

## MEASURING THE INFLUENCE OF SOCIAL MEDIA ON PERCEPTIONS OF BLACK LIVES MATTER ACTIVISM

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### Article Info

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### Abstract

The Black Lives Matter (BLM) movement has received widespread attention for amplifying the issue of racial injustice against African Americans in the United States. Social media's role in mobilizing individuals to participate in social movements has been extensively studied, but the impact of social media use on citizens' decision to support the BLM movement is yet to be fully understood. This study analyzes the relationship between social media use and individuals' behavior towards the BLM movement, with a specific focus on how diversity in one's social networks on social media affects their attitude towards BLM. By conducting a survey in the United States, this study finds that higher diversity in one's social networks on social media significantly enhances their likelihood of participating in the BLM movement, with non-white respondents driving the significant result. The study contributes to the literature of social movements by dissecting the mechanism through which social media shapes citizens' relationship with BLM, generating critical implications for understanding the dynamics of social movements in modern society.

### Introduction

Race relations in the United States have been constantly contentious. When Trayvon Martin was fatally shot by George Zimmerman in 2012, American media outlets widely covered the incident. After a jury acquitted Zimmerman in 2013, waves of protest erupted around the country, which eventually led to the Black Lives Matter (BLM) movement (Thebault 2022). The tension of race relations in America escalated again in the summer of 2020, when the details of George Floyd's death in Minneapolis, Minnesota were disclosed. A video recording the scene of his death quickly went viral online, documenting millions of views within just 12 hours (Flood 2020). As the video attracted a significant amount of attention, an unprecedented number of American citizens joined the BLM movement. Reports revealed that millions of citizens, including a large number of white individuals, participated in protests across the country (Fisher 2020; Pew Research Center 2020; Putnam et al. 2020).

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The primary focus of BLM has been on the issue of racial injustices against African Americans (Campbell 2021; Frimpong 2020; Taylor 2016). Concentrating on the issue of police brutality against African Americans, Taylor (2016) contends that racial injustice in the United States was historically constructed, generating significant degrees of social inequality that have remained prevalent today. While the BLM movement has tried to rectify structural inequalities against racial minorities (Bunyasi and Smith 2019a), the target of BLM is not confined to racial injustice. In fact, the first wave of BLM was started by three African American women, with its primary focus targeting issues that the LGBTQ community was facing (Saltzman 2020). The BLM movement therefore represents a wide range of different groups facing discrimination throughout the United States, which has subsequently induced massive social movements around the world

The issue of social movements are widely studied across different disciplines. Scholars have vigorously explored the factors that significantly shape dynamics surrounding social movements (Meyer and Tarrow 1997; Tarrow 1998). One of the most important factors that mobilized millions of citizens toward BLM was the rise of the Internet. Focusing on the importance of social media, numerous studies have analyzed the Internet's impact on various movements, such as the anti-vaccination movement (Smith and Graham, 2019), the Arab Spring (Bhuiyan 2011; Tufekci and Wilson 2012), protests in Latin America (Valenzuela et al. 2016) and feminist movements (Li et al. 2021; Pullen and Cooper 2010). Research demonstrates that social media use significantly boosts Black Lives Matter and the Effects of a Social Media User's Connection to Differing Ethnic and Racial Backgrounds

citizens' activism (Anduiza et al. 2014; Boulianne et al. 2020). These studies have consistently verified the inseparable relationship between social media and social movements in a wide variety of causes.

Recognizing the critical importance of social media in mobilizing individuals to support a social movement, the present research explores the link between social media use and individuals' behavior towards the BLM movement in the United States. While the effect of social media on social movements has been widely examined, we have not fully understood the impact of social media on citizens' decisions to be a part of the BLM movement specifically. Accordingly, it is important to closely look at the factors that drive citizens to support BLM. Because the BLM movement is mainly focused on and concerned about the problem of racial injustice (Campbell 2021; Frimpong 2020; Taylor 2016), it is necessary to consider how social media use can influence citizens' attitudes toward diversity. On one hand, some scholars state that individuals are more likely to interact with those who share the same views as themselves, calling social media an "echo chamber" (Cinelli et al. 2021; Johnson et al. 2011). On the other hand, others have suggested that the "echo chamber" perspective has been exaggerated (Dubois and Blank 2018; Nguyen and Vu 2019). Studies also suggest that social media encourages citizens to consider different viewpoints than their original stance (Barbera et al. 2015; Garrett 2009; Masip et al. 2020; Yardi and Boyd 2010). An individual's exposure to various perspectives can lead to substantive action among larger groups of social media users. Evidence indicates that social media use can foster empathy among users, thus potentially motivating them to take action on certain issues (Alloway et al. 2014; Boulianne et al. 2018; Stern 2008; Thomas et al., 2018; Vossen and Valkenburg 2016).

