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Policing In An Era of Sousveillance: A Randomised Controlled Trial Examining the Influence of Video Footage on Perceptions of Legitimacy

Megan Mohler
Temple University

Christopher M. Campbell
Portland State University, cmc22@pdx.edu

Kelsey S. Henderson
Portland State University, kelsey.henderson@pdx.edu

Brian Renauer
Portland State University

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Policing in an era of sousveillance: A randomized controlled trial examining the influence of video footage on perceptions of legitimacy

Abstract

Controversial incidents of police-citizen interactions, coupled with advancements in internet media technology has created a new dynamic of how public perceptions of the police might be influenced. This paper reports results of an experiment examining how videos of police-citizen interactions found on social media platforms might influence civilian perceptions of legitimacy and procedural justice. Using 173 randomly assigned participants and a pre/post-test design, we compare perceptual effects of positive, negative, and neutral depictions of police-citizen interactions. Results indicate all media had an effect on perceptions of legitimacy, with negative content yielding the largest effects, significantly diminishing global perceptions of legitimacy, whereas positive content significantly improved perceptions of legitimacy. Our findings suggest that while public videos of police-citizen interactions found online can contribute substantially to increasing distrust in the police, they may also demonstrate how policing agencies might use similar platforms to improve public perceptions of their legitimacy.

Keywords Police legitimacy · Procedural justice · Media effects · Citizen Journalism · Police Videos · Cooperation · Experiment

More than thirty years of research has shown the importance of police being perceived as a legitimate entity (Murphy, Hinds, & Fleming, 2008; Reisig, Bratton, & Gertz, 2007; Tankebe, 2009; Tankebe, 2012; Tyler 1990; Tyler & Fagan, 2008; Tyler & Huo, 2002). Much of the extant research stems from Tom Tyler's work on legitimacy, which sparked what Tankebe (2012) refers to as a "legitimacy turn" in Criminology. The literature largely comes to a similar conclusion as Weber (1958) did – in order for authority (e.g., police) to be effective, legitimacy is critical. In conjunction with the empirical evidence, the President's Task Force on 21st Century Policing (2015), strongly recommends policing agencies adopt models to promote legitimacy (Weitzer, 2015). Although the Task Force was established to address several controversial and highly publicized police-citizen incidents that occurred within a short time in prior years, its findings and recommendations continue to be pertinent as the U.S. experiences a similar situation in 2020. In the late spring of 2020, after the death of George Floyd at the hands of Minneapolis police officers among other similar incidents in several states, widescale demonstrations erupted across the U.S. and the World. Nearly six years after the police killing of Michael Brown in Ferguson, Missouri and the subsequent civil unrest, and five years after the 21st Century Policing recommendations, public demonstrations continue, drawing greater attention to serious, consistent, legitimacy deficits regarding the police. These viral incidences have spawned a new mantra to "defund the police," which has gained political power by questioning the legitimacy of police authority to address incidents related to complex societal ills (e.g., crises in houselessness and mental health) or non-threatening social order violations (e.g. traffic infractions).

Research shows that highly publicized, controversial interactions with police erode public confidence (Graziano, Schuck, & Martin, 2010; Weitzer 2002). Such a dynamic is promulgated via most recent digital media technology and internet usage, which provides an abundance of raw video footage documenting police-citizen interactions. For instance, high profile events (e.g., the 2020 death of Floyd in Minneapolis), are now chronicled through cell phones, police body

cameras, or other forms of video recording and shared with the public, often through social media. A concept that relates to this phenomenon has been dubbed “sousveillance” (Mann, Nolan, & Wellman, 2003)—often referring to the inverse of surveillance. Traditionally, the public was considered “the watched” and the police “the watchers”. In the age of sousveillance, however, these roles are becoming inverted through “citizen journalism”. Citizens are often encouraged to participate in news reporting by recording and sharing events related to transparency and accountability (Antony & Thomas, 2010; Farmer & Sun, 2016; Greer & McLaughlin, 2010). Greater access to raw footage coupled with this hyper-awareness has implications for perceptions of police legitimacy. In the two years following the Ferguson events, more controversial police encounters have occurred, further straining the relationships between citizens and police, and strengthening the call for greater transparency and accountability (Derickson, 2016).

While previous studies have noted the influence of traditional crime media (e.g., television news and newspapers) on public perceptions, the implications of new technological trends are currently unknown. This experiment examines the intersection of sousveillance-related videos and the impact they have on citizen perceptions of police legitimacy. Participants were randomly assigned to one of three conditions to watch positive, negative, or neutral videos depicting interactions between police officers and citizens. All of the videos used were obtained from social media platforms that capture the role of sousveillance. In our results, we demonstrate that sousveillance-related videos possess great potential for influencing citizen-police relations.

Background

As criminology has embarked on its “legitimacy turn,” it has sparked debates about the conceptualization and measurement of police legitimacy. As Tankebe notes, the debate harkens back to Weber’s original definition of legitimacy as, “a belief in the legality of the enacted rules and the right of those elevated to authority under such rules to issue commands” (Tankebe, 2012, p. 107). Although Tankebe (2012) offers that legitimacy is based on properties of legality and

shared values,ⁱ which public perceptions of procedural justice, distributive justice, and police performance represent (Bottom & Tankebe, 2012), the dominant framework for legitimacy that criminology has long adopted is largely based on Tyler's work. The Tylerian model (i.e. process-based model) posits police legitimacy as a two-part conceptualization: The perceived obligation to obey and trust in police authority (Tyler & Huo, 2002). A large body of research on the antecedents of legitimacy, spawned competing theories as to how people form legitimacy perceptions (e.g., instrumental model, distributive justice model, police performance model), but a considerable amount of research has suggested the most support for Tyler's (1990) procedural justice model (Jackson, Bradford, Hough, Myhill, Quinton, & Tyler, 2012; Sargeant, Murphy, & Cherney, 2014; Sunshine & Tyler, 2003; Tyler, 2005; Tyler & Huo, 2002). Tyler's procedural justice perspective argues that people form their perceptions regarding police legitimacy based on judgments of the fairness of police procedures. Tyler (2004) highlights four key elements to procedural justice judgments: (1) participation—allowing citizens a chance to explain and communicate their view (i.e., opportunity to voice their perspective/experience); (2) neutrality—making unbiased decisions and based on objective information; (3) respectful treatment—being polite and treating people with dignity; and (4) trustful motives—genuine intentions that show care for the well-being of citizens.

