SOCIAL MEDIA AND INDIVIDUAL AND COLLECTIVE ACTIVISM: THE ROLE OF INTERDEPENDENCE AND ONLINE POLITICAL EFFICACY

By

Alcides A. Velasquez Perilla

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Communication Arts and Sciences – Media and Information Studies

2012

ABSTRACT

SOCIAL MEDIA AND INDIVIDUAL AND COLLECTIVE ACTIVISM: THE ROLE OF INTERDEPENDENCE AND ONLINE POLITICAL EFFICACY

By

Alcides A. Velasquez Perilla

A growing interest exists among scholars to examine how the Internet, and social media in particular, may facilitate and support not only individual political participation but also collective activism. A stream of research has examined Internet use and political participation by including the concept of internal political efficacy. However, this concept only takes into account individual perceptions of political efficacy to explain individual political participation, while a wide array of political activities are performed in coordination and in concert with others. Socio-cognitive theory proposes the concept of collective efficacy to explain agency in collective pursuits. Therefore, by propounding the concepts of online political self-efficacy and online collective political efficacy, and also the necessary correspondence between each of these concepts when looking at individual and collective modes of political participation, this dissertation argues that conflicting findings in previous studies regarding the relationship between efficacy beliefs, Internet use and political participation can be explained based on the distinction between individual and collective levels of agency. Through a survey of student members of three activist groups of a large Mid-Western university (n=222) this dissertation found 1) that the more individuals feel they are capable of using the Internet and social media to attain their political objectives the more likely they will participate in individual political actions, 2) that individual political participation has a stronger relationship with a specific measure of

efficacy beliefs regarding perceptions of the capability of using the Internet for political activities than a general measure of political efficacy perceptions, 3) that individuals' previous successful experiences using the Internet for individual political participation influence both online political self-efficacy perceptions and general internal political efficacy perceptions, 4) that individuals' perceptions that the activist group they belong to is capable of using online media to attain its objectives is influenced by each individual's own perceptions that they are capable of using the Internet to attain their own objectives, and 5) that individuals' perceptions that their activist group is capable of using online media to attain its objectives influences individuals' participation in the collective actions of the group, and that this relationship is also moderated by the perceived interdependence of the activities. Moreover, this study also identified other emerging activities that individuals may undertake as individuals and as part of activist groups that add some nuances to the distinction between individual and collective levels of political participation. Findings in this dissertation are limited by the characteristics of the population studied. Also, although claims of causal relationships could be made based on socio-cognitive theory, the cross-sectional nature of the data collected limits the possibility of arguing in favor of these claims. Further research is recommended to better understand the different levels of individual and collective participation, as well as the patterns of relationships these behaviors may have with efficacy beliefs of Internet political uses at the individual and collective levels of agency.

To my father

ACKNOWLEDGMENTS

First, I would like to express my gratitude and appreciation to Dr. Robert LaRose. Bob, when I got into the situation of having to choose a new advisor I immediately thought about working with you. This was influenced not only because of the existing coincidence between your interests and the theory this dissertation advances, but also because of the certainty I had that I was going to be guided by someone with an immense commitment for educating students as researchers. I have a profound admiration of your scientific rigor and your love for knowledge. I feel very fortunate that I had the chance of working with you.

Likewise, I would like to also express my gratitude to the members of my committee. Steve, through your feedback and comments during my time as a PhD student I always felt your interest in supporting my development as a researcher. Your comments inspired me to improve my arguments and gave me the confidence to continue with my research. To Kurt, I have always admired the way in which you combine common sense with researcher rigor; your help was always useful for understanding the limitations of my research. You showed me to always think about how to engage my audience in my writing. Dan, despite the little time that we shared during my time as student, I owe you becoming familiar with a whole area of research for me, which instilled in me a profound interest in establishing links between different research traditions.

I would also like to thank someone who offered me his support and advice since I first arrived at MSU. Cliff, thanks for everything. Despite the changes in the circumstances I have always felt that you were available to help me in anything I needed. Thanks because during all

the time we worked together I learned about the value of doing research that has a real incidence on other people.

Likewise, I want to recognize how fortunate I was when I found the emotional and material support of Emilee Rader during the time I was doing this dissertation. Emilee, thank you for all your generous help. You made my life much easier. Also, thanks to Kim Setili for her dedicated help during the process of data collection. I would also like to thank everyone in the BIT Lab for their patience during moments of stress and anxiety, and for their valuable help and feedback.

To my wife, Diana, I would have to write something as long as this dissertation to be able to express how much it meant to have her unconditional support, wise advise, and her word of encouragement during moments of difficulty. I can't image how this would have been possible without you on my side. I belief this experience made us stronger as a couple, thanks for helping me grow up in my dreams during these years.

To my mother, sisters and nephew, thanks for coming on board with me in this adventure, believing in me, and understanding how important this step was for me. Finally, to my father, always my deepest gratitude for teaching me the love for reading and for reasoned thought.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Events such as the Arab spring and movements such as Occupy Wall Street in the U.S. and the *Indignados* in Spain, have increased even more the popular interest to understand the relationship between political activism and the Internet. This interest has also grown among scholars, who see how these events have highlighted even more the role that the Internet, and social media in particular, may play as facilitator and supporter not only of individual political participation, but also of collective political activism (Bennett & Segerberg, 2012).

Some researchers, for example, have examined how social media have become an important tool used by social movements to turn online activism into tangible offline political actions (Lim, n.d.) and to support and coordinate collective political activism (Pu & Scanlan, 2012; Starbird & Palen, 2012). Some studies have focused on the question of how social media may turn into an alternative for political expression in contrast with other media more controlled by governments (Al-Ani, Mark, Chung, & Jones, 2012; Hamdy & Gomaa, 2012); while other researchers have examined the limitations that social media may have as an activism tool (Youmans & York, n.d.).

However, several studies have already examined the relationship between the Internet and political participation, and they have done so from a wide variety of perspectives. For example, some have examined the relationship between media use and online and offline forms of political participation (Bakker & de Vreese, 2011). Others have explored the connections between online and offline participation (Vitak et al., 2011). Some research has asked whether online interactions are as effective as face-to-face (FtF) interaction for specific types of political mobilization (Hooghe, Vissers, Stolle, & Mahéo, n.d.; Vissers, Hooghe, Stolle, & Mahéo, 2011),

while others have looked at the influence of online news on participation regarding a specific political issue (Nah, Veenstra, & Shah, 2006).

One of the factors that has been examined consistently when explaining political behaviors is the concept of political efficacy (McPherson, Welch, & Clark, 1977). This concept was first defined by Campbell, Guring and Miller (1954) as individuals' belief that their political actions can have an impact and affect a political process. Further refinements of the concept and empirical evidence suggested another dimension: external political efficacy, defined as the perceived responsiveness that public officials and government institutions have to demands of citizens (Balch, 1974).

Research that has examined the relationship between political uses of the Internet, political efficacy, and political participation, has focused mostly on perceptions of internal political efficacy (IPE) (Brunsting & Postmes, 2002; Kenski & Stroud, 2006; Lee, 2006; Wang, 2007). However, this concept refers only to individuals' perceived capability of influencing their political environment through their individual actions, while many political activities, such as those undertaken by political movements and activist and advocacy groups, are performed in coordination and in concert with others in order to attain changes at a broader level than the individual.

As a large set of political activities are performed at a group level, individual perceptions about individual capabilities may influence, but explain only part of this specific mode of participation. Socio-cognitive theory (SCT) (Bandura, 1986, 1991, 1997) proposes the concept of collective efficacy to explain agency in collective pursuits. However, existing research on the relationship between the Internet and political participation has not considered the influence of

collective political efficacy as a third dimension of political efficacy, despite that most social and political changes are achieved through the conjoint action of individuals.

This study looks at how conflicting findings in previous studies regarding the relationship between efficacy beliefs, Internet use and political participation can be explained in terms of the distinction between individual and collective modes of participation. Moreover, the present study contributes from a socio-cognitive perspective to the existing literature by propounding the concepts of online political self-efficacy (OPSE) and online collective political efficacy (OCPE), and by examining the necessary correspondence between each of these concepts when explaining individual and collective political participation. In doing so, this study looks at how efficacy perceptions of student activists are influenced by previous online enactive political experiences, at how a measurement of efficacy beliefs specific to a particular behavior has a stronger relationship with individual participation than a general measure of efficacy (i.e. internal political efficacy), and at how collective participation is influenced by self and collective efficacy beliefs depending on the perceived interdependence of the activity in question.

REVIEW OF LITERATURE

Research that has examined the role of political efficacy in the relationship between Internet use and political participation can be divided into two groups. In one group are those studies that have looked at how perceptions of internal and external political efficacy are influenced by political uses of the Internet. In the second are studies that have examined the relationships between political efficacy, political Internet use and political participation.

Findings in studies in the first group, (i.e. how Internet use influences political efficacy), suggest that Internet use increases beliefs of political efficacy, although this effect depends on the type of Internet use. In a study that examined how different uses of the Internet influence political efficacy, Lee (2006) found that using the Internet for reading political news, and using the Internet for contacting politicians and public sector officials through e-mails or newsgroups posts increased individuals' feelings of IPE. Regarding external political efficacy, it was found that they decreased as participants contacted online politicians and public sector officials more frequently. In contrast, Lee (2006) found that using the Internet for entertainment purposes, such as visiting adult, games, or music sites did not affect individuals' perceptions of internal and external political efficacy. In another study, Kenski and Stroud (2006) looked at the effect of Internet use, measured in terms of Internet access and online exposure to political information, on internal and external political efficacy. They found that Internet use positively influenced both perceptions of political efficacy. In another study, Wang (2007) found that IPE was affected by Internet political opinion expression. Individuals that used sites such as discussion forums to express their political opinion or interacted online with public officials reported having higher levels of IPE. In summary, studies have found that entertainment Internet use did not affect perceptions of internal and external political efficacy; while visiting online news websites for

information consumption, as well as using the Internet for interacting with politicians, public officials, or discussing politics online had a positive relationship with perceptions of internal political efficacy. However, perceptions of external political efficacy had a negative relationship with online interaction with public officials.

On the other hand, studies on the second group (those that have examined the relationships among political efficacy, political Internet use and political participation) have reported mixed findings. Wang (2007), for example, looked at political efficacy as a mediator between Internet political use and political participation. Findings suggested that neither Internet political opinion expression nor participation in political campaigns, the two modes of political participation examined in that study, were significantly predicted by political efficacy.

In contrast, Brunsting and Postmes (2002) suggested that political efficacy mediated the relationship between Internet political uses and political participation. This study compared two types of collective actions: Soft actions, such as writing letters and petitions for a political group or movement; and hard actions, those performed by groups that organize blockades and riots. Each of these was further divided into offline and online actions. Findings showed that political self-efficacy was a significant predictor of all types of participation, except for online "hard" actions.

On the other hand, Vitak et al., (2011) did not find a significant effect of political efficacy on political participation. This study explored connections between online and offline political participation and found that political efficacy did not have a statistically significant influence either on offline or on online political participation.

Hayes (2009) proposed a model based on SCT to explain the process through which political uses of social network sites (SNS) directly influenced political efficacy and participation through an increase in levels of political learning efficacy. Political learning efficacy was defined as an individual's confidence in their abilities to seek out, obtain and process politically relevant information. In the proposed model, political uses of SNS enhanced perceptions of political learning efficacy through the four sources of efficacy information suggested in SCT: Enactive experience, vicarious learning, verbal persuasion, and physiological and affective states (Bandura, 1997, p. 79). At the same time, political learning efficacy was proposed as a positive predictor of political knowledge. Political knowledge was, in its turn, an antecedent of IPE. Finally, IPE was proposed as a positive predictor of political participation. The proposed model was supported.

In sum, two sets of studies can be identified. A first group is comprised by studies that have examined how the Internet influenced efficacy perceptions. Results in this group indicated that Internet use had a positive relationship with political efficacy, although this relationship varied depending on the nature of the use of the Internet. Those uses that implied a direct experience using the Internet with political objectives increased their levels of IPE. This coincides with SCT which states that one of the sources of efficacy information is enactive experience (Bandura, 1997).

The other set of studies, have examined the role that efficacy perceptions play in the relationship between Internet use and political participation. The studies in this group have reported mixed findings. While some provided evidence that efficacy perceptions influenced online and offline participation, others have not found evidence that suggested this. The following pages will examine in more detail the root of these conflicting findings and suggest an

explanation for this based on a SCT perspective. The following chapter introduces SCT and some of its key concepts, as well as it analyzes from this theoretical framework the findings in the studies reviewed previously. A set of hypotheses are proposed as an alternative explanation for the relationship between Internet use and political participation.

SOCIO-COGNITIVE THEORY, POLITICAL EFFICACY AND PARTICIPATION

Although Bandura's SCT (1986; 1997) emerged after the concept of political efficacy was first coined, it can provide the theoretical foundation for understanding how the concept of efficacy functions and operates in the political realm. According to Bandura's definition, individual perceptions of self-efficacy refer to "… beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Therefore, self-efficacy refers not to the skills individuals have or believe they have, but rather it pertains to what individuals believe they can do with what they have in any realm of functioning (Bandura, 1997, p. 37), such as the political domain.

SCT assumes an agentic view of human nature. It is based on the assumption that people are not only driven by inner forces or controlled by external stimuli. Human functioning in SCT is explained in terms of a model of triadic reciprocity where behavior, cognitive and other personal aspects, and the environment interact and act as determinants of each other (Bandura, 1986, p. 18). Human agency is based on the idea that people have the power to follow specific actions for a given purpose (Bandura, 1997, p. 3). In this sense, efficacy beliefs play a key role in human agency. People who doubt their capacity to attain specific objectives will hardly follow the actions in order to attain them. The perceived efficacy influences what activities individuals choose to perform as well as their motivational levels (Bandura, 1997, p. 35). Furthermore, self-

efficacy beliefs not only have an effect on the course of action taken by individuals, but also on the amount of effort they exert on a particular behavior, their level of perseverance, and their resilience to adverse circumstances (Bandura, 1997, p. 3).

Measures of self-efficacy beliefs used in previous Internet and political participation studies

The concept of IPE has been studied as a predictor of political participation as it refers to the belief that the actions undertaken will affect and influence the political environment of individuals (Campbell et al., 1954). In other words, in the same way the concept of self-efficacy refers to individuals' beliefs in their capabilities to do what is needed in order to attain a particular objective, the concept of IPE refers to the individuals' beliefs that through their own actions they will be able to achieve the political changes and transformations they desire.

Therefore, from a SCT perspective IPE beliefs should influence participation. However, the studies reviewed previously that have examined the relationship between Internet use, political efficacy, and political participation have reported mixed findings. Furthermore, they have not been able to establish a clear link between political efficacy and political participation in the context of political Internet use. There are two possible explanations for this. Either these studies had limitations, for example, in relation to the way in which the concepts were measured, actually measuring something different from what they thought they were measuring; or, some limitations or inconsistencies might exist regarding the way the theory works or its concepts were applied. The following pages consider these explanations to understand the findings in these studies.

As mentioned previously, Wang (2007) did not find a statistically significant effect of IPE on political participation. However, after examining closer the measurement of political

efficacy it can be noticed that the construct's measurement did not have good reliability (α=0.63), which might have hindered its predictive power. The concept was measured with the following three items:

- *People like me don't have any say about what the government does*
- *Politics seems so complicated that a person like me can't really understand*
- *Government doesn't care about people like me*

Items that measure perceptions of political efficacy should assess individuals' beliefs about their capability for performing political actions. In Wang's study, the first two items measured perceptions about how much people perceive they are capable of. However these items did not ask specifically about the 'self,' but about people similar to the respondent, making ambiguous the level of agency at which these two items measured efficacy beliefs. By asking respondents about 'people like me' these items made unclear if they were assessing perceptions of political capabilities of the self or of a collective of individuals similar to themselves on some unspecified dimension. Additionally, the last item asked about the responsiveness or the government's attitude towards citizens. Therefore, the way in which the concept was measured did not meet the conceptual definition of self-efficacy as the perceived capability of the individual to perform a set of actions in order to attain a desired outcome. The operationalization lacked face validity (Shoemaker, Tankard, & Lasorsa, 2004, p. 34) relative to the conceptual definition of political efficacy, as it is ambiguous regarding the level of agency of efficacy beliefs it measures. Additionally, it asks about perceptions of government responsiveness, a measurement that does not correspond to the definition of self efficacy discussed previously.

