Social Media and Police Legitimacy

The Limited Positive Effect of Tweeting Police Success Stories

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**Abstract**

Social media are said to present new venues for strengthening government legitimacy. Is this true? The assumed positive relation between social media usage and government legitimacy is explored for a specific type of government organization: the police. On the basis of an exploration of the literature we propose that sending information and interacting with citizens through social media may strengthen both the perceived outcome justice and the perceived procedural justice and that both will result in a higher perceived police legitimacy. These expectations are tested on the basis of a large survey among Dutch citizens. The results firstly highlight that expectations about the effects of social media on perceived police legitimacy should not be exaggerated: only 3 to 7 percent of the population obtains information about the police through social media and the percentage of citizens interacting with citizens is negligible. Secondly, we found that not all social media are the same. YouTube had no effect whereas Twitter has some effect on perceived police legitimacy. Thirdly, we found that the effect of Twitter is mediated by outcome justice rather than procedural justice. In sum, communicating police successes through Twitter seems to have a limited but positive effect on police legitimacy.

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1. Introduction

Since public organizations in democratic societies cannot function effectively without public support, legitimacy is one the most-studied concepts in the social sciences (e.g. Lipset, 1959; Weber, 1968; Beetham, 1991; Scharpf, 1999). Legitimacy refers to an internalized feeling of obligations to comply with authority, without coercion of this authority (Tyler, 1997). Voluntary compliance is central to legitimacy and is crucial to law enforcement. Laws can only work if the large majority of people comply with them, or law enforcement would become a ‘mission impossible’ (Parsons, 1967; Easton, 1975). For these reasons, the quest for government legitimacy is one of the key issues for public organizations.

The quest for legitimacy is of specific relevance to the police since effective policing without legitimacy is only feasible in authoritarian states. Legitimacy is needed to enable voluntary support by citizens to the police but, at the same time, it is expected that collaboration and community policing will also be an antecedent of legitimacy (cf. Hinds & Murphy, 2007). Research consistently shows that contacts between police and citizens are a key determinant of police legitimacy (Ostrom, 1978; Schneider, 1987; Fung, 2006). Both direct, local face-to-face contacts and more distant (national and regional) television have been used for a long time to inform citizens about policing and to engage citizens in the collection of information (Kuijnenhoven, 2005). Communicating with the public already is starting to get embedded into the daily practices of polices forces, departments, and individual police officers in the Netherlands and abroad (e.g. Heverin & Zach, 2008; Perin, 2009; Sakiyama et al., 2010; McGovern, 2011; Meijer, 2012). Recently, social media have become an additional channel in these communication practices.

The emergence of social media such as Twitter and YouTube have encouraged police and government departments to experiment with social media (Crump, 2011; Meijer et al., 2012; Bonson, Torres, Royo, and Flores 2012; Mossberger 2013). Social media are said to create a whole range of new opportunities to inform citizens and to engage
them in police work by lowering the cost of interactions with citizens (cf. Bertot, Jaeger & Grimes, 2010; Yi, Oh & Kim, 2013, p. 310). Social media are said to take away some of the barriers for participation, because it allows the creation of bottom-up communities (Yi et al., 2013), and transparency, because it creates a direct information channel for government organizations such as the police (Bertot et al., 2010; Feeney, Welch & Haller, 2011; Mossberger, 2013; Kim, Park & Rho, 2013). Being a tool for increasing both participation and transparency, social media can be expected to improve a range of perceptions, of which the most crucial one is legitimacy (Bertot et al., 2010; Bonson et al., 2012; Kim, Park & Rho, 2013). Therefore we will examine the following central question:

_Do social media contribute to perceived police legitimacy?_

Social media have permeated society for personal and commercial use, however, relatively little is known about what is the value of social media for the public sector. Social media such as Twitter and Youtube are already being used by police forces in the Netherlands (Meijer et al., 2011) and throughout other parts of the world (Heverin & Zach, 2008; Perin, 2009; Sakiyama et al., 2010; McGovern, 2011). Since technological developments cause social media to stay and more likely cause it to permeate society and the public sector even further, it is important to increase our understanding about what it ‘does’. Social media present new venues for strengthening police legitimacy. An understanding of these venues is needed to be able to maintain or strengthen police legitimacy in an information age.