Largely in support of this model, a meta-review of 28 relevant studies found perceptions of police legitimacy can be improved when individuals feel police treat them in a manner considered procedurally just (Donner, Maskaly, Fridell, & Jennings, 2015). The Tylerian model also predicts that increased perception of police legitimacy is in turn associated with an increased cooperation with police orders and compliance with the law (Murphy, Hinds, & Fleming, 2008; Reisig, Bratton, & Gertz, 2007; Tyler 1990; Tyler & Fagan, 2008; Tyler & Huo, 2002). Tyler and Huo (2002) note how aggressive deterrence strategies to demand compliance may prove less safe for all parties, as forced compliance by the police via a power proclamation, can result in anger

and resentment from citizens (Lawler, Ford, & Blegen, 1988). Forceful compliance, especially founded upon fear, is also antithetical to a framework of democratic legitimacy (Tankebe, 2009, 2012). In contrast, when police-public interaction is centered on fairness, respect, and a mutual cooperation, tension resulting from dominance can be alleviated (Sunshine & Tyler, 2003).

While U.S.-based research has found support for this process-based model of evaluating and perceiving the police, some international research has shown this may not always be the case, especially when looking at group variation. In a survey of 9,485 Australian residents, Sargeant, Murphy and Cherney (2014) found variation in procedural justice effects when looking at ethnicity. Results indicated support for the process-based model of trust and cooperation with the police among the general population, but for certain ethnic groups (Vietnamese and Indian ancestral groups), procedural justice was less important in willingness to cooperate (Sargeant, Murphy & Cherney, 2014). Similar results were found in Ghana where perceived effectiveness was found to be more influential, suggesting that when there are deficits in police legitimacy among the general population, utilitarian factors may be more important in determining public cooperation (Tankebe, 2009). The results of these studies might hold important implications in the United States context as a crisis in policing continues to be of public concern. As unrest continues, public discourse appears to focus on utilitarian factors, such as police performance.

Even as the conceptual debate continues, it remains outside the scope of the current research. Instead, we offer that each of these core concepts – obligation to obey, trust, procedural justice, distributive justice, and police performance – have all been proven to be integral to an understanding of legitimacy, albeit in different ways depending on the idiosyncrasies of the research. What *is* important to our research is whether media portrayals of police can alter these core concepts and ultimately impacting legitimacy. In addition, much of this prior research on the relationship between procedural justice and legitimacy primarily used data from community surveys of randomly selected residents and consumer surveys of those with recent interactions

with the police (Donner et al., 2015). To date there have been few studies to examine this relationship through experimental design (more below).

Policing and the Media

The President's Task Force on 21st Century Policing (2015) suggested it can be advantageous for police organizations to develop a working relationship with the media, specifically, news outlets. By developing a stronger relationship with the media, police can communicate accurate case information, increase transparency, call upon the public for help, and help to frame stories in a way that is positive towards the police. Police departments have appointed public information officers to manage their relationship with the media; this allows departments to strategically manage their public image (Chermak & Weiss, 2005). This proactive approach is particularly relevant as society transitions towards using the internet as a primary source for learning and accessing information (Pew Research Center, 2016).

Social media, such as Reddit, Twitter, YouTube, and Facebook, are an important element to consider in the relationship between the internet and police. Differing from previous websites, they provide a platform for interactions between users and allow for users to obtain information they are specifically interested in (Meijer & Thaens, 2013). Evolving with the technological trends, police now have another way of controlling their image through social media, which is a quicker and more direct route compared to working with news agencies. Public information officers can post and deliver information in a more real time, controlled environment. Additionally, police agencies can use their own personal social media pages to share information with the public as an attempt to increase perceptions of legitimacy. Exposure to content in this way has the potential to influence perceptions of legitimacy in a positive way by appearing more accountable to the public, among other elements (Rosenbaum, Graziano, Stephens, & Schuck, 2011); however, individuals now have access to uploaded content (from a variety of sources), which may capture negative interactions. This can be particularly important considering internet users can actively search for

information and often are presented with “similar stories” when searching online (i.e., videos are on cue to play one after the other).

Recent research has examined how media consumption influences public beliefs, expectations, and attitudes toward crime and policing. In one study (Braga et al., 2014) participants read a vignette describing the context in which an arrest took place, followed by exposure to a video of an actual police-citizen encounter. The degree of procedural justice experienced by respondents in their most recent encounter with the police impacted their assessments of the police. If the participant had a prior interaction where they believe the police treated them disrespectfully and unfairly, they negatively evaluated the police in the video (regardless of the content of the video). This implies that personal experiences impact perceptions of legitimacy and procedural justice; however, less is known about vicarious exposure. Especially, the degree of influence dependent on the content of vicarious experiences, such as those depicted through shared videos or news clips.

Another study (Graziano et al., 2010) exposed participants to video clips from a highly publicized police misconduct case. While the case involved possible racial profiling by Chicago police, the news clip shown to participants was a police department representative explaining the danger that traffic stops pose to officers in response to the case. All participants were less likely to believe that Chicago police officers engaged in profiling, and had an increased perception of the dangerousness of traffic stops for police after exposure to the video. These findings suggest that police can utilize media connections to frame incidents in their favor.

The Graziano study suggests that depictions of the police that could be construed as positive or neutral can improve perceptions of the police. However, the reverse is also possible (i.e., negative depictions can have a negative effect). Recent research has examined this effect experimentally (Johnson, Wilson, Maguire & Lowrey-Kinberg, 2017; Maguire, Lowrey, & Johnson, 2017). In the first of these studies, participants were assigned to view one neutral,

negative, or positive video depicting a police traffic stop (Maguire et al., 2017). Participants who viewed a positive interaction reported higher levels of willingness to cooperate with the police, obey the police and law, and trust and confidence in the police; participants in the negative video condition reported lower levels on these measures. This research demonstrated that vicarious exposure to police-citizen interactions can influence citizen's perspectives of the police.

This work was extended to examine the effect of driver race (black versus white driver) on citizens' perceptions of police legitimacy (Johnson et al., 2017). Overall, participants in procedural justice conditions (positive video) had more positive evaluations of the police officer and the encounter depicted in video. This effect was mediated by driver race, such that the positive effects of procedural justice were stronger when the driver was white compared to black (Johnson et al., 2017). In this study, the content of the video influenced encounter-specific measures, but not global measures of the police and law generally (e.g., willingness to cooperate with the police and law). As noted by the authors, observing a single police-citizen encounter might not be enough to alter public perceptions of the police, and there is much to learn about repeated (or more multiple) exposure to vicarious encounters (Johnson et al., 2017).