Another limitation in Wang's study (2007), noticeable also in the study by Vitak et al. (2011), is that the measurements of political efficacy did not assess a specific political action. SCT (1986, 1991,1997) advises us to measure self-efficacy specifically to the behavior under study. According to Bandura (1997, p. 48) as individuals selectively develop their competencies through different activities, perceptions about their own capabilities in each realm of functioning start to differ more from each other. This makes necessary to distinguish perceptions of self-efficacy for each major activity domain. For example, someone can perceive him or herself as highly efficacious to express his or her political ideas online, but might not necessarily feel efficacious about his or her capabilities for mobilizing others around those ideas. Accordingly, previous research (Wollman & Stouder, 1991) has found that the more accurate predictors of particular political behaviors are measures of efficacy beliefs regarding the specific mode of participation.

Levels of political participation

Political participation in this study is defined following Verba and Nie (1987, p. 2) as the set of actions and behaviors that individuals perform in order to influence government bodies at any level. This includes trying to influence the decisions made by officials or government bodies as well as the policies, or the general direction of a governing institution. Political participation, from this perspective, and as empirical data has shown (Verba & Nie, 1987), can be characterized under four different modes of participation. The modes of participation were defined as categories of activities individuals might carry on when they participate in politics. These are: Voting (i.e. Voting in elections at different levels of government), campaigning (i.e. Activities that aim to increase the influence on others during the electoral process), individual-initiated contacts (i.e. Individually initiated and oriented contacts with government officials), and

communal activity (i.e. Comprising all the set of activities that, in order to perform them, require the participation of groups of individuals and seek to benefit a group or the society as a whole).

In their study about political participation in America, Verba and Nie (1987) proposed four dimensions for the different modes of political participation: the type of influence on leaders the activity exerts, the amount of conflict with others involved, the scope of the outcome of the activity, and the amount of initiative it requires. The latter dimension was defined as the amount of control that individuals have in defining the when and how of their participation. The scope of the outcome of the participation is related to the nature of the issue, collective or individual, that the political behavior aims to influence. In collective outcome modes of participation, the act of participation is set out to influence a group of people or society at large.

However, Verba and Nie's definition of scope of the outcome did not take into account a key characteristic of this dimension, which is the level of agency at which individuals are participating. Individuals can participate on behalf or as part of a group or collectivity, or just individually. Therefore, the scope of the outcome should be understood not only as the reach or degree of influence of a political behavior, but also as the level of agency, individual or collective, the frame of reference from which the individual performs the specific political behavior.

Therefore, this study differentiates the level of agency of political participation in terms of the level at which an individual decides to perform a political action. While individual and collective actions are two levels of political participation that require individuals' high amounts of initiative, they differ in that in individual participation, it is individuals, on their own, who actively decide when and around what issues to participate. Communal or collective action, on

the contrary, implies that it is not the individual alone, but a group of individuals that choose how to participate together and interdependently at a given moment regarding an issue of their choice. This study examined those political activities that imply a high degree of initiative, but that differed in their level of agency.

The distinction between individual and collective political participation.

Despite existing evidence that suggests that there are different modes of political participation, each of which are associated with different factors, research in the context of Internet use and political participation has not taken this distinction into account. Indeed, according to Boulianne (2009) in a meta-analysis of the research about Internet political participation, a predominant practice by researchers has been to aggregate activities that pertain to different levels of political participation into one single scale. This has not allowed researchers to find differences in the relationship between Internet use and different levels of political participation. This is a strong limitation especially when one considers that individual and collective political actions follow a different logic as will be explained in the following pages.

The study of participation in collective actions has been a topic of interest for scholars for a long time. Two major analytical traditions, game theory and public goods, have contributed to the understanding of the individuals' participation in collective or group activism. Olson (1965) was one of the first researchers to examine the complexities involved in the study of individuals' participation in collective actions from a public goods perspective. Public or collective goods have been defined as being comprised by three main characteristics. Public or collective goods are jointly supplied, in other words they are goods to which all individuals have the same right to access. Public goods are also non-exclusive, all individuals independent of their participation to achieve a public or collective good can take advantage of it. And finally, public or collective

goods are not susceptible to crowding, which means an individual's enjoyment of a public good does not affect the enjoyment of the same collective good by others (Chong, 1991, p. 3).

Olson argued that individuals taking part in organized action will hardly advance the common interest since instead of acting together, they naturally prefer to act based on their own self-interests. Olson pointed at a tension that emerges between individual and collective interests when individuals share a common goal with a group of other individuals. Although in a group there is an interest for achieving the common good, at the same time there is an individual interest for not having to pay the costs that are involved in achieving that collective good (Olson, 1965, p. 21). Therefore, individuals in general will prefer that others pay the costs of achieving the common goal, since either way they will enjoy the benefits of the common good.

The other way in which the problem of collective action has been looked at is from a game theoretical perspective using the prisoner's dilemma (PD). In the PD two prisoners are interrogated separately and each one is offered a deal. If they cooperate and help the police to put the other partner in jail, they will not have to face prison. If both confess, though, both will have to serve six years. If none of them cooperate nor confess, each will serve only one year. Should the prisoners work as a group and help each other by not confessing to the police, they would go out of jail in only one year. However, none of the prisoners know if the other will act based on self-interest (cooperate to convict the other), or if they will act as a group and pay one year of prison. As suggested by Hardin (1982, p. 26), just like in the public goods approach, in the PD view the individuals find more incentives to act based on their own self-interest and not cooperate with others. In other words, the logic behind both approaches to the problem of collective action is the same; individuals have more incentives to act individually than for the collective or public good. This is because both points of view are based on the assumption that

individuals are rational and therefore act based on their own sake and self-interest (Chong, 1991, p. 2).

However, as both Hardin (1982) and Chong (1991) pointed out the PD and the public good perspectives' analogy from individual and group action is flawed. Both approaches treat group or collectivities as if they had some of the same attributes as individuals. By assuming a rational choice approach they ignore the dynamics that take place in groups. In such contexts, for example, individuals can make decisions based on the previous behaviors of other group members (Hardin, 1982, p. 132), giving place to the influence of others' intentions and their own intentions to reciprocate, among other factors, the choices individuals make. Furthermore, since the public goods and the PD approaches do not make any considerations beyond a cost and benefit calculation, they do not take into account the different incentives, such as social and expressive, derived from the pleasure individuals find from participating in collective endeavors, which also increase the attraction to participate in collective actions (Chong, 1991, p. 73). Hence, these considerations strengthen the notion not only of a distinction between individual and collective activism, but also that both should be characterized as following two different processes.

Furthermore, findings from previous studies suggest that different political participation activities were associated with different factors. For example, Seligson (1980) using a different typology of participation than Verba and Nie's, found that mobilized and institutionalized participation of peasants in Costa Rica were predicted by a set of different factors. Mobilized participation was defined as participation in actions considered non-traditional and outside the law, such as riots and land invasions. Institutionalized participation was defined as participation in activities that were institutionalized in the political system, such as voting, contacting the local

government, participating in communal projects, and being a member and participating in organized groups (e.g. unions). The study showed that mobilized participation was predicted by lower levels of trust in the government, while individual beliefs about the capability to identify and act regarding the most important problem in the village increased the frequency of activities related with institutionalized participation.

Bäck, Teorell, & Westholm (2011) found that each mode of political participation was associated with different variables. This study examined four different modes of participation, using a similar typology than the one proposed by Verba and Nie (1987). The modes of participation they examined were voting, party activity (i.e. the degree to which the individual was a member and participates in party activities), contacting (i.e. whether the respondent had contacted a politician, public official, political organization, media organization or legal institution regarding a political issue), and manifestations (i.e. assessed the degree to which the respondent had, with the purpose of influencing social conditions, signed a petition, donated money, participated in a boycott , displayed a campaign badge or sticker, or taken part in a demonstration). The study found that voting and party activity were associated with the perceived benefit should the outcome be positive, while contacting and manifestations were related with incentives of the behavior independent of a positive outcome. In other words, voting and party activity were related with the perceived benefit or utility that success in the behavior (e.g. the victory of the candidate for which one voted) would bring to the individual. On the other hand, contacting and manifestations were predicted by the perceived benefit or reward that individuals perceived they would receive independent of the outcome, just for the sake of participating.

In this sense, this evidence suggested that the different political participation activities differed in relation to the factors that predicted them. This evidence points at the importance of distinguishing between the different levels of participation when examining this behavior and its precursors. However, the study by Bäck et al. (2011) did not examine participation at the individual level, focusing only on communal participation; while Seligson (1980) mixed in what he called institutionalized participation, activities at the individual and collective levels. Despite this, results in Bäck et al. (2011) suggest that when the mode of participation differed in relation to the amount of initiative required, the factors that predicted those modes also differed. However, as mentioned previously, the operationalizations of the modes of participation defined as contacting and manifestations did not measure participation at the individual level..

Individual level of participation and online political self-efficacy

Previously, it was showed how studies that have examined the role of political efficacy in the relationship between Internet uses and political participation presented some limitations that can explain their mixed findings. One of these limitations was the way some of these studies operationalized the concept of political efficacy, which lacked face validity. Another limitation was that some of these studies did not apply perceptions of political efficacy to specific political behaviors. Additionally, other studies combined different levels of participation in their measurements. This muddied their findings, since evidence suggests that modes and dimensions of political participation were associated with different factors (Bäck et al., 2011; Seligson, 1980).

It can be stated from a SCT perspective that individuals act partially based on how they judge what they can do; in other words, people act based on their self-efficacy beliefs. Many activities are not pursued by individuals who doubt their capacity to succeed on whatever activity

they want to pursue (Bandura, 1986, p. 231). Therefore, it can be hypothesized that individuals' perceptions that they, as individuals, are capable of using the Internet to attain their political objectives should be positively related with political participation at the individual level. The following hypothesis is proposed:

Hypothesis 1: Online political self-efficacy will be positively related to political participation at the individual level.

Additionally, the concept of self-efficacy refers to a multifaceted and dynamic belief system that operates in the different human activity domains and according to the different demands of the context specific situations (Bandura, 1997, p.43). Therefore, online political efficacy should have a stronger relationship with individual political participation than a general measure of IPE, since it evaluates more specific capability perceptions. The following hypothesis is proposed:

Hypothesis 2: The relationship between online political self-efficacy and political participation at the individual level will be stronger than the relationship between internal political efficacy and political participation at the individual level.

On the other hand, as suggested by the findings in the studies by Lee (2006), Kenski and Stroud (2006), and Wang, (2007) reviewed previously, the use of the Internet for political purposes had a positive relationship with individuals' perceptions of IPE. Results in these studies suggested that accessing political information online, discussing politics with other individuals online, and interacting online with politicians or public officials, all modes of participation with a high level of initiative required, increased individuals' perceptions about the influence their actions had on the political realm.

These findings can be interpreted from a SCT perspective, considering that enactive experience acts as one the sources of efficacy beliefs. According to Bandura (1997) enactive experience is the most powerful source of efficacy beliefs since it allows individuals to learn through their own experience the reach of their own capabilities. However, if these experiences are not perceived as satisfactory and successful by the individuals, they can diminish their perceived capabilities of what they can achieve. In this sense, it should be positive experiences that should feed the perceptions that the Internet can be used as an effective tool for political purposes, while information about unsuccessful experiences should hinder the development of efficacy beliefs. It is hypothesized that:

Hypothesis 3: Successful enactive experiences using the Internet for political participation at the individual level will be positively related to online political self-efficacy perceptions.

Likewise, successful experiences using the Internet for individual participation should also increase perceptions of IPE. Indeed, the information processed through the successful enactive experiences should increase individuals' general perceptions of the control they have over their environment through their political actions, as it is themselves directly who are actively trying to influence and control it. Therefore, it is hypothesized that:

Hypothesis 4: Successful enactive experiences using the Internet for political participation at the individual level will be positively related to internal political efficacy perceptions.

In this way, this study proposes that successful individual experiences using the Internet for political purposes contributes to perceptions that this communication technology can be used

to influence and control the political environment of individuals, as well as a general sense that individuals can, through their political actions, obtain their political objectives. In other words, successful Internet use for political purposes should be related with the perceptions individuals have about their capabilities for using the Internet for political activities (i.e. online political efficacy), as well as their perceptions of their IPE. These two efficacy beliefs should lead, in their turn, to more participation in individual political activities (Figure 1).

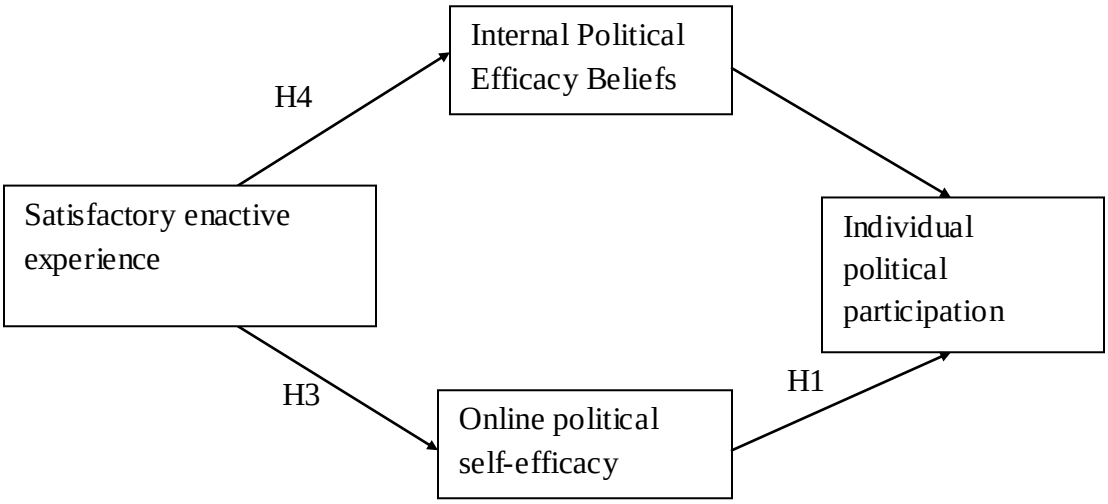

Figure 1: Hypothesized relationship of one source of online and political self-efficacy beliefs, internal and online self-efficacy beliefs, and online personalized scope of the outcome political participation.

Participation at the collective level and online collective political efficacy

Contrary to participation at the individual level, communal or collective activities are those performed by individuals together with other members of a group, on behalf of groups and that necessitate the participation of other members of the group. Therefore, the level at which efficacy beliefs operate in this case should not be at the individual, but at the collective level, through collective efficacy beliefs. The concept of collective political efficacy has not been studied as much as the concept of IPE, despite the existence of political activities that take place in concert with other people more than individually (Verba & Nie, 1987, p. 47). Yeich and

Levine (1994) proposed the concept as a third dimension of political efficacy, and as a predictor of political participation. However, these authors defined collective political efficacy as perceptions of system responsiveness to collective demands for change. Although findings supported the notion that it was a separate construct different from external and internal political efficacy, the definition used seemed more like a variation of external political efficacy and not so much as the group's shared belief in its own capabilities to obtain desired change. Additionally, items that comprised the operationalization of the construct did not tackle individual perceptions of the perceived capabilities that the homeless activist group sampled in that study was capable of acting together to attain social and political change.

As can be noticed below, the scale combined items that measured the perceived capabilities of homeless people and citizens in general to act towards a desired change, while other items measured the perceived probability that politicians would be responsive to the requests from the homeless. This operationalization did not assess individuals' perceived capability of the group, but rather the attitude of politicians towards homeless people. Specifically, the first item asked about "people" in general instead of "my people" or the specific group and actions within the group. The second and third item did not assess specifically how individuals perceived how capable the group in question was in undertaking specific actions that would bring about change, but rather any organized group of citizens. Finally, the last items measured perceptions about how responsive politicians would be should the group take a particular course of action. In short, although this study looked at the role of the concept of collective political efficacy in political participation and activism; its measurement did not measure individuals' perceptions of the capability of the homeless activist group sampled in the

study. Instead of asking these group members about their perceived capability of their homeless activist group, it asked about homeless people in general, as a social category.

