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THE POTENTIAL OF TWITTER IMAGES FOR GALVANIZING CITIZENS TO COLLECTIVE ACTION [1]

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ABSTRACT

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Research Article

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This experiment explored the mobilizing potential of image-only tweets about Black Lives Matter protests compared to text-only tweets to stimulate collective action among Caucasians. A 2 (tweet modality: image vs. textual) x 3 (tweet content type: anger-evoking, efficacy-eliciting, neutral), between-subjects design was employed with collective action intent as the dependent variable. Contrary to expectation, the results produced no evidence that image-based tweets are more effective than text-based ones, or that emotional content is better than non-emotional content, at motivating citizens to become politically engaged. Anger-evoking, image-based protest tweets were only marginally more galvanizing among Caucasians than non-anger evoking image-based tweets. However, the results showed that efficacy-eliciting *textual* tweets stoked greater intention to participate than efficacy-eliciting *image* tweets. Furthermore, men, more than women, were more inclined to get involved in social protests after viewing anger-evoking images. Women, on the other hand were more inspired to take protest action than men after exposure to efficacy-eliciting images.

Keywords: Social media, Social protest, Collective action, Emotions, Images

TWITTER GÖRSELLERİNİN VATANDAŞLARI KOLEKTİF EYLEME TEŞVİK POTANSİYELİ

ÖZ

Bu deney, yalnızca görsel içeren Tweet'lerin yalnızca metin içeren Tweet'lerle karşılaştırıldığında, Beyaz Amerikalılar'ı Black Lives Matter protestoları için kolektif eylemi teşvik etmek potansiyelini test etmiştir. Bağımlı değişken olarak kolektif eyleme katılma isteği kullanılarak, 2 (Tweet modu: sadece görsel-sadece metinsel) x 3 (Tweet içerik türü: öfke uyandıran, etkinlik (efficacy) uyandıran, nötr) şeklinde denekler arası deney tasarım uygulanmıştır. Beklentinin aksine bulgularda,

[1] Bu çalışma sorumlu yazar Özen Baş'ın 2018 senesinde Indiana University Bloomington, USA'de tamamladığı "The Potential of Twitter Images for Galvanizing Citizens to Collective Action" adlı doktora tezinden üretilmiştir. International Communication Association'ın 2019 yılı konferansında Washington, DC, ABD'de sunulmuştur. Çalışmanın Etik Kurul İzni, Indiana Üniversitesi Institutional Review Board tarafından 2 Şubat 2017'de 1701740115 onay numarası ile verilmiştir.

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

vatandaşları siyasete katılmaya motive etmede sadece görsel içeren Tweet'lerin sadece metinsel Tweet'lerden daha etkili olduğuna veya öfke uyandıran içeriğin uyandırmayan içeriklerden daha etkili olduğuna dair hiçbir kanıt bulunamamıştır. Öfke uyandıran, görsel temelli sosyal protesto Tweet'lerinin, Beyaz Amerikalılar arasında öfke uyandırmayan görsel Tweet'lere göre yalnızca marjinal olarak daha fazla harekete geçirici olduğu bulunmuştur. Bununla birlikte, sonuçlar, kolektif etkinlik (efficacy) uyandıran metinsel Tweet'lerin, etkinlik ortaya çıkaran görsel Tweet'lerden daha fazla kolektif eyleme katılım niyeti uyandırdığını gösterdi. Dahası, öfke uyandıran görsellere maruz kaldıktan sonra erkekler, kadınlardan daha fazla toplumsal protestolara katılma eğilimi göstermiştir. Öte yandan kadınlar, etkinlik ortaya çıkaran görsel içeriklere maruz kaldıktan sonra protesto eyleminde bulunma konusunda erkeklerden daha istek belirtmişlerdir.

Anahtar Kelimeler: Sosyal medya, Sosyal protestolar, Kolektif eylem, Duygular, Görseller

INTRODUCTION

The ability of social media messages to mobilize citizens for protest has been studied since the Arab Uprisings, and continues through Gezi Park, Black Lives Matter, and #NoBanNoWall research. Protest movements calling for social justice through social media platforms have become a ubiquitous part of the social web's 24-hour news cycle. Academics are starting to attributed high levels of viral power to social media platforms like Facebook and Twitter to galvanize citizen engagement.

When it comes to the motivating role of social media messages for collective action, images are an important content type. The history of photojournalism provides examples of iconic images, (e.g. Vietnam War, the Occupy Movement, the recent race riots, and the Syrian refugee crisis) that aroused emotion and mobilized collective action, which in turn lead to debate and policy changes (Hariman and Lucaites, 2007; Olesen, 2013). There is anecdotal evidence that an important trigger of the so-called Arab Spring, for example, was the negatively compelling images of two victims of governmental injustice circulated via social media. Tunisian street vendor, Mohammed Bouazizi, who set himself on fire and Egyptian Khaled Said who was beaten to death by the police, became faces of injustice. Graphic images of the two young men are believed to have elicited anger, frustration, and outrage (Howard and Hussain, 2011; Khondker, 2011). Yet, the mobilizing role of images is largely

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

overlooked in systematic research. When images are studied, they are typically analyzed qualitatively as discrete case studies (Doerr, Mattoni, and Teune, 2013). Systematic audience research would offer complementary entry points into understanding the influence of images and emotionality in the contemporary media environment.

To that end, this study examined the protest-mobilizing potential of tweets about forceful police action and institutionalized racism in the United States. Specifically, it explores the mobilizing potential of (a) Twitter images about social protests compared to text-based messages, and (b) anger-evoking versus efficacy-eliciting protest messages among Caucasians.

1. The Political Consequences of Emotional Media Content

Empirical evidence points to two cornerstones that inspired the study reported here. First, there is a correlation between social media use and political participation (Boulianne, 2015). In recent times the conceptualization of political participation has broadened in political behavior research. Traditional political participation (voting) is now widely viewed as one kind of political action that is available to citizens who live increasingly mediated lives that afford other forms of political engagement. Among them, collective action takes an important place and there is mounting evidence that citizens turn to social media to follow social protests (Pew Research Center Internet and Technology, 2018). Second, and perhaps not surprising, social media content tends to be personalized and emotional (Tettegah, 2016; Papacharissi, 2015)—in contrast to the long tradition of viewing emotion in politics and in the news as non-conducive to democratic process. Yet, emerging research point to the ways that emotional and personalized media content enable political participation. There is growing evidence that voters are better informed and politically engaged when issues are presented in personalized ways, driving more participatory action than abstract, distant, or fact-only presentations of political issues (Bas and Grabe, 2015; 2016; Bennett and Segerberg, 2012; Brader, 2005; Valentino, Brader, Groenendyk, Gregorowicz, and Hutchings, 2011; Wahl-Jorgensen, 2013).

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

2. Protesters as *Passionate Economists*: Antecedents of Collective Action

The psychological study of collective action examines "when and why individuals will (and will not) engage in collective action" (Wright, 2009, p. 860). Van Zomeren et al. (2012) aggregated disparate motivations for collective action across disciplines and bodies of research to model a dynamic system that includes group-based emotions, *perceived* disadvantage, social identity, and group-efficacy. Protesters are neither solely passionate group members who act against perceived injustices or relative deprivations, nor individual economists protesting as a result of rational cost-benefit calculations (van Zomeren, et al., 2012). Protesters are *passionate economists* motivated by a complementary dynamic of group-based emotions and rationality to engage in collective action.

2.1. Group-based Emotions

Social psychology literature offers evidence for the motivating power of emotion in collective action (Tausch et al., 2011; Van Zomeren et al., 2012). Group-based emotions are among the most important predictors of participation in collective action (Leach, Iyer, and Pedersen, 2006; Van Zomeren et al., 2012; Van Zomeren, Postmes and Spears, 2008). Among discrete emotions, anger seems to be the most relevant because it is a strong emotion that motivates negativity in approach mode behavior (see Carver and Harmon-Jones, 2009). Anger can therefore motivate action against perceived injustices (Frijda, 1986; Lazarus, 1991; Runciman, 1966; Walker and Smith, 2002). Indeed, recent work found that group-based anger predicts the willingness of individuals to act collectively against situations where they are at a disadvantage as an ingroup against an outgroup (e.g., Miller, Cronin, Garcia, and Branscombe, 2009; Tausch and Becker, 2013).

In the mediated context, arousing media content can influence emotional responses and lead to collective action. For example, Bennett and Segerberg (2012) argue that mediated social networks afford the use of personalized frames (e.g. the

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

"We are the 99%" slogan of the Occupy Wall Street movement), which allow participants to engage with the larger social and political issues on individual terms. These digitally-mediated personalized action frames have been shown to lead to larger movements, faster mobilization, and more flexibility in shifting tactics and issue foci (Bennett and Segerberg, 2012).