This research also suggests that exposure to negative interactions carries stronger weight than exposure to positive interactions, what has been termed the "asymmetry effect" (for a discussion of this effect related to citizen-police encounters see Skogan, 2006). It is possible that the stronger weight of negative effects can be amplified by repeated or multiple exposure. For example, research on pre-trial publicity (i.e., media information shared about a defendant, case, and/or evidence), has found that negative publicity is more influential on jurors' decisions, and that the greater the exposure the stronger the effect (Stebly, Besirevic, Fulero, & Jimenez-Lorente, 1999; Studebaker & Penrod, 1997). That is, it is possible that exposure to multiple videos depicting citizen-police interactions (in differing contexts) may have an *additive effect* on participants'

perceptions of police legitimacy and procedural justice. We examine exposure to multiple videos in a randomized, pre- and posttest, experimental design study.

Present study

Although prior research has highlighted the importance of relationships between media consumption and public perceptions toward the police, critical gaps remain. The goal of this research was to replicate and extend past research by examining exposure to multiple videos, depicting different contexts, and examining this effect using a pre- and posttest study to account for attitude change. Past experimental research showed participants one (often simulated) police-citizen encounter, and depicted only traffic-stops. In this study, participants were exposed to multiple videos taken directly from social media, depicting various contexts. We also measured participants perceptions of police legitimacy and procedural justice before and after exposure to the videos to examine the effect of the intervention (i.e., content of the videos). Few studies aim to capture an internet context of “new media” depictions (e.g., sousveillance) of police-citizen interactions. The present study seeks to address the question: Can exposure to multiple videos of police-citizen interactions influence perceptions of police legitimacy? Although extant literature views procedural justice as the primary antecedent of legitimacy, there is uncertainty regarding the link between video clips displaying varying degrees of procedural justice and influencing perceptions of legitimacy. Drawing from previous literature, sousveillance, and the seemingly unending stream of raw video footage available on social media, our primary hypothesis states:

Hypothesis 1 (H₁): Exposure to videos showing police interactions with the public will change baseline legitimacy perceptions held about the police.

Additionally, given the effects of asymmetry, the windfall of recent events (e.g., Minneapolis), and increasing public scrutiny of the police, a second aim of this study was to explore what type of content might be most impactful on legitimacy perceptions. In comparing the content of videos, we hypothesize the following:

H₂: The type of video content of police action will have a notably distinct impact on legitimacy perceptions.

H_{2a}: Exposure to videos showing officers acting rude, disrespectful, using excessive force, or otherwise acting procedurally unjust (i.e., negative depictions) will decrease legitimacy perceptions.

H_{2b}: Exposure to videos showing police engaged in community building activities (i.e., positive depiction) will increase (strengthen) legitimacy perceptions.

H_{2c}: Exposure to videos showing police engaged in typical duties in a way that is deemed as fair or procedurally just (i.e., neutral depiction) will increase (strengthen) legitimacy perceptions.

Hypothesis 2a-b embody the expected directions of the literature. Hypothesis 2c involving neutral depictions is set with the thought that viewing a procedurally just experience should perpetuate or strengthen previously held perceptions of legitimacy. Lastly, given that this study draws heavily from past literature on procedural justice and legitimacy components, we devised two final hypotheses:

H₃: Changes in perceptions of legitimacy will similarly be observed in reported changes to its antecedents (i.e., perceptions of procedural justice, distributive justice, and performance).

H₄: Changes in antecedents to legitimacy (i.e., perceptions of procedural justice, distributive justice, and performance) should predict changes in legitimacy perceptions when controlling for group assignment.

Hypothesis 3 and 4 were set for two reasons. First, the dominant Tylerian model of legitimacy suggests that its antecedents consist of the other scales included in this study (procedural justice, police performance, and distributive justice). The current design provides an opportunity to examine the nature of this relationship reported in the literature as it relates to social media exposure. Second, because the primary aim of this study was intended to examine the influence of videos found in social media, it is possible that multiple covariates collected at the posttest will also explain changes observed in legitimacy perceptions, apart from only the videos. For instance, it may be the case that manipulations of social media exposure influence one's perception of

distributive fairness, particularly, and it is the change in distributive fairness perceptions that subsequently influence perceptions of legitimacy.

Methodology

Sample

To test these hypotheses, questionnaires were administered between March and April of 2017 to online survey respondents obtained through Amazon's Mechanical Turk (MTurk) population (for more on MTurk, see Stewart et al., 2015). For this study, eligibility was restricted to individuals residing in the United States. On average, MTurk workers tend to be younger (roughly 30 years old), have a higher education level, underemployed, less religious, and more liberal than the general U.S. population (Berinsky, Huber, & Lenz, 2012; Paolacci, Chandler, & Ipeirotis, 2010; Shapiro, Chandler, & Mueller, 2013). In this study, we aimed to gather more than 50 participants in each group. This was set to reduce the potential of a Type II error, increase the likelihood of detecting a moderate effect, and exceed a threshold of approximately 35 per group, which is often deemed sufficient power for effect detection in experimental studies (see Funder et al., 2014). The final sample size was 173 participants, with 56 in the neutral condition, 62 in the positive condition, and 55 in the negative condition.

Video Conditions

A search for police-citizen interaction videos was conducted through various social media outlets (e.g., Facebook and YouTube). The search was based on the following keywords used individually or in various combinations: Police video, police and citizen, police encounter, police interaction, good police, honest police, police misconduct, police brutality, police and community. These phrases were also searched by substituting "cop" for "police". On Facebook, videos were searched for by going to news organizations web pages, such as The New York Times, Cable News Network, British Broadcasting Corporation, and the Washington Post. Individual police departments' Facebook pages were also searched for video content. A search (using the key words)

was also conducted on the social media website Reddit. The subreddit “Protect and Serve” (r/protectandserve), which is dedicated to law enforcement professionals, also served as a platform to search for videos, and included the top posts over the past three years. The majority of videos used in this study were found on Facebook. All videos needed to show the police engaging with the community or a citizen in some way (e.g., a traffic stop, a street encounter, or community event). These interactions were intended to serve as vicarious experiences from which people could make judgments of procedural justice about the police.