One key factor in determining levels of exposure to different perspectives is the degree of diversity in one's social networks on social media. Research shows that a user's network heterogeneity can encourage those individuals to read news stories that display different ideological orientations than what they are typically exposed to (Bakshy et al. 2015; Beam et al. 2018; Choi and Lee 2015; Masip et al. 2020). Others suggest that this diversity on social media platforms can indirectly promote higher rates of news consumption and political participation (Choi et al. 2017; Kim 2016; for a critical view, see Campbell and Kwak 2011). These studies indicate that a diverse exposure to posts and topics on social media can critically influence individuals' behavior in different fields. If social media

can promote interactions between those who have different views, there is a possibility that social media use can make users more empathetic to the plight of African Americans, thus involving them in the BLM movement.

Building upon the insights from these prior studies, the present research examines the relationship between social media and one's decision to be part of the BLM movement. More specifically, this study analyzes how diversity in one's social networks on social media can influence his or her behavior toward BLM. Because diversity on social networks can expose individuals to more diverse views, one can hypothesize that a higher number of one's "friends" and followers being from different racial and ethnic backgrounds can lead to higher levels of posting behavior toward BLM. It is equally possible to hypothesize that those individuals who are widely connected with friends and followers from different racial and ethnic origins are more likely to participate in BLM protests.

In order to test these hypotheses, we conducted a survey in the United States specifically tailored for this study. A statistical analysis on the survey data reveals that higher diversity in one's social networks on social media significantly enhances his or her likelihood of participation in the BLM movement. Yet, the analysis fails to find a statistically significant effect among white respondents; it is clearly non-white respondents who are driving the significant result relating to diversity of social networks. This study makes an important contribution to the literature of social movements by dissecting the mechanism through which social media shapes citizens' relationship to BLM. Findings from this study generate critical implications that are essential in understanding the dynamics of social movements in modern society.

This study proceeds as follows. First, we review studies exploring the relationship between social media and social movements. Second, we develop theory and hypotheses building upon the implications from previous studies examining the issue of diversity on social media. Third, we present the research design that allows us to test the hypotheses. Fourth, we conduct a statistical analysis and discuss the results. Finally, we conclude this study by summarizing the findings and discussing the implications in American society.

### **Social Media and Social Movements**

The issue of social movements has attracted a significant amount of attention in different disciplines. Scholars suggest that social movements are an essential component of modern society with many citizens actively participating in a wide range of movements for various causes (Meyer and Tarrow 1997; Norris 2002). Some argue that these movements tend to be more effective in bringing about social changes than other historical and more conventional forms of political participation (McAdam 1983). In some countries, protests have dramatically changed political dynamics, consequently inducing regime changes toward a more democratic form of government (Durac 2013; Lee 2000). One cannot underestimate the impact of social movements in these various dimensions.

Given the fact that social movements have gained critical importance in modern society, it is essential to accurately understand citizens' attitudes and behavior on this matter. Numerous studies have widely examined factors that shape individuals' decision to participate in social movements. In accounting for the rise of the Civil Rights Movement, Morris (1984, 1999) emphasizes the importance of local institutions, such as churches and community organizations, through which African Americans were mobilized on a massive scale. While these local institutions can still play an important role, it is essential to identify a newly emerging factor that drives social movements. One of the most crucial factors that has been attracting a significant amount of attention is the rise of the Internet. According to the Pew Research Center (2021a), 93% of the adults in the United States' population use the Internet. The Internet has now become an essential component of one's daily life, and accordingly, a lack of access to the Internet can be considered a serious disadvantage that may deprive people of the means to advance in society (Purdy 2021). Some scholars emphasize potentially important roles of the Internet in running a democratic

political system, including the ability for citizens to share their political expressions (Chadwick 2009; Khan and Krishnan 2017; Kobayashi et al. 2006; for a skeptical view, see Bakardjieva 2009; Shulman 2009).