Given the participatory potential of emotions and the ease with which emotional content spreads through and across online communities (Stage, 2013), social media may play a role in triggering social protests and revolutions (Sutter, 2011). This study tested whether anger-evoking protest tweets drive protest participation more so than non-anger-evoking tweets. Based on the evidence provided, the following hypothesis was posed:

Hypothesis 1: Anger-evoking social protest tweets will be associated with higher reported levels of collective action intent than neutral tweets.

2.2. Collective Efficacy

Defined as an individual's perception of the potential to achieve social change through collective effort, political collective efficacy (Bandura, 1977; Hornsey et al., 2006; Mummendey et al., 1999) is an important predictor of willingness to join collective action (Van Zomeren et al., 2012). The size of social movement also shapes the perceptions of individuals. Specifically, Klandermans (1984) documented that expectations about the number of participants in collective action is one of the most important determinants of willingness to participate. Van Zomeren et al. (2004) conceptualize the number of participants as a sign of social support, which is consequential for efficacy. Thus, answers to questions like *How many of us are going to be there if I join this movement?* and *Will we be able to make any difference if I join?* are important predictive items of participation in collective action. The following hypothesis was formulated to test the influence of media messages:

Hypothesis 2: Efficacy-eliciting tweets will be associated with higher levels of collective action intent than neutral tweets.

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Given that the overarching goal of this study is to test the effects of shared social media images on subsequent collective action, the relative participatory impact of efficacy-eliciting content was compared against anger-evoking content in an experimental setting. However, social psychology models of collective action do not offer definitive answers on the comparative predictive potential of efficacy beliefs and emotions. Instead, group-based anger and collective efficacy are seen as complementary factors rather than competitive (Van Zomeren et al., 2008; 2012). Therefore, the following research question was formulated to guide inquiry into the relative explanatory power of emotions and efficacy beliefs:

Research question 1: Is there a difference in reported levels of collective action intent after exposure to anger-evoking compared to efficacy-eliciting tweets?

3. The Potential of Image Tweets for Protest Participation

Image sharing constitutes 65% of all activities on social media (Kane and Pear, 2016), amounting to a plethora of shared images highlighting the participatory potential of these messages. Negatively compelling images of two young victims of governmental injustice, circulated via social media, are seen as important triggers of the so-called *Arab Spring*. Tunisian Mohammed Bouazizi set himself on fire on 17 December 2010 and died. He was a 25-year old college graduate working as a street vegetable vendor in Sidi Bouzid who appealed a small fine to police, town officials, and the regional governor. Each time he was beaten and insulted until his frustration lead him to set himself on fire, generating empathy that sparked national protests (Howard and Hussain, 2011). Khaled Said, who was beaten to death by Egyptian police, is seen as a significant trigger to the Egyptian Revolution when images of his fractured face went viral online (Sutter, 2011). The Facebook group "We are all Khaled Said" had more than 1.3 million supporters on its Arabic page (Zhuo et al., 2011) and the graphic YouTube video of his death was viewed by 500,000 people (Sohail and Chebib, 2011). Similarly, protests against police brutality in the United States have been fueled by social media. Two of the three most used hashtags related to social causes on Twitter are directly related to race (Pew Research Center Internet

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Science and Technology 2016c). Content analyses of Twitter images show that citizens monitoring protests in these platforms are exposed to iconic images as well as user-generated pictures (Kharroub and Bas, 2015). Yet, social protest images are typically analyzed qualitatively as discrete case studies of iconic images (Doerr et al., 2013; Mattoni and Teune, 2014) while systematic analyses of *social media* images are rare (Corrigall-Brown, 2012). Given the image-saturated digital media environment there is need for a systematic approach to studying the impact of more than iconic images (Mattoni and Teune, 2014).

3.1. Effects of Social Protest Images

Arpan and Tuzunkan (2011) tested the impact of images accompanying social protest news and found that when protesters are shown as deviant (e.g., in conflict) as opposed to peaceful, viewers reported more negative perceptions of protestors. Domke, Perlmutter, and Spratt (2002) and Arpan and colleagues (2006) found that news images are processed in accordance with preexisting beliefs and political opinions. For example, pre-existing positive attitudes towards protesting leads to identification with protestors and perception of protests as more effective compared to pre-existing negative attitudes.

Relative to words, the human brain is better adapted for visual than verbal information processing. The relatively short history of verbal language in the natural history of *Homo sapiens* is often offered as an explanation while cognitive scientists have focused on parsing differences between word and image processing. Paivio (1971) argues that words are processed in a linear fashion--one at a time--while visuals are processed faster and holistically as an entanglement of verbal and visual memory records. When one of these routes fails at the retrieval stage, the other often successfully manages the task (Paivio, 1971).

Given the body of literature that supports the idea of visual primacy, it is reasonable to expect that images will be more likely to galvanize social media followers than text messages. The following hypothesis was proposed:

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Hypothesis 3: Participants will report higher levels of collective action intention when they are exposed to image tweets of social protests compared to textual tweets.

4. Emotionality of Social Protest Images

According to Hariman and Lucaites (2007) highly visible iconic images change public opinion through legitimizing certain opinions and feelings. For example, the Vietnam era anti-war protests were made visible to the public by iconic Kent State photographs depicting injustices directed against the anti-war protesters. The emotional expression in these photographs circulated in the public sphere and eventually lead to social change by legitimizing the protest activities depicted in the images. According to Olesen (2013) the power of photography lies in its capacity to contribute to emotional knowledge. She further argues that images are often crucial in igniting emotions such as anger in potential protesters by highlighting social injustices. Doerr and his colleagues (2013) argue that pro-life movement activists instrumentalized fetal images to mobilize people through emotions. In the same way pictures of tortured animals are used by animal rights activists to recruit concerned citizens into the movement (Jasper and Poulsen, 1995).

4.1. Behavioral Consequences of Emotional News Visuals

Despite qualitative and anecdotal evidence of the participatory potential of emotional protest images, systematic evidence is lacking. Studies examining the behavioral consequences of visuals mostly focused on how emotional displays of politicians affect voter evaluations and decisions (Fahmy, Bock, Wanta., 2014). Content analyses of campaign coverage on network news showed that citizens are seeing increasingly more (image bites) of political candidates whereas they hear them speak (sound bites) less (Grabe and Bucy, 2009). Image bites are rich in hedonic and agonic display repertoires of candidates which are implicated in citizen evaluations of leadership fitness—and ultimately in how (and if) they vote (Grabe and Bucy, 2009). In fact, a growing number of experimental studies show that voters draw on emotional visual displays which set in motion automatic and volitional cognitive processes that

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

inform political impressions and judgment (Benjamin and Shapiro 2009; Masters 2001). Voters motivated to preserve their limited cognitive resources, implement these easily processed and readily available visual displays of leaders as judgmental heuristics (Bucy, 2010; Mondak, 1993). Specifically, exposure to nonverbal communication of leaders, such as facial expressions, gestures, and voice tone elicits episodic emotions in viewers, which in turn predict future political judgments and behavior (Lanzetta et al., 1985; Masters and Sullivan, 1989; 1993).

Outside of the campaign context, one study examined the framing effects of images of war and conflict on behavioral intentions, such as discussing the issue, donating money, signing a petition, and protesting the conflict (Powell et al., 2015). They found that when presented alone, images of conflict have the power to influence the level of support for the policy of governmental military intervention in an international conflict-zone (Central African Republic), whereas when presented alongside text, images are more likely to impact behavioral intentions. Importantly, emotions mediated the relationship between image frames and behavioral intention. When presented with the *obligation* frame (depicting the victims of the conflict), participants reported higher levels of anger and stronger behavioral intentions. Participants who viewed the *risk* frame (depicting the belligerent militants) reported higher fear and stronger behavioral intentions (Powell, et al., 2015).

Negatively arousing media images are processed similarly to non-mediated survival threats (Reeves and Nass, 1996). Specifically, images depicting violence, threat, and destruction were found to elicit more attention, better memory, and better free recall and comprehension (Lang et al., 1996; Newhagen and Reeves, 1992) than non-threatening images. Newhagen (1998) showed that images of an angry crowd attacking a bystander provoked action-inducing anger, which aligns with evidence that anger motivates citizens to collective action. Given the behavioral potential of emotionally compelling images, the following hypothesis was formulated:

Hypothesis 4: Anger-evoking image tweets will drive the highest level of collective action intent compared to all other kinds of textual and image tweets.

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Lack of evidence to inform a hypotheses regarding the interaction between tweet modality (image vs. text) and content (anger-evoking vs. efficacy-eliciting) prompted a research question:

Research question 2: Are there differences in the reported levels of collective action intent associated with the interaction of content and modality factors?