This paper reports the findings from a large scale survey among a representative group of 4,499 citizens in the Netherlands. The LISS (Longitudinal Internet Studies for the Social sciences) panel data were collected by CentERdata (Tilburg University, The Netherlands). The LISS panel is a representative sample of Dutch individuals who participate in monthly Internet surveys. The panel is based on a true probability sample of households drawn from the population register. Most e-government studies focus either on the supply side (i.e. what services are offered by agencies) or focus on a self-selected set of respondent on the demand side of e-government. By using a large sample that is representative of the whole Dutch population in terms of age,
gender and education, this survey can more rigorously establish relationships and patterns between social media use and perceived police legitimacy.

2. Police legitimacy

2.1. Middle course perspective on legitimacy

Legitimacy has been studied by many scholars in the social sciences (e.g. Lipset, 1959; Weber, 1968; DiMaggio & Powell, 1983; Zucker, 1987; Tyler, 1990; Beetham, 1991; Weatherford, 1992; Suchman, 1995; Tyler, 1997; Scharpf, 1999). One of the seminal works on legitimacy in general has been written by Weber (1968 [1922]). Weber argued that the fact that people adhere to instructions of authorities cannot be caused only by the power an authority wields over the. The core of legitimacy is that there is some sort of voluntary compliance to authority. Voluntary compliance means that people do not ‘just’ comply with the law because they will be punished, but because they choose to do so by themselves. Legitimacy is an internalized feeling that authority or rules should be obeyed, without the actual execution of power by authorities (Lipset, 1959; Tyler, 1997). In this paper we follow the much-cited definition of legitimacy by Suchman (1995, 574):

‘Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.’

First of all, this definition shows that legitimacy is ‘generalized’: it transcends a single incident. One government scandal does not fully determine its legitimacy. Likewise, a legitimacy is not built overnight, but takes time to develop and extend. Secondly, Suchman mentions ‘perception or assumption’ in his definition. According to Suchman legitimacy has both subjective and objective elements. Objectively it is a property of an organization (it can act legitimately or not), subjectively it can perceived as legitimate or not by citizens. In this study we focus on subjective legitimacy. Thirdly, legitimacy is socially constructed. This part of the definition reflects the extent of consonance between the acts of the organization and the shared
beliefs of a community. Hence, legitimacy depends on collective beliefs and is independent whether a single individual regards an institution as illegitimate. In this study we will focus on a generalized, subjective attitude of citizens of the police.

In academic analyses of legitimacy, two types of legitimacy are distinguished (Suchman, 1995; Weatherford, 1992): strategic and institutional legitimacy. The first type entails a managerial perspective on legitimacy. In this view it is an instrumental property, some source of organizational value which can be manipulated and enhanced. The second type, regards legitimacy as something that transcends organizational interests. It is not something that can be manipulated or used for organizational gain (e.g. DiMaggio & Powell, 1983, 1991; Zucker, 1987).

These perspectives align Weatherford’s work on political legitimacy (1992). According to him, there is a system-level view and grass roots view on legitimacy. The first view concerns the attributes that make organizations, or the political system, more or less legitimate (he mentions accountability, efficiency, procedural fairness and distributive fairness) and is manipulable to a certain extent. The grassroots view takes the perspective of the individual’s psychological makeup that determines legitimacy, such as political interest, involvement, trust in other people, and optimism about the responsiveness of the political system.

Suchman tries to join the more strategic and institutional views on legitimacy by proposing a ‘middle course’. Although he acknowledges that there are ‘things’ that organization can do to slightly influence their legitimacy; their capacity to alter it drastically is limited. The cultural environment determines organizations in a fundamental way and managers who want to alter this operate within small margins of autonomy. Amongst other things are managers themselves are a product of the cultural environment and are influenced which determines their view of their own organization.