- *Dramatic change could occur in this country if people banded together and demanded change.*
- *Organized groups of citizens can have much impact on the political policies in this country.*
- *Politicians would respond to the needs of citizens if enough people demanded change.*
- *Politicians would respond to our needs if we began a movement of homeless and poor people.*
- *Politicians would listen to homeless and poor people if we pressured them to.*
- *If enough homeless and poor people got organized and demanded change, politicians would take steps to end the problem of homelessness.*

Other research has defined the concept of collective efficacy in terms of the combination of social cohesion and expectations of pro-social actions in neighborhoods (Browning, Feinberg, & Dietz, 2004; Sampson, Raudenbush, & Earls, 1997). This understanding of collective efficacy has been used to explain social mechanisms that influence crime levels in neighborhoods (Sampson, 2009, p. 149). Internet use has also been assessed in relation to this particular conceptualization of collective efficacy. In a study that examined the role of Internet as communication tool in neighborhoods, Hampton (2010) found that the use of the Internet afforded the formation of collective efficacy –defined in terms of the observation of communicative practices in the e-mail lists of the neighborhoods under study that expressed the presence of social cohesion and informal social control– and reduced the social and civic inequalities present among different neighborhoods.

However, this definition of collective efficacy does not correspond to the definition proposed by SCT, although it might be associated to SCT's definition of collective efficacy as a possible source of collective efficacy through vicarious learning. In the context of SCT, collective efficacy refers to a group's shared belief in its capabilities to perform specific courses of action in order to produce a desired goal (Bandura, 1997, p. 477). Unlike self or individual efficacy beliefs, collective efficacy is a property that emerges from the group, and is different than the sum of individual abilities, capabilities, and personal perceptions of self-efficacy. As Bandura (2000) explains that in certain circumstances individuals decide to work together and through interdependent efforts act coordinately on a shared belief. However, Bandura also argues that collective efficacy beliefs are rooted in self-efficacy perceptions. Additionally, self and collective efficacy beliefs share similar sources and operate through a similar process, although they differ in the level of agency. While SCT explains agency in individual pursuits through self-efficacy beliefs, the theory explains collective pursuits through the concept of collective efficacy.

As a group level construct, the concept of collective efficacy has been studied in more detail by organizational, education, and sports researchers. A consistent finding in all these areas have suggested that in group settings collective efficacy, defined as how individuals perceived the group would perform on a specific task, affected positively individual (Lent, Schmidt, & Schmidt, 2006) and group performance levels (Baker, 2001; Greenlees, Graydon, & Maynard, 2001; Stajkovic, Lee, & Nyberg, 2009).

Research that has examined the role of collective efficacy in school settings has defined this concept as the aggregate of teachers' beliefs in the teachers' or the schools' capabilities to promote their students' academic success. In general, these studies have consistently found that higher levels of collective efficacy were related with higher student achievement (Bandura,

1993; Goddard, 2001), as well as with individual teacher efficacy (Goddard & Goddard, 2001), and better school organizational practices (Goddard, 2002). Also, the effect of collective efficacy, defined as the team members' belief of the capability of the group to perform successfully, has been extensively examined. Results showed that high collective efficacy teams exerted more effort in pursuit of their goals (Greenlees, Graydon, & Maynard, 2001) and reported higher predictors of team performance such as team cohesion, compared to low collective efficacy teams (Heuzé, Raimbault, & Fontayne, 2006).

Regarding Internet and collective activism and political participation, the study by Brunsting and Postmes (2002), as mentioned earlier, examined online and offline collective participation and found that political efficacy had an important role in both online and offline collective political actions. However, this study's measurement of political efficacy was not strongly reliable (α=0.66) and might have confounded different concepts. As can be noticed in the items used to measure it, the first two referred to perceptions of what a person was capable of doing or achieving through political action. These items asked about a person in general and not about how respondents themselves judged their own capabilities or the capabilities of a specific group to which they belonged. Additionally, the third item measured respondents' perceived capability that people in general and not a specific group they participated in, could make a change through their actions. The use of these items is problematic as a measurement of efficacy beliefs. On one hand, they did not measure perceptions about how individuals judged their own capabilities, but those of people or individuals in general. On the other hand, items did not measure perceptions about how respondents judged the capabilities of a group they belonged to and in which they participated together with other group members, but rather, they asked about how the respondents believed people in general and acting together could achieve change.

Finally, the last item did not measure efficacy beliefs, but rather perceptions of how responsive politicians were to public demands.

- *"Every individual can have an impact on the political process",*
- *"There's not much point in participating in political campaigns: One person's participation won't make any difference",*
- *"People working together can change government policy", and*
- *"I don't think politicians care very much what people like me think"*

Therefore, the measurement of the concept of political efficacy in Brunsting and Postmes (2002) did not match the present conceptual definition of political efficacy. This lack of validity does not provide enough certainty to establish if it is the perceptions of individual or collective capabilities the ones that predict the mode of political participation measured in the study. The lack of correspondence between the different items might also explain the weak reliability of the construct.

On the other hand, the lack of distinction between individual and collective participation might also explain why Vitak et al. (2011) did not find an effect of political efficacy on online and offline political participation. They combined participation at the individual and collective levels in one single scale, and tried to predict those using perceptions of political self-efficacy.

Therefore, the idea that individuals' beliefs that the political or activist group they belong to is capable of using the Internet for achieving their group objectives should be positively related with individuals' participation in collective actions is tested. It is hypothesized that:

Hypothesis 5: Online collective political efficacy will be positively related with political participation at the collective level.

As mentioned previously, collective efficacy beliefs have as one of their most important antecedents individuals' perceptions of self-efficacy. Therefore, it is expected that self-efficacy beliefs operate as an important predictor when examining collective political efficacy.

In the only known study that investigated some of the antecedents of collective political efficacy, Lee (2010) assessed the role of information and perceptions about the political environment as bases in the formation of collective political efficacy beliefs, and the role of the latter in protest participation. Lee (2010) defined collective efficacy as the degree to which citizens believed that Hong Kong's society as a collective actor was capable of achieving social and political outcomes. A definition of collective efficacy posed in these terms referred to a very broad group with a very loose organization so that perceptions of group cohesion and identification might be acting as moderator variables. Still, findings in this study suggested that the information and perceptions about the political environment in Hong Kong influenced the beliefs of collective efficacy of individuals.

In Lee's study, perceived media certification, defined as the degree to which respondents perceived the media as being supportive of the protest, acted as a predictor of individuals' perceived collective political efficacy. Perceived civic competence of the public, defined as the degree to which individuals perceived Hong Kong's people as interested and in general engaged in politics; and perceived representativeness of politicians, which assessed perceptions of the degree to which different political organizations represented the general public opinion, significantly increased perceptions of collective political efficacy.

Additionally, one of the stronger predictors of collective efficacy in that study was frequency of interpersonal political discussion. As mentioned previously here, other studies have also found that this behavior had a positive relationship with perceptions of individual political efficacy. This might indicate that political self-efficacy can be an important factor in the configuration of collective political efficacy. Evidence that suggests that one of the factors that influence positively the beliefs of individual political efficacy also contributes to collective efficacy perceptions is in line with the idea that perceptions of collective efficacy are rooted on self-efficacy beliefs (Bandura, 1997).

Furthermore, the relationship between self and collective efficacy has found empirical support. Gibson (2003) found that individual perceptions of self-efficacy have an important influence on collective efficacy in groups. This influence can be explained through vicarious learning and social persuasion processes that might take place during the interaction among group members. In groups where individuals show high levels of self-efficacy, members should be persuaded that the group possesses the capabilities to be efficacious. On the contrary, individuals with low self-efficacy might try to persuade others about the lack of capabilities within the group, given individuals' own perceptions of their own individual capabilities. Therefore, individual's beliefs that they can use the Internet for achieving their political objectives should influence their belief that the group, acting together as a whole, is capable of using the Internet to achieve their political objectives.

Hypothesis 6: Perceptions of online political self-efficacy will be positively related with online collective political efficacy perceptions.

Interdependence of participation and collective political efficacy

Previous research has also suggested that collective efficacy influences collective participation under certain specific conditions. Lee (2006), in a study that examined collective political efficacy as a third dimension of the construct of political efficacy, compared the effect of internal, external, and collective political efficacy on a set of political attitudes and modes of participation in Hong Kong. The results indicated that internal efficacy, external efficacy and collective efficacy were associated in different ways with political attitudes such as support for democratization, willingness to protest for democratization, and attitudes towards political debate in favor of democratization in Hong Kong.

Evidence indicated that the different dimensions of political efficacy had a different role depending on the type of participation in question, despite that all of them pertained to a collective goal for Hong Kong's society. For example, in relation to the attitudes towards supporting democratization in Hong Kong, collective efficacy, or as defined by Lee in this case, "Hong Kong citizens' belief that the general public as a collective actor can achieve social and political outcomes" (2006, p. 299) had a positive effect on this attitude; while IPE did not affect it, and external political efficacy had a negative influence. Willingness to protest in favor of democratization in Hong Kong was influenced positively by both internal and collective efficacy beliefs and negatively by external efficacy. However, the regression coefficient of collective efficacy more than doubled the one by IPE. In contrast, attitudes towards political debate in favor of democratizations were not influenced by collective efficacy perceptions, while IPE predicted them positively and external political efficacy predicted them negatively.

In relation to the variables that measured political participation, results indicated that after controlling for demographic variables, rally participation was predicted positively by

collective efficacy beliefs and negatively by perceptions of external efficacy. IPE did not have a significant effect. Voting in the 2004 Hong Kong Legislative Council elections, however, was only negatively predicted by external efficacy. Neither internal, nor collective efficacy had a significant effect on this type of behavior.

In sum, behaviors or behavioral intentions that implied acting together, or included a collective effort for its success, were strongly related with collective efficacy beliefs. On the other hand, intentions and behaviors that were mostly supported by individual pursuits or did not take place in concert with other individuals, despite their collective nature, seemed to be related with individual dimensions of political efficacy. The belief that Hong Kong's general public was capable of achieving social and political outcomes did not play a significant role when those outcomes were related to debating, for example. On the contrary, when the intentions or behaviors pertained to an action that was performed in concert with others, such as protesting or willing to protest, the role of collective efficacy acquired more importance.

A pattern seems to have emerged from this set of findings. This pattern is consistent with the notion that collective efficacy operates in tasks that imply a certain degree of interdependence and collective effort in order to be successful (Bandura, 1997, p. 477). Task interdependence is a key characteristic that determines the value that collective efficacy acquires over perceptions of individual efficacy.

Indeed, in a study that examined how collective efficacy is developed in groups Katz-Navon and Erez (2005) looked at the role that task interdependence has in the emergence of perceptions of collective efficacy as a group level construct. They compared through an experiment that manipulated the level of interdependence of tasks in individual and team levels,

the different roles that self and collective efficacy beliefs had in different conditions of interdependence and how these beliefs affected the performance of the teams.

Findings indicated that collective efficacy beliefs emerged as a separate construct only for the high task interdependence condition. Collective efficacy beliefs were measured in terms of how individuals rated their team's ability to perform a given task. In the low interdependence condition the concept of collective efficacy did not emerge as a separate concept from self-efficacy. In this sense, the perception of collective efficacy emerged in conditions in which the activities of the individuals were not only interconnected, but also in those where individuals needed others in order for their activities to have positive outcomes.

Therefore, task interdependence facilitates or inhibits the level of interaction among individuals in a group, and in this sense makes possible the emergence of beliefs of collective efficacy. As indicated by the results, in conditions of low task interdependence, collective efficacy did not predict team and individual performance, while self-efficacy was a significant predictor of both variables. On the other hand, in the high task interdependence condition, perceptions of collective efficacy became significant predictors of team performance while self-efficacy did not affect this variable at a statistically significant level.

The evidence points towards the idea that the concept of collective efficacy is relevant at the group level depending on how much the activity in question implies a certain degree of interdependence; in other words, the level to which individuals feel they need others to perform their activities, and the level to which they perceive that others need them. Therefore, the concept of interdependence is thought as having two dimensions. Initiated interdependence, which is individuals' perceptions that their tasks depend on others; and received interdependences

understood as perceptions that others depend on the individual in order to perform their tasks (Van der Vegt, Emans, & Van de Vliert, 1998).

Therefore, it is expected that in political actions individuals perform as members of a group, collective efficacy should predict participation moderated by perceptions of interdependence in that mode of participation. Modes of participation in which the interdependence is higher, perceptions about the collective capabilities should have a stronger influence than in those modes of participation that denote less interdependence (Figure 2). On the contrary, if the perceived interdependence is low, online political self- efficacy should have a stronger influence than online collective political efficacy (Figure 3).

Hypothesis 7: The relationship between online collective political efficacy and political participation at the collective level will be moderated by the perceived interdependence of participation. The relationship between online collective efficacy and participation in collective level actions will be greater for those perceiving high interdependence than low interdependence.

Hypothesis 8: The relationship between online political self-efficacy and participation in collective level political actions will be moderated by the perceived interdependence of the participation. The relationship between online political self-efficacy and participation in collective level actions will be greater for those perceiving low interdependence than high interdependence.

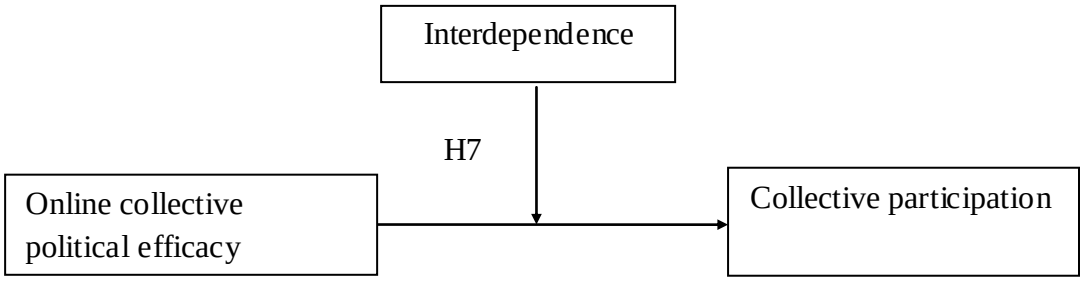

Figure 2: Hypothesized interaction between online collective political efficacy and task interdependence on online participation.

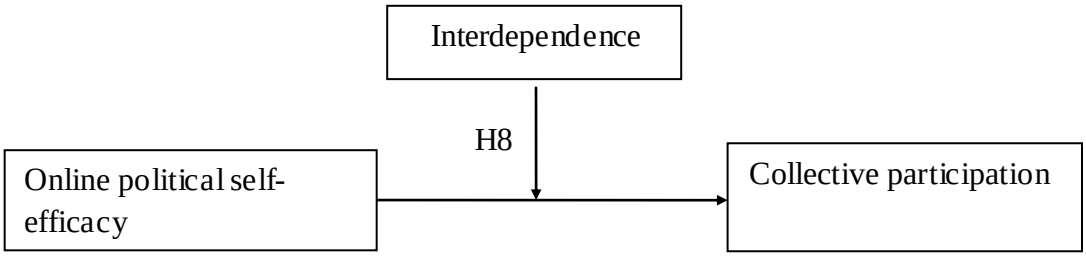

Figure 3: Hypothesized interaction between online political self-efficacy and task interdependence on online participation.

METHODS

Sample and data collection

This study was undertaken through a mixed-mode surveys approach and used the Tailored Design Method (Dillman, 2007). A mixed-mode approach helped to reach all the members of the groups, and at the same time it improved cost efficiency and high response rates. Additionally, the Tailored Design Method seeks the development of trust, minimal respondent effort and an increased perception of the rewards obtained during participation in surveys. These characteristics have proven to be effective for getting maximum response rates.

This study used a purposive sample of students who are members of political, activist, and advocacy groups of a large United States Mid-Western university. A first set of groups were selected using the university list of registered student organizations for 2011-2012 that focused on activism, advocacy and political participation. Nineteen organizations were identified through the university's Office of Student Life. Then, the online presence of all these organizations was assessed looking for the different ways in which each of these groups used the Internet and social media. Then, the organizations were filtered according to the type of online applications they used for their activities. Those organizations that favored similar methods for their online activities were then selected for further contacting. A total of eleven groups were selected from the initial list of nineteen (See Appendix A). These groups focused their online activities on Facebook pages or groups, Twitter accounts, and blogs. These groups and their members use these media to share content related with their topics of interest, announce and organize meetings and related offline activities, and to share information and opinions. The university's Student Life Office was contacted again to obtain the contact information of the leaders of each these eleven groups.