Numerous studies show that the Internet significantly affects citizens' political behavior. Firstly, scholars suggest that the Internet tends to enhance levels of political knowledge and interest among citizens. Lupia and Philpot (2005) contend that an individual's habits of accessing websites that they find useful can potentially increase their political interest. Nagahama (2019) demonstrates that online news sites tend to boost levels of political knowledge among citizens. Similarly, Takano et al. (2020) show that "accidental contacts" to a type of news content make individuals more knowledgeable about the subject. Closely related to these issues, research also indicates that the Internet encourages political discussions. Stromer-Galley (2002) maintains that the Internet provides citizens with an important space in which they can freely discuss and share their ideas relating to the political climate and leaders in their area. Also, Papacharissi (2004) states that an online space serves as an arena where citizens can engage in heated political discussions, which can significantly contribute to democratic governance. These studies document the broad variety of benefits the Internet provides in motivating individuals' involvement in politics. Along with the potential benefits of the Internet, it has become imperative to explore how the Internet actually influences citizens' political participation.

Research from around the globe shows that the Internet, interacting with the traditional media sources, can boost levels of political discussion and participation (Bakker and De Vreese 2011; Shah et al. 2005). Additionally, others suggest that online activism has a positive impact on political participation in the real world. Using data in the United States, Zuniga et al. (2009) demonstrate that online activities translate into political engagement offline. On an international level, studies show similar results of an increase in political engagement. Analyzing behavior among Twitter users in Italy, Vaccari et al. (2015) indicate that social media use enhances levels of political engagement beyond the online arena. Additionally, Stetka and Mazak (2014) found that online activism through social media indeed led to more active political participation in the Czech Republic. Finally, Slater et al. (2012) argue that social media was instrumental in generating political engagement during the post-disaster period in Japan, as social media created a new information flow. Evidence indicating the positive impact of social media on political participation is abundant.

As scholars document the importance of the Internet in the political arena, they have widely explored the relationship between the Internet and social movements. The rise of the Internet has dramatically changed the way participants in social movements communicate with others. Studies underline the advantages of social media in enhancing communication strategies for social movements (Mercea 2013). Van Laer and Van Aelst (2010) suggest that the Internet provides new tools that make it possible to mobilize a large number of citizens, including online petitions and protest websites or alternative media sources. Zeitsoff (2017) also contends that social media significantly decreases the cost of communication, thus making it easier to diffuse information between larger groups of people who may not have had connection with each other otherwise. Some studies show that social media creates a new information flow that is distinct from traditional media sources. When analyzing the Arab Spring in Egypt, scholars maintain that the authoritarian regime could not effectively control or suppress the information flow on social media regarding citizens' dissatisfaction with the regime, which greatly contributed to the surge of protests (Bhuiyan 2011; Tufekci and Wilson 2012). It is certain that the Internet, especially social media, has created new paths through which information travels among citizens, translating into more interconnectedness between groups of people with varying ideologies.

Along with the innovation in communication, social media has dramatically transformed the way citizens are mobilized into social movements. Bennett and Segerberg (2012) contend that the rise of information technology has significantly changed the shape of social movements, giving rise to a looser form of movement with no formal

organizations, which they call “connective action.” Consistent with this perspective, studies have widely documented that social media has played an essential role in mobilizing citizens toward actual movements. In analyzing protest behavior in Latin American countries, Valenzuela et al. (2016) show that social media significantly boosts the possibility that individuals are involved in protests. In an experimental study in Chile, Valenzuela et al. (2014) demonstrate that social media use positively affects individuals’ propensity to take part in protests. Examining the protest of the *Indignados* in Spain, Anduiza et al. (2014) highlight the importance of online social networks in mobilizing citizens to protest. Finally, research in Guatemala indicates that activities taking place on social media led to a series of actions beyond the cyberspace (Harlow 2011). These cases clearly underline the notion that social media use significantly increases the chance that individuals become part of social movements offline.