Pilot study. Prior to conducting our study, we ran a pilot test to increase reliability by categorizing videos with high rater agreement into 3 distinct categories: negative, neutral, and positive. The pilot survey included 18 videos and was administered to six individuals. The raters were selectively chosen to provide a relatively wide range of perspectives and backgrounds within the criminal justice field, while still allowing for an objective approach to constructing the video conditions. If at least five out of the six participants agreed on the category, then the video was put into the corresponding category. All but two videos fell into distinct categories based on this agreement criteria. The two videos were rated equally as both positive and neutral. Subsequently, they were reviewed by the experimenter and others and were deemed as falling into the neutral category.

The pilot study resulted in 15 videos being selected for the final study, with five videos in each category (positive, negative, neutral). Rather than using just one video per condition, all 15 were ultimately used for multiple reasons. First, we aimed to capture the tendency of social media outlets to suggest related videos in various ways. Second, recent research has suggested that people often seek out similar videos of a certain nature and thereby overlooking videos that might fall into a separate condition (e.g., Colleoni, Rozza, & Arvidsson, 2014). And lastly, prior research has examined the effect of exposure using one video, we sought to extend these findings by examining exposure to multiple videos (additive effect).

Positive videos depicted the police interacting with a citizen(s) in a way that goes above and beyond their typical job duties or depicted the officers in a favorable light (e.g., having a cookout with the community); these videos portrayed officers as more approachable or socially warm (e.g., engaging with community members by being unnecessarily helpful). Neutral videos showed the police performing a typical duty and engaging with a citizen(s) in a way that is respectful, fair, and procedurally just (i.e., gives citizen voice or participation, provides explanations, but did not exceed expectations; e.g., pulling someone over and explaining why they did so). Negative videos depicted anything from unnecessary force to disrespectful treatment (e.g., graphic police use of force). The definitional distinction of positive (being more community or extracurricular) as opposed to neutral (being more concerned with typical duties) was emphasized to create two distinct types of content. Videos ranged from 22 seconds to 4 minutes and 29 seconds.

Procedure

The [blinded for review] University Institutional Review Board approved materials and procedures prior to the collection of data. Participants were recruited from MTurk and re-directed to Qualtrics to complete the study. The description of the study was listed as: “In this study you will be asked your opinions on the police in the United States. You will also be asked to watch videos of police-citizen encounters”. Videos, recruitment, and study materials are available at the request of the first author. After indicating consent, all participants were given a pretest that consisted of all measures, and then randomly assigned to one of the three media content conditions. Participants were not aware of their group assignment. Participants were then exposed to five videos clips according to their assignment of either positive, neutral, or negative (total media length ranged from 7.5 to 12.5 minutes in length). Thus, each participant watched multiple videos, within their condition. Participants were not able to move forward until each viewed had played in its entirety. After exposure to the videos, participants responded to a posttest questionnaire measuring perceptions of legitimacy, procedural justice, distributive justice, and police

performance measures. Participants were compensated upon successful completion. The average duration of the survey was 25.7 minutes (standard deviation = 9.9 minutes)

Measures

As noted above, there has been some debate over the conceptualization and operationalization of police legitimacy. To wade directly into the debate in testing and examining the psychometric properties of legitimacy is outside the scope of this study. Ultimately, for consistency with the majority of extant literature, we chose to apply the more common Tylerian measure of legitimacy, which treats measures of procedural justice, distributive justice, and police performance as antecedents of legitimacy and obligation to obey as a component of legitimacy.

Legitimacy. Tyler's measure of legitimacy is broken down into two elements—obligation to obey and trust (Tyler 2004; Wolfe et al., 2016). Participants were presented with six statements that capture these two elements and were asked to rate on a six-point scale how much they agree with the statement (1 - strongly agree to 6 -strongly disagree). These statements and validated scales are from Sunshine and Tyler (2003). The six statements were as follows: (1) "Disobeying the police is seldom justified," (2) "You should accept the decisions made by the police, even if you think they are wrong," (3) "The police can be trusted to make decisions that are right for your community," (4) "You should do what the police tell you to do," (5) "I have confidence in the police officers who patrol my locality," and (6) "People's basic rights are well protected by the police." We conducted a principal component analysis including these 6 items; items loaded on to one construct ($\alpha = .91$). The legitimacy scale was coded in accordance with Sunshine and Tyler's method (2003) in that lower scores indicate higher perceptions of legitimacy.

Procedural justice. Seven Likert scale questions gauged procedural justice and the respondents reported how often they believed the police engaged in the specified behavior on a five-point scale (very often, somewhat often, sometimes, rarely, or never). The seven statements were as follows: (1) "Treat citizens with respect and dignity," (2) "Take account of the needs and

concerns of the people they deal with,” (3) “Make their decisions based upon facts, not their personal biases or opinions,” (4) “Give honest explanations for their actions to the people they deal with,” (5) “Do not listen to all of the citizens involved before deciding what to do,” (6) “Make decisions about how to handle problems in fair ways,” and (7) “Treat all people fairly.” The procedural justice scale was also additive ($\alpha = .93$) with lower scores indicated higher (more favorable toward police) perceptions of procedural justice.

Distributive justice. The distributive justice scale included three statements and participants were asked to rate on a six-point scale how much they agree with the statement (Strongly agree to strongly disagree). The three distributive justice statements were as follows: (1) “The police provide the same quality of service to all citizens,” (2) “The Police enforce the law consistently when dealing with all people,” and (3) “The police provide better services to wealthier citizens.” The distributive fairness scale ($\alpha = .85$) was also additive with lower scores indicating higher ratings of distributive justice.

Police performance. The police performance scale included three statements and participants were asked to rate on a six-point scale how much they agree with the statement (Strongly agree to strongly disagree). The three police performance statements were as follows: (1) “The police are effective in fighting crime in my neighborhood,” (2) “When people call for help, the police respond quickly,” and (3) “The police are effective at helping people who ask for help.” The additive police performance scale ($\alpha = .89$) was coded in the same direction with lower scores indicating higher ratings of police performance.

Compliance and Cooperation. Both cooperation and compliance have been linked to legitimacy perceptions, in that increased legitimacy is related to willingness to cooperate and comply. To measure compliance, participants were asked to respond to five statements on a five-point Likert scale of how often they engage in a certain behavior (very often, somewhat often, sometimes, rarely, never). The five compliance statements were as follows: (1) “Bought something

you thought might be stolen,” (2) “Illegally disposed of trash and litter,” (3) “Made a lot of noise at night,” (4) “Drank alcohol in a place where you are not supposed to,” and (5) “Broke traffic laws.” Lower scores indicate more willingness to comply in the additive compliance scale ($\alpha = .79$). Considering that compliance measures would not change from the pretest to the posttest, they were only collected once in the pretest questions.

