.1924	0.1937	0.2172
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**							

These results illuminate a number of relationships between perceptions of efficacy and participation in online actions. First, regardless of the underlying logic or organizing strategy, there seems to be a general relationship between the efficacy variables, such that self-efficacy has a weak effect on participation and that effect is mediated by perceptions of collective efficacy. Contrary to expectations, collective efficacy also tended to have a weak effect on participation; however, the strength of this effect was greater under collective actions than connective actions, as expected. Finally, tactical efficacy (whether traditional or new) tended to have the greatest explanatory power and the largest effect sizes, whether modeled independently or in combination with other variables.

In direct comparison of collective and connective actions, self-efficacy exerts a stronger effect on collective participation than on connective participation, although the effect size is weak and generally non-significant. MTurk Workers tended to exhibit a stronger effect of self-efficacy on participation than did the student sample. Contrary to expectation, perceptions of collective efficacy produced greater effect on connective actions than collective actions, although these effects were non-significant.

DISCUSSION

In this chapter, I introduce three types of efficacious beliefs and conceptualize them as part of a mediated causal chain that predicts participation in online actions. I introduce the concept of tactical efficacy as more specific form of collective efficacy. If collective efficacy asks "can individuals come together to form a group and create change?" then tactical efficacy asks "if the group engages in *this specific behavior*, how likely are they to create the intended change?" This conceptual distinction is important individuals are most likely to join an action

when they believe it will be efficacious, and the data from this chapter supports that assertion. Although collective efficacy exerts a statistically significant effect on participation independently, the inclusion of tactical efficacy in the model mediates this effect. There is some evidence that collective efficacy mediate the effect of self-efficacy on participation, although these results are more mixed and less conclusive. In the full models, tactical efficacy emerges as the strongest predictor of participation, and in some cases it is the only statistically significant efficacy variable. For online actions using the logic of collective action, the tactical efficacy factor "Organizational Response" exerts a stronger effect on participation than the "Changing Habits & Values" factor, though both are statistically significant. The single-factor solution for tactical efficacy of actions associated with connective action emerges as the strongest and only statistically significant predictor of participation, aside from some control variables which display mixed results between the two samples.

Given the tactical position of autonomous movements ("beyond the frontier"), they are unlikely to sustain mobilization, but this position also represents the vanguard position (Downey and Rohlinger 2008). Occupy Wall Street may not have formalized itself into an organization, party, or lobbying group, but was responsible for causing "a huge shift in consciousness" that may become the antecedent to such formalized institutions (Brana 2017). Given the relatively new form of connective action, we have yet to see the true consequences of these movements and they should not necessarily be written off so quickly. If these formalizing processes occur, that new information may improve individuals' perceptions of the tactical efficacy of connective action tactics.

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CHAPTER 4: INTRINSIC AND EXTRINSIC MOTIVATIONS FOR PARTICIPATING IN DIGITALLY-NETWORKED ACTION

What motivates individuals to participate in collective action online? From what source does this motivation originate, and do motivations differ between participants in online *collective* action versus online *connective* action?[22]

At a basic level, motivations can be either *intrinsic* or *extrinsic*. Intrinsic motivations are the result of an inherent sense of interest or pleasure in an activity, while extrinsic motivations refer to the drive to engage in an activity that results from the expectation of a separate outcome, like a reward, punishment, or social approval (Ryan and Deci 2000a; Séguin, Pelletier, and Hunsley 1998). Earlier work in this tradition conceptualized intrinsic and extrinsic motivation as a unidimensional scale, but these concepts are now considered to represent two independent dimensions (Feagin 1964; Allport and Ross 1967). Extrinsic motivations can vary widely depending on the level of autonomy experienced by the individual. Most activities are undertaken due to extrinsic motivations (Ryan and Deci 2000a), but less autonomous forms of extrinsic motivation can undermine future intrinsic motivation to engage in an activity or behavior (Desi, Koestner, and Ryan 1999). In other words, extrinsic motivation may only act as a weak impetus for action in the short term but dull inherent interest in the action for the long term (Bénabou and Tirole 2003).

Studies of intrinsic and extrinsic motivation can be found in other sociological lines of

[22] The collective/connective typology was developed by Lance Bennett and Alexandra Segerberg (2013).

literature, namely religion, education, and work/occupations. Results from these domains suggest that intrinsic motivations and the more autonomous forms of extrinsic motivations are associated with outcomes that are desirable for social movements, such as greater commitment and productivity (e.g., Grant 2008; Nov, Arazy, and Anderson 2011; Walker, Greene, and Mansell 2006). More autonomous forms of extrinsic motivation positively predict voter participation among Canadian adults, whereas less autonomous forms had no significant effect on voting behavior (Koestner et al. 1996). Despite the widespread agreement that intrinsically motivated behavior leads to more positive outcomes, social psychological approaches to social movements have rarely incorporated the intrinsic/extrinsic conceptual framework into their studies and instead focus on perceptions of collective identity, efficacy, injustice, and emotions (e.g., van Zomeren et al. 2008; van Stekelenburg and Klandermans 2010, 2013).

Recent research by Lilleker and Koc-Michalska (2016) makes a novel attempt to incorporate the study of intrinsic and extrinsic motivations into political participation by surveying the United Kingdom electorate's participation in both online and offline actions during a contentious election cycle. Their results suggest that offline participation is driven by both intrinsic and extrinsic motivations, but that participation in online actions only has a significant relationship with extrinsic motivation. Even though these findings are relevant to the current investigation, there are some issues with Lilleker and Koc-Michalska's study that call the finding into question. One such issue is the fact that online actions can have dramatically different underlying logics, namely the more familiar logic of *collective* action and the emergent form of *connective* action, which is a more personalized and expressive form of participation

online (Bennett and Segerberg 2013). Despite their recognition that online activities are often expressive rather than instrumental, Lilleker and Koc-Michalska (2016) fail to distinguish between collective actions and connective actions in the construction of their online political participation variable. Furthermore, their operationalization of intrinsic motivations is corrupted with items that measure extrinsic motivation ("*I feel that this activity is the sort of thing that my friends and family would respect me for*.") and self-efficacy ("*I feel I can influence others*."). The present study will address these issues by distinguishing between collective and connective action, as well as constructing an intrinsic motivation index that is more faithful to the conceptual understanding of intrinsic motivation.

The present study will investigate the explanatory power of intrinsic and extrinsic motivations on individuals' propensity to participate in online actions, both collective and connective. Results will contribute to the literature on intrinsic and extrinsic motivations for participation in online actions, as well as provide much-needed empirical clarity on the distinctions between the logics of collective and connective action. The current study is also designed as a way to begin to address recent criticisms of insufficient dialogue between the discourses of social movements, political science, and social psychology (Jasper 2017; van Zomeren 2016). Before addressing the results, I will outline the changing discourse in social movements literature that culminated in the dominance of Resource Mobilization Theory and the use of selective incentives to motivate participation. Once this is done, I will introduce the theoretical foundations of intrinsic and extrinsic motivations by demonstrating the conceptual similarities in the two literatures. This will allow me to address the need to incorporate intrinsic and extrinsic motivations into the study of social movement participation.

PARTICIPATION IN COLLECTIVE ACTION

Human action is guided by certain motives or motivations and engaging in collective action is no different. However, early scholars within the collective behavior tradition viewed collective action participants as irrational (e.g., Le Bon 1895) or acting upon unconscious tendencies (e.g., Allport 1924). This framework proved to be difficult to study systematically, and Turner and Killian (1957) found no support for the idea that collective action participants would lose their abilities to think rationally in a crowd. These criticisms led the popular discourse in social movements to abandon micro-level psychological theories of participation in favor of structural and organizational theories, most notably Resource Mobilization Theory (RMT).[23]

To address questions of mobilization and participation, RMT asserts that individuals are rational actors who ought to engage in resource accumulation in order to mobilize masses for the purpose of accomplishing a goal. According to McCarthy and Zald (1977), social movement goals are best achieved through the establishment of a social movement organization (SMO), which serves as a hub to receive and distribute resources such as money, time, and attention. The success of the movement is dependent upon the SMO's ability to effectively manage those resources. The RMT approach emphasizes organizational dynamics, which exert meso- and macro-level effects on individuals and the decision to participate in collective action. Yet the theory does not effectively address micro-level social psychological processes that influence social movement participation. RMT shifted sociologists far from the study of individual

[23] Political Process Theory (PPT) emerged around the same time, also with a focus on structural and organizational explanations of participation. That said, PPT will not be discussed in this paper, as its scope is tangential to the main focus of the current investigation.

psychological motives discussed by collective behavior theorists by excluding any meaningful mention of emotions or grievances in the mobilization process.

Since the 1980s, social movements scholars have been attempting to resolve the failures of both the collective behavior and RMT traditions in regards to the role of social psychological influences on participation. In contrast to earlier theories of collective behavior, RMT argues that humans tend to act rationally and do not necessarily lose this capacity as a member of a crowd. However, humans are not capable of the type of hyper-rationality proposed by economic models within RMT. Humans live in a *perceived* world, and the social psychological perspective aims to understand these perceptions, how they are influenced by social context, and how they affect behaviors such as participation in social movement activity (van Stekelenburg and Klandermans 2010). In this way, a social psychological approach to movement participation addresses micro- *and* macro-level influences on individuals' decision to participate in collective action.

Motivations to Participate in Collective Action

The classical model of participation was based on theories of deprivation and grievances, two factors which represent internal motivations for participation (Pinard 2011). Additional internal factors that have been studied more recently include emotions (Gould 2004; Taylor 1995; van Zomeren et al. 2004; Klandermans, van der Toorn, and van Stekelenburg 2008), aspirations (Breton 1972; Collier and Hoeffler 2004; Nagel and Olzak 1982; Nielsen 1985), and moral obligations (Hirsch 1990; Jasper 1997; Jenkins 1983; Rule 1988; van Stekelenburg and Klandermans 2007). Deprivation, grievances, and internal motives were largely dismissed by proponents of RMT and were replaced with a focus on external

motivations, or "incentives." Collective incentives are goods or benefits that are publicly available or equally distributed[24], whereas selective incentives are rewards that are only distributed to participants (Olson 1965; Panebianco 1988). For example, establishing a local farmer's market would be a collective incentive in which all members of the community could enjoy, and a selective incentive could be that only farmers who helped to establish the market are eligible to be vendors. According to Olson (1965), when one's contribution to the collective good is deemed small or insignificant, a rational actor will not be sufficiently motivated by the collective incentive to participate and will instead choose to "free-ride" on the actions of others who will participate and achieve the public good. It is only through the mechanism of selective incentives that a rational actor will choose to participate in collective efforts toward a collective incentive. In the farmer's market example, the selective incentive – access to a vendor's stall – would motivate local farmers to engage in collective action to establish the farmer's market, but the collective incentive itself – a farmer's market that all can enjoy – would not be sufficient motivation for a rational actor to engage in collective action. In the RMT perspective, McCarthy and Zald (1977) state that grievances (as an internal motive) may or may not be a factor in participation for any particular social movement, but costs and rewards (i.e., "selective incentives") can adequately account for differences in individual participation. In other words, the proper use of selective incentives would overcome the rational actor's disinterest in participation by assigning punishments or rewards based on their behavior.[25]

[24] Collective incentives are often discussed as goods or benefits that are sought after as a social movement goal, instead of goods and benefits that are already available.

[25] Translated further into the language of intrinsic and extrinsic motivations, RMT and the free-rider dilemma assert that humans, as rational actors, assign no intrinsic value to participation in collective action (or at least not enough intrinsic value to *actually* participate), and it is only through extrinsic motivations that one can be

These views were bolstered by empirical studies that failed to find significant effects for deprivation and grievances, but more recent research suggests that measurement and analytical design flaws may be to blame for these negative or null results from the past (Pinard 2011). In direct contradiction to Olson's theories, Marwell and Oliver (1993) find that selective incentives are neither necessary nor sufficient solutions to the free-rider problem, and the ubiquity of the free-rider problem itself may be overstated because it is more likely to affect certain types of movements (such as those with decelerating production functions) than others. Likewise, Fireman and Gamson (1979) provides evidence that "hard" (or material) selective incentives were not required for mobilization for cases in which individuals were drawn into action through solidarity, loyalty, and moral responsibility. There is also evidence that some organizational members can be motivated to participate primarily by collective incentives, and the ability to produce a stable and lasting organization therefore depends on the ability to distribute both collective and selective incentives (Panebianco 1988). The view of motivation advocated by RMT scholars largely dismisses the role of internal or intrinsic motivating factors in favor of explanations that stress the mobilizing potential of extrinsic rewards. Although internal motivations may contribute to external motivations and vice versa, neglecting to measure internal motivations will obscure the mobilization process (Desi, Koestner, and Ryan 1999; Pinard 2011; Ryan and Deci 2000a).