Some even suggest that social media use leads to identity change among users. Scholars believe that social media can play an essential role in creating a collective identity in social movements (Kavada 2015). One can easily see that participants in protests tend to establish a collective identity through social media by discussing their ideas and forming protest events to share those ideas with others. In analyzing the case of “Indignant Citizens,” a Greek Facebook group focused on anti-austerity, Yannopoulou et al. (2019) suggest that social media was instrumental in forging a shared identity among participants of the movement. In a similar manner, Milan (2015) emphasizes the role of social media in constructing a collective identity in social movements because social media can be considered “one of the main meaning-making machines of our time” (p. 897). Another example is seen in the way that online space provides an important arena where LGBTQ identities can be collectively forged (Pullen and Cooper 2010). Considering that social media deeply penetrates society in many ways, it is thus possible that social media can significantly transform one’s identity in social movements that present themselves throughout the world.

The BLM movement in the United States is a prime example where social media played a central role in galvanizing the entire movement. Although research focusing on the BLM movement since 2020 is still in the process of development, evidence indicating the importance of social media in BLM before 2020 is abundant. Cox (2017) notes that social media served as an indispensable source of information for the BLM movement. Also, Bernabo (2019) shows that Twitter provided an arena where users could engage in open discussions regarding BLM. Similarly, by analyzing the way citizens interacted with the BLM movement on social media, Ince et al. (2017) assert that the use of hashtags on Twitter modified the framing of the movement. Consistent with this perspective, research shows that social media can generate a new type of dynamics that can be termed as “hashtag activism,” where users can use short phrases to share their stance on a particular subject (Fang 2015; Yang 2016). In a similar manner, Carney (2016) indicates that social media has been instrumental in shaping discourses surrounding the BLM movement. Finally, Mundt et al. (2018) maintain that social media contributed to the development of the BLM movement by building coalitions among participants. These dynamics have remained virtually the same in the BLM movement since 2020. The momentum surrounding BLM grew significantly along with the extensive use of social media. The next section closely looks at the potential mechanism through which social media influences users’ behavior in the BLM movement.

### **Diversity of Social Networks on Social Media and BLM**

The main goal of the present research is to reveal factors that motivate individuals to be part of the BLM movement. The key in tackling this question lies in the issue surrounding the relationship between social media and diversity. Because the focus of the BLM movement is on racial injustice in the United States (Campbell 2021; Frimpong 2020; Taylor 2016), there is no question that the issue of diversity is central in driving citizens toward



the movement. Therefore, it is important to examine how social media affects the extent to which individuals are exposed to a wide variety of views.

Scholars have vigorously examined this question from the perspective termed as an “echo chamber” (Cinelli et al. 2021; Johnson et al. 2011). According to this view, social media users tend to cling to their own opinions because they are exclusively exposed to only the content that reinforces their views (Jamieson and Cappella 2008). Some studies support this perspective, suggesting that individuals choose to view only those pages that support their own opinions (Cinelli et al. 2021; Iyengar and Hahn 2009; Johnson et al. 2011). However, others claim the “echo chamber” perspective has been exaggerated (Dubois and Blank 2018; Garrett 2009; Nguyen and Vu 2019). Research shows that social media can actually encourage citizens to turn to different perspectives than their own (Barbera et al. 2015; Garrett 2009; Masip et al. 2020; Yardi and Boyd 2010). Judging from the growing evidence, it is reasonable to assume that social media can expose users to various viewpoints that are not necessarily congruent with their own views.

One of the key factors determining the degree to which individuals consume content that is different from their own views is one’s diversity in their social networks on social media. Studies show that one’s social connections on social media can critically affect the way users consume information. Anspach (2017) contends that users tend to read content online that their friends and family members have endorsed. In a similar manner, Bakshy et al. (2015) show that heterogeneity in one’s social networks is crucial in determining the extent to which he or she reads news stories that contain diverse ideological orientations. Furthermore, research indicates that heterogeneity in one’s social networks on social media is important in determining the information flow among users. Beam et al. (2018) maintain that elements of diversity in social networks significantly increase rates of news reading and sharing online. In exploring the case of South Korea, Kim (2016) demonstrates that network heterogeneity can facilitate the relationship between the use of news in Facebook posts and political participation. Furthermore, Lu and Lee (2021) show that diversity in one’s social networks online mediates the impact of social media in terms of news reading online. Finally, Kahne and Bowyer (2018) indicate that the degrees of exposure to “weak ties” critically determine levels of political activities. These studies provide important implications regarding the effect of social networks on social media, showing that diversity in social networks provides a wider exposure to political problems and potentially encourages political activism.