The current study opts for this ‘middle course’ of legitimacy. It is in large part determined by factors that are out of control of single managers and citizens, but there are margins within which it can be influence. Further, we also view legitimacy as a subjective property determined by collectively shared beliefs.
2.2. Police legitimacy

In the previous section we discussed legitimacy in general terms, but why is legitimacy important for the police? Voluntary compliance is essential for police work. Police always will have limited capacity to survey on the street or to track down criminals. If people do not break the law only out of fear for punished this would severely increase police work load, making it impossible to be effective. In other words, rules only work when the vast majority of people obey them or enforcement would become a very tedious, if not impossible, job (Parsons, 1967; Easton, 1975).

Contacts between police and citizens are an important determinant of perceived legitimacy (Ostrom, 1978; Schneider, 1987; Fung, 2006). These contacts provide citizens with information about what the police do and how effective they are but also how they fulfill their role obligations. In addition, these contacts are important for building relationships between police and citizens. Citizens acquire the idea that the police work for a safer society and that they are responsive to citizen demands. In addition, their understanding of limitations in producing safer societies and their responsiveness to society may strengthened.

A central concept in studies in police legitimacy that fits with the emergence of social media in the safety domain is ‘community policing’. In the 1990s community policing became a policy buzzword for various strategies that sought to improve the relationship between the police and the public, simultaneously improving crime control. Keeping ties with the community and fighting crime are now viewed as closely intertwined (Friedman 1992; Sunshine & Tyler, 2003; Meijer, 2012). The idea behind this is that by interacting with local residents they will be trusted more and receive more voluntary compliance. Eventually this cooperation helps to prevent crime because problems are thought to be signaled early on by local residents and community police officers. It is here where legitimacy and social media coalesce: a certain threshold of police legitimacy is needed to enable the voluntary compliance needed for community policing. On the other hand, community policing is said to generate higher legitimacy (Hinds & Murphy, 2007). Hence, police legitimacy as both an input and output of community policing.
2.3. Two sources for police legitimacy: towards a model

Literature on police legitimacy distinguished two important sources: procedural and outcome justice (cf. Hawdon et al., 2003; Tyler, 2004; Hinds & Murphy, 2007). This distinction is related with conceptions of legitimacy in political science, where input and output-based legitimacy are identified as two important sources (Scharpf, 1999). From a psychological point of view, two models of legitimacy exist: ‘resource-based’ models or ‘identity-based’ models. The first model is instrumental, legitimacy is based on resources and performance. The identity-based model draws legitimacy from social relationship of an authority with group members. Both sources are important for legitimacy (Tyler, 1997).

Overall, it seems that there is agreement in different fields of social science that there legitimacy springs from two important sources: one that is instrumental and in which citizens determine legitimacy based on performance and outcomes. What is in it for them? The second source is based on just procedures and is based on the relationship and interaction between citizens and (police) authority. In this paper we will use the terms that are commonly used in police legitimacy research: procedural and outcome justice. Especially procedural justice has been found to be an important predictor for police legitimacy (Sunshine & Tyler 2003; Tyler, 2004). With regard to outcome justice the performance and outcomes of police acts are concerned. (Hawdon et al., 2003; Hinds & Murphy, 2007).

Hence, the relation between social media and legitimacy is not expected to be a direct one since police legitimacy is determined by its perceived procedural and outcome justice (Sunshine & Tyler, 2003; Hawdon et al., 2003; Tyler, 2004; Hinds & Murphy, 2007). A (simplified) model to describe the relationships between variables is presented below.
This general model can be used to analyze the relationship between police communication and police legitimacy. Our paper specifically explores these relations for a new communication channel: social media.

3. Social media: it takes two to tango!

Over the past years, the practice of using social media by government – and actually also the research into this practice – has been exploding. A key advantage of social media is that no expensive technology and no complex skills are needed to use tools such as Facebook, Twitter, Linkedin, YouTube. In contrast with previously introduced e-government systems such as websites and forums, individual users can immediately start using social media. No financial resources are needed and, as a consequence, initiatives of social media use have popped up at different levels in government organizations.