One early attempt to address intrinsic motivations can be found in Klandermans' (1984) work on what he describes as "expectancy-value." In part, he articulates three motives which

sufficiently motived to participate in collective action. Although the power of extrinsic motivations to undermine intrinsic motivations is well documented (see Desi, Koestner, and Ryan 1999), RMT and Olson's theories severely undervalue the power of intrinsic motivations.

can influence individuals' perceptions about the expected outcomes of an action and the value of these outcomes[26]: social motives, reward motives, and collective motives. Social motives refer to the reactions of significant others, while reward motives refer to material costs and benefits such as money, time, injury, or entertainment (Klandermans 1984). Like selective incentives, social and reward motives represent types of extrinsic motivation or behavior that is motivated by the expectation of a separate outcome, such as a material rewards or social approval. Collective motives, on the other hand, represent a type of intrinsic motivation. To be motivated by the collective motive, one must find both the collective good and the type of participation to be attractive (Klandermans 1984). Collective motives seem to imply an inherent interest in the activity, which is a key component of intrinsic motivation (Ryan and Deci 2000a, 2000b).

Current Social Psychological Approaches to Participation

The dominant social psychological approach to social movement participation is not defined in terms of motives or motivations. Social psychological research on movement participation has been primarily concerned with individual perceptions of collective identity, efficacy, and injustice to explain protest participation (van Stekelenburg and Klandermans 2010, 2013; van Zomeren et al. 2008). van Stekelenburg and Klandermans (2010) theorize that motivation arises from a variety of pathways, with ideology, group-based anger, and perceptions of efficacy having the most proximate effects on motivational strength. While some of these variables, such as collective identity, are not themselves a motivation, these factors

[26] The perception of the expected outcome of an action is multiplied by the value of said outcome to create "value-expectancy products," the sum of which are Klandermans' (1984) operationalization of "motivation."

may inform one's sense of "moral obligation," which is an internal motivation to act (Pinard 2011). Therefore, the study of motivations does not duplicate the current work of social psychologists with different terminology, but rather adds a new dimension to study that may be associated with the variables already investigated by social psychologists.

Intrinsic and extrinsic motivations are more commonly found in studies of education (Burbach, Cnaan, and Babbitt 2010; Gonzalez-DeHass, Willems, and Holbein 2005; Walker, Greene, and Mansell 2006), religion (Allport 1960, 1966; Eisenstein 2006; Gorsuch 1994; Morris and Hood 1981), and work (Grant 2008; Hars and Ou 2002; Johnson and Mortimer 2011; Nov, Arazy, and Anderson 2011). Intrinsically motivated individuals display greater levels of persistence (Grant 2008; Nov, Arazy, and Anderson 2011; Walker, Greene, and Mansell 2006), cognitive engagement (Walker, Greene, and Mansell 2006), and productivity (Grant 2008), among other positive outcomes (see Ryan and Deci 2000a, 2000b). Intrinsic motivation seems to decline with age, and some evidence suggests external motivation may decrease over time as well (Lepper and Henderlong 2000). Just as sociological scholars have identified multiple types of extrinsic motivations, so too does psychological theory. These different types of extrinsic motivations can be arranged from more to less autonomous in nature, with material rewards or punishments being the least autonomous.[27] There is evidence that the more autonomous forms of extrinsic motivation can also be associated with positive outcomes similar to intrinsic motivations (Koestner et al. 1996; Ryan and Deci 2000a).

The contemporary approach to social psychological influences on participation runs

[27] To be clear, intrinsically motivated behavior is considered the most autonomous of all. This evidence indicates that autonomy in motivation to act is an important factor in positive life behaviors and outcomes.

parallel to discussions about intrinsic and extrinsic motivation. Intrinsic and extrinsic motives can be associated with one's sense of identity, solidarity, efficacy, injustice, and consciousness, but they are not neatly overlapping concepts. This study will incorporate the psychological motivational variables of intrinsic and extrinsic motivation into a study of the social psychological aspects of social movement participation, thus expanding the discourse on collective action and broadening the application of motivational orientations.

SELF-DETERMINATION THEORY

Self-Determination Theory (SDT) reconceptualized motivations within the field of psychology by asserting that "goal achievement" was an underspecified basis for motivations (Deci and Ryan 1985). SDT also introduced a framework based on psychological development, well-being, and satisfaction of innate psychological needs (Deci and Ryan 1985, 2000). Specifically, SDT proposes that understandings of three basic psychological needs – autonomy, competence, and relatedness – will shed light on both the content and processes involved in goal achievement (Deci and Ryan 2000). These needs are considered innate because the satisfaction of these needs is necessary for optimal, healthy development, regardless of whether an individual consciously values these factors or not (Deci and Ryan 2000). The causal sequence derived from SDT (i.e. Social factors → Need Satisfaction → Motivation → Outcomes) has extensive empirical support (Vallerand 2007; Vallerand and Lalande 2011).

According to SDT, motivations to engage in behaviors vary in terms of their *orientation* and their level of *intensity*. The fundamental distinction in orientation proposed by SDT is between intrinsic and extrinsic motivations, such that intrinsic motivations are the result of an inherent sense of interest or pleasure in an activity and extrinsic motivations to engage in an

activity result from the expectation of a separate outcome, like a reward or punishment (Ryan and Deci 2000a; Séguin, Pelletier, and Hunsley 1998). Additionally, intrinsic motivations are accompanied by an *internal* perceived locus of causality, whereas extrinsic motivations are associated with an *external* perceived locus of causality (Ryan and Deci 2000a). Although most activities are undertaken due to extrinsic motivations (Ryan and Deci 2000a), intrinsic orientations are associated with a wide range of positive behaviors and life outcomes (Ryan and Deci 2000b), such as persistence and perseverance, greater productivity, and more meaningful cognitive engagement (e.g., Grant 2008; Nov, Arazy, and Anderson 2011; Walker, Greene, and Mansell 2006).

All intrinsic motivation is self-determined, and some forms of extrinsic motivation can be self-determined (Ryan and Deci 2000a, 2000b). The classic view of extrinsic motivations is that it is nefarious and pulls an actor into play against their will; however, extrinsic motivations can also cause behavior that appears self-endorsed (e.g., through rewards or positive feedback). It is inaccurate to state that only intrinsically motivated acts are *voluntary*, because voluntary participation can also be achieved through positive reinforcement too (Ryan and Deci 2000a). Although intrinsically motivated behavior is associated with positive life outcomes compared to an extrinsic orientation, there is evidence that the more self-determined forms of extrinsic motivation lead to better outcomes than less self-determined forms (Koestner et al. 1996). This indicates that self-determined or autonomous behavior in general is an important factor in the relationship between motivation and positive general outcomes.

Intrinsic Motivation

Actions or tasks that are performed simply for pleasure or interest are the result of

intrinsic motivation (Séguin, Pelletier, and Hunsley 1998). This type of motivation is based on a hedonistic evaluation of whether an activity is enjoyable and personally satisfying (Grant 2008; Lilleker and Koc-Michalska 2016). Early work on the subject identified four themes associated with intrinsically motivated behavior, aptly dubbed "the four C's": challenge, curiosity, control, and context (Lepper and Henderlong 2000). Intrinsic motivation is considered a natural tendency that can be seen in humans from infancy onward when children play, explore, and demonstrate curiosity without the expectation of punishments or rewards (Ryan and Deci 2000a). In fact, intrinsic motivation is closely linked to the primary socialization process and the events and structures therein. The SDT framework[28] offers an explanation for the variation in intrinsic motivations between individuals based on available social contexts and structures. SDT asserts that the context surrounding an individual's action can maintain and enhance intrinsic motivation if that context helps to bring about feelings of *competence* while simultaneously accompanied by a sense of *autonomy* within the individual (Deci and Ryan 1985, 2000). Competence and autonomy represent two of the three innate psychological needs which must be satisfied in order to achieve optimal development (Deci and Ryan 2000). This process begins in infancy, and the context is largely controlled by parents and other primary socializing agents. For example, in order for a child to feel intrinsically motivated to walk, the child would need to experience a sense of self-determination for learning to walk, as well as feelings of competence toward to the skill. In contrast, a child who is motivated into walking through the promise of material rewards (e.g., toys) or parental approval would be considered extrinsically motivated.

[28] The more specific theoretical framework for intrinsic motivations is called Cognitive Evaluation Theory (CET), and it is considered a subtheory of SDT.

Contexts with an absence of barriers, setbacks, putdowns, etc. can also facilitate intrinsic motivation (Ryan and Deci 2000a). Although autonomy and competence are the primary factors which explain variability in intrinsic motivations, another more distal but nevertheless important factor in this process is *relatedness*, or a sense of belonging and connectedness to persons, groups, or cultures (Ryan and Deci 2000a, 2000b). The importance of this psychological need is demonstrated elsewhere in psychology, such as in Bowlby's famous Attachment Theory (1958). Evidence supports the need for relatedness in maintaining and enhancing intrinsic motivation. Infants who are more securely attached to their mothers displayed more exploratory behaviors (Frodi, Bridges, and Grolnick 1985), and intrinsic motivation in children declined if they perceived their teachers as cold and uncaring (Ryan and Grolnick 1986) or when performing a task in the presence of an adult stranger who ignores them (Anderson, Manoogian, and Reznick 1976). However, relatedness is not as important in maintaining and enhancing intrinsic motivation as autonomy and competence because there are cases in which individuals engage in solitary activities for inherent pleasure (Ryan and Deci 2000b).

Although intrinsic motivation has largely been ignored in the social movements literature, there is evidence that it plays a role in participation in collective action. There are positive and moderately strong correlations between intrinsic motivations and a composite activism orientation scale developed by Corning and Myers (2002), as well as between intrinsic motivations and the conventional action subscale; that said, there was no significant correlations between intrinsic motivations and the high-risk subscale (Klar and Kasser 2009). Intrinsic motives also have the strongest predictive power for the length of time volunteers engaged in a citizen science project for NASA (Nov, Arazy, and Anderson 2011). In a direct

examination of intrinsic and extrinsic motivations for engaging in collective action both online and offline, Lilleker and Koc-Michalska (2016) reported that both intrinsic and extrinsic motivations have a significant and positive effect on participation in offline collective action. While intrinsic motivations have a stronger direct effect on participation, it is the case that extrinsic motivation has a stronger total effect. However, the authors found no significant relationship between intrinsic motivations and online participation directly, whereas extrinsic motivations continued to be a significant positive predictor of participation in online actions.

Extrinsic Motivation

Actions or tasks that are performed with the expectation of a separate outcome, such as a punishment or reward, are the result of extrinsic motivation (Ryan and Deci 2000a). This type of motivation is much more varied than intrinsic motivation, with some types of extrinsic motivation prompting passive or controlled behaviors and other types promoting active and voluntary participation (Ryan and Deci 2000a). Because not all tasks are inherently interesting or pleasurable, the proper application of extrinsic motivations can overcome issues of non-participation or non-compliance. Indeed, a pillar of Resource Mobilization Theory is to offer "selective incentives" to motivate participation (Klandermans 1984; Olson 1965); this represents an extrinsic motivation to participate in collective action.