Along with the issues surrounding network heterogeneity, it is important to examine how individuals can change their attitudes through social media. In the context of BLM, it is essential to analyze how diversity in one’s social networks can make individuals more empathetic toward others. Although the number of studies examining the link between social media and empathy is still limited, some studies show that social media can foster empathy among users. Alloway et al. (2014) indicate that some functions in Facebook can enhance levels of empathy. Similarly, when studying adolescents in the Netherlands, Vossen and Valkenburg (2016) demonstrate that social media can develop a sense of empathy. Also, Stern (2008) suggests that personal sites and blogs can help adolescents feel connected to others, thus playing an important role in identity formation among youth. Some studies contend that social media can encourage individuals to take action on certain issues by boosting empathy among users (Boulianne et al. 2018; Thomas et al. 2018). These implications are essential in understanding the link between social media and individuals’ behavior toward BLM. Because BLM is concerned about racial injustice, empathy is a critical component in driving individuals to the BLM movement.

Combining these insights from previous studies, it is possible to present testable hypotheses regarding the relationship between social media and an individual’s decision to be involved in the BLM movement. When focusing on the issue of diversity, one can predict that diversity in one’s social media accounts plays an important role in the BLM movement. More specifically, it is likely that those who have a larger number of friends from

different racial and ethnic backgrounds tend to be more active in the BLM movement. Since heterogeneous networks on social media are thought to make individuals more empathic to the plight of African Americans and other minority groups, these social media users tend to be more active in posting and sharing content about BLM. In the same way, these users are more likely to participate in a BLM protest. The next section explains the research design that makes it possible to test these hypotheses.

### **Research Design**

In order to test the hypotheses above, it is important to obtain reliable data. For this purpose, we conducted an online survey that was specifically tailored for this study. We collected responses by posting the survey link on authors' social media accounts. The survey platform used was Google Forms. There were two criteria to be eligible to participate in the survey. First, respondents had to be at least 19 years old at the time of the survey. Second, the subjects had to reside in the United States. Respondents did not receive any compensations for their participation. The survey was conducted during the period of November 16, 2020, through December 1, 2020. 260 responses were collected in total.

68.09 percent of the respondents were 29 years old and younger. There were 216 female respondents (84.05%) and 41 male respondents (15.95%). The responses for this study were convenience samples due to the way the subjects were recruited. Accordingly, the samples were inevitably skewed. Although the samples were not representative of the United States population, this should not undermine the effectiveness of the statistical analysis. As long as the analysis can detect a significant effect of key independent variables on respondents' behavior toward BLM, the goal of this study can be achieved.

### ***Dependent Variable***

The goal of this study is to examine how social media affects individuals' behavior toward BLM. In order to address this question, it is essential to measure their specific actions on this matter. Specifically, we adopt two measures. First, we examine their posting behavior regarding BLM by utilizing the following question: "Within the last 12 months, have you made a social media post related to Black Lives Matter?"<sup>2</sup> Second, it is important to investigate whether respondents actually participated in the BLM protest. One can assume that participating in the BLM protest requires a deeper commitment in the cause than merely posting comments on social media.

The second wave of the BLM movement took place during the COVID-19 pandemic. Although it is possible that the pandemic increased online activities, evidence indicates that those participants who were deeply committed to the cause of BLM were not deterred by the pandemic (Arana-Chicas, et al. 2021). Accordingly, respondents' participation in the BLM protest is an important variable accurately capturing their commitment in the cause. We measure this variable by posing the following question: "Did you participate in a Black Lives Matter protest or event around the United States?" For these two questions, respondents were asked to answer using either "Yes" or "No." We coded these answers so that the value of 1 indicates those who engaged in these actions. We assigned the value of 0 for those who did not take these actions.