Then, the leaders of the groups were contacted via e-mail and were invited to participate in the study. The e-mail included an explanation of the study, its purpose, and an explanation of why the group was selected to participate. In exchange for their participation, group leaders were offered a donation of $75.00 for their group and a final report including the results of the answers to any questions they were interested in asking group members regarding the group's social media communication strategy.

Three group leaders expressed their interest in having their group participate. Two of the groups had a clear political nature. These two students based organizations were the official

representatives of the Democratic and Republican parties on campus. These two student organizations have as their main objective the promotion of the ideas and values of each of the parties to university students, faculty and staff; help elect candidates; and bring awareness of current political and policy related issues to group members and students at large. They do this by supporting the visit of election candidates to campus, by inviting guest speakers to talk about current issues of interest to student members, and by debating with members of other political parties and organizations.

The other student-based organization that agreed to participate in the study was an environmental organization that advocates for the transition of the university away from the use of coal and towards the use of clean and renewable sources of energy in order to end the university's dependency on coal for the generation of electricity. Members of this organization focus their efforts on campaigning across campus in favor of the use of clean sources of energy, and on trying to raise the awareness of environmental issues within the community. This group has held debates, brought guest speakers, participated in rallies, and presented proposals to university officials.

Once the leaders of the student-based organizations agreed to participate, they were given the $75.00 donation, although they were asked not to comment on this with other members of the group since that would have affected their efficacy perceptions. Then they were asked to provide a current list of student members of the group with their e-mail addresses. The Office of the Registrar at the university was then contacted asking for the local postal address of the students who had not restricted access to this type of information. Those who had restricted the access to their postal address were contacted using the e-mail provided by the organizations' leaders.

Instrument pre-testing.

Before starting with the process of data collection, a pre-test of the instrument was performed in order to anticipate any problems or difficulties participants might face when answering the questionnaire (Presser et al., 2004). The questionnaire was pre-tested using the respondent debriefing questions method (Martin, 2004). This method invites respondents to help improve the instrument through comments and retelling of their experience answering the survey. Although there is no theoretical rationale for an appropriate and sufficient size of the sample for pre-testing, other researchers' experience served as guidance. A total of 12 subjects, members of one of the groups, participated in the pre-testing stage. This number of participants was enough according to recommendations of leading experts and methodology researchers for appropriate sample size during questionnaire pre-testing (Presser et al., 2004; Hunt, Sparkman, & Wilcox, 1982).

Subjects that participated in the pre-testing of the instrument received $10 as compensation for their participation. During pre-testing, participants met individually with the researcher. They were asked to read the consent form and fill out a paper version of the questionnaire. They were asked to take side notes next to any questions they had any trouble answering while they were timed in order to assess how long it took them to fill out the survey. In this stage of the research the length of the survey, the layout, format, and wording of the questions were assessed (Hunt et al., 1982). After finishing, each of the participants was asked about any problems, issues or misunderstandings they might have had while answering the survey. This iterative process allowed for the improvement of the instrument before actual data collection. Participants were specifically asked about what they had in mind when they answered the questions pertaining online political collective and political self-efficacy perceptions and

individual and communal political participation to make sure they were, in each case, answering each set of questions at the individual or group level. Participants were also asked to state in their own words what they thought they were being asked in some of the questions in order to identify any misunderstandings or misreported answers. No major issues were identified with the questionnaire, although participants made some suggestions regarding the wording, order and format of the questionnaire. These suggestions were taken into account in order to improve the clarity of the questions and the format overall.

Data collection.

Once a final version of the questionnaire was achieved, the data collection process started. Data was collected in three different ways. First, the researcher attended one of the regular group meetings. Previously, leaders in all three groups had announced to group members that they were going to be asked to participate in a study that had the approval of the group's executive board. From the social exchange perspective that gives the foundation to the Tailored Design Method, one of the ways in which the feeling of trust can be established is through the provision of in advance cash incentives. With this in mind, group members received $2.00 in advance. During the meetings, participants received an envelope with an informed consent letter, two $1.00 bills, and the survey questionnaire. The researcher explained to the participants that they did not have to answer the survey or any of the questions in it if they did not want to. Having individuals answer the survey during their face-to-face meetings also reduced the perceived costs of participating in the study, since they did not have to use any additional time besides the time they would use to attend their group meetings.

Students that did not attend the meetings were contacted through postal mail in cases where access to their local addresses was not restricted. Following Dillman's (2007) Tailored

Design Method, multiple contacts were used to invite individuals to participate in the study in order to maximize response rate. Individuals were sent an individualized pre-notification letter letting them know that they were going to be asked in the near future to participate in an important research study, and that their participation would be appreciated. The pre-notification letter was sent five days prior to sending the questionnaire. This letter had university letterhead and was directed individually to each of the members of each group.

The second contact included an envelope with the consent language explaining the characteristics of the study, the importance of the subject's participation, and that participation was completely voluntary. The envelope also included the questionnaire, $2.00 and a stamped return envelope. A week after the questionnaire was sent, a reminder post-card was sent only to those individuals that had not returned their survey. Finally, one and a half weeks later a replacement questionnaire, with a letter asking again for the individual's participation in the study was sent. Finally, those individuals who did not attend their group meeting and who were not contacted by postal mail were contacted via electronic mail. These individuals were first sent an e-mail with a very similar text from the pre-notification letter. The e-mail was personalized and was sent from a university e-mail address. A few days after the first contact, these participants received another personalized e-mail inviting them to participate in the study by accessing the survey through the website Surveygizmo.com. The e-mail included a link to the online survey. In another e-mail, participants received a link to their advance incentive, which in this case was a $2.00 Amazon.com gift card. A week later, a new online communication was sent reminding participants to answer the survey. A final e-mail reminded participants about the survey, letting them know that it was going to be available for a couple of more days.

Sample.

A total of 64 students from the three groups filled out the questionnaire in person, during the meetings (see Table 1 for details on the response rates per modality and groups). All the individuals that attended the meetings agreed to answer the survey and returned it filled out. A total of 639 individuals were contacted by postal mail and were asked to participate in the study. Of the 639, 130 were from the MSU College Democrats group (DG), 46 from the MSU College Republicans group (RG) and 463 from MSU Beyond Coal, the environmental group (EG). As indicated in Table 1, the total response rate for the surveys distributed by postal mail was 23%. For the online version of the study a total of 132 individuals received an e-mail invitation, 19 were from the DG, 12 from the RG, and 101 from the EG. The total response rate for the online version of the study was 8%. The overall response rate for the three modalities for all the groups was 26.58%.

Table 1

Response Rates by Groups and Survey Modality

	RG	DG	EG	Response rate by modality
Response rate for Survey Modality				
Face-to-face	100%	100%	100%	100%
Postal mail	34%	30%	21%	23%
Online survey	16%	15%	6%	8%

A total of 224 surveys were received. However, two had to be excluded because they did not have any questions answered whatsoever. Of these 222 individuals, 29.5% were members of

the DG, 18.5% were members of the RG, and 52.3% were members of the EG. Tables 2 and 3 include descriptive information for each group. Significant differences across groups regarding these demographic parameters were assessed using ANOVAs and Chi-square tests. Results of the ANOVA suggest that no significant difference existed regarding time spent on Facebook daily $F(2,219)=.788$, $p=.456$ and average Internet daily use $F(2, 219)=.900$, $p=.408$ across groups. However, results suggest that a significant difference existed in age $F(2, 219)=3.59$, $p=.029$ and in time as group member $F(2,219)=23.24$, $p<.001$, across groups. Post-hoc Tukey tests showed that individuals in the EG (M=21.4, $S.D.$=3.61) had a significantly higher mean score for age compared to individuals in the DG (M=20.06, $S.D.$=1.2) and in the RG(M=20.9, $S.D.$=1.5); and that the reported mean score of time as members of the group for individuals of the RG (M=17.9, $S.D.$=16.2) was significantly higher compared to the mean scores of members of the DG (M=8.94, $S.D.$=12.0) and of members of the EG (M=5.3, $S.D.$=5.3).

Table 2

Means and Standard Deviations for Time as Group Member, Age, Facebook Use, Internet Use for Each Group and Overall

	RG	**DG**	**EG**	**All groups**
Average age (SD)	20.9 (1.5)	20.06 (1.2)	21.4 (3.61)	20.9 (2.8)
Average daily hours of Facebook use (SD)	2.6 (2.4)	2.2 (1.5)	1.96 (2.56)	2.18 (2.26)
Average daily hours of Internet use (SD)	13.89 (8.1)	11.9 (8.1)	10.9 (8.7)	11.8 (8.4)
Months in the group (SD)	17.9 (16.2)	8.94 (12.0)	5.3 (5.3)	8.9 (11.4)

Table 3

Percentages for Gender, Race, and Facebook Account Ownership by Groups and Overall

	RG	**DG**	**EG**	**All groups**
Males	53.8%	44.4%	29.6%	38.6%
Females	46.2%	55.6%	70.4%	61.4%
Race[a]				
White	100%	93.7%	80.5%	88%
African American	2.6%	4.7%	6.1%	5%
Asian	0%	9.4%	10.4%	9%
Native American	2.6%	3.1%	2.6%	3%
Hispanic/Latino	2.6%	4.7%	6.1%	5.2%
Facebook account	95%	95.4%	95.7%	96.5%

[a] For race respondents were asked to check all the possible answers that applied, this is why for some groups the total percentage for races adds more than 100%.

Results of the Chi-Square tests showed that there was a statistical difference across groups regarding gender, $\chi^2(2, N=222)=8.71$, $p<.05$. However, no significant difference was observed across groups regarding whether individuals had a Facebook account or not, $\chi^2(2, N=222)=.258$, $p=.879$. Since the Chi-square test is highly sensitive to sample size and number of observations for each cross tabulation cell, differences for race and ethnicity could not be calculated, given the low occurrence of races others than white.

Analysis and results

A total of 7 observations had to be dropped from the sample before starting with the analysis because those respondents returned the survey with only the demographic information included (*N*=218). Mean values were imputed to missing data. In no case imputation of missing values exceeded 10% of the whole sample.

Factor analysis of communal and individual levels of political participation.

An exploratory factor analysis was used to test that items measuring individual and communal levels of political participation responded to the expected underlying processes. Exploratory factor analysis groups variables that are highly correlated, but that are independent of other variables. It can also be a useful tool in early stages of research to consolidate variable measurements and for testing underlying processes that according to theory should be taking place (Tabachnick & Fidell, 2001, p. 582).

In this sense, it was expected that the exploratory factor analysis would identify if the items that were proposed to measure individual and communal political participation were part of their respective factors. During the process of exploratory factor analysis, items loading with at least .6 on the primary factor and less than .4 in the rest of the factors are retained (Hair, Tatham, Anderson, & Black, 1998). The number of factors is solved by combining the analysis of a scree plot and by the number of factors with eigenvalues larger than 1. Adequate interpretability of factor loadings also suggests an appropriate solution of the factor analysis.

Exploratory factor analysis with principal components analysis and varimax rotation revealed that the items formed three distinct factors (Table 4), although only two were expected. Factor 1 contained all 10 items which, except for CPP1 and CPP2, held together. All these items

where part of the communal participation factor. Six items related to individual participation loaded in a second factor; while IPP1, IPP8, IPP9 and IPP10 loaded on a third factor. These results suggest that besides the expected communal and individual participation levels of participation, an additional pattern of civic participation seems to have been uncovered. This emerging level of participation involved individual actions that required the cooperation of others (e.g. others joining in a protest, a public official willing to meet with the individual) and confounded the meaning of individual political participation as conceptualized previously, so were excluded.

Therefore, an alternative solution was explored excluding the items that loaded in that new level of participation. Also, the two items that loaded across factors (CPP 1 and CPP 2) and CPP10 were excluded because these also were conceptually distinct from the other items in that they could be undertaken without the participation of other group members. In the second factor analysis, two distinct factors emerged with eigenvalues > 1. The items loaded clearly on the factors they were expected to load on. Items that loaded on factor 1 corresponded to communal political participation, while items that loaded on factor 2 corresponded to individual political participation (Table 5).

Table 4

Initial Rotated Factor Solution of Individual (IPP) and Communal political participation (CPP)[a]

	Factor			Mean	S.D.
	1	2	3		
CPP 1: Post content on Facebook supporting the ideas your group advocates	**.695**	**.455**	.194	4.79	2.063
CPP 2: Share with your Facebook friends content posted on your group's page	**.728**	**.430**	.105	4.54	1.860
CPP 3: Talk to a group or person on behalf of your group	**.772**	.097	.295	4.48	1.855
CPP 4: Invite people to participate in your group	**.760**	.167	.192	4.87	1.668
CPP 5: Organize meetings	**.862**	.138	.165	3.55	2.024
CPP 6: Coordinate with others in your group to organize the group's activities	**.862**	.138	.165	4.01	1.963
CPP 7: Coordinate members' tasks	**.882**	.153	.155	3.75	2.008
CPP 8: Support the activities of other members of the group	**.889**	.133	.130	5.08	1.580
CPP 9: Find useful information online to support the group's activities	**.760**	.229	.127	4.72	1.736
CPP 10: Post on someone else's social media site content related with your group	**.702**	.350	.100	4.22	1.879
IPP 1: Sign a petition	.007	.292	**.570**	5.99	1.272

Table 4 (cont'd).

IPP 2: Express your opinion online regarding a political issue	.224	**.824**	.224	5.29	1.755
IPP 3: Post a political comment on a social network site page	.255	**.814**	.185	4.90	1.888
IPP 4: Discuss a political issue online	.257	**.851**	.153	5.07	1.772
IPP 5: Post a link about politics on a social media website	.234	**.825**	.139	5.40	1.750
IPP 6: Visit a social media site of an activist or political group	.174	**.747**	.357	5.63	1.547
IPP 7: Look at the content of a link posted online by an activist or political group	.146	**.743**	.323	5.68	1.537
IPP 8: Contact an elected official	.287	.270	**.627**	4.57	1.884
IPP 9: Attend a protest	.223	.195	**.822**	4.70	1.782
IPP 10: Attend a political meeting	.394	.225	**.743**	4.88	1.758

[a] Varimax rotation with Eigenvalues > 1 specified, three factors extracted explaining 70.6% of the variance.

Table 5

Final Rotated Factor Analysis Solution of CPP and IPP Excluding Emerging Factor and Cross Loading Items[a]

	Factors	
	1	2
CPP 3: Talk to a group or person on behalf of the group	**.810**	.180
CPP 4: Invite people to participate in the group	**.772**	.221
CPP 5: Organize meetings	**.884**	.194
CPP 6: Coordinate with others in the group to organize the group's activities	**.902**	.205
CPP 7: Coordinate members' tasks	**.900**	.181
CPP 8: Support the activities of other members of the group	**.778**	.191
CPP 9: Find useful information online to support the group's activities	.**767**	.267
IPP 2: Express your opinion online regarding a political issue	.218	**.856**
IPP 3: Post a political comment on a social network site page	.239	**.833**
IPP 4: Discuss a political issue online	.237	**.867**
IPP 5: Post a link about politics on a social media website	.209	**.835**

Table 5 (cont'd).

IPP 6: Visit a social media site of an activist or political group	.185	**.827**
IPP 7: Look at the content of a link posted online by an activist or political group	.161	**.818**

[a] Varimax rotation with Eigenvalues > 1 specified, two factors extracted explaining 72.3% of the variance.

Measures.

Dependent and independent variables were measured based on the conceptual definitions of the variables and on operational definitions used in previous research. The exact items used in the questionnaire are included in Appendix B. Means, standard deviations and reliabilities for all scales can be seen in Table 6.

Dependent variables.

Individual political participation was measured by adapting items from Hayes (2009) and Verba and Nie (1987). The variable was measured with an additive index of six items. The preface asked respondents how likely they were to perform a set of political activities on their own to attain a political objective (1=very unlikely, 7 = very likely). Some of the items included were: "Express your opinion online regarding a political issue," "Discuss a political issue online," and "Look at the content of a link posted online by an activist or political group."