The variance in extrinsic motivations and their consequences are the result of "differing degrees to which the value and regulation of the requested behavior have been internalized and integrated" (Ryan and Deci 2000b:71). Behavior regulation is a fundamental aspect of extrinsic motivation because the latter typifies behavior that is performed despite a lack of inherent interest or pleasure; that is to say, in the absence of intrinsic motivation, an individual

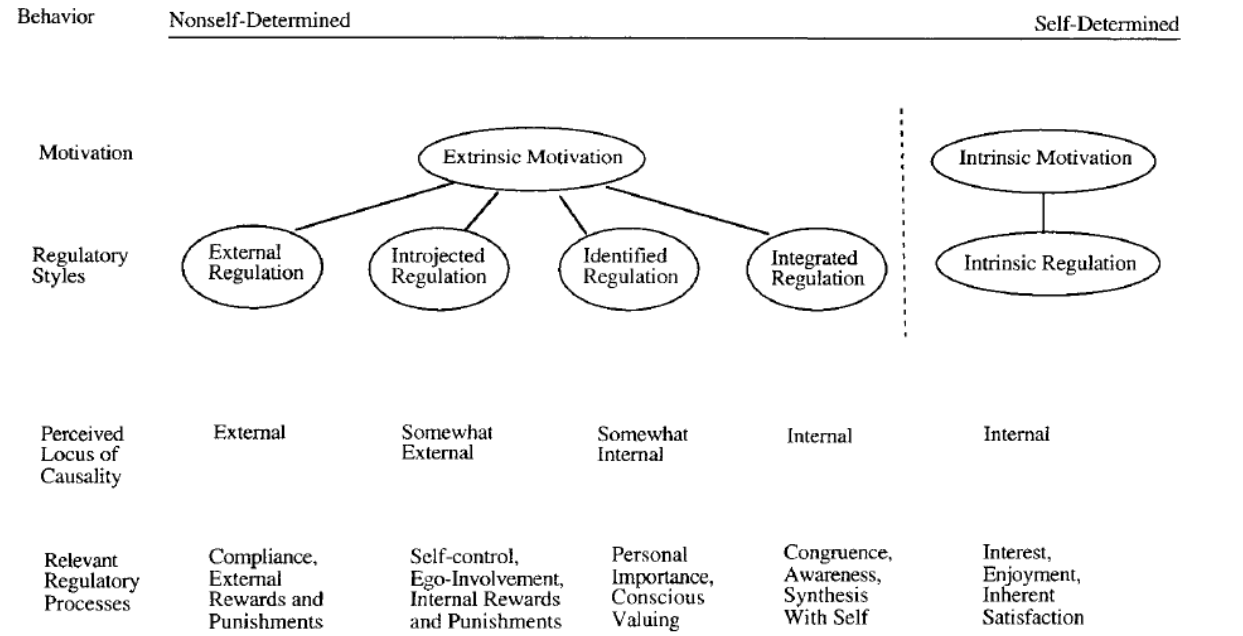
must regulate their behavior in some manner to perform the task. According to SDT, individuals are inherently motivated to internalize the regulation of culturally important activities, even those that are initially perceived as uninteresting (Deci et al. 1994). The process of behavior regulation can vary according to the degree to which the behavior is *internalized*.

Internalization is the process of transforming external regulations into internal regulations (Koestner et al. 1996). According to Berger and Luckmann (1967), internalization is the third and final step of socialization, wherein an individual has become familiar with a social setting, its formal rules and informal norms, and can begin to function appropriately in that setting. Intrinsic motivation does not require internalization of value because it is inherently interesting (Koestner et al. 1996). Oftentimes, extrinsically motivated behaviors are initially performed because they are prompted, modeled, or valued by significant others to whom we feel (or want to feel) attached or related, which suggests that relatedness is germane to internalization (Ryan and Deci 2000b). The four types of extrinsic motivation are said to represent different levels of internalization of regulation, ranging from successful internalization to more partial or incomplete forms (Koestner et al. 1996). The more active, voluntary, or autonomous forms of extrinsic motivation represent more fully internalized regulations (Ryan and Deci 2000a).

Self-Determination Theory[29] describes four types of extrinsic motivation and their respective regulation processes (Deci and Ryan 1985). The four types of extrinsic motivation are External Regulation, Introjection, Identification, and Integration (see Figure 4.1).

[29] Specific theories about extrinsic motivation within SDT are presented as a subtheory called Organismic Integration Theory (OIT).

Figure 4.1: Types of Motivation



Source: Ryan and Deci 2000b (modified)

External regulation. This is the least autonomous form of extrinsic motivation (Ryan and Deci 2000a). External regulation represents the classic view of extrinsic motivation because it describes participation that is based on receiving tangible rewards and/or the avoidance of punishment (Deci and Ryan 2000). A student who only completes their homework because of their parents' control is an example of external regulation (Ryan and Deci 2000b). This type of motivation can undermine intrinsic motivation, meaning base levels of intrinsic motivation for a task can decrease in the future after receiving this type of extrinsic motivation (Desi, Koestner, and Ryan 1999). This would suggest that external regulation is a poor mechanism for recruiting committed participants.

Introjected regulation. Introjection is a more autonomous form of extrinsic motivation than External Regulation, but it is still relatively controlling (Ryan and Deci 2000a). This form of extrinsic motivation describes a level of behavioral regulation that is slightly more internalized

and the individual takes on responsibility for administering punishments and/or rewards as opposed to these consequences being administered by others (Deci and Ryan 2000). Introjection is associated with ego states that contribute to behavior regulation, such as anxiety, guilt, shame, or pride (Ryan and Deci 2000a). For example, some religious members may only attend weekly services because they would feel guilty otherwise. Because introjection requires partial internalization of regulations, these behaviors are more likely to persist over time, but it still represents a relatively unstable form of regulation and is not a strong source of commitment (Koestner et al. 1996).

Regulation through identification. Identification represents a more autonomous and more fully internalized type of regulation than the previous types. This form of extrinsic motivation describes individuals who consciously identify with the value or importance of a goal or behavior (Ryan and Deci 2000b). As a more autonomous and internalized form of regulation, motivation by identification is expected to be better maintained and associated with stronger commitment and performance (Deci and Ryan 2000). A student who values academic achievement and commits extra time to math homework to ensure his or her own success is motivated by identification; this is different from an intrinsically motivated student who commits extra time to math homework for sheer pleasure.

Regulation though integration. Integration is the most complete form of internalization, representing a state of self-determined behavior that is the result of not only full identification with the importance of a behavior, but also the full assimilation of those identifications into other aspects of the "self" (Deci and Ryan 2000; Ryan and Deci 2000b). Integrated forms of motivation are voluntary and autonomous and share many of the desirable qualities of intrinsic

motivation (Ryan and Deci 2000a). However, this form of extrinsic motivation is nonetheless distinct from intrinsic motivation because regulation through integration exhibits an external perceived locus of control. In this instance, behavior is performed for its instrumental value with respect to some outcome separate of the behavior and not for the pleasure of the behavior itself (Ryan and Deci 2000a). It may be the case that many activists are acting under a process of integrated regulation rather than intrinsic motivation, assuming these activists commit their resources (time, money, etc.) out of an integrated sense of morality or ideology rather than the inherent pleasures of donating or attending a protest demonstration.

Although individuals who are intrinsically motivated to participate would be ideal for social movements, the need for large numbers of participants and other resources means extrinsic motivations will continue to play an important role in recruitment. Furthermore, it would be difficult for a social movement or its carriers to manipulate intrinsic motivations for participation[30], which leaves extrinsic motivations as a crucial tool for inducing or encouraging behavior which might not otherwise occur. Although more autonomous forms of extrinsic motivation can contribute to and strengthen one's sense of intrinsic motivation, less autonomous forms (such as those that offer punishments or rewards for participating) can undermine intrinsic motivation over the long term (Bénabou and Tirole 2003; Desi, Koestner, and Ryan 1999). In other words, social movements must balance their desire to induce large-scale participation with simple rewards because this motivational strategy can ultimately

[30] The only way to manipulate one's intrinsic motivation for participation in a social movement would be to vary either the goal of the movement or the tactic being used. However, by changing goals or tactics, social movements would risk losing participants who were intrinsically motivated to participate in the original goal and/or tactic, thus this is an incomplete strategy for gaining intrinsically motivated participants.

backfire by undermining existing intrinsic motivations and dampening long-term commitment.

The most direct application of motivations to social movement research comes from Klandermans (1984) and his typology of motives: reward motives, social motives, and collective motives. I contend that Klandermans' typology aligns with SDT. Reward motives, which include material costs and benefits for participants, clearly represent external regulation, the least autonomous type of extrinsic motivation. Klandermans (1984) reported that reward motives had the weakest explanatory power of all three motives for moderate and militant actions. According to SDT, external regulation produces the weakest forms of commitment and can undermine long-term commitment. Klandermans' social motives refer to the reactions of significant others. In terms of SDT, social motives are extrinsic motivations because the locus of control is external, but they could represent identified or integrated regulation, the most autonomous forms of extrinsic motivation. These two forms of extrinsic motivation regulate behavior through internalized values and cultural norms, which are social constructions that would permeate an individual's social group. Although the individual subscribes to the values and norms of the social group, these behaviors are still considered extrinsically motivated because the behavior is performed for its instrumental value with respect to some outcome separate – like social approval or esteem – and not for the pleasure of the behavior itself (Ryan and Deci 2000a). Finally, an individual acts using a collective motive when both the collective good and the type of participation are attractive (Klandermans 1984), which seems to evoke the same sense of inherent pleasure that indicates intrinsic motivation. According to Klandermans (1984), social motives and collective motives have similarly high levels of explanatory power for participating in political action; however, collective motives better

explain conventional action, while social motives better explain radical action. If social motives represent more autonomous forms of extrinsic motivation and collective motives represent intrinsic motivations, then Klandermans' results largely align with results that indicate a complementary or additive effect of intrinsic and extrinsic motivations.

Early theories of intrinsic and extrinsic motivation assumed that only one orientation or the other could be the basis for a particular action, but later research showed that intrinsic and extrinsic motivations have only a weak negative correlation and can have an additive effect to increase overall motivation in some contexts (Lepper and Henderlong 2000). This is further supported by the work of Lilleker and Koc-Michalska (2016), who found that intrinsic and extrinsic motivations, combined, exert a positive influence on participation in both online and offline domains. Moreover, extrinsic motivations had greater explanatory power for online participation (Lilleker and Koc-Michalska 2016). A study of Canadian voters revealed that regulation through identification in the domain of politics was positively correlated with actually voting, whereas there was no significant correlation between voting and introjected regulation, a less autonomous form of extrinsic motivation (Koestner et al. 1996).

RESEARCH DESIGN

Within the limited study of social movements and the larger bodies of research on education, work, and religion, there is a clear trend regarding intrinsic motivation and healthy or desirable outcomes, such as commitment, engagement, and general well-being. However, due to the exclusion of intrinsic motivations from RMT and mainstream social psychological research, there is very little theorizing or empirical study of this important motivational orientation. According to Bennett and Segerberg (2013), online collective action closely mirrors

the logic of traditional (or offline) social movement activity. Research supports the notion that traditional social movement participation is associated with higher levels of intrinsic motivation (Klar and Kasser 2009; Lilleker and Koc-Michalska 2016). Therefore, I hypothesize that participation in online collective actions will be associated with higher levels of intrinsic motivation. Also, because intrinsic motivation is associated with deeper, more meaningful cognitive engagement (Walker, Greene, and Mansell 2006), I also hypothesize that individuals with high levels of intrinsic motivation will be more likely to report more meaningful levels of intended engagement with the stimulus presented in the survey, such as commenting and creating one's own material online. In other words, high intrinsic motivation scores will have a significant positive effect on intended behavior scores.

Participation in online connective action, on the other hand, may be more motivated by extrinsic factors. For example, individuals who join Facebook communities are primarily interested in opportunities to socialize and enhance their reputation among peers (Valenzuela, Park, and Kee 2009). Similarly, Park (2015) reports information seeking, social interaction, and recreational motivations as the main reasons why people use social networking sites. Furthermore, the primary motivations of bloggers are to influence others and build a reputation (Ekdale et al. 2010), or to connect with other people (Liu et al. 2007). Lilleker and Koc-Michalska (2016) found that intrinsic motivations did not have a statistically significant direct effect on online participation, but extrinsic motivations did. However, their study suffers from measurement errors in both their operationalization of "online participation" and "intrinsic motivations," which may have caused the authors to misestimated the role of intrinsic motivations in online actions. Connective action is expressive and employs "personal action

frames," which allow individuals to articulate their personal grievances toward the issue at hand (Bennett and Segerberg 2013). This definition seems to imply a more intrinsically motivated approach for addressing one's grievances, but due to the lack of empirical research on connective action, the association between intrinsic motivations and connective action is largely unknown. Given that most actions are extrinsically motivated (Ryan and Deci 2000a) and the dominance of selective incentives within the social movements literature, I hypothesize that extrinsic motivations are a positive significant predictor of participation in both collective and connective action online.

Furthermore, I have incorporated an experimental design into the study which attempts to enhance feelings of intrinsic motivation. Intrinsically motivated behaviors are associated with greater persistence and commitment, qualities that would serve any social movement well. If the relationship between higher levels of intrinsic motivation and deeper engagement with the Facebook posts exists, efforts to enhance feelings of intrinsic motivation should therefore increase the likelihood of respondents participating with the Facebook posts. Events that satisfy our basic needs (autonomy, competency, and relatedness) tend to increase intrinsic motivation (Desi, Koestner, and Ryan 1999). Using rewards or feedback to enhance feelings of intrinsic motivation must be handled carefully. On one hand, rewards can be interpreted as an attempt to control one's behavior; in this case, the rewards would not enhance intrinsic motivation. However, rewards that are informational in nature are more likely to be perceived as an indicator of competency, which may enhance intrinsic motivations (Desi, Koestner, and Ryan 1999). In past studies, positive feedback was found to enhance intrinsic motivation (Cameron and Pierce 1994; Desi 1971; Tang and Hall 1995), and controlling feedback was found to

diminish intrinsic motivation (Ryan 1982; Pittman et al. 1980). I will randomly assign respondents to one of three conditions for this experiment: the first group will receive no additional feedback and continue through the survey as normal; the second group will receive feedback that is intended to be neutral in nature, providing no information to respondents about competency and thus should have no effect on intrinsic motivations; and the third group will receive a feedback message that is intended to be positive in tone and informational in nature, but also one that provides an indicator of competency so that need satisfaction can occur. Respondents will be shown these feedback message during the survey, immediately prior to the questions about intrinsic and extrinsic motivation.