### ***Independent Variables***

#### ***Diversity of Friends and Followers***

One of the key elements in this study is to consider how diversity in individuals' social networks on social media affects their behavior on BLM. Scholars have tried to measure this concept in various ways. For instance, previous studies operationalize diversity among friends on social media by asking respondents to categorize their friends into different groups such as family, friends, or members from religious organizations (Beam et al. 2018; Buglass et al. 2016). Also, Kim (2016) measures heterogeneous elements in one's social networks in terms of gender, socio-economic status, and political views. Some studies try to incorporate race in their measures of diversity. Choi et al. (2017) gauge this variable in terms of gender, race, religion, and ideological orientations. Seder and

Oishi (2009) code racial/ethnic backgrounds of friends in Facebook using two choices, “European American” or “Non-European American.” These simple categorizations may not be satisfactory in evaluating the ethnic or racial compositions of friends and followers on social media. In order to overcome this challenge, it is useful to rely on respondents’ own knowledge of their friends and followers on social media. Kobayashi (2012) asked respondents to estimate the percentage of their followers on Twitter who have different viewpoints than themselves. Following Kobayashi’s method, we asked the respondents to estimate the percentage of their friends and followers who came from different racial and ethnic backgrounds than the respondent. More specifically, we tapped into diversity in one’s social networks by posing the following question: “How many friends/followers do you have that are a different race/ethnicity than you? (This can be an estimation or approximate percentage.) We then recoded the answers so that higher numbers indicate higher percentage of friends/followers who came from different racial and ethnic backgrounds.

#### *Number of Friends and Followers*

Many studies examine how the number of friends and followers on social media affects human behavior in various issues such as people’s impressions (Tong et al. 2008), self-esteem (Metzler and Scheithauer 2017) and health status (Lima et al. 2017). Given these insights from these studies, one can hypothesize that the number of friends and followers on social media tends to increase individuals’ activism on BLM. We measured the number of friends and followers in respondents’ social media accounts by posing the following question: “How many friends or followers do you have on these accounts?” We recoded the answers so that higher values indicate larger numbers of friends and followers.

#### *Frequency of Social Media Use*

The statistical analysis controls for frequencies of social media use among respondents. Previous studies have extensively explored the impact of this variable. Choi and Lee (2015) indicate that those individuals who use social media more often tend to be exposed to a wider variety of ideas. Lee et al. (2014) show that frequencies of social media use are positively related to heterogeneity of individuals’ social networks on social media, which can subsequently affect the possibility that individuals will encounter diverse ideas. Although some are skeptical of the impact of this variable (Bakker and De Vreese 2011), it is reasonable to speculate that frequencies of social media use can significantly affect one’s behavior on BLM. We adopt the following question to capture frequencies of social media use: “How long do you use these social media accounts per day? Answers to this question were coded so that higher numbers indicate more daily hours of social media use.

#### *Demographic Variables*

In addition to the variables discussed above, it is necessary to control for potentially confounding factors. For this purpose, we consider a series of demographic variables. First, it is essential to control for age. It has been reported that a large number of young people engaged in the BLM protest (Baskin-Sommers 2021; Hathaway 2021). One can hypothesize that younger respondents are more likely to be active in the BLM movement. We operationalized the variable as an ordinal variable so that older respondents receive higher values. Second, the statistical analysis examines gender. Studies have consistently indicated males tend to be more active in political activities (Coffe and Bolzendahl 2011; Inglehart and Norris 2003). As these studies suggest, it is possible that male respondents tend to be part of the BLM movement. We recoded the variable so that a value of 1 indicates female respondents and 0 male respondents. Third, the statistical analysis considers respondents’ educational attainments. Studies have shown that education is closely related to citizens’ activism. Hillygus (2005) indicates that education enhances political participation. In the same way, Dahlum and Wig (2019) show that education tends to induce protest activities among citizens in Africa. Accordingly, one can expect that those with higher educational



attainments are more likely to be committed in BLM. We operationalized education as an ordinal variable so that higher values signify higher educational attainments.