Definitions of social media highlight that these media can be used for both one-on-one and many-to-many interactions and that they enable the formation of strong and robust networks of relationships (Kim, Park & Rho, 2013: 3). The interesting thing about these definitions is that in terms of technology and patterns of usage it is difficult to make a clear distinctions between social media and previously existing communication technologies such as Usenet and mailing lists. A key difference may
be the widespread nature of these technologies and the fact that no expensive technologies and high-tech skills are needed to use social media. In that sense, they can be seen as the popularization of a previous wave of one-on-one and many-to-many communication technologies.

Many analyses highlight the interactive nature of social media (McDermott, 2010; Mergel, 2012; Kim, Park & Rho, 2013). These technologies can indeed be used to develop various forms of interactions between individual users but also within networks of individuals. A core component of social media are these interactions and the idea that people comment on YouTube videos, like Facebook posting and retweet tweets is central to the social character of these new media. At the same time, some of these analyses seem to ignore that interaction is possible and taking place but most of the communication through social media still has a one-way character. Most people are ‘lurkers’: they read information and follow debates but do not engage in these themselves. To a large extent, social media are also cheap mass media: YouTube gives every individual a television channel and Facebook provides every citizens with a media outlet.

The distinction between these different types of use has been acknowledged by some other (e.g. Mergel, 2010) but these analyses sometimes seem to suggest that the distinction between interaction and informing is a strategic choice made by the respective government organization. It is important to note that the difference between informing and interacting can be made both by governments and citizens. Governments that only use social media to communicate messages to citizens, who never ask questions and who don’t react to comments or posts from citizens reduce their communication to informing. At the same time, communication may also take the form of informing when governments may make a serious attempt to invite interactions with citizens by asking questions and encouraging them to comment but when these citizens only read government messages and never react. It takes two to tango but many other people may sit on the side and watch these people dancing.

This discussion highlights that we need to analyze social media usage in terms of interactive and informative use of social media. We highlighted that interactive use is the result of decisions and actions of both governments and citizens. Interactive use is
not by definition better or more influential than informative use. The effects of both types of usage will be analyzed in this paper. To analyze these relations, we will present a list of hypotheses in the next section.

4. Social media: police legitimacy in an information age?

Police legitimacy takes a new turn with the emergence of social media. Social media such as YouTube channels, can be used to requests the help of citizens to track down suspects or missing persons. Via Twitter citizens can be asked to report trouble to their local community police officer. Social media enable increasing means for coproduction of safety (Meijer et al., 2013). In other words, platforms such as Twitter and YouTube create new ways for citizens and police to collaborate and enhance safety. We are aware that police-citizen interactions is not a new phenomenon. Citizens have been involved in fighting crime for many years, for example through ‘wanted posters’, radio and television broadcasts. However, social media have given a new channel that involves citizens in more direct ways and allows “many-to-many” communication (Crump, 2011; Bertot et al., 2010).

First of all, the emergence of social media has expanded opportunities for the police to interact with citizens. For example, a YouTube channel Twitter feed can be used to send and receive information about wanted criminals. Community police officers can use Twitter to maintain their social contact with citizens in their community. This interactive use of social media can harness the perceived outcome justice when citizens obtain answers to and a better understanding of the results of police work. In addition, these interactions can strengthen the perceived procedural justice when citizens can get a better appreciation of the procedures applied by the police to obtain results.

Secondly, social media can be used to obtain information and knowledge about the police, without responding or interacting. This is a more passive way of social media use. The police can, for example, use YouTube to strengthen perceived outcome justice by presenting the results of a campaign to reduce burglaries to the public or by tweeting the apprehension of crime suspects. Alternatively, the police can use social
media to communicate their correct and equal treatment of citizens in general or specific cases to harness the perceived procedural justice.

![Figure 2. Specific model of relation between social media communications and police legitimacy](image)

Since the literature indicates that, in general, more communication is positively related to police legitimacy, we postulate the following hypotheses for the relation between social media communications and police legitimacy:

**H1)** Interactive use of social media with the police is associated with higher levels of perceived procedural justice.

**H2)** Interactive use of social media with the police is associated with higher levels of perceived outcome justice.

**H3)** Receptive use of social media to obtain information about the police is associated with higher levels of perceived procedural justice.