Finally, there is a clear trend in the literature that intrinsic and extrinsic motivations often work in complementary fashion, such that political participation is best predicted by high levels of both intrinsic and extrinsic motivation for a task (Grant 2008; Klandermans 1984; Lilleker and Koc-Michalska 2016; Pinard 2011; Séguin, Pelletier, and Hunsley 1998). Therefore, I hypothesize a complementary nature between intrinsic and extrinsic motivations, such that high levels of both types of motivation will correspond to a higher likelihood of participation in both collective and connective actions.

Survey Measures

To measure intrinsic and extrinsic motivation, I have adapted items from the work of Lilleker and Koc-Michalska (2016), but I improve upon their design to address a couple of flaws. The original design of Lilleker and Koc-Michalska's intrinsic motivation index featured four items, of which only one is retained in the current study ("*I personally feel good taking part in this activity*"). The remaining original items will be discarded because they measure an external

perceived locus of control ("*I feel that this activity is the sort of thing that my friends and family would respect me for*") or self-efficacy ("*I feel I can influence others*," "*I feel I can influence policymakers*"). These items have been replaced, and the final three items that measure intrinsic motivation are: "I personally feel good taking part in this activity," "This activity is pleasurable," and "I enjoy taking part in this activity." Response categories range from "Strongly Disagree" (1) to "Strongly Agree" (7). Respondents will be shown two political activities, one of which exemplifies the logic of collective action (such as "join or follow an environmental organization on Facebook," "sign an online petition for an environmental organization," and "donate money online to an environmental organization") and the other will exemplify the logic of connective action (such as "express my views about the environment on Facebook," "create or share a meme to describe my feelings about the environment," and "change my profile photo to support pro-environmental causes").

In addition to providing data on intrinsic motivations for these activities, respondents will also be asked about their level of agreement with four statements intended to capture their feelings of extrinsic motivation for these political activities. The extrinsic motivation index items used by Lilleker and Koc-Michalska (2016) insufficiently address the range of extrinsic motivations and the authors do not specify which types of extrinsic motivation their index is intended to measure. The items measuring extrinsic motivation in the current study are as follows: "Engaging in this activity fits with my identity or personality," "This activity is important for helping the environment," "I feel proud when I take part in this activity," "I would feel guilty if I did not take part in this activity." These items represent the three most autonomous forms of extrinsic motivation. I have chosen to exclude measurement of external regulation (i.e.,

rewards or punishments from others) because it is theoretically a poor mechanism for recruiting committed participants and is not well applied to social movement participation.[31] The first item measures regulation through integration, the most autonomous form of extrinsic motivation. The second item measures regulation through identification, the next most autonomous form. The third and final items measure introjected regulation, which is associated with ego states such as pride and guilt. Response categories form a 7-point Likert-style scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (7).

Respondents will also view two Facebook posts and indicate the likelihood of performing six common actions. Each Facebook post exemplifies one of the logics of action, and responses will be reduced using factor analysis to produce two variables of participation that will be used as the dependent variables in this study.

Control Variables

Individuals bring their offline "baggage" into online interactions, including issues related to gender, race, stage in the life course, and socioeconomic status (Dutta-Bergman 2006; Wellman and Gulia 2002). Also, intrinsic and extrinsic motivations are developed and maintained in social contexts, which are known to suffer from longstanding gender, race, and class dynamics. Therefore, the current study will control for age, gender, race/ethnicity, income, and education. There is strong evidence that intrinsic motivation seems to decline with age, and some evidence suggests external motivation may decrease over time as well (Lepper and Henderlong 2000). Males are more likely to be persistent protestors (offline), or "stalwarts"

[31] This line of logic holds unless stories about "paid protestors" are to be believed. It is conceivable that others may be rewarded for their online activity, such as Instagram and YouTube "celebrities" who can use their large number of followers to make money thought sponsored products or advertisements.

(Saunders et al. 2012), and evidence suggests that males are also more likely to engage in online political participation (Lilleker and Koc-Michalska 2016). Males are more likely to engage in expressive communication online and offline (Park 2015), which may indicate an increased likelihood of male participation in connective actions. Individuals with high socioeconomic status, based on measures of education and income, are also more likely to participate in political activities (Lilleker and Koc-Michalska 2016; McClurg 2003; Nam 2012).

RESULTS

Sample Summary Statistics

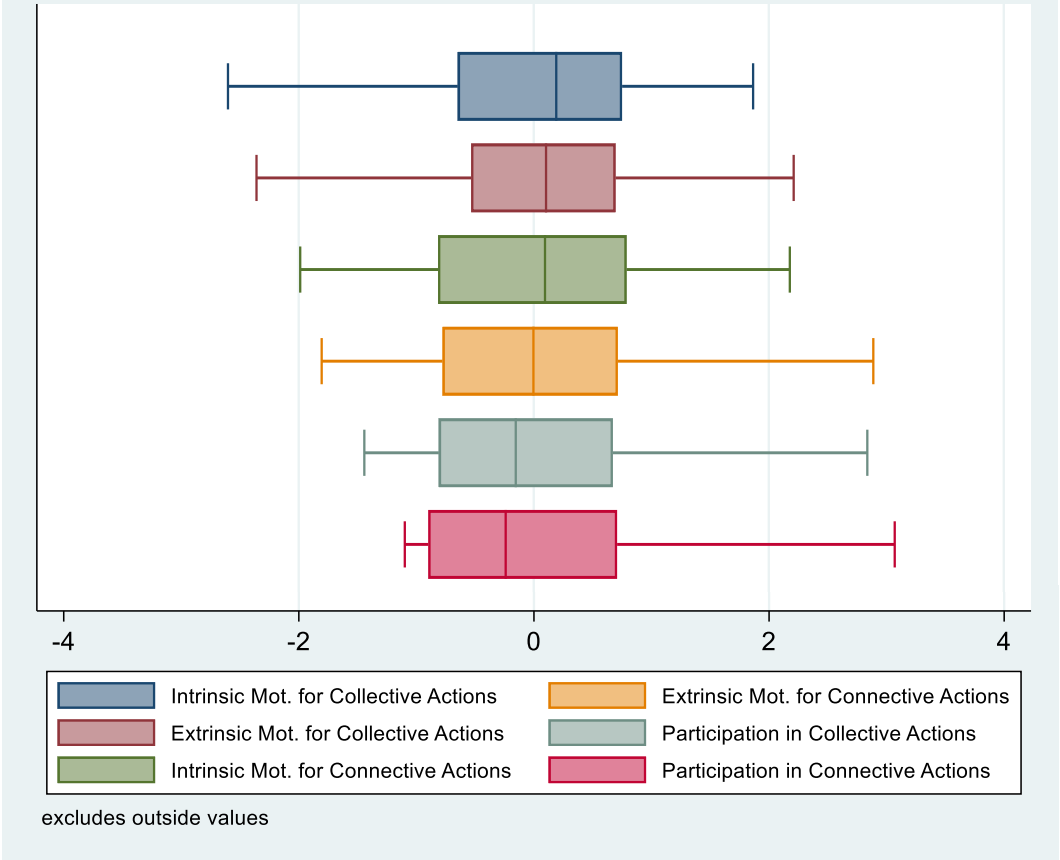
Tables showing the distribution of common demographic variables for both the student sample and the MTurk sample can be found in Chapter 2 (Table 2.1 – Table 2.4). The following tables and figures show the distribution of the key variables of interest for this study. Factor loading information can be found in Tables 4.1 and 4.2, and Figures 4.2 and 4.3 provide box plot visualizations of the variables.

Correlation matrices are provided in Tables 4.3 and 4.4. Intrinsic and Extrinsic motivation have strong, positive correlations with one another for both collective actions (student r=0.7512, MTurk r=0.7602) and connective actions (student r=0.7667, MTurk r=0.8215). Intrinsic motivation is positively correlated with participation in collective action (student r=0.3510, MTurk r=0.4746) and connective actions (student r=0.3712, MTurk r=0.4209). Extrinsic motivations are also positively correlated with participation in collective action (student r=0.4168, MTurk r=0.5183) and connective action (student r=0.3933, MTurk r=0.4814).

Table 4.1: Factor Loadings for Student Motivations and Participation Variables	
Items	***Loadings***
Intrinsic Motivations for Collective Actions	
I personally feel good taking part in this activity.	0.8866
This activity is pleasurable.	0.9336
I enjoy taking part in this activity.	0.9424
Extrinsic Motivation of Collective Actions	
Engaging in this activity fits with my identity or personality.	0.8017
This activity is important for helping the environment.	0.8102
I feel proud when I take part in this activity.	0.8552
I would feel guilty if I did not take part in this activity.	0.6343
Intrinsic Motivations of Connective Actions	
I personally feel good taking part in this activity.	0.9005
This activity is pleasurable.	0.9533
I enjoy taking part in this activity.	0.9580
Extrinsic Motivations for Connective Actions	
Engaging in this activity fits with my identity or personality.	0.8122
This activity is important for helping the environment.	0.8291
I feel proud when I take part in this activity.	0.8748
I would feel guilty if I did not take part in this activity.	0.7379
Participation in Collective Actions	
Ignore the post or do nothing	-0.7529
Like the post	0.7271
Share the post	0.8489
Comment on the post	0.7316
Click a link in the post to visit another website	0.5652
Create my own post based on this content	0.7425
Participation in Connective Actions	
Ignore the post or do nothing	-0.7624
Like the post	0.7947
Share the post	0.8227
Comment on the post	0.7678
Click a link in the post to visit another website	0.7245
Create my own post based on this content	0.7234

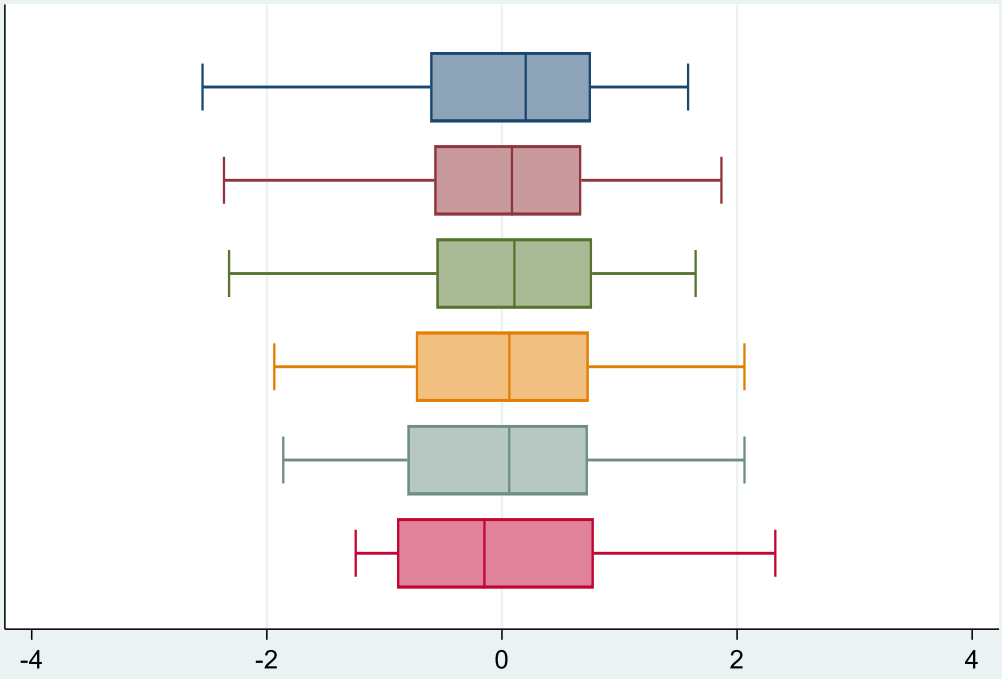
Table 4.2: Factor Loadings for MTurk Motivations and Participation Variables	
Items	***Loadings***
Intrinsic Motivations for Collective Actions	
I personally feel good taking part in this activity.	0.8854
This activity is pleasurable.	0.9310
I enjoy taking part in this activity.	0.9438
Extrinsic Motivation of Collective Actions	
Engaging in this activity fits with my identity or personality.	0.8091
This activity is important for helping the environment.	0.8322
I feel proud when I take part in this activity.	0.8769
I would feel guilty if I did not take part in this activity.	0.6691
Intrinsic Motivations of Connective Actions	
I personally feel good taking part in this activity.	0.9260
This activity is pleasurable.	0.9479
I enjoy taking part in this activity.	0.9483
Extrinsic Motivations for Connective Actions	
Engaging in this activity fits with my identity or personality.	0.8453
This activity is important for helping the environment.	0.8872
I feel proud when I take part in this activity.	0.9015
I would feel guilty if I did not take part in this activity.	0.7869
Participation in Collective Actions	
Ignore the post or do nothing	-0.8004
Like the post	0.7287
Share the post	0.8620
Comment on the post	0.8057
Click a link in the post to visit another website	0.6457
Create my own post based on this content	0.7616
Participation in Connective Actions	
Ignore the post or do nothing	-0.7878
Like the post	0.7804
Share the post	0.8806
Comment on the post	0.8190
Click a link in the post to visit another website	0.8049
Create my own post based on this content	0.8023