Communal political participation was measured with an additive index of seven items, and asked respondents, given the opportunity, how likely they were to perform a set of political activities as followers of the group (1 = very unlikely, 7 = very likely). The variable was

measured by adapting items from Verba and Nie (1987) and Brunsting and Postmes (2002), and included items such as "Talk to a group or person on behalf of group," "Coordinate with others in your group to organize the group's activities," and "Find useful information online to support your group's activities."

The items that comprised the scales that measured perceptions of both collective and individual online political efficacy were derived from theoretical considerations in SCT and followed the recommendations by Bandura (2006) for the generation of efficacy scales. One of those recommendations is to measure the strength of efficacy beliefs using a 100 point scale that ranges in 10 unit intervals, or in its absence, a scale with unit intervals from 1 to 10 is preferred. The latter alternative was used in this study.

The scale that measured individuals' perceptions of online political self-efficacy gauged individuals' perceptions of how certain they were that they could accomplish a set of politically related activities using the Internet and social media, such as, "Use social media applications to express their political views," "Influence others online regarding a political issue," and "Use the Internet to pursue your political purposes." The additive index was comprised by a total of 9 items, ranging from 1 (lowest perceived capability) to 10 (highest perceived capability).

A debate exists regarding how to best measure perceptions of collective efficacy (Paskevich, Brawley, Dorsch, & Widmeyer, 1999). Some researchers suggest that since this concept assesses the perceived capability of a group the best way to measure it is to have members of the group arrive at an agreement about the efficacy of the group. However, this approach can be subject to social persuasion or power relations within a group (Bandura, 2006). On the contrary, following Bandura's (2006) suggestion of asking individuals about how they

perceive the capability of the group as a whole to perform a specific action or attain a particular objective –- has been previously validated in political participation research (Lee, 2006; 2010). Therefore, this variable was measured by asking individuals how certain they were that the group they belonged to, acting together as a whole, was capable of performing a set of political activities using the Internet. A total of 6 items comprised the additive index. Some of the items included were: "Let other people know about the advocacy work the group performs," and "Increase the awareness of the ideas the group advocates." Answers ranged from 1 (low certainty) to 10 (high certainty).

Internal political efficacy was measured using the items previously tested and validated by Craig et al. (1990), such as, "I consider myself to be well qualified to participate in politics," and, "I feel that I could do as good a job in public office as most people." The additive index was calculated using four 7-point Likert scale items that asked respondents to express their level of agreement (1=strongly disagree, 7=strongly agree).

Independent variables.

The seven 7-point Likert scale items that comprised the additive index for successful enactive experience were adapted from the item used by LaRose et al. (2007) and based on SCT's definition of the concept. Individuals were asked to express their level of agreement with a set of statements, regarding their experience using the Internet (1=strongly disagree, 7=strongly agree). Items included: "My personal experience has showed me that it can be useful for expressing my political opinion," and "I have had successful experiences using it to influence others on political matters."

Task interdependence is comprised by two dimensions. Received interdependence, which refers to individuals' perceptions that their tasks depend on others; and initiated interdependence,

which refers to perceptions that others depend on the individual in order to perform specific tasks. The two dimensions were measured by adapting items from validated and reliable scales used in previous studies (Van der Vegt, Emans, & Van de Vliert, 1998). Received interdependence was measured by asking respondents the extent to which individuals perceived they depended on others (1= Not at all, 2=Very little, 3=Somewhat, 4= Extremely) to perform specific communal political activities. The scale included six items, such as, "Let other people know about the advocacy work it performs and Increase the awareness of the ideas it advocates." Initiated interdependence was measured using six items related to communal political activities. Some items included were: "Coordinate the group's activities," and "Let non-members learn about the activities of the group."

Control variables.

Social media use included measurements from previous studies (Lin, Peng, Kim, Kim, & LaRose, 2012), and it was comprised by ten items that asked respondents how frequently (1=Never, 2=Rarely, 3=Monthly, 4=Weekly, 5=Several times per week, 6=Daily, 7=Several times per day) they performed a set of specific social media activities, such as "Update your Facebook status, Create 'events' on Facebook and Add or change pictures on Facebook".

Table 6.

Means, Standard Deviations and Reliability Scores for Dependent and Independent Variables

	Mean	S.D.	Cronbach's alpha
Communal participation	4.3	1.55	.94
Individual participation	5.3	1.47	.93
Online collective political efficacy	7.5	1.78	.91
Online political self-efficacy	7.5	2.11	.96
Internal political efficacy	4.7	1.60	.86
Successful enactive experience	5.1	1.20	.85
Task interdependence	2.3	.79	.93
Social media use	3.9	1.20	.85

Before performing the analysis to test the hypotheses related the relationship between online political self-efficacy (OPSE) and individual modes of political participation (IPP), and between successful enactive experience (SEE) and internal political efficacy (IPE) and online political self-efficacy (OPSE), diagnostics tests for cases that could be considered as influential outliers were performed for all variables involved. DFBETAS are useful for detecting the specific observations that are affecting the results by showing the degree to which the regressions coefficients would change should that specific outlier be deleted. The common rule used to detect those cases is by identifying those whose DFBETA scores are higher than $2/\sqrt{n}$ (Andersen, 2008, p. 41). DFBETAS were calculated for the regressions predicting online

political efficacy and internal political efficacy by enactive successful experience and the regressions predicting individual participation by online political self-efficacy and internal political efficacy. Fifteen influential outliers were identified through this analysis and were omitted from consequent statistical analysis. The size of the sample for the subsequent analysis was $n = 203$.

Online political self-efficacy and individual political participation.

Before performing the analysis to test hypothesis 1, which stated that OPSE had a positive relationship with IPP, the normal distribution of the dependent variable was examined. No evidence suggested that IPP was not normally distributed. Next, in order to correct the positive skewness of age, it was logarithmically transformed. No indication of multi-collinearity among the independent variables was present, according to the variance inflation factors (VIF) calculated (Table 7). However, possible significant differences in relationships among variables might have been present given the differences in the nature of the environmental and the two political groups. Therefore, a correlation matrix was calculated by group, in order to assess possible variations across the groups in the relationship between independent and dependent variables (Table 8).

Table 7

Collinearity statistics for analyses predicting IPP

	Tolerance	VIF
Gender	.822	1.217
Age (Log)	.878	1.139
Republican	.736	1.359
Democrat	.702	1.424
Social media use	.836	1.196
IPE	.559	1.788
OPSE	.622	1.608

Table 8

Correlation Coefficients for Each Group Between Age, SMU, IPE, OPSE and IPP [a]

	IPP		
	Rep. (N=37)	Dem. (N=63)	Env. (N=103)
Age (Log)	-.120	.027	-.005
SMU	.371*	.257*	.327**
IPSE	.392*	.294*	.492**
OPSE	.574**	.584**	.629**

*p<.01, **p<.001

[a] SMU: Social media use, IPE: Internal political efficacy, OPSE: Online political self-efficacy, IPP: Individual political participation

The differences of the correlations across groups were assessed for statistical significance using Fisher's Z transformation which tests for significant differences between correlation coefficients for independent samples (Kullback, 1997, p. 320). Results of the test revealed that no significant differences existed across groups in the correlations between the independent and dependent variables. Also, correlation coefficients were calculated for the dependent and independent variables included in the analysis for hypotheses 1 through 4.

Table 9

Correlation Coefficients Between IPP, SEE, OPSE, IPE, SMU, Age, Gender, and Group Membership

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. IPP	1	.666**	.637**	.485**	.339**	-.061	.098	.095	.191*	-.251**
2. SEE		1	.691**	.497**	.290**	-.055	.125	.122	.213**	-.292**
3. OPSE			1	.542**	.360**	-.132	.092	.158*	.217**	-.323**
4. IPE				1	.190**	-.013	.332**	.230**	.301**	-.456**
5. SMU					1	-.102	.059	.230*	.033	-.209**
6. Age (log)						1	.214**	.019	-.213**	.182**
7. Male							1	.176*	.067	-.199**
8. RG								1	-.317**	-.479**
9. DG									1	-.681**
10. EG										1

*p<.05, **p<.01, ***p<.001

A hierarchical regression examined the relationship between OPSE and IPP (hypothesis 1). Results are illustrated in Table 10.

The variables included in the first model were gender, age (log), group membership, and SMU. Results suggested that for this model (R^2=.157, F(5,196)=7.304, p<.001), SMU (β=.311, p<.001) was a significant predictor; while a significant difference existed between individuals that belonged to the DG (β=.199, p<.001), and those that belonged to the EG in their level of reported IPP. In the second model IPE was included and a significant change in the R^2 was observed (R^2=.151, F(1, 195)=42.559, p<.001). The significant predictors in the second model were SMU (β=.268, p<.001) and IPE (β=.458, p<.001). By including IPE in the second model, we were able to observe the variance added by this variable and also, the additional variance explained by OPSE in the third model, after accounting for the effect of IPE. Finally, in the third model, OPSE was incorporated, with a significant change in the R^2, (R^2=.146, F(1,195)=51.696, p<.001). Results of the final model R^2=.454, F(7,194)=23.013, p<.001suggest that the significant predictors of IPP were SMU (β=.146, p<.05), IPE (β=.216, p<.001), and OPSE (β=.484, p<.001), therefore hypothesis 1 was supported. This model explained 45% of the variance in IPP.

Table 10.

Hierarchical Regression Analyses Predicting Individual Political Participation

	Individual political participation		
	Model 1	Model 2	Model 3
Gender			
Male	.052	-.061	-.022
Age (Log)	.000	-.008	-.026
Group			
Republicans	.078	-.052	-.060
Democrats	.199**	.026	-.001
Social media use	.311***	.268*	.146*
Internal political efficacy		.458***	.216**
Online political self-efficacy			.216**
F(*df*)	7.3 (5,196)	14.4 (6,195)	19.2 (7,194)
R^2 change	.157***	.151***	.46***
R^2	.157	.308	.454

*p<.05, **p<.01, ***p<.001

n=203

Difference in the strength of the relationship between internal political efficacy and individual political participation and internal political efficacy and individual political participation.

Hypothesis 2 stated that the relationship between OPSE, a variable that specifically measured the perceived capability of individuals for using the Internet as a tool for political participation, and IPP would be stronger than the relationship between IPE, a more general measure of efficacy, and IPP. This hypothesis was tested following a procedure designed to test for the significance of the difference between two correlated correlations (Tabachnick & Fidell, 2001, p. 146) introduced by Steiger (1980). This procedure tests for the difference between the correlations of two independent variables with a dependent variable, and when the resulting Z is not within the critical values of +/- 2.58 for two-tailed test and $p<.01$, a significant difference between the predicted correlations exists, implying that one of the variables has a stronger relationship with the dependent variable.

Results of the test showed that the correlation between IPE and IPP ($r=.485$, $p<.01$) was significantly different than the relationship between OPSE and IPP ($r=.637$, $p<.01$), $\bar{Z}=2.88$, $df=200$. Looking at the correlation coefficients, it can be noticed that OPSE has a stronger correlation with IPP than IPE does. Therefore, hypothesis 2 is supported. The strength of the relationship between OPSE and IPP is significantly stronger than the relationship between IPE and IPP.

Successful enactive experience and individual efficacy beliefs.

Hypothesis 3 posed that successful enactive experience (SEE) had a positive relationship with OPSE, and hypothesis 4 proposed that SEE had a positive relationship with IPE. A set of analyses were performed to examine if any significant differences existed among groups in the

magnitude of the relationships between the dependent and independent variables involved in the analysis for these hypotheses. Pearson product-moment correlations were calculated in order to find the correlation coefficients between IPE, OPSE, SEE, social media use (SMU), and age (log) for each group (Table 11).

Table 11.

Correlation Coefficients for Each Group Between Age, SMU, SEE, IPE and OPSE

	IPE[a]			**OPSE**[a]		
	RG (N=37)	DG (N=63)	EG (N=103)	RG (N=37)	DG (N=63)	EG (N=103)
Age (Log)	.081	-.009	.100	-.160	-.152	-.059
SMU[a]	-.207	.235	.137	.007	.298*	.415**
SEE[a]	.705**	.148	.495**	.678**	.633**	.678**

*p<.01, **p<.001

[a] SMU: Social media use, SEE: Successful enactive experience, IPE: Internal political efficacy, OPSE: Online political self-efficacy

Although the results presented in the correlation matrix in Table 11 might be subject to Type II error given the size of the sample (especially for the political groups) some differences can be noticed when examining the correlations coefficients between IPE and OPSE and the other variables across the three groups. Therefore, a test for significant differences between correlation coefficients, which uses Fisher's Z transformation, for independent samples was

performed (Kullback, 1997, p. 320). Results of this test are given as a χ^2 distribution with degrees of freedom *m*-1, where *m* is the number of subjects' samples. Results suggest that relationship between SEE and IPE for the RG $r(35)=.705$, $p<.001$, the DG $r(61)=.148$, $p<0.1$and the EG $r(101)=.495$, $p<.001$ were significantly different, $\chi^2(2)=12.32$, $p<.001$.Likewise, the differences between SMU and OPSE for the RG $r(35)=.007$,$p<.1$, the DG $r(61)=.298$, $p<.01$ and the EG $r(101)=.415$, $p<.001$ were significant. Therefore, interaction terms between group membership and SMU were included to test hypothesis 3, and interaction terms between group membership and SEE were included in the analysis for hypothesis 4.

Hypothesis 3, which suggested that SEE had a positive relationship with OPSE, was assessed through a hierarchical regression. Table 12 shows the results for this analysis, including standardized regression coefficients, R^2 and R^2 changes. In the first model the variables included were gender, age (log), SMU, group membership, and the interaction term of SMU and group membership. In the second model, SEE was incorporated in the analysis.

Table 12

Hierarchical Regression Analyses Predicting Online Political Self-efficacy

	Online political self-efficacy	
	Model 1	Model 2
Gender		
Male	.053	.010
Age (Log)	.-039	-.051
Social media use	.487***	.283***
Group		
Republicans	.841**	.430
Democrats	.750**	.532**
Social media use X Republicans	-.558*	-.397
Social media use X Democrats	-.756*	-.474*
Enactive successful experience		.604***
F(*df*)	8.3 (7, 194)	28.0 (8, 193)
R^2 change	.232***	.305***
R^2	.279	.537

*p<.05, **p<.01, ***p<.001

N=203

Results of the first model (R^2=.232, *F*(7,194)=8.364, *p*<.001) suggested that group membership, RG (β=.841, p<.01) and DG (β=.750, p<.01), SMU (β=.487, p<.05), and the interaction term of group membership and SMU, DG (β=-.756, p<.01) and RG (β=-.558, p<.01);

had a significant effect on OPSE. When SEE was added to the model, the R^2 had a significant increase, (R^2=.305, *F* (1,193)=127.415). Results of this second model, (R^2=.537, *F*(8,193)=28.015, *p*<.001), suggested that the significant predictors of OPSE were SMU (β=-.283, p<.001), group membership, with DG reporting significant higher levels of OPSE (β=.532, p<.001), and SEE (β=-.604, p<.001). The effect of SMU on OPSE also varied significantly depending on the group. For members of the DG, the effect was .474 (p<.05) standardized units lower than for the EG. Although for the RG the effect of SMU on OPSE was also lower compared to the members of the EG, this difference was not statistically significant. In short, SEE had a positive effect on OPSE as hypothesized. Differences across groups were found for the effect of SMU on the dependent variable. For members of the DG, the effect of social media was significantly lower than for members of the reference group (i.e. EG).

With respect to hypothesis 4, a hierarchical regression was employed to examine the relationship between SEE and IPE. Table 13 shows the standardized regression coefficients, R^2 and R^2 changes for each model. Gender, the log transformation of age, SMU, and group membership were introduced in the first model as control variables. After the first model was run (R^2=.270, *F*(5,196)=15.197, *p*<.001), results suggested that gender (β=.248, p<.001) and group membership, group membership, RG (β=.248, p<.001) and DG (β=.377, *p*<.001); were significant predictors of IPE. In the second model, SEE and the interaction terms for group membership and SEE were introduced. The second model (R^2= .441, *F*(8, 193)=19.070, *p*<.001) resulted in a significant R^2 change of .162, (*F*(3,193)=18.674, *p*<.001), with gender (β=-.204,

$p<.001$), membership to the DG ($\beta=1.1$, $p<.05$), SEE ($\beta=.442$, $p<.001$) and the interaction between SEE and DG ($\beta=-.878$, $p<.05$) as significant predictors; supporting hypothesis 4. The whole model explained a 44% of the variance of IPE.