5. Methodology

5.1. Design

The proposed hypotheses and research questions were tested using a 2x3 between-subjects experimental design. Tweet modality (visual vs. text) and tweet content type (anger-evoking, efficacy-eliciting, neutral) were the two experimental factors. Two levels of the modality factor were represented by image-only and text-only tweets. The three levels of the content type factor were represented by anger-evoking, efficacy-eliciting, or neutral tweets. Each participant saw a total of four different tweets in only one of the six different conditions: anger-evoking image, efficacy-eliciting image, anger-evoking text, efficacy-eliciting text, neutral image, and neutral text. Participants did not see tweets in more than one condition.

5.2. Stimuli

Black Lives Matter protests are well-suited for the study reported here, for two reasons. First, racial equality is a social issue that college students in the United States identify with (Ortiz, et al., 2013). Second, protest events against police brutality have been prevalent in social media, and especially Twitter (Pew Research Center Internet Science and Technology, 2016c). In fact, two of the top three most used hashtags related to social causes on Twitter are directly related to race (Anderson and Hitlin, 2016). Typically shared with popular hashtags, such as #Ferguson, or #BlackLivesMatter, images of protest events and documentation of police injustice are circulated publicly on Twitter (Pew Research Center Internet Science and Technology, 2016c).

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Twitter was chosen as the platform to present the experimental stimuli for three reasons. First, as of 2015, 63 percent of Twitter users reported that they use the platform for news about issues unrelated to friends and family (Pew Research Center Journalism and Media, 2015). Furthermore, compared to Facebook users, Twitter users are more likely (72% versus 61%) to get news from the platform (Pew Research Center Journalism and Media, 2015). In addition, unlike Facebook, Twitter does not require authorization of followers which creates a free flow of information conducive to social activism. To improve ecological validity, the stimulus materials were chosen from existing citizen tweets against police brutality in the United States. The focus on citizen tweets was driven by the fact that they create more protest content on social media than individual journalists or news agencies (Kharroub and Bas, 2015; Theocharis et al., 2015). Moreover, tweets shared by professional news outlets and journalists are more likely to be familiar to participants of the study. Therefore, to minimize the familiarity of the participants with the stimulus material, images and text tweets shared by professional news outlets were excluded from stimulus selection.

Twitter user interface was created with the most popular hashtag against police brutality and racial inequality, #BlackLivesMatter, added to all tweets. The same number of Retweets and Favorite numbers were displayed underneath stimuli tweets. Participants viewed tweets separately on the experimental Twitter page that was not interactive.

5.2.1 Pre-test

Images and texts were selected based on their potential to elicit anger, efficacy beliefs, or neutral responses (no anger or collective efficacy). Anger was measured using items adapted from van Zomeren, Spears, Fischer, and Leach (2014)[2]. Similarly,

[2] Group-based anger measures were composed of four 5-point Likert-scale questions. “This tweet makes me feel angry towards the police”; “This tweet makes me feel irritated by the police”, “This tweet makes me feel furious at the police”, “This tweet makes me feel displeased because of the current police brutality against people”

questions adapted from existing measures in social psychology (Tausch et al., 2011) were used to assess how much each tweet fostered collective efficacy beliefs[3].

The pre-test informed these election of stimuli for the following six conditions: anger-evoking image, efficacy-eliciting image, anger-evoking text, efficacy-eliciting text, neutral image, and neutral texts. Amazon Mechanical Turk workers (N=294) rated 100 image and 100 textual tweets individually. A total of 25 tweets were randomly assigned to each Mechanical Turk worker. Each image and text was rated by at least 30 participants.

Reliability among four anger and four efficacy items were assessed separately for image (N=100; Cronbach's alpha=.980) and text (N=100; Cronbach's alpha=.987), with conventionally acceptable outcomes. Scores for the four anger questions were aggregated and used for each image and text tweet in further analyses. Similarly, efficacy scores for image (Cronbach's alpha=.906) and text tweets (Cronbach's alpha=.909) were reliable. Aggregated scores for the four efficacy questions were used for image and text tweets in further analyses.

To select four *anger-evoking image* tweets, 20 images that yielded the highest anger scores were subjected to paired samples t-tests for anger and efficacy. Images with the largest difference between anger and efficacy were selected. The same procedure was carried out to select *anger-evoking text* tweets as well as *efficacy-eliciting image* and *efficacy-eliciting text*tweets. Priority was given to stimuli with the largest distance between anger and efficacy scores, in some cases favoring higher gaps between anger and efficacy over highest anger or efficacy scores neutral images were selected based on both low anger and efficacy scores. Paired sample t-tests were run on anger and efficacy scores of 20 images. Four images with the lowest t-values were selected. The same procedure was used to select neutral text tweets. Table 1

[3] Collective efficacy measures were composed of four 5-point Likert-scale questions. "This tweet makes me think that protesters can stop police brutality", "This tweet makes me think that protesters can successfully defend their rights", "This tweet makes me think that protesters are strong as a group and can move a lot", "This tweet makes me think protesters have already lost the fight against police brutality".

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

summarizes these t-tests results. Final selected tweets used as stimuli can be seen in Appendix.

Table 1. T-test Results for Tweets Selected for Anger-evoking Conditions, Efficacy-eliciting, and Neutral Conditions

	Anger		Efficacy			
Tweets selected	M	SD	M	SD	t	df
Image 46	2.21	1.18	3.16	.73	-4.83*	37
Image 78	2.24	1.12	3.28	.96	-4.91*	39
Image 83	2.42	1.41	3.49	.94	-4.47*	34
Image 95	2.55	1.29	3.17	.86	-3.16*	39
Image 55	3.51	1.18	2.06	.82	-7.25*	34
Image 68	3.22	1.07	2.10	.87	-7.17*	36
Image 86	3.35	1.16	2.04	.85	-6.89*	38
Image 74	3.56	1.05	2.32	.97	-6.79*	36
Text 30	1.96	1.28	3.23	.86	-5.30*	35
Text 67	2.14	1.14	3.41	.92	5.28*	36
Text 17	2.36	1.21	3.20	.87	4.37*	39
Text 51	2.47	1.14	3.38	.87	4.38*	34
Text 87	3.43	1.14	1.88	.70	-6.93*	34
Text 92	3.49	.99	2.22	.83	7.39*	37
Text 86	3.34	1.16	2.32	.62	6.69*	37
Text 77	3.52	.97	2.44	.98	-6.98*	40
Image 72	3.13	1.11	3.15	.74	.147	38

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Image 41	3.28	1.29	3.23	.61	-.227	32
Image 70	3.20	1.38	3.43	.91	.925	32
Image 14	3.54	1.06	3.29	.81	-1.23	33
Text 9	3.27	1.42	3.24	.95	.111	30
Text 80	3.29	1.25	3.28	.92	-.057	36
Text 97	3.08	1.36	3.34	.87	1.05	35
Text 8	3.16	1.37	3.37	.85	-.931	38

* p < .05. *Note.* Lower mean numbers indicate higher scores

5.2.2 Manipulation Check

To assess if the tweet content factor elicited levels of anger and efficacy beliefs congruent with the conceptualization of the condition, experimental participants were also asked to respond to the set of four anger and four efficacy used in the pre-test. The reliability of the anger items for all eight conditions ranged from .922 to .956. Similarly, the reliability of the four efficacy items for all eight conditions were all above the conventional standards (Cronbach's alphas ranged from .864 to .917). As a result, anger and efficacy scores for each of the six conditions were aggregated for a mean anger and efficacy scores per condition. These scores were used in a series of independent samples t-tests that were run to detect mean differences between conditions. The results showed that anger and efficacy levels for each of the six condition were in line with the conceptualization of image and text conditions, except for one. The neutral textual (M=3.13, SD=.72) condition drove *higher* levels of anger in participants than the efficacy-eliciting (M=3.60, SD=.77) image condition at statistically significant levels, $t(61)$=2.47, p=.02. Table 2 summarizes these findings.