Figure 4.2: Box Plots of Student Motivations and Participation Variables



excludes outside values

Figure 4.3: Box Plots of MTurk Motivations and Participation Variables



excludes outside values

Table 4.3: Correlation Matrix of Student Motivations and Participation Variables						
	Intrinsic Mot. for Collective Actions	***Extrinsic Mot. for Collective Actions***	***Intrinsic Mot. for Connective Actions***	***Extrinsic Mot. for Connective Actions***	***Collective Participation***	***Connective Participation***
Intrinsic Mot. for Collective Actions	1.0000					
Extrinsic Mot. for Collective Actions	0.7512	1.0000				
Intrinsic Mot. for Connective Actions	0.3544	0.3809	1.0000			
Extrinsic Mot. for Connective Actions	0.3548	0.4528	0.7667	1.0000		
Collective Participation	0.3510	0.4168	0.3878	0.4324	1.0000	
Connective Participation	0.2473	0.3046	0.3712	0.3933	0.4502	1.0000

Table 4.4: Correlation Matrix of MTurk Motivations and Participation Variables						
	Intrinsic Mot. for Collective Actions	***Extrinsic Mot. for Collective Actions***	***Intrinsic Mot. for Connective Actions***	***Extrinsic Mot. for Connective Actions***	***Collective Participation***	***Connective Participation***
Intrinsic Mot. for Collective Actions	1.0000					
Extrinsic Mot. for Collective Actions	0.7602	1.0000				
Intrinsic Mot. for Connective Actions	0.4800	0.5097	1.0000			
Extrinsic Mot. for Connective Actions	0.4603	0.5512	0.8215	1.0000		
Collective Participation	0.4746	0.5183	0.4987	0.5599	1.0000	
Connective Participation	0.3021	0.3393	0.4209	0.4814	0.5362	1.0000

Experimental Stimulus

In order to test the effectiveness of the experimental stimulus, I performed a series of two-sample t-tests of means. Respondents were randomly assigned to one of three possible conditions: survey-only, neutral feedback, and motivational feedback. There should be no difference in intrinsic motivation nor participation between the survey-only and neutral feedback groups. However, the motivational feedback group should have statistically higher levels of intrinsic motivation and participation than both the survey-only and neutral feedback groups if the experiment is successful.

In comparing the means of the survey-only and neutral feedback groups, results indicate that there are no significant differences between the two groups on measures of intrinsic motivations for collective action, intrinsic motivations for connective actions, participation in collective actions, and participation in connective actions. Neither the student sample nor the MTurk sample show any significant differences between the survey-only and neutral feedback groups, and these results indicate that the neutral feedback was indeed neutral in its effects.

However, in comparing the survey-only and motivational feedback groups for the student sample, there are also no significant differences between the various measures of intrinsic motivation and participation, despite expectations that there would be differences between these conditions. In the MTurk sample, the motivational feedback group exhibited statistically higher levels of intrinsic motivation for collective action ($t(671) = -2.548$, $p<0.01$) than the survey-only group; however, there are no other significant differences between the two groups on measures of intrinsic motivation for connective actions, nor participation in collective or connective actions.

In comparing the final two groups, the neutral feedback and motivational feedback groups, t-tests show no significant differences on all measures of intrinsic motivation and participation for the student sample, despite expectations that the two conditions would produce differing results. However, the MTurk sample again shows statistically higher levels of intrinsic motivation for collective actions ($t(668) = -1.681$, $p<0.05$) among the motivational feedback group, but there are no other statistically significant differences between these two groups in terms of intrinsic motivation for connective actions nor participation of any kind.

These t-test results show that the experimental stimulus was not effective in enhancing motivations or participation among the student sample, and the experiment was only mildly successful for the MTurk sample. MTurk Workers who viewed the motivational feedback stimulus exhibited statistically higher levels of intrinsic motivation for collective actions, but this enhanced intrinsic motivation did not lead to increased participation as hypothesized. It may be the case that the experimental stimulus was able to enhance feelings of intrinsic motivation, but that the strength of that effect was not great enough to produce subsequent enhancements in participation. Although the measurement of intrinsic motivations for collective actions has a range of approximately four points, the difference between the mean values in each condition was less than 0.2 points. This indicates that, while the difference in means is statistically significant, the difference between the two conditions represents only a small proportion of the overall variance in the variable. Furthermore, this effect was only found in the MTurk samples and not the student samples, and only for intrinsic motivations for collective actions and not connective actions. Given the limited effects of the experimental stimulus, the remaining analyses do not account for respondents' assignment to one of the three groups.

OLS Regression

Tables 4.5 and 4.6 provide the regression results for participation in collective action. In the regression analyses, I have recategorized the gender variable to represent "non-males," that is respondents who identified as either female, transgender, or "other / prefer not to say." While income and education are measured ordinally in the survey, I treat them as continuous variables in the analyses because this method is more appropriate than treating the categories as nominal, and these variables are used as controls for which a continuous approximation is not highly consequential.

In both the student sample and the MTurk sample, intrinsic and extrinsic motivations independently predict participation in collective actions; however, when included in the model together (Model 3), extrinsic motivation appears to moderate the effects of intrinsic motivation, although both variables continue to exert a statistically significant effect on collective participation in the combined model. Extrinsic motivation exerts a stronger effect on collective participation for both samples. These two variables alone explain a good proportion of the total variance in collective participation (student R^2=0.1770, MTurk R^2=0.2840).

In the full model in Tables 4.5 and 4.6 (Model 4), collective participation is regressed on both motivational variables and the demographic characteristics. Students who identify as non-males, black, or Hispanic are more likely to participate in collective actions online. Students with higher levels of education are less likely to participate in collective action, but the effect is weak (b= -0.0972, p<0.001). MTurk Workers who identify as black, Hispanic, Native American, and "other" are statistically more likely to participate in collective actions online than Workers who identify as white only. Older Workers and Workers with lower household incomes are also

Table 4.5: Regression Results for Student Participation in Collective Actions on Motivations				
	(1) Collective Participation	*(2) Collective Participation*	*(3) Collective Participation*	*(4) Collective Participation*
Intrinsic Motivations for Collective Actions	0.351*** (0.0261)		0.0871* (0.0383)	0.0723+ (0.0382)
Extrinsic Motivations for Collective Actions		0.417*** (0.0253)	0.351*** (0.0383)	0.319*** (0.0385)
Age				0.00768 (0.00562)
Non-Males				0.272*** (0.0620)
Race (white omitted)				
Black (only)				0.215+ (0.130)
Hispanic (only)				0.304* (0.137)
Asian (only)				-0.104 (0.0877)
Native American (only)				0.188 (0.402)
Other (only)				0.426 (0.262)
Multiracial				0.0958 (0.105)
Education				-0.0972*** (0.0273)
Income				0.00123 (0.00675)
Political Affiliation (Rep. omitted)				
Democrat				0.0869 (0.124)
Libertarian				-0.0321 (0.207)
Unaffiliated / Independent				0.0430 (0.110)
Other				0.172 (0.220)
Political Orientation				-0.0214 (0.0275)
Constant	0.000 (0.0261)	0.000 (0.0253)	0.000 (0.0253)	-0.299 (0.232)
N	1288	1288	1288	1288
R^2	0.1232	0.1737	0.1770	0.2104
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**				

Table 4.6: Regression Results for MTurk Participation in Collective Actions on Motivations				
	(1) Collective Participation	*(2) Collective Participation*	*(3) Collective Participation*	*(4) Collective Participation*
Intrinsic Motivations for Collective Actions	0.475*** (0.0277)		0.191*** (0.0411)	0.180*** (0.0405)
Extrinsic Motivations for Collective Actions		0.518*** (0.0270)	0.373*** (0.0411)	0.363*** (0.0407)
Age				0.00947*** (0.00237)
Non-Males				-0.0345 (0.0583)
Race (white omitted)				
Black (only)				0.334** (0.109)
Hispanic (only)				0.351** (0.130)
Asian (only)				0.128 (0.104)
Native American (only)				0.491+ (0.258)
Other (only)				0.564* (0.236)
Multiracial				0.158 (0.108)
Education				-0.0346 (0.0216)
Income				-0.0276** (0.00880)
Political Affiliation (Rep. omitted)				
Democrat				-0.115 (0.0975)
Libertarian				0.0837 (0.153)
Unaffiliated / Independent				-0.0904 (0.0896)
Other				-0.101 (0.224)
Political Orientation				0.0118 (0.0225)
Constant	0.000 (0.0277)	0.000 (0.0269)	0.000 (0.0267)	0.00686 (0.221)
N	1009	1009	1009	1009
R^2	0.2252	0.2686	0.2840	0.3215
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**				

Table 4.7: Regression Results for Student Participation in Connective Actions on Motivations				
	(1) Connective Participation	*(2) Connective Participation*	*(3) Connective Participation*	*(4) Connective Participation*
Intrinsic Motivations for Connective Actions	0.371*** (0.0259)		0.169*** (0.0397)	0.136*** (0.0397)
Extrinsic Motivations for Connective Actions		0.393*** (0.0256)	0.264*** (0.0397)	0.255*** (0.0395)
Age				-0.0180** (0.00566)
Non-Males				0.272*** (0.0626)
Race (white omitted)				
Black (only)				0.0879 (0.131)
Hispanic (only)				-0.116 (0.138)
Asian (only)				-0.0287 (0.0886)
Native American (only)				-0.309 (0.406)
Other (only)				-0.0548 (0.264)
Multiracial				0.0491 (0.106)
Education				-0.00713 (0.0278)
Income				-0.000854 (0.00682)
Political Affiliation (Rep. omitted)				
Democrat				0.0706 (0.125)
Libertarian				0.0617 (0.208)
Unaffiliated / Independent				0.0107 (0.111)
Other				-0.237 (0.222)
Political Orientation				-0.00368 (0.0275)
Constant	0.000 (0.0259)	0.000 (0.0256)	0.000 (0.0255)	-0.0237 (0.234)
N	1288	1288	1288	1288
R^2	0.1378	0.1547	0.1664	0.1961
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**				

Table 4.8: Regression Results for MTurk Participation in Connective Actions on Motivations				
	(1) Connective Participation	*(2) Connective Participation*	*(3) Connective Participation*	*(4) Connective Participation*
Intrinsic Motivations for Connective Actions	0.421*** (0.0286)		0.0784 (0.0484)	0.0590 (0.0486)
Extrinsic Motivations for Connective Actions		0.481*** (0.0276)	0.417*** (0.0484)	0.404*** (0.0493)
Age				0.000272 (0.00250)
Non-Males				-0.0215 (0.0608)
Race (white omitted)				
Black (only)				0.309** (0.114)
Hispanic (only)				0.264+ (0.137)
Asian (only)				0.177 (0.109)
Native American (only)				0.330 (0.270)
Other (only)				0.287 (0.246)
Multiracial				0.226* (0.113)
Education				0.00158 (0.0225)
Income				-0.0218* (0.00922)
Political Affiliation (Rep. omitted)				
Democrat				0.0102 (0.102)
Libertarian				0.227 (0.159)
Unaffiliated / Independent				-0.109 (0.0936)
Other				-0.0811 (0.234)
Political Orientation				-0.0248 (0.0236)
Constant	0.000 (0.0286)	0.000 (0.232)	0.000 (0.234)	0.187 (0.231)
N	1009	1009	1009	1009
R^2	0.1772	0.2317	0.2337	0.2593
(standard errors in parentheses) **+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001**				

more likely to participate in collective actions. These models explain a greater proportion of the total variance in collective participation for MTurk Workers (R^2=0.3215) than for students (R^2=0.2104).