Results suggested that a significant difference existed between males and females in their level of IPE. Males reported having .204 standardized units higher levels of IPE than women. Both political groups reported significantly higher levels of IPE than the respondents from the EG. Results also suggested that the main effect of SEE on IPE for the reference group, which in this analysis was the EG, was statistically significant, supporting hypothesis 4. Results showed that the influence of SEE on IPE was different for individuals in the DG. For those in this group, the effect of SEE on IPE was .878 units lower than for those in the EG. In contrast, for those in the RG, this difference was not statistically significant, although it was very close ($p=.056$). In short, while SEE had a positive effect on IPE, supporting hypothesis 4, results suggested that the effect was less strong for those individuals in the DG.

Table 13

Hierarchical Regression Analyses Predicting Internal Political Efficacy

	Internal political efficacy	
	Model 1	Model 2
Gender		
Male	.248***	.204***
Age (Log)	.019	.026
Social media use	.094	.016
Group		
Republicans	.238***	-.620
Democrats	.377***	1.1***
Successful enactive experience		.442***
Successful enactive experience X Republicans		.848
Successful enactive experience X Democrats		-.878*
F(*df*)	15.19 (5, 196)	19.07 (8,193)
R^2 change	.279***	.162***
R^2	.279	.441

*p<.05, **p<.01, ***p<.001

N=203

Online political self-efficacy and online collective political efficacy.

Hypothesis 6 stated that a positive relationship existed between OPSE and online collective political efficacy (OCPE). Prior to starting with the analysis for this hypothesis, the independent, control and dependent variables were examined for normal distribution and the other assumptions of multiple regression analysis. Time as member of the group (measured in months) was logarithmically transformed. The linearity of the relationship between the independent variables and the dependent variable was examined using scatter plots. No indication of non-linear relationships was present. Variance inflation factors (VIF) were calculated to identify multicollinearity among the independent variables. No indication of multicollinearity was present (Table 14). A correlation matrix was calculated for the relationship between the independent and dependent variables across groups (Table 15), and tests were performed looking for statistical significant differences in the magnitudes of the correlations. No evidence suggested this was the case.

Table 14

Collinearity statistics for analyses predicting OCPE

	Tolerance	VIF
Gender	.886	1.128
Age (Log)	.843	1.186
Republican	.721	1.387
Democrat	.757	1.320
Time as group member (Log)	.785	1.273
SMU	.794	1.259
OPSE	.800	1.250

Table 15

Correlation Coefficients for Each Groups Between, Age, Time as Group Member, SMU, and OPSE with OCPE

	OCPE[a]		
	RG (N=37)	DG (N=63)	EG (N=103)
Age (Log)	.040	-.094	-.060
SMU[a]	.106	.012	.367
Time as group member	-.161	.131	.066
OPSE [a]	.414*	.245*	.342*

*p<.01, **p<.001

[a] SMU: Social media use, OPSE: Online political self-efficacy, OCPE: Online collective political efficacy

An ordinary least squares (OLS) regression was employed to examine the relationship between OPSE and OCPE. Table 16 includes the results for this analysis. The model had an R^2=.168 (F(7, 194)=5.616, p<.001) and the significant predictors were gender (β=-.159, p<.05), SMU (β=.149, p<.05), and OPSE (β=.320, p<.001). There was significant difference in the reported level of OCPE between men and women. Men reported .159 standardized units lower levels of OCPE. No difference was found across groups. Regarding hypothesis 6, it was

supported. The regression coefficient of OPSE suggested that a positive relationship existed between this variable and OCPE.

Table 16.

OLS Regression Predicting Online Collective Political Efficacy

	Online collective political efficacy
Gender	
Male	-.159*
Age (Log)	.028
Group	
Republicans	-.095
Democrats	.023
Time as group member (Log)	-.026
Social media use	.149*
Online political self-efficacy	.320***
F(*df*)	5.6 (7, 194)
R^2	.168

*p<.05, **p<.01, ***p<.001

n=203

Online efficacy beliefs, task interdependence and participation in collective actions. A set of three hypotheses were proposed to examine the relationship between OCPE, OPSE and communal political participation (CPP). Hypothesis 5 stated that OCPE was positively related with CPP. Hypotheses 7 and 8 examined the moderating role of task interdependence in the

relationship between OCPE and CPP, and OPSE and CPP. Table 17 includes a correlation matrix of variables included in the analysis for hypotheses 5 through 8.

Table 17.

Correlation Coefficients between SMU, IPE, OPSE, OCPE, interdependence, and CPP [a]

	1.	2.	3.	4.	5.	6.
1. SMU	1	.190**	.360**	.211**	.341**	.276**
2. IPE		1	.542**	.219**	.200**	.220**
3. OPSE			1	.336**	.244**	.239**
4. OCPE				1	.251**	.332**
5. Interdependence					1	.606**
6. CPP						1

*p<.01, **p<.001

[a] SMU: Social media use, IPE: Internal political efficacy, OPSE: Online political self-efficacy, OCPE: Online collective political efficacy, CPP: Communal political participation

Since the statistical analysis for testing hypotheses 7 and 8 included interaction terms, standardized values were calculated for all variables. Before performing the statistical analysis, normal distribution was examined for the dependent variable. Scatter plots were utilized to examine if a linear relationship existed between independent and dependent variables, which was the case. No evidence of multi-collinearity was found (Tables 18 and 19).

Table 18

Collinearity statistics for analyses predicting CPP

	Tolerance	VIF
Age (Log)	.823	1.215
Gender	.788	1.269
Republican	.568	1.762
Democrat	.688	1.454
Time as group member (Log)	.771	1.297
SMU	.400	2.503
Republican X SMU	.581	1.720
Democrat X SMU	.541	1.848
IPE	.653	1.531
OCPE	.748	1.336
Interdependence	.747	1.338
Interdependence X OCPE	.922	1.085

Table 19

Collinearity statistics for analyses predicting CPP

	Tolerance	VIF
Gender	.808	1.238
Age (Log)	.814	1.228
Republican	.584	1.712
Democrat	.689	1.451
Time as group member (Log)	.772	1.295
SMU	.386	2.588
Republican X SMU	.576	1.738
Democrat X SMU	.548	1.824
IPE	.550	1.818
OPSE	.551	1.815
Interdependence	.796	1.257
Interdependence X OPSE	.886	1.129

Correlation coefficients for each group were calculated for the relationship between independent and the dependent variables (Table 20), and a statistical test (Kullback, 1997, p. 320) was performed to account for significant differences in the magnitude of the relationships between the groups. Results suggested that the relationship between SMU and CPP differed across groups. The relationship between SMU and CPP for the RG $r(35)=.209$, $p=215$, the DG

$r(61)=.539$, $p<0.01$and the EG $r(101)=.141$, p=.156 were significantly different, $\chi^2(2)=8.25$, p<.05.This difference was accounted for in the regression analysis through interaction terms.

Table 20

Correlation Coefficients for Each Group Between Age, Time as Group Member, SMU, OPSE, IPE, OCPE and CPP

	CPP[a]		
	RG (N=37)	DG (N=63)	EG (N=103)
Age (Log)	-.053	.168	-.007
SMU[a]	.209	.539**	.141
Time as group member	.007	.216	.135
OPSE[a]	.380*	.384*	.183
Interdependence	.518*	.656*	.653*
IPE	.336*	.175*	.257**
OCPE	.226*	.321*	.383**

*p<.01, **p<.001

[a] SMU: Social media use, OPSE: Online political self-efficacy, OCPE: Online collective political efficacy

Hypothesis 5 stated that a positive relationship existed between OCPE and CPP, while hypothesis 7 stated that this relationship was moderated by the perceived interdependence of the task. OCPE would have a stronger relationship with CPP in situations where the perceived

interdependence was higher. These two hypotheses were examined through a hierarchical regression. The analysis used as control variables age (log), gender, time involved with the group (log), SMU and IPE perceptions. OCPE was included in the second model and task interdependence and the interaction term between OCPE and task interdependence were included in the third model.

Table 21 shows the results for the model explaining CPP. The first model, with only the control variables, explained 16% of the variance in CPP, with IPE (β=.223, p<.01) as a significant predictor. A significant difference in levels of CPP existed between the reference group (EG) and the RG (β=-.442, p<05). A statistical difference was found in the effect of social media on communal participation between the EG and the DG (β=.356, p<.05). When online collective political efficacy was included in the second model, the variance explained increased to 25%, with a significant R^2 change, R^2=.088, F(1, 191)=22.30, p<.001.

In the second model, a significant effect of OCPE (β=.325, p<.001) was found. The variation in the effect of SMU on CPP was still significant for the members the DG (β=.479, p<.01). A direct effect of task interdependence was tested in the third model in order to avoid confounding of main and interaction effects. Besides task interdependence the interaction term between this variable and OCPE was included. Results showed a significant change in the R^2 (R^2=.230, F(2, 189)=41.54, p<.001).

The final model had OCPE (β=.221, p<.001), task interdependence (β=.515, p<.001), and the interaction between task interdependence and OCPE (β=.11, p<.05) as significant predictors. The difference between the reference group and the RG (β=-.479, p<.01) and the DG (β=-.282,

$p<.05$) in the reported levels of CPP was significant. Also, a significant difference was found in the effect of SMU on CPP for the DG ($\beta=.280$, $p<.05$) compared to the EG, the reference group.

Table 21.

Hierarchical Regression Analyses Predicting CPP

	Collective political participation		
	Model 1	Model 2	Model 3
Age (Log)	-.013	-.017	-.068
Gender			
Male	.123	.257	.224
Group			
Republicans	-.442*	-.329	-.479**
Democrats	-.292	-.284	-.282**
Time as group member (Log)	.051	.057	-.009
Social media use	.111	-.013	-.045
Republicans X Social media use	.149	.214	.156
Democrats X Social media use	.356*	.479**	.280*
Internal political efficacy	.223**	.133	.102
Online collective political efficacy		.325***	.221***
Task interdependence			.515***

Table 21 (cont'd).

Task interdependence X Online collective political efficacy			.111*
F(*df*)	4.02(9,192)	6.23(10,191)	14.32(12,189)
R^2 change	.158***	.088***	.230***
R^2	.158	.246	.476

*p<.05, **p<.01, ***p<.001

N=203

These results suggest that hypothesis 6, which stated that OCPE had a positive relationship with CPP, was supported. The more individuals feel that their group is capable of using online tools to attain its political objectives, the more individuals tended to participate in collective actions with the group. Hypothesis 7, which stated that the relationship between online collective political efficacy and communal participation varied depending on the level of interdependence of the task, was also supported. Evidence suggests that task interdependence moderated the relationship between OCPE perceptions and CPP. The positive sign in the coefficient indicates that for every one unit of increase in task interdependence, the slope of OCPE on CPP will increase .111 units. In other words, in tasks individuals perceive high in interdependence, the stronger the effect of OCPE on CPP. A significant direct effect of task interdependence on CPP was found. The final model explained a 47% of the variance in CPP.

The results of the OLS regression performed to test hypothesis 8, which stated that task interdependence moderated the relationship between OPSE and CPP, are presented in Table 22.

Standardized values of the variables were used in the analysis. The control variables gender, age (log), group membership, time as group member (log), social media use, the interaction term between group membership and SMU and IPE; and the independent variables OPSE, as well as task interdependence and the interaction term between task interdependence and OPSE were included in the analysis.

The model had a R^2=.440, $F(12, 189)=12.385$, $p<.001$, task interdependence ($\beta=.569$, $p<.001$) was a significant predictor. Also, a significant difference between the RG ($\beta=-.608$, $p<.01$) and the EG ($\beta=-.326$, $p<.05$) was found in the predicted levels of CPP ($\beta=.146$, $p<.05$). No evidence suggested that task interdependence moderated the relationship between OPSE and CPP. Therefore, hypothesis 8 did not have any supporting evidence.

Table 22.

Regression Analyses of the Moderating Role of Interdependence in the Relationship between OPSE and CPP

	Collective political participation
Gender	
Male	.161
Age (Log)	-.076
Group	
Republicans	-.608**
Democrats	-.326*
Time as group member (Log)	-.023
Social media use	-.017
Social media use X Republicans	.142
Social media use X Democrats	.226
Internal political efficacy	.126
Online political self-efficacy	.089
Task interdependence	.569***
Task interdependence X Online political self-efficacy	.048
F(*df*)	12.38 (12, 189)
R^2	.440

*p<.05, **p<.01, ***p<.001

N=203

Although some of the results of the previous analyses suggest that significant differences exist between the reference group (EG) and the DG and the RG, none of these analyses explored the difference between members of the DG and the RG. An analysis examining the differences between these two groups can be of particular interest since the political nature of these two groups is similar, which makes them comparable. Any difference between these two groups can provide new and interesting directions for further research. According to the results of the previous analyses, possible differences between these groups might be present in relation to SMU, SEE, OCPE and IPE.

A set of ANOVA were performed in order to examine if indeed a significant difference existed between the DG and the RG regarding members' reported levels on these variables. Results are reported in Table 23. According to the results, SMU differed differed significantly across the DG and the RG, $F(1,98)=4.49$, $p=.037$. The mean of SMU for the DG ($M=4.07$) was significantly lower compared to the mean of SMU for the RG (M=4.57). No other result suggested a significant difference between these groups.

Table 23

ANOVA analyses comparing differences across the RG and the DG

		Sum of Squares	df	Mean Square	F	Sig.
SMU	Between Groups	5.995	1	5.995	4.496	.037
	Within Groups	130.686	98	1.334		
	Total	136.682	99			
IPE	Between Groups	.077	1	.077	.055	.815
	Within Groups	137.494	98	1.403		
	Total	137.572	99			
SEE	Between Groups	.080	1	.080	.109	.742
	Within Groups	71.485	98	.729		
	Total	71.565	99			
OCPE	Between Groups	6.485	1	6.485	2.892	.092
	Within Groups	219.730	98	2.242		
	Total	226.215	99			

In sum, the results related with the hypotheses suggested that OPSE had a significant positive relationship with IPP. Also, this relationship was found to be stronger that the relationship between IPE and IPP. SEE had a positive effect on both IPE and OPSE. Also, results of the previous set of analyses found that task interdependence acted as a moderator in the relationship between OPCE and CPP. Additionally, results suggested that OPCE also had a direct effect on CPP. However, task interdependence did not act as a moderator in the relationship between OPSE and CPP, although the former had a significant effect on OCPE.

In the following section the findings are interpreted and discussed in more detail, and some implications for theory and future studies are included. Table 24, below, summarizes the results for the hypotheses in the study.

Table 24

Summary of results for each hypothesis

Hypothesis 1: Online political self-efficacy is positively related to individual political participation.	Supported
Hypothesis 2: The relationship between online political self-efficacy and individual participation is stronger than the relationship between internal political efficacy and individual participation.	Supported
Hypothesis 3: Successful enactive experience in online political participation is positively related to online political self-efficacy.	Supported
Hypothesis 4: Successful enactive experience in online political participation is positively related to internal political efficacy.	Supported
Hypothesis 5: Online collective political efficacy is positively related with collective political participation.	Supported
Hypothesis 6: Online political self-efficacy is positively related with online political collective efficacy.	Supported
Hypothesis 7: The relationship between online collective political efficacy and collective participation is moderated by the perceived interdependence of the mode of participation.	Supported

Table 24 (cont'd).

Hypothesis 8: The relationship between online political self-efficacy and collective participation will be moderated by the perceived interdependence of the mode of participation.	Not- Supported

DISCUSSION

This study sought to explain, from a socio-cognitive theory approach, conflicting findings in previous research regarding the role of political efficacy in the relationship between Internet use and political activism and participation. By propounding the concepts of online self and collective political efficacy this research examined how the level of agency at which the political behaviors are performed should be taken into account when looking at the relationship between Internet use and political participation. In this sense, this study proposed a distinction not only between efficacy perceptions at the individual and collective levels, but also between political participation at the individual and collective levels; and investigated how the efficacy perceptions are associated with political participation at the same level of agency. The distinction between two levels of political participation was based on the notion that individuals can perform their political activities either as individuals or together with others as members of a group or collectivity.