To measure cooperation, participants were asked to respond to three statements on a six-point scale of how likely they were to engage in a behavior (very likely to very unlikely). The three cooperation statements are as follows: (1) “Call the police to report a crime,” (2) “Provide information to the police to help find a suspected criminal,” and (3) “Call the police to report an accident”. The additive cooperation scale ($\alpha = .89$) was coded in the same direction with lower scores indicating more willingness to cooperate. Due to too few participants completing the cooperation questions in the posttest (only 73 completed) we only used pretest scores only.

Correlations among scaled measures. Participant ratings of procedural justice, police performance, distributive fairness, compliance, and cooperation were all significantly and positively correlated with legitimacy perceptions. Table 1 shows that stronger beliefs that police act in a procedurally just manner, distribute justice fairly, are effective at their job, and higher willingness to cooperate and comply were all associated with higher perceived legitimacy scores. As expected and in accordance to prior research, the strongest correlations were between global measures of procedural and distributive justice, police performance, and legitimacy perceptions.

[INSERT TABLE 1 HERE]

Manipulation and attention checks. To gauge participants’ attention to our study materials, we include an attention check question. Participants were given a 50-word paragraph which was followed by “*To show that you have read the instructions, please ignore the question below about how you are feeling and instead check only the "none of the above" option as your*

answer.” In total, nine participants answered this question incorrectly and were excluded from the data analysis. The final analytical sample consisted of 173 participants.

To further validate the video content coding and to ensure participants were sensitive to our video content manipulation, manipulation check questions were included after each video. Participants were asked to rate the content of the video and if they had seen the video before. In negative conditions, 85.4% of participants rated the videos as negative content. For neutral content, 71.8% rated the videos as neutral, and 82.9% of the positive group rated the videos as positive.ⁱⁱ Only 2.5% of participants in the neutral group, 7.7% in the positive group, and 21.5% in the negative group reported they had previously seen the videos. Only seven people out of 173 (4%) claimed to have never seen a police-citizen video clip on social media before and 26.6% of the sample responded that they see such clips at least weekly.

Demographics. Demographic measures included age, self-reported gender, race, education, political identification, and prior criminal justice-related experiences. Table 2 provides a breakdown of demographic measures. The survey included six racial categories to choose from: White, Black or African American, American Indian or Alaskan Native, Asian, Native Hawaiian or Pacific Islander, or Other (write in option). Due to a lower number of participants identifying as a racial minority, the race variable was dichotomized as White (1) and Non-White (0). The respondents also presented with a higher education than what is commonly seen in the general population with 28.9% having had at least some college experience, 15.6% achieved an associate’s degree or completed trade school, 35.3% had a bachelor’s degree, and 8.7% had obtained a graduate degree. Additionally, the sample was considerably more liberal, with 60.7% identifying as either democrat or independent (left) and only 32.4% identifying as either republican or independent (right). The sample’s education and political breakdown falls in line with prior research that has found that MTurk workers tend to have a higher education level and are more liberal than the general U.S. population (Berinsky et al., 2012). Unlike prior research that found

that MTurk workers tend to be younger (around 30 years old), the participants in this study ranged from ages 18 to 78 with the average age being 40.47.

Lastly, prior criminal justice experiences included any previous victimization (e.g., vehicle stolen, being robbed, or being assaulted, among others), and any other police contacts or arrests within the past year. A dichotomous variable was created to cover any victimization over the previous year leading up to the survey. Prior police experience was coded as 0 = no prior experience, 1 = neutral, 2 = positive, and 3 = negative. In this sample, among those who experience a police interaction, 38.2% reported that it was neutral in nature, 33.5% reported it being positive, and 12.7% reported a negative interaction.

As shown in Table 2, for all of the demographic and experiential information there are no significant differences present in proportions or means across the three groups (chi-square p values all $>.05$, and age $F[2, 170] = .56, p = .57$). Subsequently, the three groups were equivalent for comparison, and allowing observed differences to be attributed to the video content.

[INSERT TABLE 2 HERE]

Analytical Plan

Given the experimental design and our hypotheses, the analytical plan consisted of two phases. First, to determine if the video exposure had an effect, we aimed to test H_1 and H_{2a-c} in their entirety using one-way analyses of variance (ANOVA), t -tests and chi-square tests to examine within group differences across pre- and posttest scores (H_1), and between group differences at the posttest (H_{2a-c}). To test similar changes in the antecedents of legitimacy, the same tests were also conducted on posttest scales of procedural justice, police performance, and distributive justice (H_3). The second phase of the analytical plan consisted of a test of H_4 using multivariate linear regression to examine if the measured change in antecedents of legitimacy explained the change in legitimacy, while controlling for other theoretically relevant measures. Specifically, this provides an estimate of the change in legitimacy scores that is best explained by

the manipulation versus changes in other covariates. Interactions were also tested to examine the extent to which the antecedents of legitimacy might overlap in their explained variance.

Results

H₁: Video exposure will influence perceptions about police legitimacy

To address H_1 , we examined the difference between the pretest and posttest legitimacy scores within each group. Shown in Table 3, a paired samples t-test indicated that each group saw a difference in the expected direction. The group exposed to neutral videos reported an increase in legitimacy perception after exposure with a mean difference of 1.29,ⁱⁱⁱ standard deviation (SD)= 3.48, $t(55) = 2.77$, $p < .01$. The positive group also reported an increase in average legitimacy perceptions with a mean difference of 1.61, SD= 3.94, $t(61) = 3.22$, $p < .01$. The negative group reported a decrease in average legitimacy perceptions with a mean difference of -2.13, SD= 3.91, $t(54) = -4.03$, $p < .001$. The negative group had the largest difference in mean legitimacy score, suggesting that the negative videos might have the greatest influence on perceptions. Consequently, Hypothesis 1 is supported – exposure to raw videos showing police interactions with the public can significantly change one’s baseline legitimacy perceptions, at least in the short term.