Tables 4.7 and 4.8 provide regression results for participation in connective action. A similar pattern emerges with respect to intrinsic and extrinsic motivations, such that each variable is a significant predictor of participation independently, but when both variables are included in the model, extrinsic motivations appear to moderate the effect of intrinsic motivations. In the MTurk sample (Table 4.8), intrinsic motivation loses its statistical significance when extrinsic motivations are incorporated (Model 3). Looking at the full models, controlling for demographic characteristics does not significantly change the relationships between motivations and participation in connective action. Among the student sample, the only variable besides intrinsic and extrinsic motivations that predicts participation in connective actions is gender, with non-males demonstrating a higher likelihood or participation (b=0.272, p<0.001). MTurk Workers who identify as multiracial or having lower household incomes are more likely to participate in connective actions.

These results are largely in line with the expected effects of intrinsic and extrinsic motivations on participation in online actions. Intrinsic and extrinsic motivation have a strong, positive correlation with one another for both collective and connective actions. While each type of motivation is a strong and significant predictor of participation independently, when both types of motivation are included in the models, it is extrinsic motivation that exerts a stronger effect, for both collective and connective participation.

Between the two samples, results for intrinsic motivation are curiously mixed. In the full

models (Model 4), students exhibit a weak effect of intrinsic motivation on collective participation (b=0.0723, p<0.1) but a stronger effect of intrinsic motivation on connective participation (b=0.136, p<0.001). This pattern is reversed for MTurk Workers, who exhibit a stronger effect of intrinsic motivation on collective participation (b=0.180, p<0.001) than on connective participation (b=0.0590, *non-sig*). There is a similar discrepancy with extrinsic motivation, although the differences appear less pronounced. For students, extrinsic motivation exerts a stronger effect on participation in collective action (b=0.319, p<0.001) than in connective actions (b=0.255, p<0.001). For MTurk Workers, extrinsic motivation exerts a stronger effect on participation in connective action (b=0.404, p<0.001) than in collective actions (b=0.363, p<0.001).

DISCUSSION

The substance of the present research was to attempt a novel study of the influence of intrinsic and extrinsic motivations on participation in online actions, both "collective" and "connective" in nature. Prior research attempting a similar task (Lilleker and Koc-Michalska 2016), found that offline actions are driven by both intrinsic and extrinsic motivations, whereas online actions are primarily driven by extrinsic motivations. However, their measurement of online actions did not account for the differing logics of collective and connective action. On one hand, the logic of collective action is not confined to the internet (like connective action is) and can be said to be the underlying logic for most offline actions. Therefore, one might expect the logic of collective action to be motivated by the same factors online as it has been offline action – both intrinsic and extrinsic motivations.

My results indicate that the logic of collective action *online* seems to operate in the

same fashion as offline participation under this logic. In final models for both the student and MTurk samples, both intrinsic and extrinsic motivations exert a statistically significant effect on participation, with extrinsic motivation exerting the stronger effect. However, the results for participation under a logic of connective action are mixed. In the student sample, both intrinsic and extrinsic motivations continue to have a statistically significant effect on participation in the final model, with extrinsic motivations exerting the stronger effect. In the MTurk sample, however, intrinsic motivations fail to reach statistical significance in the final model and extrinsic motivations remain a strong, statistically significant predictor of participation in connective actions.

Based on these results, it is clear that online participation is primarily driven by extrinsic motivations, for both collective and connective actions. Intrinsic motivations continue to play a role in online collective action, although the effect size is much weaker than that of extrinsic motivations. The role of intrinsic motivations in connective actions displays mixed results, with statistically significant effects emerging in the student sample but not the MTurk sample. Although neither sample is nationally representative, the MTurk sample is more diverse, and may be a better indicator of what researchers would find using more generalizable data. However, the student sample, with its higher proportion of younger respondents, may be more indicative of the future of these relationships. In other words, the student sample contains more respondents who are likely to have been raised with these internet communication technologies, and therefore may be a better indicator of the motivations of future participants who will also have been raised in a society with ubiquitous access to these digital technologies.

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CHAPTER 5: CONCLUSIONS

This dissertation contributes to field of social movements by conducting a large, quantitative analysis on the emerging dynamics of social movement participation online. My works brings together theories from the fields of sociology, political science, and psychology to create theoretically robust hypotheses, and I provide compelling empirical evidence through sampling from two distinct data sources: a large public university and a crowd-sourced online marketplace. Due to the recency of these phenomena, most published research at this time is qualitative in nature and tends to focus on current or former participants in online actions. By incorporating a quantitative framework and sampling a more general population, I hope to move the discourse on these phenomena toward a more rigorous examination of the social psychological influences on social movement participation.

In Chapter 2, I examined the relationship between collective identity and participation. As with all my analyses, participation is conceptualized as engagement with Facebook posts that either exhibit an underlying logic of collective action or a logic of connective action. This conceptualization is based on the work of Bennett and Segerberg (2012, 2013), who have also asserted that participation in connective actions does not require any form of underlying collective identity. Participation in collective actions, on the other hand, require an affiliation with a politicized identity, a specific type of collective identity that requires identifying as either a member of a social movement organization (SMO) or as an activist (Bennett and Segerberg 2013). My results indicate that politicized identity is a strong, positive predictor of participation

in collective action. Factor analysis scores for participation have a range of approximately 4 points, from approximately -1 to 3. Controlling for various demographic characteristics, the regression coefficient for politicized identity is b=0.319 (p<0.001, student sample) or b=0.515 (p<0.001, MTurk sample), which means that a 1-point increase in politicized identity is associated with a 0.32- to 0.52-point increase in one's collective participation score. Politicized identity and the control variables account for 18-32% of the total variance in collective participation (based on student and MTurk samples, respectively). Participation in connective actions is far less understood, and this study made a novel attempt to measure autonomous identity as a predictor of connective participation. Factor analysis of autonomous identity measures revealed a two-factor solution which reflected the concept's "Inclusivity" and "Organizational Distrust" aspects. The Inclusivity factor had a statistically significant but weak association with connective participation (student b=0.105, p<0.001; MTurk b=0.199, p<0.001), whereas Organizational Distrust had a near-zero effect on connective participation (student b= -0.00137, *non-sig*; MTurk b= -0.0727, p<0.05).As a check on the criterion validity of the autonomous identity variables, I performed additional regression analyses that showed politicized identity to be a much stronger predictor of participation in connective actions than either autonomous identity factor (see Tables 2.14 and 2.16). Regression coefficients for politicized identity were approximately twice as large as the coefficients for "Inclusivity" in both the student and MTurk samples. Although autonomous identity has a positive, statistically significant effect on participation in connective actions, the effect of politicized identity is much larger. These results indicate that autonomous identity is not the primary driver of participation

that I had expected it to be, but it also casts doubt on the Bennett and Segerberg's claims that connective participation is not associated with any underlying collective identity.

In Chapter 3, I examined the relationship between three perceptions of efficacy and participation in online collective and connective actions. The concept of self-efficacy is most often used in psychology studies, and the concept of collective efficacy is more common to studies in political science and sociology. Bringing these disciplines together, I argue that collective efficacy can be conceptualized as a mediator between self-efficacy and participation. I also introduce the concept of tactical efficacy as mediator between collective efficacy and participation. Self-efficacy has had weak or non-significant effects on participation in past studies (Niemi et al. 1991; van Zomeren, Saguy, and Schellhaas 2012), and I observed this pattern with my student sample; self-efficacy never reached statistical significance as a predictor of either type of participation. Although MTurk results did reach statistical significance, regression coefficients indicate a weak relationship with participation in collective and connective actions. My results also indicate that collective efficacy acts as a mediator between self-efficacy and participation, and tactical efficacy acts as a mediator between collective efficacy and participation, for both collective and connective actions. Controlling for demographic variables, tactical efficacy emerges as one of the strongest predictors of participation in both collective and connective action, especially in the MTurk sample.

In Chapter 4, I examined the relationship between intrinsic and extrinsic motivations and participation under both logics of digitally-networked action. This work was inspired by Lilleker and Koc-Michalska's (2016) recent and novel attempt to incorporate the study of intrinsic and extrinsic motivations into the field of social movements, joining other fields in

sociology like education, religion, and work/occupations in examining the effect of these psychological variables on sociological phenomena. I also incorporated an experimental design into this study, displaying feedback messages to a random subset of respondents designed to enhance their feelings of intrinsic motivation. Unfortunately, these messages failed to produce the intended results, which may be a result of the survey design or it could indicate that delivering impersonal feedback messages via computer (cf. in-person human researcher) is not sufficiently motivating for the purposes of participating in online social movements. Aside from the null results from this innovative experiment, results offer broad support for the chapter's hypotheses. Intrinsic and extrinsic motivations have a strong, positive correlation, and each variable exerts a moderately strong, statistically significant effect on participation in online action independently. However, when both motivations are included in the analysis, extrinsic motivation moderates the effect of intrinsic motivation. In both collective and connective actions, extrinsic motivations emerge as the strongest predictor of participation. However, my two samples demonstrate opposite patterns in terms of the which logic of action is most affected by intrinsic and extrinsic motivations. The student sample shows a stronger effect of intrinsic motivation on connective action (b=0.14, p<0.001) than on collective action (b=0.07, p<0.1); the MTurk sample shows a weaker effect of intrinsic motivation on connective action (b=0.06, *non-sig*) than on collective action (b=0.18, p<0.001). Similarly, the student sample shows a stronger effect of extrinsic motivation on collective action (b=0.32, p<0.001) than on connective action (b=0.26, p<0.1); the MTurk sample shows a weaker effect of extrinsic motivation on collective action (b=0.36, p<0.001) than on connective action (b=0.40, p<0.001).

Neither sample is representative, so I cannot make a claim as to which pattern of association is most accurate.

In order to continue this line of research, similar surveys must be constructed using other social movements and issues. Those results should be reviewed alongside the present study's results in a meta-analysis in order to best explain the pattern of associations between these social psychological variables and participation and both logics of online actions. Data quality could also be improved by using nationally representative samples. The generalizability of the present study is limited by the focus on a single social movement (environmental movement) and issue (global warming), as well as a reliance on a "laboratory setting" in which respondents report their *likely* behavior and view Facebook posts from individuals who are not their "real friends." There are methods that could reduce the impact of laboratory conditions, such as locating and recruiting individuals who have participated in in these types of actions in the past or posting information to Facebook and tracking the patterns of engagement with backend analytic tools like Facebook Analytics (https://analytics.facebook.com). However, these methods would also introduce other biases into the data, such as relying on individuals to report their feelings when they completed an action in the past or introducing ethical concerns regarding deceptive tracking behaviors. Future survey data collection should seek to replicate as many measures from the current study as possible to preserve internal validity.