Finally, it is important to control for levels of income among respondents. Research shows that the amounts of resources available to citizens are an important indicator of political participation (Brady et al. 1995; Solt 2008). Accordingly, one can expect to see more active involvement in BLM among more affluent citizens. However, it is possible to present another scenario regarding the impact of income. Some studies suggest that grievance and economic inequality among citizens can lead to protest activities (Bernburg 2015; Gurr 1970). Therefore, one can expect that those subjects with lower incomes tend to be more active in the BLM movement, as they are attempting to shine a light on any disparities that individuals may face in the nation. This variable was operationalized as an ordinal variable so that higher values show higher incomes. In this way, the statistical analysis controls for these demographic variables

### **Empirical Analysis**

In order to test the hypotheses above, it is important to conduct a statistical analysis. This study examines two dependent variables: respondents' posting behavior regarding BLM and their participation in the BLM protest. Since these dependent variables are dichotomous variables, it is not appropriate to employ an ordinary least squared (OLS) analysis. To accommodate the dichotomous structure of the dependent variables, we adopt a probit analysis. Table 1 is the result of the probit analysis

The variables of our interest are those concerning social media. The most important variable is diversity of the friends and followers on respondents' social media accounts. The statistical analysis does not indicate a significant effect of this variable in Model 1. Diversity of friends and followers on social media does not seem to be an important factor determining respondents' tendency to post about BLM. However, the analysis reveals a different picture in the analysis of respondents' participation in the BLM protest. In Model 2, diversity of social networks indicates a statistically significant effect ( $p < 0.01$ ). The positive coefficient suggests that those respondents who have larger numbers of friends and followers from different racial and ethnic backgrounds are more likely to participate in the BLM protest. This result is consistent with the hypothesis above. Unlike this variable, other variables concerning social media, which are the frequency of social media use and the number of friends and followers, do not show a statistically significant effect. These variables are not critical factors in shaping respondents' propensity to be part of the BLM protest.

In order to further look into the relationship between diversity of friends and followers and respondents' tendency to participate in the BLM movement, it is necessary to take into account the respondents' race in the statistical analysis. For this purpose, we ran an identical analysis but limited the samples to white respondents. Table 2 shows the result of the statistical analysis among white subjects.

Table 1: Probit Analysis: Individuals' Behavior on BLM (all samples)

Predictors	Model 1 (Posting)	Model 2 (Protest)
Number: friends and followers	0.01 (0.05)	0.01 (0.06)
Diversity of friends and followers	0.08 (0.06)	0.21** (0.07)
Frequency of social media	0.05 (0.11)	0.17 (0.13)
Gender	0.61* (0.25)	-0.20 (0.29)
Age	-0.13 (0.13)	-0.06 (0.19)
Education	0.18* (0.08)	-0.02 (0.11)
Income	-0.01 (0.08)	0.03 (0.04)
Constant	-1.45* (0.60)	-2.23** (.075)
Pseudo R <sup>2</sup>	0.0499	.1050
N	207	206

Estimated in Stata 15

\*  $p \leq .05$ , \*\*  $p \leq .01$ . Standard errors in parentheses

Unlike the analysis of all the subjects in Table 1, diversity of social networks fails to indicate a statistically significant effect among white respondents. Diversity of friends and followers does not seem to be a critical factor determining their participation in BLM. This result suggests that the effect of this variable varies across racial groups. Given the fact that this variable fails to show a significant effect among white respondents, it is actually the minority group respondents who are driving the significant finding of diversity of social networks in Table 1. Put differently, the diversity of one's friends and followers is not an important factor among white respondents. Although it is not possible to run a separate analysis using only minority samples due to the small sample size, it is clearly the case that minority respondents are those contributing to the significant result of diversity of friends and followers on social media.<sup>12</sup> These are important findings in understanding the relationship between social media and citizens' behavior on the BLM movement.

Table 2: Probit Analysis: Individuals' Behavior on BLM (whites only)

Number: friends and followers	0.00 (0.06)	-0.04 (0.08)
Diversity of friends and followers	0.03 (0.08)	0.16 (0.10)
Frequency of social media	0.02 (0.12)	0.05 (0.15)
Gender	0.78** (0.30)	-0.07 (0.35)
Age	-0.18 (0.14)	-0.13 (0.20)

Education	0.18*	-0.01
	(0.09)	(0.12)
Income	0.00	0.01
	(0.04)	(0.05)
Constant	-1.40*	-1.50
	(0.64)	(0.81)
Pseudo R <sup>2</sup>	0.053	0.039
N	185	185
Predictors	Model 1 ( Posting )	Model 2 ( Protest )

*Estimated in Stata 15*

\*  $p \leq .05$ , \*\*  $p \leq .01$ . Standard errors in parentheses

Apart from the variables concerning social media, it is important to examine the impact of other variables. Among demographic variables, gender indicates a statistically significant effect ( $p < 0.05$ ) on posting behavior (Model 1 in Table 1). The positive coefficient suggests that female respondents are more likely to