H_{2a-c}: Content type will have a distinct impact on legitimacy perceptions

To test H_2 and its sub-hypotheses, a one-way ANOVA was used to test the difference between groups on their mean posttest legitimacy scores. Results from this analysis suggested there was a significant difference between the groups, $F(2, 170) = 8.53$, $p < .001$, thus indicating the videos influenced legitimacy perceptions. A Bonferroni post hoc test indicated that the most significant mean difference was found when comparing the negative group to both the positive and neutral groups. There was an absolute mean difference of 4.30 (standard error [SE]= 1.25, 95% confidence intervals [CI]= 1.29, 7.32, $p = .002$) between the negative group and neutral group, and a mean difference of 4.53 (SE= 1.22, CI= 1.59, 7.48, $p = .001$) between the negative group

and positive group, with the negative group having a mean score indicating lower legitimacy perceptions. The mean difference between the positive and neutral group was not significant (M difference = .230, $SE= 1.21$, $CI= -2.70, 3.16$, $p = 1.0$). This further suggests that the negative videos had the greatest effect on legitimacy perceptions. As a result, we conclude that Hypothesis 2 and its sub-hypotheses were also supported.

[INSERT TABLE 3 HERE]

H₃: Similar changes will be observed in antecedents to legitimacy

Table 3 also presents the results of paired sample t-tests for the theoretical antecedents of legitimacy: Procedural justice, police performance, and distributive justice. Analyses revealed that the videos significantly influenced respondent perceptions of procedural justice across all manipulation groups. Both positive and neutral groups reported a substantial change in their perceptions of procedural justice in the posttest, with the largest change experienced in the positive group, $M(\text{difference})= 1.41$, $SD= 4.03$, $t(61) = 2.73$, $p < .01$. These changes mirrored those seen in legitimacy perception scores, which is particularly notable because it closely follows the literature stating procedural justice is the most important factor in developing a sense of legitimacy. Participants in the negative group reported the largest change across all groups with their scores decreasing by a mean difference of -3.39 , $SD= -4.64$, $t(54) = -5.26$, $p < .001$. Although the change in procedural justice scores was larger than both police performance and distributive justice, significant changes were still observed in these areas. Only participants in the neutral group reported little to no change in their perceptions of distributive justice and police performance after viewing the videos. Thus, Hypothesis 3 is supported. The results here also suggest that measures of legitimacy following Tankebe's (2012) approach of combining procedural justice, police performance, and distributive justice would also be impacted by positive, neutral, and negative images of the police.

H₄: Antecedent change should predict changes in legitimacy

To test Hypothesis 4, a linear regression was conducted using the observed change in the primary antecedents' scores as test measures to explain the change in legitimacy scores. Apart from the antecedents, other control measures were included that were also driven by the literature. Specifically, the model controlled for past victimization experiences, past experiences with the police, willingness to cooperate and willingness to comply, and the group to which they were assigned with the neutral group as the reference. Table 4 shows two significant models. The base model is that with just the antecedents ($F(3, 158) = 37.75, p < .001, R^2 = .42$), and the second model is with the controls added ($F(12, 148) = 9.15, p < .001, R^2 = .43$). Including the measures in the second model increased the variance explained only minimally, and did not greatly influence the importance of the antecedent measures from the baseline.

[INSERT TABLE 4 HERE]

The models revealed that the only measures explaining change in legitimacy scores are the change in participant perceptions of police performance and distributive justice, as well as which group the participants were in. When controlling for other key covariates, such as experiences with crime and the police, change in respondent perceptions of police performance and distributive fairness was positively associated with a similar change in legitimacy. Police performance perceptions was the most influential of all. As perceptions of police performance changed by one standard deviation, legitimacy perceptions changed in the same direction by up to nearly half a standard deviation ($\beta = .48$ and $.39$ in the baseline and full models, respectively). If the theoretical antecedents are assumed to have no effect on legitimacy (i.e., the null is assumed), the probability of finding a coefficient greater than this estimate is less than one in a thousand.

In addition to this, three other aspects are worth noting. First, the marginal effects of the video content as it relates to changes in legitimacy was slightly reduced when considering the other covariates. When using only group assignment, the average change in legitimacy scores was one point or more (Table 3). However, when accounting for the other factors in the full model, the

marginal effects of the video assignment was reduced to a point or less; yet the negative video group still explained more than a point-change in legitimacy. Second, changes in procedural justice perceptions appears to not predict the change in legitimacy, as expected according to prior research. Interactions were explored between the antecedent changes (e.g., change in procedural justice by change in distributive fairness), but these were not significant and yielded no added effect. Subsequently, Hypothesis 4 is only partially supported with exception given to the antecedent of procedural justice. Lastly, after controlling for if the respondents had seen the videos before the study exposure (not shown), the within group effects were slightly amplified (e.g., negative videos $b = 2.03, p = .008$ and positive videos $b = .33, p = .59$). Considering the negative group had the higher proportion of respondents who had prior exposure (30.9% compared to 16.1% for positive, and 8.9% for neutral), this suggests that re-watching the videos (i.e., increased exposure) may either enhance effects with each viewing, or act as a renewal of the video's effects.

Discussion

In our experimental examination of procedural justice perceptions, we found that exposure to videos of police interactions can significantly change global perceptions of legitimacy based on Tyler's traditional measurement and its antecedents. Furthermore, the content type has notably distinct impacts on such perceptions. These results are still important in the face of the existing debate about the proper conceptualization and measurement of legitimacy because the findings reveal that the media presentation of police had significant impacts on all of the core concepts central to the debate including – obligation to obey, trust, procedural justice, distributive justice, and police performance. Three particularly remarkable aspects of these findings are present in the degree of perception changes. First, the heavy influence of negative content readily found in social media should be highlighted. Similar to prior procedural justice research (Johnson et al, 2017; Maguire et al., 2017) and on the asymmetry effect of police-citizen encounters (Skogan, 2006), negative content in our study had a stronger effect on perceptions when compared to both positive

and neutral videos. Specifically, the largest effects of negative content were observed in global legitimacy and procedural justice scales. Not only was the effect of negative videos statistically significant but it doubled or nearly doubled the effects of the positive and neutral conditions. This is especially relevant when considering that negativity bias likely plays a role as negative content tends to yield more attention in traditional media, social media, and the public at large (e.g., Kätsyri, Kinnunen, Kusumoto, Oittinen, & Ravaja, 2016; Knobloch-Westerwick, Mothes, & Polavin, 2017). In this study, on average, 21.5% of those in the negative group had reported previously seeing the videos, which is much higher than the average percent seen in the neutral group (2.5%) and the positive group (7.7%). Such discrepancy in viewership lends support to the negativity bias and its place in how police-citizen interactions are viewed and digested by the public.

Second, the positive and neutral conditions presented notable effect sizes. With exception given for perceptions of police performance in the neutral condition, every perceptual scale was significantly strengthened in each condition. This suggests that perceptions about the police can be improved by exposure to positive and procedurally neutral videos found on social media. Such findings are quite remarkable when considered in the context of prior research and the lack of effects found for global, positive perceptions (Johnson et al, 2017; Maguire et al., 2017). In our study, exposure to multiple videos of similar content (as one might find due to social media algorithms) influenced a significant, positive change in public perceptions toward the police in all areas.