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APPENDIX A: FULL SURVEY TEXT

1. Which of the following best describes your status at the University of North Carolina at Chapel Hill (UNC-CH)? ***

- ○ Undergraduate Student (1)
- ○ Graduate Student (2)
- ○ Professional Student (3)
- ○ Other Affiliation to UNC-CH (4)
- ○ Not Affiliated with UNC-CH (5)

*** *This question does not appear in the survey for MTurk Workers*

2. Are you an American citizen?

- ○ Yes (1)
- ○ No (2)

3. In what year were you born? _____

4. Please indicate all the social media sites with whom you have an active account.
Check all that apply.

- ☐ Facebook (1)
- ☐ Twitter (2)
- ☐ Instagram (3)
- ☐ YouTube (4)
- ☐ Google+ (5)
- ☐ None of the above (6)

5. Please choose the item which best represents your views.

- ○ "Global warming" or "climate change" is not happening. (1)
- ○ "Global warming" or "climate change" is happening, but there is nothing humans can do to stop it. (2)
- ○ "Global warming" or "climate change" is happening, but it is not an important issue to address. (3)
- ○ "Global warming" or "climate change" is happening, and there may be something humans can do to stop it. (4)

End of Block: Screening Questionnaire

Start of Block: Demographics

6. What is your gender identity?

- ○ Male (1)
- ○ Female (2)
- ○ Transgender (3)
- ○ Other / Prefer not to say (4)

7. What is the highest educational degree you have earned?

- ○ Less than High School Diploma (1)
- ○ High School Diploma or GED (2)
- ○ Some College, but have not earned a degree (3)
- ○ Associate's Degree or Professional Certificate (4)
- ○ Bachelor's Degree (5)
- ○ Master's Degree (6)
- ○ Professional Degree or Doctorate Degree (7)

8. What is your estimated annual household income?

- ○ Less than $10,000 (1)
- ○ $10,000 - $19,999 (2)
- ○ $20,000 - $29,999 (3)
- ○ $30,000 - $39,999 (4)
- ○ $40,000 - $49,999 (5)
- ○ $50,000 - $59,999 (6)
- ○ $60,000 - $69,999 (7)
- ○ $70,000 - $79,999 (8)
- ○ $80,000 - $89,999 (9)
- ○ $90,000 - $99,999 (10)
- ○ $100,000 - $149,999 (11)
- ○ More than $150,000 (12)

9. What is your race or ethnicity?
Check all that apply.

- ☐ White or Caucasian (1)
- ☐ Black or African American (2)
- ☐ Asian or Pacific Islander (3)
- ☐ Native American (4)
- ☐ Hispanic or Latino (5)
- ☐ Other (6)

10. What is your political affiliation?

- ○ Republican (1)
- ○ Democrat (2)
- ○ Libertarian (3)
- ○ Unaffiliated / Independent (4)
- ○ Other (5)

11. Which of the following best describes your political orientation?

- ○ Extremely Liberal (1)
- ○ Liberal (2)
- ○ Slightly Liberal (3)
- ○ Moderate / Middle of the Road (4)
- ○ Slightly Conservative (5)
- ○ Conservative (6)
- ○ Extremely Conservative (7)

End of Block: Demographics

Start of Block: Collective Identity

12. Please indicate your level of agreement with the following statements.

I see myself as a member of a pro-environment organization. (1)	Strongly Disagree (1) ... Strongly Agree (7)
I identify with members of pro-environmental organizations. (2)	Strongly Disagree (1) ... Strongly Agree (7)
I have strong ties to members of pro-environmental organizations. (3)	Strongly Disagree (1) ... Strongly Agree (7)
Being a member of a pro-environmental organization is important to me. (4)	Strongly Disagree (1) ... Strongly Agree (7)

13. Please indicate your level of agreement with the following statements.

Large organizations are not good at achieving their goals. (1)	Strongly Disagree (1) ... Strongly Agree (7)
The strongest decisions are made when different sets of opinions are considered first. (2)	Strongly Disagree (1) ... Strongly Agree (7)
I believe my personal experiences are worth sharing with others. (3)	Strongly Disagree (1) ... Strongly Agree (7)
Labels are restrictive. (4)	Strongly Disagree (1) ... Strongly Agree (7)
I am skeptical of large organizations. (5)	Strongly Disagree (1) ... Strongly Agree (7)
It is important to hear all voices in the room before making a decision. (6)	Strongly Disagree (1) ... Strongly Agree (7)

End of Block: Collective Identity

Start of Block: Efficacy

14. Please indicate your level of agreement with each statement.

I can achieve most of the goals I set for myself. (1)	Strongly Disagree (1) ... Strongly Agree (7)
When facing difficult tasks, I am certain that I will accomplish them. (2)	Strongly Disagree (1) ... Strongly Agree (7)
In general, I think I can obtain outcomes that are important to me. (3)	Strongly Disagree (1) ... Strongly Agree (7)
I believe I can succeed at most any endeavor to which I set my mind. (4)	Strongly Disagree (1) ... Strongly Agree (7)
I am able to successfully overcome many challenges. (5)	Strongly Disagree (1) ... Strongly Agree (7)
I am confident that I can perform effectively on many different tasks. (6)	Strongly Disagree (1) ... Strongly Agree (7)
Compared to other people, I can do most tasks very well. (7)	Strongly Disagree (1) ... Strongly Agree (7)
Even when things are tough, I can perform quite well. (8)	Strongly Disagree (1) ... Strongly Agree (7)

15. Please indicate your level of agreement with each statement.

I believe that people, as a group, can achieve difficult goals. (1)	Strongly Disagree (1) ... Strongly Agree (7)
The collective actions of a large group of people can change society. (2)	Strongly Disagree (1) ... Strongly Agree (7)
A large group of people cannot persuade the government or corporations to make changes. (3)	Strongly Disagree (1) ... Strongly Agree (7)
I believe that people can achieve their common goals if they work together. (4)	Strongly Disagree (1) ... Strongly Agree (7)
People are more likely to get what they want when they work with others to achieve their goals. (5)	Strongly Disagree (1) ... Strongly Agree (7)

16. How effective do you think the following behaviors are in reducing global warming?

Contacting elected representatives (1)	Not Effective at all (1) ... Extremely Effective (5)
Donating time to environmental organizations (2)	Not Effective at all (1) ... Extremely Effective (5)
Donating money to environmental organizations (3)	Not Effective at all (1) ... Extremely Effective (5)
Attending a community meeting or rally about environmental issues (4)	Not Effective at all (1) ... Extremely Effective (5)
Changing personal habits to be more environmentally-friendly (5)	Not Effective at all (1) ... Extremely Effective (5)
Changing American values and culture to be more environmentally-friendly (6)	Not Effective at all (1) ... Extremely Effective (5)

17. How effective do you think the following behaviors are in reducing global warming?

Using social media to share news articles about environmental issues (7)	Not Effective at all (1) ... Extremely Effective (5)
Using social media to share your personal grievances about environmental issues (8)	Not Effective at all (1) ... Extremely Effective (5)
Using social media to create or share "memes" about climate change ** (9)	Not Effective at all (1) ... Extremely Effective (5)
Changing your profile photo on social media to show solidarity with the environmental movement (10)	Not Effective at all (1) ... Extremely Effective (5)
On Facebook, using the Like, Share, and Comment features to express your views on environmental issues (11)	Not Effective at all (1) ... Extremely Effective (5)

*** An Internet meme could be anything from an image to an email or video file; however, the most common type of meme is an image of a person or animal with a funny or witty caption.*

End of Block: Efficacy

Start of Block: Neutral

You have completed 65% of the survey. The survey will take approximately four (4) more minutes to complete.

End of Block: Neutral

Start of Block: Motivational

Your responses indicate your level of concern for the environment is: **above average**.

End of Block: Motivational

Start of Block: Motivations

For the next two questions, please explain how you would feel if you performed the following tasks.

18a) Followed or joined a pro-environmental organization online.

I personally feel good taking part in this activity. (1)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is pleasurable. (2)	Strongly Disagree (1) ... Strongly Agree (7)
I enjoy taking part in this activity. (3)	Strongly Disagree (1) ... Strongly Agree (7)
Engaging in this activity fits with my identity or personality. (4)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is important for helping the environment. (5)	Strongly Disagree (1) ... Strongly Agree (7)
I feel proud when I take part in this activity. (6)	Strongly Disagree (1) ... Strongly Agree (7)
I would feel guilty if I did not take part in this activity. (7)	Strongly Disagree (1) ... Strongly Agree (7)

18b) Signed an online petition for a pro-environmental organization.

I personally feel good taking part in this activity. (1)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is pleasurable. (2)	Strongly Disagree (1) ... Strongly Agree (7)
I enjoy taking part in this activity. (3)	Strongly Disagree (1) ... Strongly Agree (7)
Engaging in this activity fits with my identity or personality. (4)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is important for helping the environment. (5)	Strongly Disagree (1) ... Strongly Agree (7)
I feel proud when I take part in this activity. (6)	Strongly Disagree (1) ... Strongly Agree (7)
I would feel guilty if I did not take part in this activity. (7)	Strongly Disagree (1) ... Strongly Agree (7)

18c) Donated money online to a pro-environmental organization.

I personally feel good taking part in this activity. (1)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is pleasurable. (2)	Strongly Disagree (1) ... Strongly Agree (7)
I enjoy taking part in this activity. (3)	Strongly Disagree (1) ... Strongly Agree (7)
Engaging in this activity fits with my identity or personality. (4)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is important for helping the environment. (5)	Strongly Disagree (1) ... Strongly Agree (7)
I feel proud when I take part in this activity. (6)	Strongly Disagree (1) ... Strongly Agree (7)
I would feel guilty if I did not take part in this activity. (7)	Strongly Disagree (1) ... Strongly Agree (7)

Please explain how you would feel if you performed the following task.

19a) Expressed your views about the environment online.

I personally feel good taking part in this activity. (1)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is pleasurable. (2)	Strongly Disagree (1) ... Strongly Agree (7)
I enjoy taking part in this activity. (3)	Strongly Disagree (1) ... Strongly Agree (7)
Engaging in this activity fits with my identity or personality. (4)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is important for helping the environment. (5)	Strongly Disagree (1) ... Strongly Agree (7)
I feel proud when I take part in this activity. (6)	Strongly Disagree (1) ... Strongly Agree (7)
I would feel guilty if I did not take part in this activity. (7)	Strongly Disagree (1) ... Strongly Agree (7)

19b) Created or shared a meme online to describe your feelings about the environment. **

I personally feel good taking part in this activity. (1)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is pleasurable. (2)	Strongly Disagree (1) ... Strongly Agree (7)
I enjoy taking part in this activity. (3)	Strongly Disagree (1) ... Strongly Agree (7)
Engaging in this activity fits with my identity or personality. (4)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is important for helping the environment. (5)	Strongly Disagree (1) ... Strongly Agree (7)
I feel proud when I take part in this activity. (6)	Strongly Disagree (1) ... Strongly Agree (7)
I would feel guilty if I did not take part in this activity. (7)	Strongly Disagree (1) ... Strongly Agree (7)

*** An Internet meme could be anything from an image to an email or video file; however, the most common type of meme is an image of a person or animal with a funny or witty caption.*

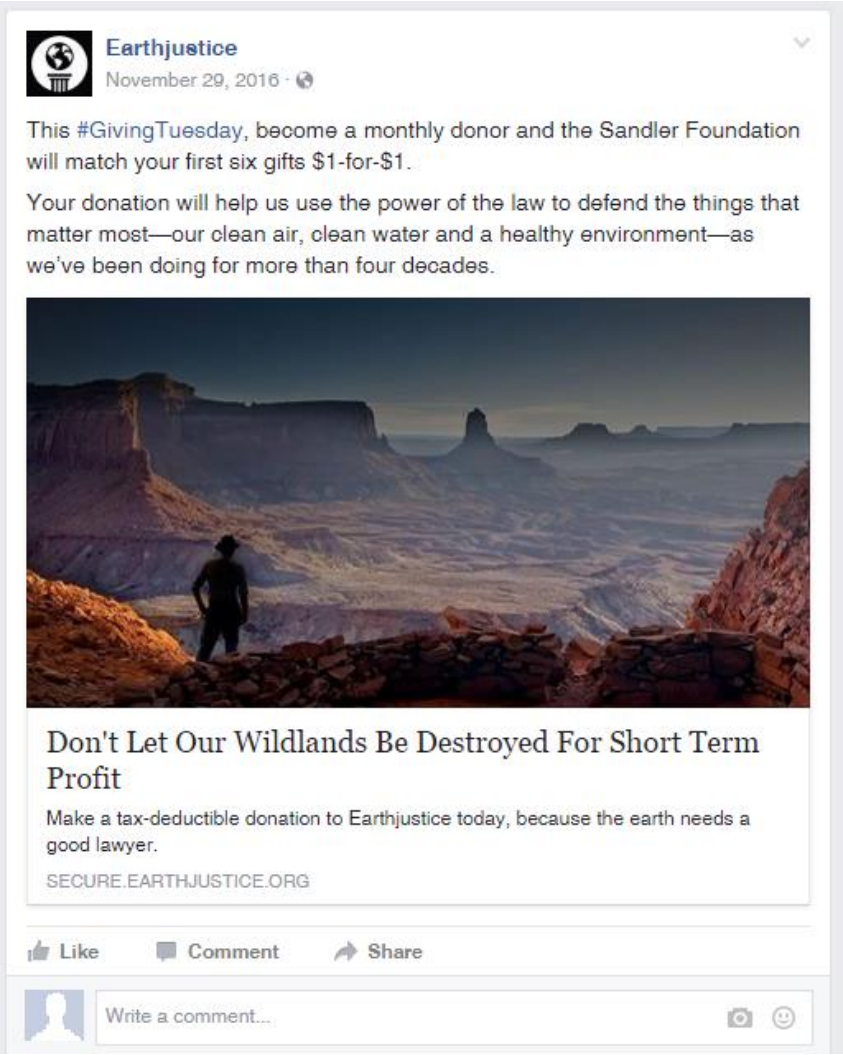
19c) Changed your profile photo online to support a pro-environmental cause.