As mentioned in a previous section, some of the studies that have examined the relationships among Internet use, including social media, and individuals' political and civic engagement have mixed different levels of participation into one single scale, while others measured ambiguously efficacy beliefs, not making clear if it was individual or collective efficacy the variable that was measured. This resulted in some studies trying to explain activities

that pertained to different levels of agency using variables only at the individual level of agency, such as internal political efficacy; or that combined political activities at different levels of agency. This explains the inconsistent findings in this research.

This study solves the inconsistencies by distinguishing between participation and efficacy beliefs in terms of levels of agency, and demonstrated that when examining participation at the individual level, self-efficacy beliefs become relevant. When the behavior examined pertains to a collective level of agency, collective efficacy behaviors as a predictor that influences this behavior, while self-efficacy does not have such relevance. Furthermore, results of the exploratory factor analysis in this study confirmed that a distinction existed between individual and collective levels of participation. This distinction implies the need to take into account activities that individuals perform collectively, as members of groups. Results in this study also confirmed that when examining collective or communal participation, it is not efficacy beliefs at the individual level of agency those associated with participation at this level. Therefore, the distinction between individual and collective levels of efficacy beliefs makes sense as each explain participation at different levels of agency.

However, the factor analysis was useful also to discriminate activities that despite being performed at the same level of agency, they seemed to be different from what was considered in this study as individual and collective activism. Indeed, according to the results of the first factor analysis, a third new factor emerged that did not coincide completely with collective or individual levels of participation. The items in this third factor corresponded to actions that individuals performed for their own self-interest, on their own sake and on their own behalf; but that cannot take place without the cooperation of others. Examples of activities for this third factor included signing a petition or attending a political meeting. Although individuals

participate on their own behalf a certain level of collectivity is implicit in these political activities as they require more than one individual in order to undertake them. However, these are not necessarily collective actions as individuals do not perform them as members of a group. Rather, these are activities in which individuals associate strategically with each other so that each one of them can attain an objective set individually. For this type of participation there is no participation as a member of a group, or a feeling of acting together with others on behalf of a group and with the goal of achieving a goal shared by the members of the group. However, there is a need for associating with other individuals in order to attain individually oriented objectives. However, these activities also correspond to traditional political activities. In other words, this factor can be interpreted as also actions that individuals perform offline. In this sense, it is possible that the difference between these two factors of individual participation might not be based on the interdependent nature of the activities, but rather that they might correspond to actions that individuals perform offline and separated from the technological realm. Further research should explore in more detail if the difference between these two factors is based on the interdependent nature or if they are related with the fact that they correspond to traditional forms of offline participation.

Additionally, the factor analysis also uncovered collective actions that do not necessarily involve other group members when individuals undertake them. These are activities that presented cross loadings in the individual and collective participation factors. These activities do not need the concert of other members of the group in order to perform them, but they are undertaken by individuals as members of a group and on behalf of the group. In this sense, although this type of participation corresponds to collective modes of action, they present characteristics of individual participation since they can be performed without the participation

of others. Therefore, a fourth participation factor might have been identified which corresponds to actions that people undertake as members of a group, but that do not imply the cooperation or participation of other members of the group in order to perform them. These are solitary activities that group members do for their group, without the participation of group peers.

This also has implications for the way in which the concept of group is defined in this context. While group is understood as a set of individuals that share a belief or objective and coordinate in order to achieve this objective, not all activities performed by group members will necessarily entail interaction and coordination with other group members. However, independent of the activities that a member might perform, a key element in the concept of group in this context is the idea of membership and belonging, in terms of voluntarily joining and becoming part of a collectivity together with other individuals that share a similar objective.

In this sense, although individuals regularly get together with others and become members of a group to act jointly to achieve a shared objective, not all activities that members perform require the participation of other group members. This means that efficacy beliefs might be playing a different role when examining participation at the group level. Based on results in this study, it is possible that efficacy beliefs at the individual level should influence positively "collective-individual" participation and this relationship would be moderated by the perceived level of interdependence. The less interdependent the activity is perceived, the more efficacy at the individual level will influence participation. This might also explain the null finding in this study regarding the moderating role of interdependence in the relationship between online political self-efficacy and collective participation. As this study did not find a significant influence of online political self-efficacy on the collective actions examined, it might influence the new emerging collective-individual action factor as in fact findings in previous studies about

interdependence and efficacy beliefs suggest (Katz-Navon & Erez, 2005). Indeed, in the experimental study by Katz-Navon and Erez individuals were randomly assigned to perform a task as part of a group effort, but the tasks varied by how much their work and the work of others was mutually needed in order to finish the whole assignment. Their findings showed that despite being in the same group, when individuals did not depend on others and others did not depend on them for performing a task, it was their individual perceptions of capability the ones that operated as predictors of performance.

Likewise, results also implied that on occasion individuals associate with others, and although they do not necessarily join or form a group, their activities do involve some level of interdependence. In this case, although the concept of collective efficacy should not be relevant as there is no membership to a group, there is a certain level of interdependence. Therefore, it might be that the relationship between self-efficacy and "individual-collective" participation is moderated by the degree of interdependence. The more the activity is perceived as interdependent, the lower the effect of self-efficacy on behavior. Likewise, it might be that third variables, such as expected outcomes, play an important role as predictors of these particular behaviors.

The nature of the collective actions that were taken into account for this study corresponded precisely to activities that in general require other members of the group and can only be performed in concert with other individuals.

Results also point at the importance that successful enactive experience had as it influenced both perceptions of individual efficacy. This indicates that is not just any type of Internet and social media use what increases perceptions of efficacy, but rather it is effective and

successful use of these media what will influence capability perceptions. Furthermore, successful political use of social media seems to affect not only capability perceptions of using these media effectively for political participation but also individuals' general perceptions of being capable of influencing their political environment. This might point at a possible process that explains the way in which political uses of social media influence participation in individual political activities. Although this research did not provide the evidence needed to show this is the case, SCT suggests a possible process where individual participation is influenced by political uses of the Internet through efficacy perceptions. The more positive experiences individuals have using social media for political participation, the more certain they will feel they can use these media for successful civic and political participation. This feeling, in its turn, would cause political participation. In other words, satisfaction with the experience of using the Internet for political purposes possibly moderates the relationship between political Internet use and individual efficacy perceptions. In circumstances of successful or satisfactory experiences, political uses of the Internet will increase efficacy perceptions; while in circumstances of negative experiences, the efficacy perceptions might decrease. These efficacy perceptions will, in their turn affect positively individual political participation.

Also, a significant difference in the levels of collective actions was found between groups. DG and RG reported lower intentions of participating in the collective actions of their group compared to the EG. This difference could be explained in terms of the nature of these groups. The EG is focused on a single issue and based its actions on group and collective expressions. In contrast, individuals in the DG and the RG may express and promote their ideas outside of the group, and tended to participate in group activities less. In other words, the participation in collective activities may be an inherent part of the way in which this group

undertakes its activities, while the DG and the RG members did not tend to have these types of participation as a norm in the group. As a matter of fact, during the time of the survey, which took place during the spring term of 2012, the EG was working on a proposal that was going to be presented to the President of the university about abandoning the use of coal on-campus. Collective work on this project and in the general activities performed to raise awareness of the issues the group advocates, such as demonstrations across campus and organizing public forums, might have influenced the reported answers of members of this group. On the other hand, the other two groups were more focused on the electoral cycle related with the presidential primaries and party conventions. The RG, for example, was organizing a trip to Washington D.C. to attend to Conservative Political Action Conference (C-PAC) and the state GOP convention. The DG initiated some fundraising activities for commissioners and school board candidates' elections, as well as preparing for the presidential electoral cycle next November.

Other differences found across groups have to do with the effect that social media use had on collective participation for the DG. This effect was larger for members of this group compared to the EG reference group. Speculatively, it might be the case that members of this group tended to be more connected online with other members of the group. It might be that those with whom members of the DG interacted with online were in fact the same individuals with whom they participated with in group related activities. In other words, it is possible that members of the DG shared more aspects of their life beyond those related with the activities of the group. One of the ways in which this interaction might take place is through social media and in this way they tend to increase their sense of belonging to the group and their intention to participate in its activities.

Another difference between groups was a difference in the relationship that social media use had on online political self-efficacy. This relationship was lower for members of the DG compared to members of the EG. Although it was found that social media use influences online political self-efficacy, it was also true that this effect was lower for members of the DG.

Likewise, a set of analyses were performed to find more evidence related with differences across groups, particularly the DG and the RG. These analyses were performed with the objective of looking deeper into potential differences between these two groups given their similar nature. The only significant difference that was found was regarding the use of social media. Members of the RG reported higher levels of general use of social media compared to members of the DG. As mentioned previously, the influence of the use of social media on the perceptions of online political self-efficacy was lower for members of the DG. This difference might be pointing at the importance that the nature of the individual use that members of similar groups, like the DG and the RG, might have. It might be that members of the DG tended to interact more among members of the same group, which reduced their possibilities of increasing their efficacy perceptions regarding Internet use for political objectives. In other words, the nature of the online interactions that members of the DG had might have been more restricted, and might have limited their possibilities of increasing their perceptions of online political self-efficacy. Likewise, the relationship of successful enactive experience using the Internet for political participation had with internal political efficacy might be explained in the same way.

However, these considerations continue to be speculations, and point at the need of looking deeper into the different ways in which members of groups of similar nature might be using social media and how these differences might be affecting individual efficacy perceptions. These results give origin to questions about the type of interaction, the content of these

interactions and with whom these individuals interact, as well as their individual motivations for using social media not as members of groups, but individually. It might be that these uses are also informing in some way their perceptions of what they are capable of achieving through social media.

Limitations and future research

Although findings in this study make a contribution to the current knowledge about the relationship between social media and political and civic engagement, they are limited by the characteristics of the population studied. On one hand, only information about three groups in one university was collected. Additional variation might be noticed if more groups were examined. Additionally, aspects such as the size, interaction styles and group cohesiveness are aspects that could be influencing the way in which the groups decide to perform their activities and to use social media as a tool to attain their objectives. Further research can explore more in depth different typologies of action among groups.

The nature of the data collected does not allow us to find any evidence about causal relationships among these variables, or the influence of other variables not included in this study. Although, following SCT it can be argued that the relation between enactive experience and efficacy beliefs are in a first moment causal and that over time, a correlation emerges between these variables, future research should explore the role of expected outcomes in conjunction with online political efficacy beliefs as a possible explanation of the process that individuals follow when they use social media to attain certain political objectives at the collective and individual levels, as well as the role that those expected outcomes might play when examining the emerging factors identified for collective and individual levels of participation. Likewise, future research should try to identify and define better these modes of participation as separate constructs from

the individual and collective modes of participation defined in this study, as well as examine the patterns of relationships with the efficacy perceptions propounded here and possible variables that might be moderating or influencing directly these levels of participation, such as task interdependence. A first approach could be through qualitative studies that might reveal the meaning and sense that individuals give to the different forms of participation and the different means and tools they use for them.

One of the differences found across groups was the effect that social media use had on participation in collective actions. Future research should examine how patterns of online interactions among members might influence participation. One way to do this would be by exploring if those individuals that interact more on social media with other members of the group and share with them other aspects of their lives present higher levels of participation than those that only use tool for activities related with the group.

Both Bandura's SCT and results of previous studies, such as the one by Bäck et al. (2011), suggest that expected outcomes and incentives have an important role as predictors of political participation. SCT adds to this expectancy-value approach the idea that efficacy beliefs acts an antecedent of the perceived incentives, as individuals act anticipating the scenarios of what certain actions might bring to them. Those scenarios will be shaped by the individual's efficacy beliefs (Bandura, 1997, p.116). In other words, individuals who think of themselves as highly efficacious will foresee positive results from their actions, while those that expect poor performances will project negative outcomes as a result of their actions (Bandura, 1991, p. 78), and most likely refrain from following those behaviors. However, this study did not examine the influence of incentives on participation and how they might be influenced by efficacy perceptions. By focusing only on efficacy perceptions an important amount of explanatory power

was ignored. Future research should also include motivational variables and examine the process that starts with Internet and social media use and leads to political participation.

Conclusions

This study contributes to the existing literature about the relationship between Internet use and political participation by finding that a correspondence exists between individual and collective modes of participation and efficacy perceptions at the same unit of agency. From a socio-cognitive theory approach the study proposes a possible explanation for the process through which Internet use influences political participation. This process takes place through efficacy perceptions that these media can be used to participate in politics at the individual and collective levels, and the role that successful experience using the Internet for political participation play as they increase efficacy perceptions. Therefore, it is not through a general use of the Internet and of social media, but rather a successful use of the Internet for political participation that later on influences participation in political actions.

Likewise, this study is a first step in the exploration of different patterns of relationships between political uses of the Internet and political participation, since it identified possible emergent patterns of participation that combine collective and individual levels of participation. This combination of collective and individual participation is a step towards an explanation of collective actions and the role of technology as supporter and facilitator of these behaviors.

APPENDICES

APPENDIX A

List of activist groups contacted

1. MSU Students for Choice

2. MSU Students For Fair Trade

3. Graduate Employees Union @ MSU

4. MSU College Democrats

5. Gender Neutral MSU

6. MSU Beyond Coal

7. Michigan Student Sustainability Coalition

8. Movimiento estudiantil Xicana/o de Aztlan

9. Spartans for Israel

10. MSU College Republicans

11. MSU College Libertarians

APPENDIX B

Survey

Collective participation scale

As a follower of the MSU College Democrats, given the opportunity, how likely are you to perform the following actions? (1=Very unlikely, 2= Unlikely, 3=Somewhat unlikely, 4=Neutral, 5= Somewhat likely, 6=Likely, 7= Very likely)

- Post content on Facebook supporting the ideas your group advocates
- Share with your Facebook friends content posted on your group's page
- Talk to a group or person on behalf of your group
- Invite people to participate in your group
- Organize meetings
- Coordinate with others in your group to organize the group's activities
- Coordinate members' tasks
- Support the activities of other members of the group
- Find useful information online to support the group's activities
- Post on someone else's social media site content related with your group

Online collective political efficacy scale

For the following question, the higher the number you select the more certain you are about each statement (1 to 10). Please indicate how certain you are that the MSU College Democrats, as a group, are capable of using the Internet to…:

- 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

Received interdependence scale

As a follower of the MSU College Democrats, please indicate to what extent you depend on other members of the group to… (1=Not at all, 2=Very little, 3=Somewhat, 4=Extremely).

- Interact online with non-members on behalf of your group
- Let non-members learn about the activities of your group
- Advocate in favor of your group
- Organize in person meetings
- Coordinate the group's activities
- Recruit new members

Initiated interdependence scale

As a follower of the MSU College Democrats, please indicate to what extent other members depend on you to… (1=Not at all, 2=Very little, 3=Somewhat, 4=Extremely).

- Interact online with non-members on behalf of your group
- Let non-members learn about the activities of your group
- Advocate in favor of your group
- Organize in person meetings
- Coordinate the group's activities
- Recruit new members

Successful enactive experience

For the following questions, please express your level of agreement with each statement regarding your experience using the Internet.

- My personal experience has showed me that it can be useful for expressing my political opinion
- I have had the personal experience of successfully using it for political activities
- I have not seen for myself that I can express my political opinions using it
- My experience shows me that signing online petitions can be effective
- I have been successful in using it to interact with others around political issues
- I have had successful experiences using it to influence others on political matters
- I have seen by myself that I can get important political information through it

Individual political participation scale

Given the opportunity, how likely are you to perform the following activities *on your own* to attain a political objective: (1=Very unlikely, 2= Unlikely, 3=Somewhat unlikely, 4=Neutral, 5= Somewhat likely, 6=Likely, 7= Very likely).

- Sign a petition
- Express your opinion online regarding a political issue
- Post a political comment on a social network site page
- Discuss a political issue online
- Post a link about politics on a social media website
- Visit a social media site of an activist or political group
- Look at the content of a link posted online by an activist or political group

- Contact an elected official
- Attend a protest
- Attend a political meeting

Online political self-efficacy

For the following question, the higher the number you select the more certain you are about each statement (1 to 10).