<sup>12</sup> The total number of minority respondents (Asian, African American, Hispanic, and two or more races) is 24, and the number of African American respondents among them is only 4.

post content about BLM on social media. In the same way, education shows a statistically significant effect ( $p < 0.05$ ) in posting behavior (Model 1 in Table 1). The higher respondents' educational attainments are, the more likely they are to engage in posting behavior. These findings hold even when the samples are limited to white respondents (Model 1 in Table 2). Therefore, we can conclude that gender and education affect respondents' posting behavior in the same way regardless of their races. While these demographic variables significantly influence respondents' posting behavior, none of them indicate a statistically significant effect on their participation in the BLM protest (Model 2 in Table 1 and Table 2). Rather than demographic variables, it is the diversity of friends and followers on social media that determines respondents' participation in the BLM protest

## Conclusion

The BLM movement has attracted a significant amount of attention in various fields. Waves of protests demanding racial justice clearly represent the magnitude of this issue in the United States. One of the most important elements that made the BLM movement unique was a large number of white participants. It has been reported that an unprecedented number of white individuals chose to be part of the BLM movement (Fisher 2020; Pew Research Center 2020; Putnam et al. 2020). Clearly, BLM was able to appeal to citizens across multiple racial groups in the United States.

Recognizing the importance of BLM in the United States, the main goal of this study has been to explore the factors that drive citizens toward the BLM movement. The focus of this study has been on the impact of social media on citizens' behavior on BLM. Previous studies widely document that social media tends to promote citizens' activism both online and offline (Anduiza et al. 2014; Boulianne et al. 2020; Papacharissi 2004; Stetka and Mazak 2014; Stromer-Galley 2002; Zuniga et al. 2009). Similarly, research indicates that diversity of social networks on social media can expose citizens to different viewpoints (Bakshy et al. 2015; Barbera et al. 2015; Beam et al. 2018; Garrett 2009; Masip et al. 2020). Some studies even suggest that social media use can foster empathy among users, thus potentially motivating them to take action on certain issues (Alloway et al. 2014; Boulianne et al. 2018; Stern 2008; Thomas et al. 2018; Vossen and Valkenburg 2016). Building upon these

insights, we have focused on diversity of friends and followers on individuals' social media accounts. We have hypothesized that diversity of friends and followers encourages respondents to be active in the BLM movement. In order to test the hypothesis above, we conducted the online survey in the United States specifically tailored for this study. The analysis relying on samples of all races has shown that one's diversity of friends and followers on social media significantly increases their participation in a BLM protest. Yet, the significant effect disappears when the samples are limited to white respondents. Among white individuals, one's diversity of friends and followers on social media is not a significant factor motivating respondents to be part of the BLM movement. It is clearly non-white respondents who are driving the significant result of diversity of social networks in the statistical analysis. It seems to be the case that friends and followers from different ethnic and racial backgrounds matter for minorities, but not for white respondents, in determining their decisions to be involved in the BLM protest.

These findings provide important implications in the United States, representing the dire reality of American society. In recent years, race has become a critical element of political discourses in the United States (Lee 2020). The BLM movement can be considered as a manifestation of persistent racial tension deeply rooted in American society. Although social media has provided a strong momentum for the BLM movement, one cannot assume that the impact of social media is constant across racial groups. Because the diversity of friends and followers does not enhance white respondents' activism in BLM, it is thus minorities who are driving the significant effect of diversity of friends and followers in the statistical analysis presented. Given these findings, the potential of social media in bridging the gap among different races may be critically limited.

Although the present research has underlined the importance of minority respondents, the mechanisms linking social media use and its effects on BLM are still not clear. One can envision various scenarios through which social connections on social media can shape individuals' decisions to engage in social movements. Also, it is important to acknowledge the possibility of endogeneity. It may be the case that participation in the BLM movement encouraged individuals to use more social media rather than vice versa. While this may be certainly possible, there is no question that that social media encouraged millions of people to be part of the BLM movement. It is necessary to further examine the process through which social media induce citizens' activism. More detailed survey questions can be effective in dissecting intricate dynamics surrounding social media and social movements. Future studies need to systematically address these issues.

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