I personally feel good taking part in this activity. (1)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is pleasurable. (2)	Strongly Disagree (1) ... Strongly Agree (7)
I enjoy taking part in this activity. (3)	Strongly Disagree (1) ... Strongly Agree (7)
Engaging in this activity fits with my identity or personality. (4)	Strongly Disagree (1) ... Strongly Agree (7)
This activity is important for helping the environment. (5)	Strongly Disagree (1) ... Strongly Agree (7)
I feel proud when I take part in this activity. (6)	Strongly Disagree (1) ... Strongly Agree (7)
I would feel guilty if I did not take part in this activity. (7)	Strongly Disagree (1) ... Strongly Agree (7)

End of Block: Motivations

Start of Block: Intended Engagement with Facebook

20a) You will now review two Facebook posts. Please review each Facebook post carefully and consider how you would react if you saw these posts on your own Facebook account.



If you saw a post like this on Facebook today, what is your likelihood of performing the following actions?

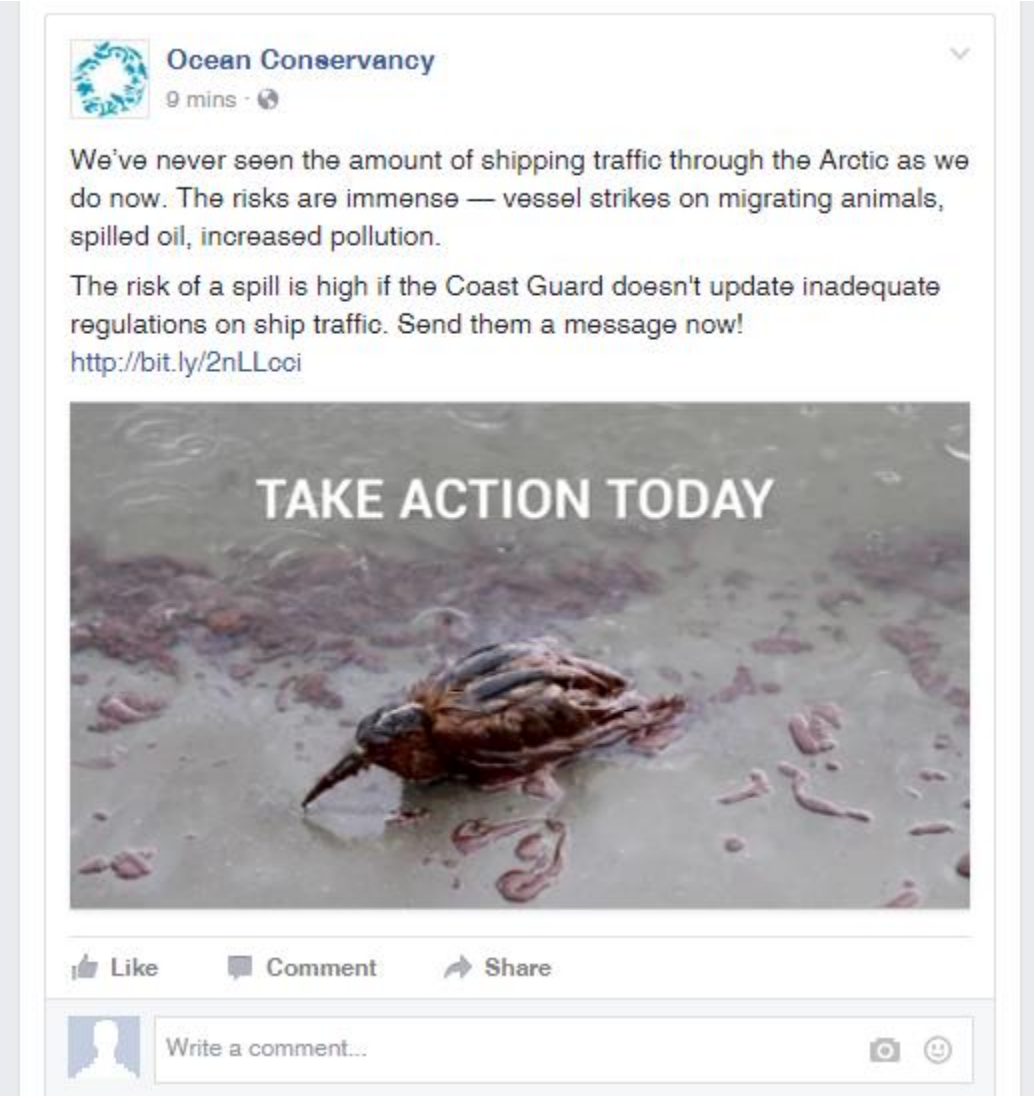
Ignore the post or do nothing (1)	Extremely Unlikely (1) ... Extremely Likely (7)
Like the post (2)	Extremely Unlikely (1) ... Extremely Likely (7)
Share the post (3)	Extremely Unlikely (1) ... Extremely Likely (7)
Comment on the post (4)	Extremely Unlikely (1) ... Extremely Likely (7)
Click a link in the post to visit another website (5)	Extremely Unlikely (1) ... Extremely Likely (7)
Create my own post based on this content (6)	Extremely Unlikely (1) ... Extremely Likely (7)

20b) You will now review two Facebook posts. Please review each Facebook post carefully and consider how you would react if you saw these posts on your own Facebook account.

If you saw a post like this on Facebook today, what is your likelihood of performing the following actions?

Ignore the post or do nothing (1)	Extremely Unlikely (1) ... Extremely Likely (7)
Like the post (2)	Extremely Unlikely (1) ... Extremely Likely (7)
Share the post (3)	Extremely Unlikely (1) ... Extremely Likely (7)
Comment on the post (4)	Extremely Unlikely (1) ... Extremely Likely (7)
Click a link in the post to visit another website (5)	Extremely Unlikely (1) ... Extremely Likely (7)
Create my own post based on this content (6)	Extremely Unlikely (1) ... Extremely Likely (7)

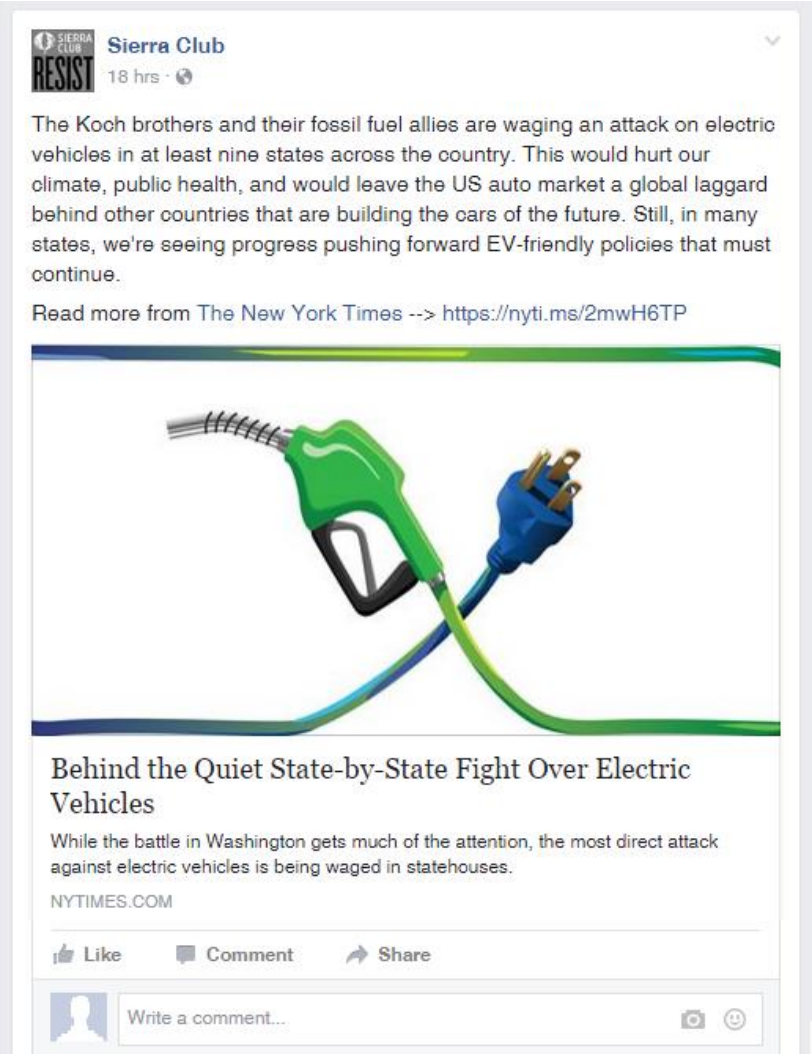
20c) You will now review two Facebook posts. Please review each Facebook post carefully and consider how you would react if you saw these posts on your own Facebook account.



If you saw a post like this on Facebook today, what is your likelihood of performing the following actions?

Ignore the post or do nothing (1)	Extremely Unlikely (1) ... Extremely Likely (7)
Like the post (2)	Extremely Unlikely (1) ... Extremely Likely (7)
Share the post (3)	Extremely Unlikely (1) ... Extremely Likely (7)
Comment on the post (4)	Extremely Unlikely (1) ... Extremely Likely (7)
Click a link in the post to visit another website (5)	Extremely Unlikely (1) ... Extremely Likely (7)
Create my own post based on this content (6)	Extremely Unlikely (1) ... Extremely Likely (7)

20d) You will now review two Facebook posts. Please review each Facebook post carefully and consider how you would react if you saw these posts on your own Facebook account.



If you saw a post like this on Facebook today, what is your likelihood of performing the following actions?

Ignore the post or do nothing (1)	Extremely Unlikely (1) ... Extremely Likely (7)
Like the post (2)	Extremely Unlikely (1) ... Extremely Likely (7)
Share the post (3)	Extremely Unlikely (1) ... Extremely Likely (7)
Comment on the post (4)	Extremely Unlikely (1) ... Extremely Likely (7)
Click a link in the post to visit another website (5)	Extremely Unlikely (1) ... Extremely Likely (7)
Create my own post based on this content (6)	Extremely Unlikely (1) ... Extremely Likely (7)

21a) Please review this Facebook post carefully and consider how you would react if you saw this post on your own Facebook account.

If you saw a post like this on Facebook today, what is your likelihood of performing the following actions?

Ignore the post or do nothing (1)	Extremely Unlikely (1) ... Extremely Likely (7)
Like the post (2)	Extremely Unlikely (1) ... Extremely Likely (7)
Share the post (3)	Extremely Unlikely (1) ... Extremely Likely (7)
Comment on the post (4)	Extremely Unlikely (1) ... Extremely Likely (7)
Click a link in the post to visit another website (5)	Extremely Unlikely (1) ... Extremely Likely (7)
Create my own post based on this content (6)	Extremely Unlikely (1) ... Extremely Likely (7)

21b) Please review this Facebook post carefully and consider how you would react if you saw this post on your own Facebook account.

If you saw a post like this on Facebook today, what is your likelihood of performing the following actions?

Ignore the post or do nothing (1)	Extremely Unlikely (1) ... Extremely Likely (7)
Like the post (2)	Extremely Unlikely (1) ... Extremely Likely (7)
Share the post (3)	Extremely Unlikely (1) ... Extremely Likely (7)
Comment on the post (4)	Extremely Unlikely (1) ... Extremely Likely (7)
Click a link in the post to visit another website (5)	Extremely Unlikely (1) ... Extremely Likely (7)
Create my own post based on this content (6)	Extremely Unlikely (1) ... Extremely Likely (7)

21c) Please review this Facebook post carefully and consider how you would react if you saw this post on your own Facebook account.

If you saw a post like this on Facebook today, what is your likelihood of performing the following actions?

Ignore the post or do nothing (1)	Extremely Unlikely (1) ... Extremely Likely (7)
Like the post (2)	Extremely Unlikely (1) ... Extremely Likely (7)
Share the post (3)	Extremely Unlikely (1) ... Extremely Likely (7)
Comment on the post (4)	Extremely Unlikely (1) ... Extremely Likely (7)
Click a link in the post to visit another website (5)	Extremely Unlikely (1) ... Extremely Likely (7)
Create my own post based on this content (6)	Extremely Unlikely (1) ... Extremely Likely (7)

21d) Please review this Facebook post carefully and consider how you would react if you saw this post on your own Facebook account.

If you saw a post like this on Facebook today, what is your likelihood of performing the following actions?

Ignore the post or do nothing (1)	Extremely Unlikely (1) ... Extremely Likely (7)
Like the post (2)	Extremely Unlikely (1) ... Extremely Likely (7)
Share the post (3)	Extremely Unlikely (1) ... Extremely Likely (7)
Comment on the post (4)	Extremely Unlikely (1) ... Extremely Likely (7)
Click a link in the post to visit another website (5)	Extremely Unlikely (1) ... Extremely Likely (7)
Create my own post based on this content (6)	Extremely Unlikely (1) ... Extremely Likely (7)