Table 2. Manipulation Check: T-test Results for Image and Text Conditions

Conditions

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

	Anger-evoking image			Anger-evoking text			95% CI for Mean Difference	t	df
	M	SD	n	M	SD	n			
Anger	2.00	.63	34	2.27	.87	29	-.65, .10	-1.45	61
Efficacy	3.14	.68	34	2.90	.71	33	-.09,.58	1.14	65

	Conditions Efficacy-eliciting image			Efficacy-eliciting text			95% CI for Mean Difference		
	M	SD	n	M	SD	n		t	df
Anger	3.60	.77	30	3.44	.69	32	-.22,.52	.83	60
Efficacy	2.53	.59	33	2.41	.63	34	-.18,.41	.78	65

	Conditions Neutral image			Neutral text			95% CI for Mean Difference		
	M	SD	n	M	SD	n		t	df
Anger	3.42	.76	31	3.13	.72	33	-.08,.65	1.55	62
Efficacy	3.12	.61	35	3.09	.61	35	-.26,.32	.21	68

	Conditions Anger-evoking image			Efficacy-eliciting text			95% CI for Mean Difference		
	M	SD	n	M	SD	n		t	df
Anger	2.00	.63	34	3.44	.69	32	-1.77,-1.12	-8.87*	64
Efficacy	3.14	.68	34	2.41	.63	34	.41,1.05	4.61*	66

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

	Conditions						95% CI for Mean Difference		
	Anger-evoking image			Neutral text					
	M	SD	n	M	SD	n		t	df
Anger	2.00	.63	34	3.13	.72	33	-1.47,-.81	-6.89*	65
Efficacy	3.14	.68	34	3.09	.61	35	-.26,.36	.32	67

	Conditions						95% CI for Mean Difference		
	Efficacy-eliciting image			Anger-evoking text					
	M	SD	n	M	SD	n		t	df
Anger	3.60	.77	30	2.27	.87	29	.90,1.75	6.22*	57
Efficacy	2.53	.59	33	2.90	.71	33	-.69,-.04	-2.27	64

	Conditions						95% CI for Mean Difference		
	Efficacy-eliciting image			Neutral text					
	M	SD	n	M	SD	n		t	df
Anger	3.60	.77	30	3.13	.72	33	.09,.84	2.47*	61
Efficacy	2.53	.59	33	3.09	.61	35	-.86,-.27	-3.87*	66

	Conditions						95% CI for Mean Difference		
	Neutral image			Anger-evoking text					
	M	SD	n	M	SD	n		t	df
Anger	3.42	.76	31	2.27	.87	29	.73,1.57	5.47*	58
Efficacy	3.12	.61	35	2.90	.71	33	-.09,.55	1.41	66

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

	Conditions						95% CI for Mean Difference		
	Neutral image			Efficacy-eliciting text					
	M	SD	n	M	SD	n		t	df
Anger	3.42	.76	31	3.44	.69	32	-.39,.34	-.12	61
Efficacy	3.12	.61	35	2.41	.62	34	.41,1.0	4.78*	67

Notes. * p < .05. Higher means indicate lower scores

5.3. Dependent Variable

5.3.1 Collective Action Intent

The literature on the social psychology of collective action shows that intent is a reliable a proxy for behavioral participation (De Weerd and Klandermans, 1999; Van Zomeren et al., 2008). Collective action intent was measured using three 5-point Likert scale items adapted from van Zomeren et al. (2004)[4]. The reliability of the three items acceptable (Cronbach's alpha=.901) and items were collapsed as an index of collective action participation intent (*M*=3.33, *SD*=1.01).

5.4. Covariates

Five variables were included as covariates in the data analyses. To make sure that *cognitive style* (verbal versus visual) differences were not deriving variance in the dependent variables, a validated scale taken from Richardson (1977) were used. Fifteen Likert scale (5-point) responses were collected[5]. Of the fifteen items, seven

[4] "I would participate in a demonstration against police brutality", "I would participate in raising our collective voice to stop police brutality", "I would do something together with fellow citizens to stop this police brutality".

[5] The wording of the questions were as the following: "I enjoy doing work that requires the use of words", "My daydreams are sometimes so vivid I feel as though I actually experience the scene", "I enjoy learning new words", "I can easily think of synonyms of words", "My powers of imagination are higher than average", "I seldom dream", "I read rather slowly", "I cannot generate a mental picture of a friend's face when I close my eyes", "I don't believe that anyone can think in terms of mental pictures", "I prefer to read instructions

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

were measuring verbalizer tendencies at a reliable level (Cronbach's alpha=.711) and aggregated as a verbalizer index (*M*=3.44, *SD*=.59). The other eight items measured visualizer baselines and were also reliable (Cronbach's alpha=.733). Hence, they were averaged to a visualizer index (*M*=3.86, *SD*=.55).

To ensure that experimental factors were driving the variance, *perceived issue importance* was included as a covariate. The importance of police brutality on personal and societal levels was each measured by an item[6]previously (Grabe et al., 2017) shown to be reliable as an index (α=.91). In this study, the two items were proved to be reliable (Cronbach's alpha=.77) and used as an issue importance index (*M*=6.43, *SD*=1.90).

Attitudes towards social protests and protesters affect the way media users respond to news about protests (Arpan et al., 2006). To control for prior attitudes, a ten-item semantic differential measure adapted from Arpan, et al. (2006) was administered[7]. The ten items proved to be reliable (Cronbach's alpha=.84) and employed as a protest attitude index (*M*=3.60, *SD*=.57).

Research shows that voting is a habitual behavior acquired over time (Fowler, 2006; Gerber et al., 2003; Plutzer, 2002). Like voting, civic engagement and other types of *political participation* is also highly predictive of political engagement levels

about how to do something rather than have someone show me", My dreams are extremely vivid", "I have better than average fluency in using words", "My daydreams are rather indistinct and hazy", "I spend very little time attempting to increase my vocabulary", "My thinking often consists of mental pictures of images".

[6] Two questions with 11-point response scales (1 = "Not at all serious" and 11 = "Extremely serious")were used. The exact wording of the questions are: "How serious is police brutality as a problem in society?" and "How important is this issue to you personally?"

[7] The wording ten questions with 5-point Likert scale responses are as the following: "Protestors provide a useful service to our democracy", "Protests are an effective way to influence politicians", "Protests are an effective way to influence public opinion", "Protesters can offer new insights on certain issues", "Protesters often bring new issues to my attention", "Protesters have a right to protest", "Protesters are often disrespectful (reverse coded)", "Protesters tend to be annoying (reverse coded)", Protesters are out to cause trouble (reverse coded)", "People should not be allowed to protest in public places (reverse coded)".

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

(Hooghe, 2003). Eight questions based on validated participation measures (Brady et al., 1995; Milbrath, 1965; Valentino et al., 2011) were used to assess previous political participation[8]. The eight dichotomous yes/no questions were used to create an additive index (*M*=2.33, *SD*=2.00).

To measure the *strength of political ideology*, a previously used item (Bas and Grabe, 2016) was employed here[9]. Extreme liberal and conservative options were aggregated and assigned a 3 (*n*=20, %7.1), liberal and conservative options were recoded as 2 (*n*=128, %45.7), and slightly conservative and liberal options were coded as 1 (*n*=68, %24.3), and Middle of the road and Haven't thought much about it were recoded as 0 (*n*=64, %22.9).

The Implicit Association Test developed by Greenwald, McGhee, and Schawratz (1998) was used to assess the *latent race attitudes* of each participant and used as a covariate in statistical analyses. Specifically, *D scores* were used in the analyses (*M*=.24, *SD*=.27), where higher scores indicated more bias towards African Americans.

5.5. Participants

Data collected from 208 Caucasian undergraduate students enrolled at a Midwestern university were used for the analysis. Course credit was given as compensation. While 155 (74.5%) participants self-identified as females, 53 self-identified as males. Hypotheses and research questions for this project were not

[8] The wording of the questions were: "Did you vote in the previous Presidential Election?", "Have you ever worn a political campaign button, sign, sticker, or t-shirt?", "Have you ever attended a meeting, speech, or rally for a candidate?", "Have you ever volunteered working for a political party or a candidate?", "Have you ever donated money to a candidate or a political party?", "Have you ever written (online or offline) to a politician?", "Have you ever expressed your political opinion in the media (newspaper, TV, radio) or any social media sites such as Facebook, Twitter, etc.?", "Have you ever circulated or signed a petition (online or offline) for a political campaign or a political issue?".

[9] Ideological strength was measured through the following question: "In general, would you describe your political views as…". The answer options to the question were: "Extremely liberal", "Liberal", "Slightly liberal", "Moderate/middle of the road", "Slightly conservative", "Conservative", "Extremely conservative", "Haven't thought much about it".

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

formulated to test for gender differences. Yet, as is often done in studies with unequal groups, gender was included as a control for potential effects. An *a priori* power analysis run in G*Power 3.1 revealed that with 208 subjects, effect sizes of .275 should be detected with .95 power at .95 confidence level in this experimental design.

5.6. Procedures

Participants came to al lab in small groups of one to seven where they were assigned to individual but identical desktop computers in private cubicles. In order to blind participants to the goal of the experiment, they were told that the study is focused on their opinions about the quality of citizen journalism on Twitter. Next, participants read background information about the Black Lives Matter movement and then were automatically assigned to one of the conditions. Immediately after viewing four tweets they reported their anger and collective efficacy beliefs by responding to measures. Demographic questions, traditional political participation (not reported here) and collective action intention measures were administered in that order, followed by the visualizer/verbalizer cognitive style index items, perceived issue importance, attitudes towards protests and protesters, previous political participation, and ideological strength questions. Finally, the Race Implicit Association Test was administered in DirectRT version 2016, a program widely used to measure reaction time.