Please rate how certain are you that *you can* do the things discussed below by choosing the appropriate number:

- Use social media applications to express your political views
- Express coherently your political ideas to others online
- Influence others online regarding a political issue
- Use social media applications to obtain a political objective
- Gather relevant online resources to express a political view
- Argue effectively with others online
- Use relevant information online to express your political views
- Use the Internet to pursue your political purposes
- Keep informed about political issues you care about using online social media sites and applications

Internal political efficacy scale

Indicate your level of agreement or disagreement with the following statements:

- I consider myself to be well qualified to participate in politics

- I feel that I have a pretty good understanding of the important political issues facing our country
- I feel that I could do as good a job in public office as most people
- I often don't feel sure of myself when talking with other people about politics and government

Internet use questions

- Do you have a Facebook account?

  Yes

  No
- On average, how much time do you spend on Facebook daily?

  hrs.

  mins.

- Approximately how many TOTAL Facebook friends do you have?
- On average, how much time do you spend on the Internet during a week day?

  hrs.

  mins.

- On average, how much time do you spend on the Internet during a weekend day?

  hrs.

  mins.

Social media use scale

Either on your cell phone or computer, how frequently do you:

- Send messages to Facebook ‘friends’
- Chat with your Facebook ‘friends’
- Add or change pictures on Facebook
- Post content on Twitter
- Check a Facebook friend profile
- Check your ‘events’ Facebook
- Create ‘events’ on Facebook
- Check a Facebook friend photos
- Check some Twitter posts
- Update your Facebook status

- For how long have you been involved with the NAME OF GROUP? Months
- How many organizations, besides the MSU College Republicans are you involved with?
- What year were you born?
- What is your gender?

  Male Female
- Are you (Check all that apply)

  Black or African American

  Asian (including Chinese, Korean, Japanese, and Southeast Asian)

  White

  Native American or Alaskan native

  Pacific Islander

Other, please specify

- Are you of Spanish, Hispanic or Latino origin, including Mexican-American, Chicano, Mexican, Puerto Rican, Cuban, Central or South American, or other Hispanic?

  Yes No

APPENDIX C

Correlation Coefficients Between IPP, CPP, SEE, OPSE, IPE, OCPE, Interdependence, SMU, Time in the group, Age, Gender, and Group membership

Table 25

Correlation Coefficients Between IPP, CPP, SEE, OPSE, IPE, OCPE, Interdependence, SMU, Time in the group, Age, Gender, and Group membership

1. IPP	8. SMU
2. CPP	9. Time in Group (Log)
3. SEE	10. Age (Log)
4. OPSE	11. Male
5. IPE	12. RG
6. OCPE	13. DG
7. Interdependence	14. EG

Table 25 (cont'd)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1.	1	.390**	.666**	.637**	.485**	.262**	.276**	.339**	.116	-.061	.098	.095	.191*	-.251**
2.		1	.379**	.336**	.343**	.356**	.629**	.342**	.215**	-.026	.185**	.143*	.213**	-.308**
3.			1	.691**	.497**	.323**	.304**	.290**	.188**	-.055	.125	.122	.213*	-.292**
4.				1	.542**	.336**	.244**	.360**	.178*	-.132	.092	.158*	.217**	-323**
5.					1	.219**	.200**	.190**	.203**	-.013	.332**	.230**	.301**	-.456**
6.						1	.251**	.211**	.024	.074	-.134	-.056	.121	-.068
7.							1	.341**	.270**	.104	.107	.210**	.001	-.164*
8.								1	.292**	-.102	.059	.230**	.033	-.209**
9.									1	.159*	.177*	.319**	.030	-.274**
10.										1	.214**	.019	-.213**	.182**
11.											1	.176*	.067	-.199**
12.												1	-.317**	-.479**
13.													1	-.681**

Table 25 (cont'd)	
14.	1
*p<.05, **p<.01, ***p<.001	

REFERENCES

References

Al-Ani, B., Mark, G., Chung, J., & Jones, J. (2012). The Egyptian Blogosphere: A Counter-Narrative of the Revolution. *Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work*, CSCW '12 (pp. 17–26). New York, NY, USA: ACM. doi:10.1145/2145204.2145213

Bäck, H., Teorell, J., & Westholm, A. (2011). Explaining Modes of Participation: A Dynamic Test of Alternative Rational Choice Models. *Scandinavian Political Studies*, *34*(1), 74–97. doi:10.1111/j.1467-9477.2011.00262.x

Bakker, T. P., & de Vreese, C. H. (2011). Good News for the Future? Young People, Internet Use, and Political Participation. *Communication Research*, *38*(2). doi:10.1177/0093650210381738

Balch, G. I. (1974). Multiple Indicators in Survey Research: The Concept "Sense of Political Efficacy." *Political methodology*, *1*(2), 1–43.

Bandura, A. (1986). *Social Foundations of Thought and Action*. Englewood Cliffs, N.J.: Prentice Hall.

Bandura, A. (1991). Social Cognitive Theory of Self-Regulation. *Organizational behavior and human decision processes*, *50*(2), 248–287.

Bandura, A. (2000). Exercise of Human Agency Through Collective Efficacy. *Current directions in psychological science*, *9*(3), 75–78.

Bandura, A. (1997). *Self-efficacy : The Exercise of Control*. New York: W.H. Freeman.

Bandura, A. (1991). Self-Regulation of Motivation Through Anticipatory and Self-Reactive Mechanisms. *Perspectives on motivation: Nebraska Symposium on Motivation* (R.A. Dienstbier., Vol. 38, pp. 69–192). Lincoln, NE: University of Nebraska Press.

Bandura, A. (1993). Perceived Self-Efficacy in Cognitive Development and Functioning. *Educational Psychologist*, *28*(2), 117–148. doi:10.1207/s15326985ep2802_3

Bandura, A. (2006). Guide for Construction Self-efficacy Scales. *Self-efficacy beliefs of adolescents* (Pajares, Frank & Urdan, Timothy C., pp. 307–337). Greenwich, Conn.: IAP.

Bennett, W. L., & Segerberg, A. (2012). The Logic of Connective Action. *Information, Communication & Society*, 1–30. doi:10.1080/1369118X.2012.670661

Browning, C. R., Feinberg, S. L., & Dietz, R. D. (2004). The Paradox of Social Organization: Networks, Collective Efficacy, and Violent Crime in Urban Neighborhoods. *Social Forces*, *83*(2), 503–534.

Brunsting, S., & Postmes, T. (2002). Social Movement Participation in the Digital Age. *Small Group Research*, *33*(5), 525 –554. doi:10.1177/104649602237169

Campbell, A., Gurin, G., & Miller, W. E. (1954). *The Voter Decides*. Evanston, Ill.: Row, Peterson.

Chong, D. (1991). *Collective Action and the Civil Rights Movement*. Cambridge, MA, USA: University of Chicago Press.

Craig, S. C., Niemi, R. G., & Silver, G. E. (1990). Political Efficacy and Trust: A Report on the NES Pilot Study Items. *Political Behavior*, *12*(3), 289–314. doi:10.1007/BF00992337

Dillman, D. (2007). *Mail and Internet Surveys : The Tailored Design Method* (2 ed., 2007 update with new Internet, visual, and mixed-mode guide.). Hoboken, NJ, USA: Wiley.

Gibson, C. B. (2003). The Efficacy Advantage: Factors Related to the Formation of Group Efficacy. *Journal of Applied Social Psychology*, *33*(10), 2153–2186.

Goddard, R. D. (2001). Collective Efficacy: A Neglected Construct in the Study of Schools and Student Achievement. *Journal of Educational Psychology*, *93*(3), 467–76.

Goddard, R. D. (2002). Collective Efficacy and School Organization: A Multilevel Analysis of Teacher Influence in Schools. *Theory and research in educational administrations* (pp. 169–184). Information Age Publishing.

Goddard, R. D., & Goddard, Y. L. (2001). A Multilevel Analysis of the Relationship between Teacher and Collective Efficacy in Urban Schools. *Teaching and Teacher Education*, *17*(7), 807–18.

Greenlees, I. A., Graydon, J. K., & Maynard, I. W. (2001). The Impact of Collective Efficacy Beliefs on Effort and Persistence in a Group Task. *Journal of Sports Sciences*, *17*(2), 151–158. doi:10.1080/026404199366253

Hair, J. F., Tatham, R. L., Anderson, R. E., & Black, W. (1998). *Multivariate Data Analysis* (5th ed.). Upper Saddle River, New Jersey, USA: Prentice Hall.

Hamdy, N., & Gomaa, E. H. (2012). Framing the Egyptian Uprising in Arabic Language Newspapers and Social Media, Framing the Egyptian Uprising in Arabic Language Newspapers and Social Media. *Journal of Communication, Journal of Communication*, *62*, *62*(2, 2), 195, 195–211. doi:10.1111/j.1460-2466.2012.01637.x, 10.1111/j.1460-2466.2012.01637.x

Hampton, K. N. (2010). Internet Use and the Concentration of Disadvantage: Glocalization and the Urban Underclass. *American Behavioral Scientist*, *53*(8), 1111–1132. doi:10.1177/0002764209356244

Hardin, R. (1982). *Collective Action*. Baltimore, Maryland, USA: The Johns Hopkins University Press.

Hayes, R. (2009). *New media, new politics: Political Learning Efficacy and the Examination of Uses of Social Network Sites for Political Engagement*. Michigan State University, East Lansing.

Heuzé, J.P., Raimbault, N., & Fontayne, P. (2006). Relationships Between Cohesion, Collective Efficacy and Performance in Professional Basketball Teams: An Examination of Mediating Effects. *Journal of Sports Sciences*, *24*(1), 59–68. doi:10.1080/02640410500127736

Hooghe, M., Vissers, S., Stolle, D., & Mahéo, V. (n.d.). The Potential of Internet Mobilization: An Experimental Study on the Effect of Internet and Face-to-Face Mobilization Efforts. *Political Communication*, *27*(4), 406–431.

Katz-Navon, T. Y., & Erez, M. (2005). When Collective and Self-efficacy affect Team Performance: The Role of Task Interdependence. *Small Group Research*, *36*(4), 437–465.

Kenski, K., & Stroud, N. J. (2006). Connections Between Internet Use and Political Efficacy, Knowledge, and Participation. *Journal of Broadcasting & Electronic Media*, *50*(2), 173–192.

Kullback, S. (1997). *Information Theory and Statistics*. North Chemsford, MA, USA: Courier Dover Publications.

Lee, F. L. F. (2006). Collective Efficacy, Support for Democratization, and Political Participation in Hong Kong. *International Journal of Public Opinion Research*, *18*(3), 297–317.

Lee, F. L. F. (2010). The Perceptual Bases of Collective Efficacy and Protest Participation: The Case of Pro-Democracy Protests in Hong Kong. *International Journal of Public Opinion Research*, *22*(3), 392–411.

Lee, K. M. (2006). Effects of Internet Use on College Students' Political Efficacy. *CyberPsychology &Behavior*, *9*(4), 415–422. doi:10.1089/cpb.2006.9.415

Lim, M. (n.d.). Clicks, Cabs, and Coffee Houses: Social Media and Oppositional Movements in Egypt, 2004–2011. *Journal of Communication*. doi:10.1111/j.1460-2466.2012.01628.x

Lin, J. H., Peng, W., Kim, M., Kim, S. Y., & LaRose, R. (2012). Social Networking and Adjustments Among International Students. *New Media & Society*, *14*(3), 421–440. doi:10.1177/1461444811418627

Martin, E. (2004). Vignettes and Respondent Debriefing for Questionnaire Design and Evaluation. *Methods for Testing and Evaluating Survey Questionnaires* (S. Presser, J. M. Rothgeb, M. P. Couper, J. T. Lessler, E. Martin, J. Martin and E. Singer., pp. 149–171). Hoboken, NJ, USA: John Wiley & Sons, Inc. Retrieved from http://onlinelibrary.wiley.com.proxy1.cl.msu.edu/doi/10.1002/0471654728.ch8/summary

McPherson, J. M., Welch, S., & Clark, C. (1977). The Stability and Reliability of Political Efficacy: Using Path Analysis to Test Alternative Models. *The American Political Science Review*, *71*(2), 509–521.

Nah, S., Veenstra, A. S., & Shah, D. V. (2006). The Internet and Anti-War Activism : A Case Study of Information, Expression, and Action. *Journal of Computer-Mediated Communication*, *12*(1), 230–247. doi:10.1111/j.1083-6101.2006.00323.x

Olson, M. (1965). *The Logic of Collective Action: Public Goods and the Theory of Groups*. Harvard University Press.

Paskevich, D. M., Brawley, L. R., Dorsch, K. D., & Widmeyer, W. N. (1999). Relationship Between Collective Efficacy and Team Cohesion: Conceptual and Measurement Issues. *Group Dynamics: Theory, Research, and Practice*, *3*(3), 210–222. doi:10.1037/1089-2699.3.3.210

Presser, S., Couper, M. P., Lessler, J. T., Martin, E., Martin, J., Rothgeb, J. M., & Singer, E. (2004). Methods for Testing and Evaluating Survey Questions. *Public Opinion Quarterly*, *68*(1), 109 –130. doi:10.1093/poq/nfh008

Pu, Q. & Scanlan, S. J. (2012). Communicating Injustice? *Information, Communication & Society*, 1–19. doi:10.1080/1369118X.2012.665937

Sampson, R. J. (2009). Collective Efficacy Theory: Lessons Learned and Directions for Future Inquiry. In F. Cullen, J. Wright, & K. Blevins (Eds.), *Taking Stock: The Status of Criminological Theory*. Transaction Publishers.

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy. *Science*, *277*(5328), 918 –924. doi:10.1126/science.277.5328.918

Seligson, M. A. (1980). Trust, Efficacy and Modes of Political Participation: A Study of Costa Rican Peasants. *British Journal of Political Science*, *10*(1), 75–98.

Shelby D. Hunt, Sparkman, R. D., & Wilcox, J. B. (1982). The Pretest in Survey Research: Issues and Preliminary Findings. *Journal of Marketing Research*, *19*(2), 269–273.

Shoemaker, P. J., Tankard, J. W., & Lasorsa, D. L. (2004). *How to build social science theories*. Thousand Oaks, CA, USA: SAGE.

Starbird, K. & Palen, L. (2012). (How) Will the Revolution be Retweeted?: Information Diffusion and the 2011 Egyptian Uprising. *Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work*, CSCW '12 (pp. 7–16). New York, NY, USA: ACM. doi:10.1145/2145204.2145212

Steiger, J. H. (1980). Tests for Comparing Elements of a Correlation Matrix. *Psychological Bulletin*, *87*(2), 245–251. doi:10.1037/0033-2909.87.2.245

Tabachnick, B. G. & Fidell, L. S. (2001). *Using Multivaraite Statistics* (4th. ed.). Needham Heitghts, MA, USA: Allyn and Bacon.

Van der Vegt, G., Emans, B., & van de Vliert, E. (1998). Motivating Effects of Task and Outcome Interdependence in Work Teams. *Group & Organization Management*, *23*(2), 124–124–143.

Verba, S. & Nie, N. H. (1987). *Participation in America: Political Democracy and Social Equality*. Chicago, IL, USA: University of Chicago Press.

Vissers, S., Hooghe, M., Stolle, D., & Mahéo, V.-A. (2011). The Impact of Mobilization Media on Off-Line and Online Participation: Are Mobilization Effects Medium-Specific? *Social Science Computer Review*. doi:10.1177/0894439310396485

Vitak, J., Zube, P., Smock, A., Carr, C. T., Ellison, N., & Lampe, C. (2011). It's Complicated: Facebook Users' Political Participation in the 2008 Election. *Cyberpsychology, Behavior, and Social Networking*, *14*(3), 107–114. doi:doi: 10.1089/cyber.2009.0226

Wang, S.I. (2007). Political Use of the Internet, Political Attitudes and Political Participation. *Asian Journal of Communication*, *17*(4), 381–395.

Wollman, N. & Stouder, R. (1991). Believed Efficacy and Political Activity: A Test of the Specificity Hypothesis. *Journal of Social Psychology*, *131*(4), 557–566.

Yeich, S. & Levine, R. (1994). Political efficacy: Enhancing the construct and its relationship to mobilization of people. *Journal of Community Psychology*, *22*(3), 259–271. doi:10.1002/1520-6629(199407)

Youmans, W. L. & York, J. C. (n.d.). Social Media and the Activist Toolkit: User Agreements, Corporate Interests, and the Information Infrastructure of Modern Social Movements. *Journal of Communication*. doi:10.1111/j.1460-2466.2012.01636.x