Third, regardless of the condition, changes in legitimacy significantly coincided with changes in perceptions of police performance and distributive fairness. The full regression model indicated that for participants in the positive condition, changes in perceptions of police performance and distributive fairness may explain changes in legitimacy better than video exposure and respondent's prior police experience. This suggests that not only can legitimacy

perceptions be independent of procedural justice, but legitimacy may be dependent on the other theoretical antecedents. If change is elicited in one or both perceptions of performance or distributive fairness via a positive video exposure, then these results suggest that perceptions of legitimacy will likely change as well. On the other hand, if improving perceptions of procedural justice is the aim as suggested by the Task Force on 21st Century Policing, then it may need to be targeted more directly. Future research should aim to further unpack these relationships and how they relate to the debate over legitimacy's conceptualization and operationalization.

That said, some of our findings are germane to the overarching debate. Research on the process-based model of public perceptions of police have long viewed perceptions of police performance, procedural justice, and distributive justice in particular as antecedents to perceptions of police legitimacy. However, this study reveals the possibility that this may not be the case. While changes in the perceptions of distributive justice and police performance predicted the change in legitimacy, changes in procedural justice perceptions did not. This is counter to that argued by other studies laying out the relationship between these constructs (e.g., Jonathan-Zamir & Weisburd, 2013), although falls more in line with results from Tankebe's (2009, 2012) studies. It is possible that procedural justice and legitimacy have more of an equal influence on people (e.g., influencing the likelihood of compliance and cooperation) than previously thought. Similarly, the influence of procedural justice perceptions may change depending on one's perspective of the situation. Further examination on how the four pillars of procedural justice interact with each other is clearly needed. As we could not explore these possibilities, they remain areas for future research.

Overall, given that these global changes were observed, our results lend credence to the persuasive power of video content found on social media. The findings of this experiment have direct implications for the procedural justice literature and practical use of social media as it relates to policing. Specifically, we highlight how exposure to videos as they are found in social media

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(i.e., rarely in just a single viewing and often linked to multiple others like it), can influence citizens' global perceptions toward the police, potentially to a greater magnitude than a single instance and setting. In the age of sousveillance and social media, where such raw footage is readily available for citizen consumption without context, the findings of this research draw concern. For instance, one recent trend in social media platforms rely on algorithms to bring similar content to the viewer as s/he has liked in the past. With this trend comes the potential development of an "echo chamber" or self-fulfilling prophecy for sousveillance depictions of police that are skewed in one direction or another, though largely favoring the negative (e.g., Colleoni, Rozza, & Arvidsson, 2014). As a result, viewers may self-select based on personal or vicarious experiences, thereby perpetuating and strengthening previously held perceptions.

Juxtaposing the negative findings, this research also provides uplifting possibilities for ways to change perceptions for the better. For example, police departments are increasingly using social media and posting positive videos to promote a favorable image of helping citizens, promoting civil rights, and improving the community's quality of life. The findings here support such efforts so long as the videos posted fall into the same neutral or positive categories we have laid out. Thus, posting clearly positive and even routine, procedurally justice footage may also help that cause. To strengthen the influence of positive videos when considering the asymmetry effects and negativity bias, positive videos should probably be posted in at least a ratio of two positive videos for every one negative video that is viewable. That being said, there are still ethical issues to consider when it comes to the idea of manipulating public perceptions. Law enforcement should be mindful that they are using videos in such a way that aims to help with community building and not just as a means to paint a possibly untruthful depiction. It is important to recognize that even by addressing these issues, changing public perception is quite different from addressing root causes of the crisis in policing.

In the past, police departments may have had the upper hand when it came to controlling their image in the media, but this is beginning to change. Whereas police often were considered and can still be considered the ultimate “watchers” who enact surveillance on every day citizens, this power relation is not as straight forward anymore. Currently, there appears to be attempts from the public to reverse the roles by engaging sousveillance and posting video content, where the many (the public) are watching the actions of the few (the police). This new and changing dynamic has led to an important question: Is the viewing and sharing of police video content among the public actually influencing people’s perceptions? The results of our study add to the growing body of evidence that indicates there is indeed an influence. As technology becomes more sophisticated, and streaming videos become ever more prevalent in shaping public discourse, the concept of sousveillance has the potential to dictate how the public views law enforcement. Most importantly, marginalized communities engaging in sousveillance are able to bring previously hidden interactions with the police to the eyes of a privileged majority, which can ultimately impact and shape trust in the police for the masses.

Limitations

These findings, as in all research, must be taken in conjunction with their limitations. This is especially the case with studies that seek to address media effects, as they will always suffer limitations related to the difficulty in gauging the highly nuanced, non-linear influence of media. Media effects are cumulative and happen over extended periods of time (Callanan & Rosenberger, 2011). Since this study only looks at immediate exposure through survey measure, the data may not capture all nuanced influence the exposure may have or how long effects may pervade (e.g., decaying effect over time, see Weitzer 2002; Graziano, Schuck, & Martin, 2010). Nevertheless, our findings indicate media exposure can influence public perceptions of police in the short term.

In regards to our study procedures, a small limitation, but one that could easily be addressed in future research, is that we did not randomly order question blocks throughout the pre- and

posttest questionnaire or the videos. Future research could randomly order the videos to ameliorate any concerns about order effects. Another limitation exists in the nature and coding of the videos. First, the nature of the videos ranged in and across our experimental conditions. Subsequently, the setting and situational components of the videos were not controlled, and therefore could pose a threat to internal validity. That being said, we argue that the manner in which we exposed participants to the videos better captures the influence of videos found on social media on global perceptions. Second, while external and specifically diverse raters were used to increase the reliability of video coding, some difficulties were experienced in categorizing positive and neutral videos (e.g., less consensus with positive versus neutral categorization). As addressed previously, it is possible that when police act in a way that is procedural just, this could be perceived as positive by a rater. In this study, positive videos were associated more with community building and activities that fall outside the typical duties of police officers. Similarly, there is likely discrepancies in the severity of the different actions viewed. A severe negative action, for instance, may be more impactful than a severe instance of positive and neutral interactions viewed in the same sitting by raters. Nonetheless, given the detailed literature on procedural justice (Sunshine & Tyler, 2003; Tyler 1990, 2003; Tyler & Huo, 2002), and the degree of consensus that was reached in coding the videos, we argue that the procedure yielded reliable categorization for the purposes of this study, and likely did not influence the direction and impact of the effects observed.