6. Results

Between-subjects ANCOVA (Linear General Model) procedures with modality (visual versus text) and content type (anger-evoking, efficacy-eliciting, neutral) were conducted. The verbalizer and visualizer indices, previous political participation, racism baseline from the Implicit Associations Test, attitudes toward protesters, perceived issue importance, and ideological strength were run as covariates in each test. Hypotheses and research questions for this project were not formulated to test for gender differences. Yet, because of unequal group sizes, gender was included in model testing to assess potential effects.

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

6.1. H1: Anger-Evoking Protest Tweets and Collective Action Intent

The first hypothesis predicted that anger-evoking tweets will be associated with higher levels of collective action intent than neutral tweets. An ANCOVA test with collective action intent as the dependent variable was conducted. There was no main effect for tweet content type, F <1. Hypothesis 1 was not supported.

6.2. H2: Efficacy-Eliciting Protest Tweets and Collective Action Intent

The second hypothesis predicted that efficacy-eliciting tweets would be associated with higher levels of collective action than neutral tweets. An ANCOVA procedure revealed that participants who viewed efficacy-eliciting tweets (M=3.23, SE= .09) did not report higher levels of collective action intent than those who viewed neutral tweets (M=3.23, SE= .09), F<1. Therefore, hypothesis 2 was not supported.

6.3. RQ1: Interaction of Anger-evoking and Efficacy-Eliciting Tweets on Collective Action Intent

Research question 1 initiated an investigation to uncover potential differences in collective action intent driven by exposure to anger-evoking tweets compared to efficacy-eliciting tweets. Participants did not report varying levels of collective action intent after viewing anger-evoking tweets (M= 3.38, SE= .09) compared to efficacy-eliciting tweets (M=3.23, SE= .09), F<1.

6.4. H3: Modality and Collective Action Intent

Hypothesis 3 proposed that participants would report higher levels of collective action intent when they are exposed to image compared to text tweets. Results revealed a pattern opposite to the prediction. Participants who viewed text tweets were *more* willing to participate in collective action (M= 3.42, SE= .06) than participants who viewed image tweets (M= 3.24, SE= .07). This finding approached conventional significance levels, $F(1,269)=3.54$, p=.061, ηp 2 =.013, offering tentative support as a counter to Hypothesis 3.

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

6.5. H4: Anger-evoking Images and Collective Action Intent

The fourth hypothesis predicted that anger-evoking image tweets would elicit the highest level of collective action intent of all text and image tweets. First, the omnibus test failed to produce a significant interaction effect for modality and tweet content type factors, $F(2,189)=1.42$, $p=.244$, ηp 2 =.015. When the Bonferroni adjusted pairwise comparisons were considered, it became clear that participants who viewed anger-evoking images ($M= 3.37$, $SE= .14$) reported higher levels of willingness to participate in collective action than those who were exposed to efficacy-eliciting images ($M= 3.00$, $SE= .13$), $F(2,189)=2.02$, $p=.140$, and neutral image condition ($M= 3.15$, $SE= .12$), $F(2,189)=1.42$, $p=.705$. Neither of these differences reached statistical significance levels, though. Furthermore, all text conditions produced higher scores than the anger-evoking image condition. However, these mean differences between text and anger-evoking image tweets also fell below statistically significant levels. In conclusion, anger-evoking image tweets failed to motivate collective action at statistically higher levels than other conditions. Hypothesis 4 was therefore not supported.

6.6. RQ2: Interaction of Modality and Tweet Content Type on Collective Action Intent

Research question 2 proposed a test to assess whether there would be differences in collective action intent associated with the interaction of content and modality factors. The result was not significant, $F(2,189)=1.42$, $p=.244$, ηp 2 =.015. However, post hoc paired comparison tests revealed a significant effect for one pair: Efficacy-eliciting *textual* tweets elicited significantly higher levels of collective action intent ($M= 3.47$, $SE= .13$) than efficacy-eliciting *image* tweets ($M= 3.00$, $SE= .13$), $F(1,189)=6.96$, $p=.009$, ηp 2 =.036. Thus, the mobilizing potential of efficacy-eliciting texts was significantly higher than its image counterpart.

6.7. Covariate results

The central variables of interest in this study (modality and tweet content type) have failed to explain an important chunk of variance in collective action intent. In

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

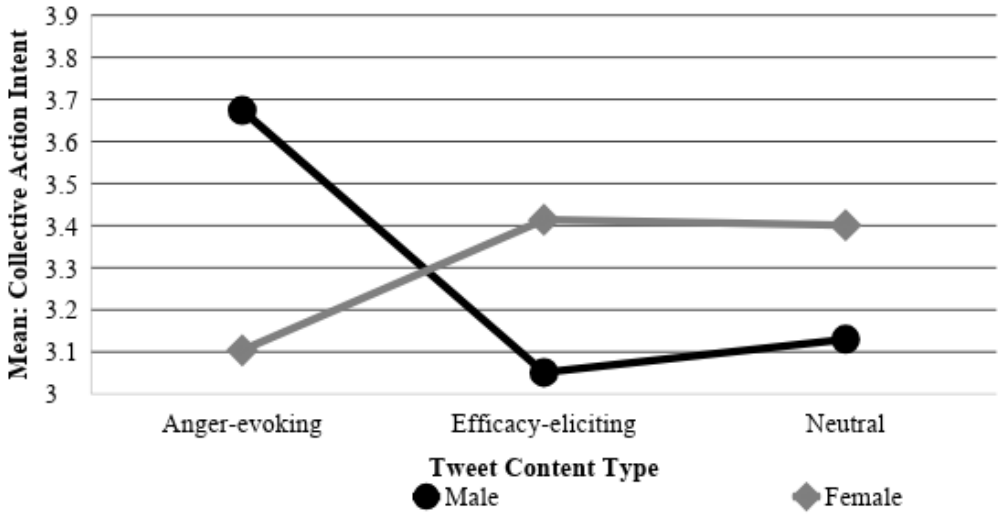
order to understand what else drives the variance in collective action intent, the control variables were investigated. The following covariates were significantly related to collective action intent: Implicit racism score $F(1,189)=4.95$, $p=.027$, ηp 2 =.026, Attitude towards protests and protesters $F(1,189)=24.39$, $p<.001$, ηp 2 =.114, Previous political participation experience, $F(1,189)=8.95$, $p=.003$, ηp 2 =.045, and Issue importance $F(1,189)=87.78$, $p<.001$, ηp 2 =.317.

Besides the covariates, the ANCOVA procedure produced a significant interaction effect for gender with tweet content type, F (2,189) = 7.92, $p<0.01$, ηp 2 =.077. Women (M=3.10, SE= .09) who were exposed to anger-evoking tweets reported lower levels of collective action intent than men (M=3.67, SE= .16), $F(1,189)=9.37$, $p=.003$. Conversely, when women (M=3.41, SE= .09) were exposed to efficacy-eliciting tweets, they reported significantly, $F(1,189)=3.94$, $p=.048$, higher levels of collective action than men (M=3.05, SE= .16) exposed to the same tweets. However, there were no statistically significant differences in how men (M=3.13, SE= .15) and women (M=3.40, SE= .09) reported intentions for collective action after exposure to neutral tweets $F(1,189)=2.46$, $p=.118$.

Further pairwise comparisons showed how tweet content differentially motivated participants of the two gender groups. First, women who saw anger-evoking tweets (M=3.10, SE= .09) reported significantly, $F(2,189)=3.79$, $p=.049$, less participatory intent than women in the efficacy-eliciting condition (M=3.41, SE= .09). Conversely, men exposed to anger-evoking tweets (M=3.67, SE= .16) reported significantly, $F(2,189)=4.54$, $p=.019$, more collective action intent than men in the efficacy-eliciting condition (M=3.05, SE= .16), and the neutral condition (M=3.13, SE= .15); $F(2,189)=4.54$, $p=.042$. Figure 1 visualizes this interaction.

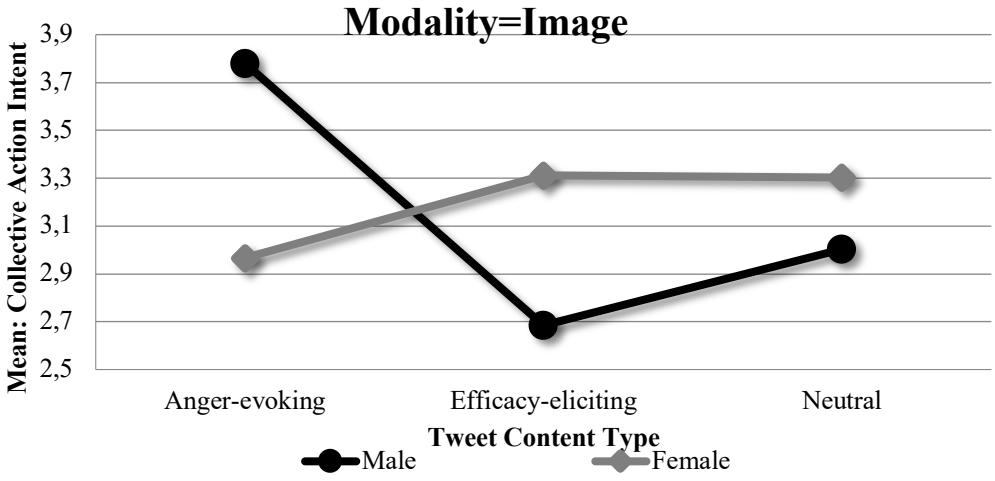
BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Figure 1. Interaction Effect for Tweet Content Type and Participant Gender on Collective Action Intent



Furthermore, a three-way interaction of gender, modality, and tweet content type were not statistically significance, F (2,189) = 2.00, p=.147, ηp 2 =.020. However, there were important two-way interactions, main effects, and pairwise comparisons to take note of. Figure 2 visualizes the interactions.

Figure 2. Three-way Interaction Effects for Tweet Content Type and Participant Gender, and Modality on Collective Action Intent



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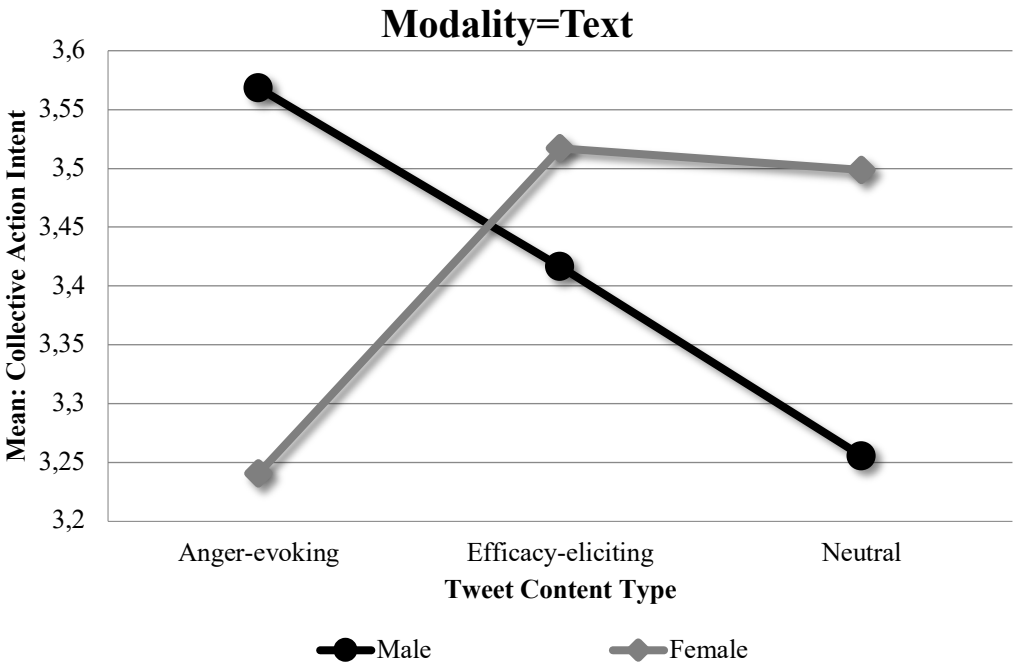

First, men and women significantly differed in their collective action intent after exposure to anger-evoking imagery, F (1,189) = 8.61, p=.004, ηp2 =.044, and efficacy-eliciting imagery, F (1,189) = 5.94, p=.016, ηp2 =.030. Males (M= 3.78, SE= .24) reported higher levels of collective action than females (M= 2.97, SE= .13) after viewing anger-evoking images. Conversely, women (M= 3.31, SE= .13) who were assigned to efficacy-eliciting image condition were more galvanized for protests than men (M= 2.68, SE= .22). Neutral image and textual conditions did not drive differential collective action intents across the gender groups.

Next, men assigned to efficacy-eliciting *textual* condition (M= 3.42, SE= .22) were significantly more likely to participate in collective action than those in efficacy-eliciting *image* condition (M= 2.68, SE= .22), F (1,189) = 5.79, p=.017, ηp2= .030. Lastly, men differed in their collective action responses after exposure to different image content, F (2,189) = 5.87, p=.003, ηp2 =.058. Men who viewed anger-evoking images (M= 3.78, SE= .24, 95% CI, [3.30, 4.26]) were significantly more likely to participate in collective action than those who viewed efficacy-eliciting images (M=

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

2.68, *SE*= .22, 95% CI, [2.25, 3.12]), *p*=.003, and neutral images (*M*= 3.00, *SE*= .22, 95% CI, [2.57, 3.43]), *p*=.056.

6. Conclusion and Discussion

This study did not produce evidence that image-based and emotional messages are potent agents for motivating citizens to become politically engaged. Anger-evoking, image-based tweets about Black Lives Matter were only marginally more galvanizing than non-anger evoking image-based tweets. Furthermore, these tweets did not stir more collective action intent than did exposure to text tweets.

The finding that neutral tweets stimulated the same levels of participatory intent as anger-evoking and efficacy-eliciting ones is not in line with studies that have demonstrated the impact of group-based anger and collective efficacy on collective action (van Zomeren et al., 2008; van Zomeren, et al., 2011). The sample of participants consisted of members of an advantaged group (i.e., Caucasians). Social psychology of collective action focused on disadvantaged groups, while ignoring advantaged group members as potential actors in reducing social inequalities (Iyer and Leach, 2010). Recently, a few studies explored what motivates such allies in fighting against social inequalities (van Zomeren, et al., 2011). Similar to disadvantaged groups, group-based anger and collective efficacy beliefs have been found to motivate advantaged group members for collective action (van Zomeren et al., 2011). Furthermore, communication of group-based anger of disadvantaged groups leads to empathy in advantaged groups when there is high consensus among the members of the disadvantaged group (de Vos et al., 2016). In this study, it was expected that exposing Caucasians to tweets about police brutality against African Americans would have elicited more anger and collective action intentions than exposure to neutral tweets. However, there was no evidence in support of this expectation. One variable in explaining this is varying levels of identification of Caucasian participants with African Americans. Indeed, identification with disadvantaged outgroup members (African Americans) was consequential in explaining collective action tendencies of advantageous groups (Caucasians) (van Zomeren, et al., 2011). Participants in the study reported here might have identified with victims they viewed in tweets at

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

different levels. Future work should include the level of identification of members of advantaged groups with disadvantaged group members in their research designs and investigate how privileged members of society are mobilized against fighting for social equality as a result of social media consumption.

While the social psychology literature points to group-based anger as a potent predictor of collective action, other discrete emotions may also be relevant in explaining collective engagement. For example, fear is another important emotion in the context of collective action (Miller et al., 2009), yet it is less frequently studied than anger (van Zomeren, et al., 2008). Unlike anger, which is an approach-related emotion, fear is an avoidance behavior, and there is evidence that fear inhibits the power of anger in stimulating collective action (Miller, et al., 2009). In this study, anger-evoking tweets might have instilled race-based fear in participants, resulting in their inaction. Although fear levels were not measured, this would explain why anger-evoking tweets did not stimulate collective action intent. Future research should utilize tweets that evoke high levels of anger and low levels of fear.

Image stimulus used in this experiment were not as powerful in engaging Caucasians as textual stimulus. A potential explanation might be content differences across image and textual conditions. In choosing and designing stimulus material for this experiment, the content of images and tweets cannot be duplicated—only the intensity of anger and efficacy elicitation can be assessed and matched. Selection priority was therefore given to similarity in anger and efficacy levels of images and texts. A wide range of unaccounted content differences between the two modalities could have contributed to textual tweets driving higher collective action than image tweets. Yet, it should be noted that the content of image and textual tweets were not completely dissimilar. For instance, anger-evoking images were mainly portraying victims of police brutality--bloody faces or laying on the ground. Similarly, anger-evoking text tweets were describing people beaten by police. Efficacy-eliciting images were portraying groups of protesters walking on the streets, or in front of buildings, and occupying areas of cities. Again, efficacy-eliciting texts were verbally describing

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

groups of people walking down the streets. In that sense, it can be said that the main content across the image and textual conditions were similar, yet not the same.

Twitter images are accompanied by a caption which gives context and background about the image depicted. Yet, in order to delineate between the effects of image and text content, image conditions in this study were presented without a caption. The only text that accompanied images was the hashtag *#BlackLivesMatter*. This might have lowered the impact of images. It certainly decreased the ecological validity of image tweet content.