To further ensure the reliability of the video rating, the participants were also asked to rate the videos after viewing. Overwhelmingly, participants rated the video in congruence with the intended category. On 13 of the 15 videos, the majority of the participant's characterizations of the video matched that of the raters' assessments, with a range varying from 58.2% to 96.3% of the subjects in agreement. Two videos that were rated in a way that showed a stronger divide, overlapped in the positive and neutral categorization. The video intended to be "neutral" was rated as neutral by 48.2% of participants and positive by 46.4%. The content of this video displayed a

police officer during a traffic stop acting respectful with the citizens in the car. The reason that this video might have been perceived as more positive than just simply neutral, is that the police officer and citizen appeared to know one another through a local organization that records the police (e.g., Copwatch or CopBlock). Thus, there was a rapport between the police officer and the citizen that could have been perceived as extra friendly, and not just a typically, routine duty. The second video, intended to be “positive”, was rated by 50% of the viewers as neutral, whereas 48.4% of the viewers rated it as positive. The content of this video showed a few police officers talking with a group of 15-20 teenagers who are loitering in a parking lot. In the video, the officer explains why they cannot be out loitering, how he does not want to write any tickets, and what they can do instead. In some ways, this interaction falls in line with the neutral/fair category because it could be seen as an officer engaging in a typical duty. The external raters who categorized this video saw it as slightly more positive than neutral, noting that the officers are going beyond intended duties.

Importantly, the overwhelming majority of participants rated the videos in congruence with the intended category (positive, negative, or neutral). In spite of this overlap in the two videos, we do not believe that this possessed enough influence to change the results. At worst, it inflated the effect size of procedurally neutral situations on perceptions of legitimacy, and weakened the effect size of the positive videos. However, future research could develop a more detailed approach to video coding. Perhaps a system of coding could be used to count the number of procedurally just elements a video contains and the videos could be rated on a sliding scale of procedural fairness. With our sample coming from MTurk, it might differ demographically with the population at large, resulting in generalizability issues. While sampling from MTurk has been viewed as a reliable method in conducting social psychological studies (Buhrmester, Kwang, & Gosling, 2011), and MTurk workers tend to be closer to the U.S. population as a whole than traditional university subject pools (Paolacci et al., 2010), our sample might not have captured a racially diverse group. The sample in our study was 80% white and prior research suggests racial differences in regards

to attitudes towards the police and interactions with the police (Tuch & Weitzer, 1997). National polls have shown that African Americans generally hold more negative views towards the police and have less confidence in officers' ability to protect them (Tuch & Weitzer, 1997) In comparison to white citizens, African Americans display greater adverse reactions to incidents of police brutality and these incidents may have greater weight in changing their perceptions (Tuch & Weitzer, 1997). Furthermore, only 12.7% of the participants in this study reported having a negative interaction with the police previously, which might have been different if the sample was more diverse. Those who live in poor neighborhoods, which tend to have a high concentration of racial minorities, often experience different forms of policing strategies, leading to different types of interactions and views towards the police (Tyler & Fagan, 2008). In the future, researchers should draw a larger sample, generally, but also oversample racial minorities to better understand the effects of prior experience and vicarious interactions on police legitimacy. Lastly, because the study utilizes the traditional Tylerian conceptualization of legitimacy and its antecedents, the results do not move forward the conceptual and measurement critiques of the traditional process-based model of legitimacy. However, our intent was to examine if media impacts matter for changing perceptions for any of the core concepts related to legitimacy. It is worth noting that some of the difficulty in dissecting the concepts of procedural justice theory, regardless of ongoing theoretical debates, are related to the inherent relationship between perceptions toward the police and the overall trust in institutions and the government. Tumultuous and polarized perceptions of the overall government likely leach into perceptions toward law enforcement, but this remains an area for future research.

Future research should also examine the potential relationship between respondents who have familial connections to law enforcement or first-responders in general. It is possible that these individuals may present an overly positive view that can bias a portion of the sample. While we did not ask respondents about this specifically, we believe that it did not impact our results to a

significant degree for three reasons. First, it is likely that most respondents have a distal connection to a law enforcement or first-responder of some kind, providing what would likely be an equal spread across the sample. Second, their perceptions are equally important in considering the legitimacy of the police. Third, even with this potential positive skew, our findings still show a dramatic difference between positive and negative conditions.

Conclusion

In this study, we examined the influence of video clips capturing police-citizen interactions on legitimacy perceptions. Prior research has shown people form their legitimacy perceptions by judging actions of police during encounters (Tyler & Huo, 2002), lending the possibility of sousveillance influencing legitimacy perceptions. Results from this experiment indicated this is indeed the case. We find that positive, negative, and neutral media portrayals influence all core components of police legitimacy models including obligation to obey, trust, procedural justice, distributive justice, and police performance. Such findings hold implications for both the public and police. For citizens wishing to increase police transparency and accountability it appears methods of sousveillance can be an effective approach. Sharing information that could decrease legitimacy perceptions could lead to more pressure being placed on police for appropriate reform. Policing organizations will further benefit from the results of this study as far as they can work towards increasing legitimacy perceptions. Results show certain types of videos help to increase legitimacy perceptions, thus, it would be in the best interest of the police to use such methods. This is especially important given the link between legitimacy and cooperation cited throughout the literature and supported in this study. Those who watched positive or neutral videos not only reported an increase in legitimacy perceptions, they also reported that they would be more likely to cooperate with police activities like reporting criminal activities and providing information about a potential suspect to the police. This cooperation is essential as police rely a great deal on help and information from the public in order to perform their duties effectively and maintain

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public safety. Police departments would be well advised to engage in social media outreach with video footage that show them acting in ways that are community engaging and procedurally just.

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ⁱ In the context of the debate, it is important to note Tankebe (2009, 2012) argues that the obligation to obey legal authorities should be considered a distinct concept, outside of legitimacy because it could be based upon fear (e.g. corrupt violent reprisal) as opposed to shared values and legality of authority.

ⁱⁱ The majority of the incongruence that occurred was in relation to coding the video as neutral when the rater may have called the video a positive depiction, or vice versa.

ⁱⁱⁱ Differences are discussed in terms of positive values indicating a decrease in the scores and negative values indicating an increase in the scores. For example, a positive mean difference of legitimacy is an increase in legitimacy perceptions.