The existing body of knowledge regarding gender variance in attention, memory, and comprehension to audiovisual news is expanded by the findings of this study. Negative and emotionally compelling images have varying behavioral (political) effects on men and women. Despite the fact that this study was not designed to test hypotheses about gender differences in responses to social protest tweets, important insights regarding how men and women engage emerged. Women, more than men, were inspired by textual tweets about groups of peaceful protesters, while anger in image tweets seems to be the main force driving men's political engagement. Also, *images* of large-scale protests seem to discourage people from collective engagement compared to reading about them. Women were inclined to get involved in collective action more than men when they were exposed to efficacy-eliciting tweets. Conversely, male participants were inspired more than females by anger-evoking tweets about social protests. Men, more than women, were more inclined to get involved in social protests after viewing anger-evoking images. Women, on the other hand, were more inspired for protest action than men after exposure to efficacy-eliciting images. Furthermore, anger in image tweets seems to be the main force driving men's political engagement. Male participants assigned to the anger-evoking image conditions were moved to collective action more so than those in the efficacy-eliciting and neutral image conditions. Women, on the other hand, were not affected by the kind of content they viewed in image-based tweets.

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

The dissimilarity in how men and women reacted to anger-evoking and efficacy-eliciting tweets is not surprising. For example, it has been documented that men prefer watching news with more violent content than women and that women show avoidance behavior towards negative stimulus (Canli et al., 2002; Grabe, 2011). Men compared to women encode and comprehend more information from negatively framed news stories (Grabe and Kamhawi, 2006). However, the literature on varying responses of men and women towards negative stimulus and negatively framed news stories mainly focuses on attention and memory outcomes (Putrevu, 2001; Soroka et al., 2016).

The sizes of the male and female subsamples in this experiment were disproportionate. Despite the fact that ANOVA is a robust test for unequal group sizes, and that the assumption of equality of variance in the two subsamples was not violated (as indicated by Levene's Equality of Variance tests), future research should recruit equal numbers of men and women.

The null findings in this study may be accounted for, to a significant degree, by the subject of the protest issue at hand: police brutality. This is especially likely when one considers the degree of public indifference—and, amongst some segments, outright opposition—to the Black Lives Matter movement. For example, as recently as mid-2016, when the movement was already three years old, 30% of the U.S. public reported not having heard of it or having no opinion about it (Horowitz and Livingston, 2016). A year later, roughly one-third of the U.S. public (34%) reported being either slightly or strongly opposed to it (Pew Research Center, 2017c), compared to about half (55%) who somewhat or strongly supported it. The partisan divide on the BLM movement was also stark. Whereas approximately two-thirds of Republicans (65%) opposed it, only 11% of Democrats did. At least for the portion of the U.S. public who oppose BLM, it is hard to imagine that any message—whether crafted visually or verbally, emotionally-valenced or not—would motivate them to demonstrate in support of it.

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Another reason why the emotional content of tweets did not explain the willingness of Caucasians to take part in social protests against racial inequality could be due to the stability of opinions on this issue. Racial attitudes and political opinions about social issues and political engagement might be so deeply embedded that change resulting from brief exposure to a few social media messages is unlikely. Indeed, racial attitudes, as measured by the Implicit Association Test, explained significant variation in collective action intent. The more favorable the participant was towards Caucasians, the lower the collective action intent. Similarly, previous political participation experiences and attitudes towards protests and protesters also predicted collective action. The relative power of these belief characteristics could be another underlying reason for the inability of tweet content to shape collective action. Therefore, it seems that socialized beliefs about race and political and social dissent are not susceptible to influence by a few social media messages.

This study was situated specifically to offer insight into the perspective of privileged groups in American society. If organizers of race-related protests want to recruit participants from privileged social groups, social media images of violence do not seem to support that goal. Although images of police brutality against Black citizens do evoke anger, they are only marginally more effective than non-anger evoking images in fueling collective action intentions. Yet, images of violence do not necessarily discourage people from taking part in social protests. The bottom line is that anger-evoking images do not appear to spur participation any more than textual tweets describing how citizens are subjected to violence.

This study demonstrated that exposure to messages about groups of people protesting peacefully seems to increase collective efficacy beliefs among Twitter users. Importantly, demonstrations and social protests depicting people gathered in protest can motivate collective action intent more when tweeted with text than images. Non-anger evoking imagery, however, was found to be less effective. Therefore, social movement organizers would be well served to use textual tweet updates and anger-evoking imagery when reporting these demonstrations. In addition, citizens who are predisposed to participate in collective action will be more likely to act when they

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

encounter media messages. In the contemporary media age where citizens are moving away from institutional politics yet engaging more and more in digital media facilitated forms of collective action, it is important to further understand the nuances of how different content and modalities of media messages are encouraging active citizenry.

Finally, given the availability of popular social media platforms among young citizens across the globe, such as TikTok, the implications of the findings of this study should be interpreted, taking into consideration the technological affordances, content characteristics (multimodality) and uses of these relatively new social media apps. TikTok, afforded by creativity and algorithmic manipulation, is a suitable platform for increasing awareness and mobilizing audiences for collective action against social injustices. Indeed, users across the globe instrumentalized this app for various social and political activism uses, such as climate change activism, the Black Lives Matter movement, and stopping anti-Asian racism. Recent scholarship interrogates the potential of TikTok in changing the practices and cultures of social movements worldwide (Lee and Abidin, 2023).

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

While these studies acknowledge the changing cultural aesthetics of mediated political activism, our findings have merit in understanding the galvanizing potential of the new style of short, edited, creative videos. As the AI-assisted filter-enabled meme-like short videos encourage participatory culture on TikTok, the emotionality and efficacy-related eliciting potential, as well as the visual aspects of the short videos, the two independent variables investigated in this study, need further investigation through, first, systematic content analysis of TikTok videos going viral. To do so, the content on TikTok is different and thus should be investigated in terms of its aesthetic cultures and dimensions. According to Brown et al. (2002), the platform technologies afford "affective design," which amplifies emotions across users through replicated yet personalized memetic videos. The virality of such new social media platforms is heavily dependent on the content characteristics, replications of existing or unique content with added creativity, which seem to differ from what most image Tweets looked like since the early 2010s: the rise of connective action. Controlled experiments should support systematic content analysis of multimodal elements of such TikTok videos to uncover whether meme-like short video formats have similar levels of potential to galvanize citizens from different sociodemographic backgrounds.

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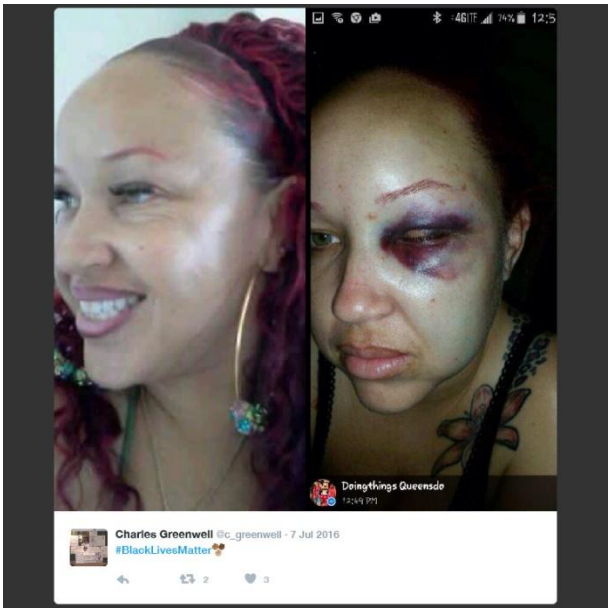
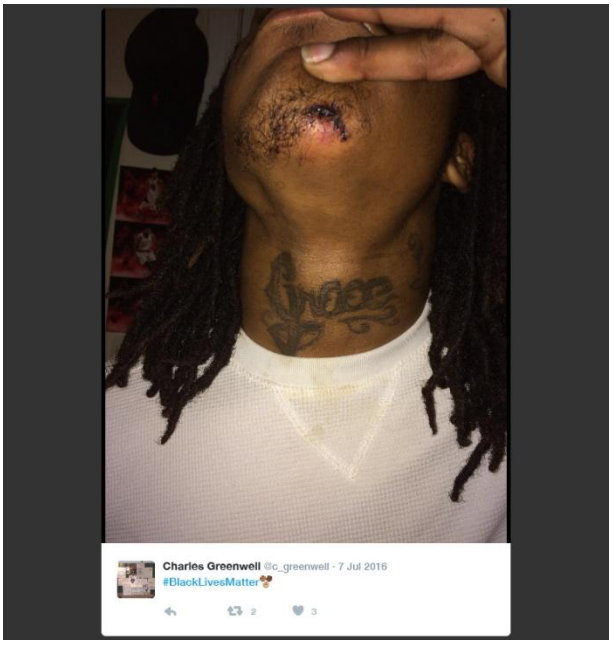
Appendix

Stimulus Material Used in the Experiment

Anger-evoking Image Condition



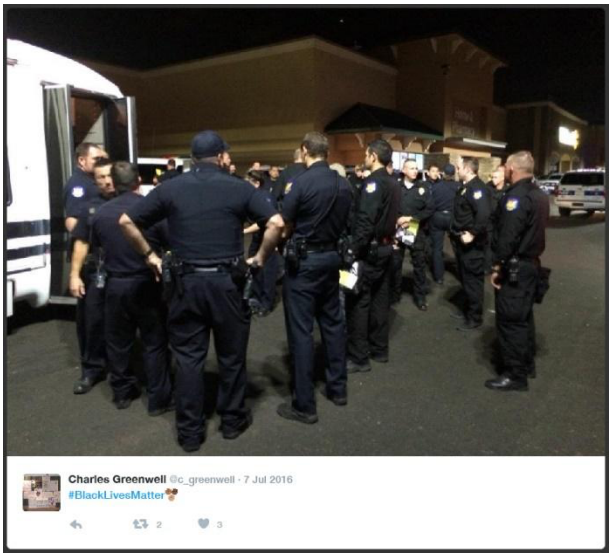


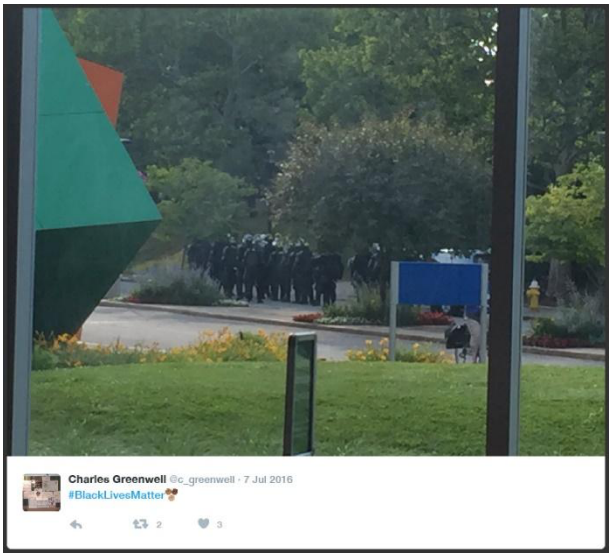
BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

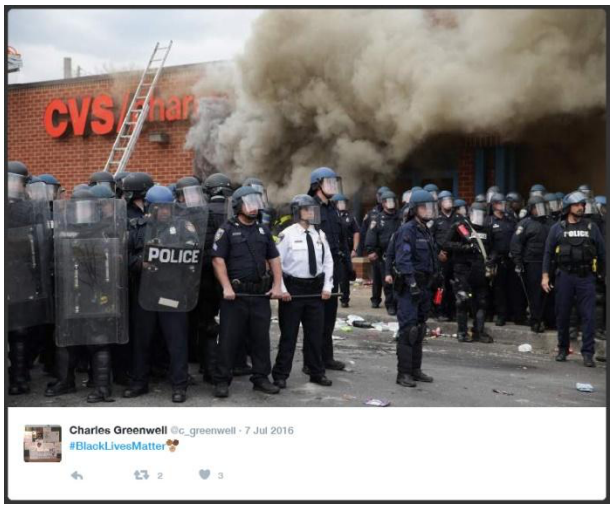
Efficacy-eliciting Image Condition

BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Neutral Image Condition





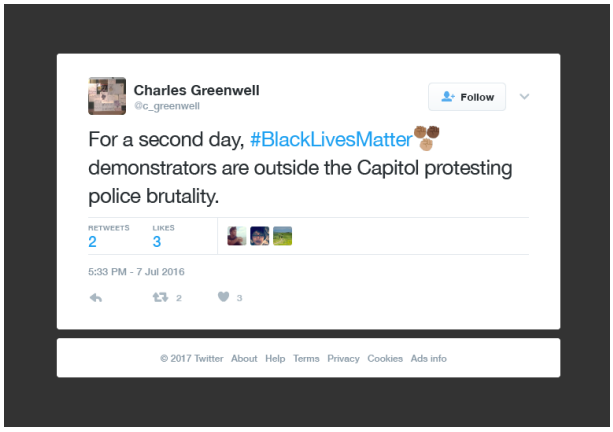


BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Anger-evoking Text Condition

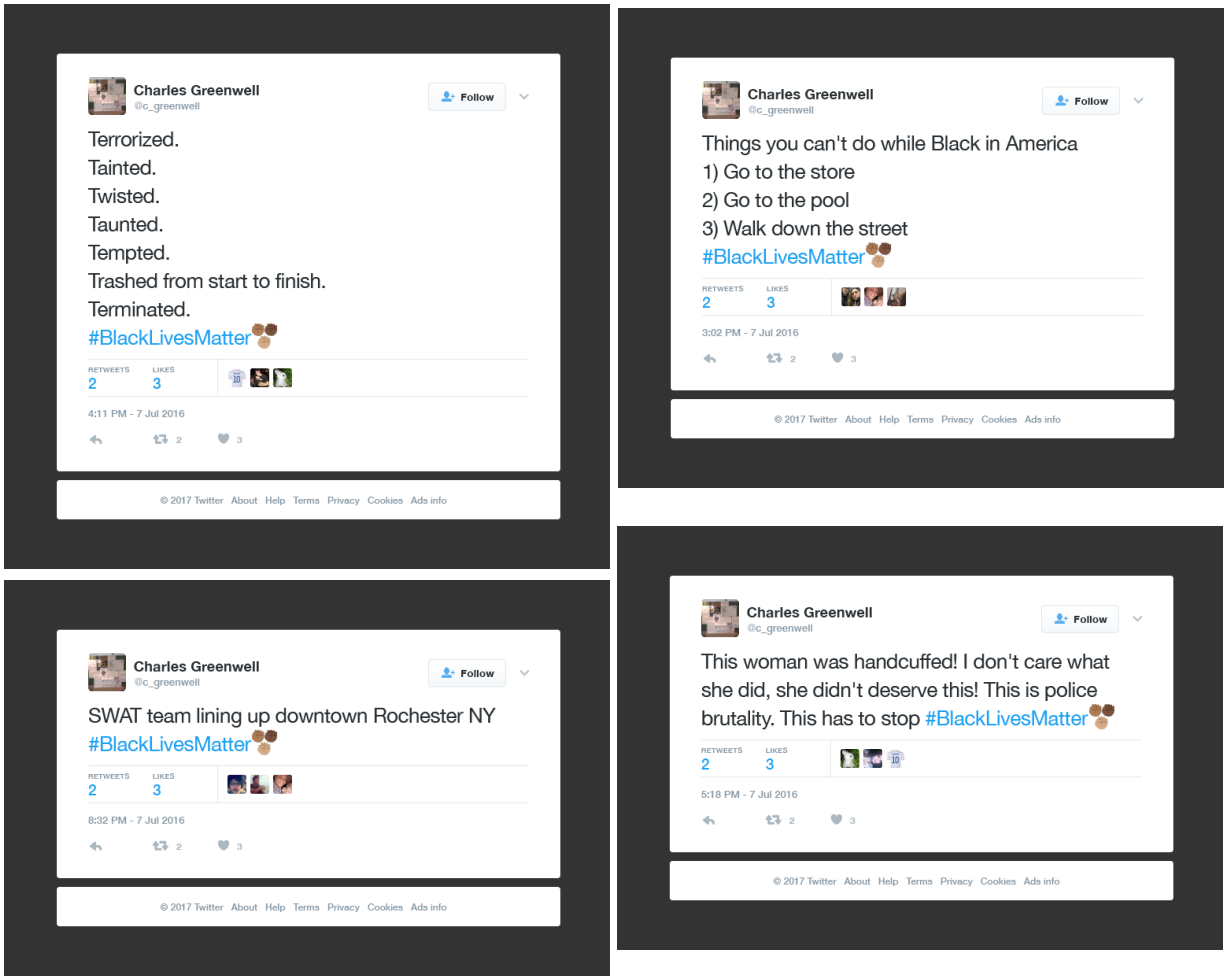
BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Efficacy-eliciting Text Condition



BAŞ, Özen ve GRABE, Maria Elizabeth (2023). The Potential of Twitter Images for Galvanizing Citizens to Collective Action. Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi (e-gifder), 11 (2), 1462-1509.

Neutral Text Condition



Çalışma kapsamında herhangi bir kurum veya kişi ile çıkar çatışması