**H4)** Receptive use of social media to obtain information about the police is associated with higher levels of perceived outcome justice.

Two types of justice have been distinguished – outcome and procedural justice – to classify two types of changes in citizens’ perceptions of the police. Information about the apprehension of alleged criminals is expected to strengthen outcome justice as it shows what to police doing, building on a resource-based model of legitimacy (Hawdon et al., 2003; Hinds & Murphy, 2007). The second type of information is
expected to contribute to procedural justice, since it does not highlight the effects of police actions but their procedural nature and the treatment of citizens. This fits with Tyler’s identity-based model and how people perceive police to treat others. In the end, this is expected to have positive relations with legitimacy (Sunshine & Tyler, 2003; Hawdon et al., 2003; Tyler, 2004; Hinds & Murphy, 2007). This argument results in the following hypothesis:

\[
H5) \text{Higher levels of perceived procedural and outcome justice are associated with higher levels of perceived legitimacy.}
\]

These hypotheses were tested in quantitative research among a large group of citizens in the Netherlands.

5. Research methods

Design
We carried out a cross-sectional survey for this study. Although we are aware this is not suitable for inferring causal relations, this design enables us to gather data on many variables on a large number of subjects.

Sample
Data were collected using the LISS panel. The LISS panel data were collected by CentERdata (Tilburg University, The Netherlands). The LISS panel is a representative sample of Dutch individuals who participate in monthly Internet surveys. The panel is based on a true probability sample of households drawn from the population register. Households that could not otherwise participate are provided with a computer and Internet connection. More information about the LISS panel can be found at: www.lissdata.nl. In total, 4,499 respondents were included in the sample.
Table 1 – Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dutch population aged 16 or older</th>
<th>Sample (N=4,499)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage high vocational education or higher</td>
<td>27.6</td>
<td>30.4</td>
</tr>
<tr>
<td>Percentage female</td>
<td>50.8</td>
<td>53.6</td>
</tr>
<tr>
<td>Average age in years</td>
<td>47.4</td>
<td>50.0</td>
</tr>
</tbody>
</table>

Table 1 shows that the sample is by and large representative to the Dutch population. Nevertheless, we will take these background variables into account as control variables to control for any confounding effects on the outcome variables.

Variables and measures

Variables are measured as follows. These items have been tested and validated in a prior (small) online pilot study (N=115) and are based on a literature review.²

Use of social media

- Have you recently (up to six months) watched a videoclip on YouTube that was uploaded by the police? (Yes/No)
- Are you currently following a Twitter account of the police? (Yes/no).
- Have you ever responded to a police request for information about a suspect or missing person? (No/yes, seen on TV/yes, seen on YouTube/yes, seen on Twitter)

Perceived outcome justice (3 items)

Translated and adapted from scales used by Tyler (1997), and Hinds & Murphy (2007) (alpha = 0.823)

- The police successfully fight crime.
- The police do whatever they can to trace suspects, missing persons and goods.
- If it really matters, the police will do the utmost to help you.

¹ Only people of 16 years and older were allowed to participate in the LISS panel, therefore we com Figures obtained from Centraal Bureau voor de Statistiek
² We translated the original items in Dutch into English for this paper.
Perceived procedural justice
Translated and adapted from scales used by Tyler (1997), and Hinds & Murphy (2007). (alpha = 0.848)
- In the execution of their tasks, the police respect citizens’ rights.
- You can rely on just actions and behavior of the police.
- The police treats every citizen equally.

Legitimacy (5 items)
Translated and adapted from scales used by Tyler (1997), and Hinds & Murphy (2007). (alpha = 0.829)
- I have much respect for the work of the police.
- I trust the police.
- I always follow police officers’ orders even if I think differently.
- Please indicate how satisfied you are with the general performance of the police on a scale from 1 to 10.

Control variables. We used the following as control variables: gender, age, education, feelings of safety, recent victimhood of crime (regardless the degree of the crime).

6. Findings

Descriptives
Prior to testing the hypotheses, this section will provide descriptive statistics on which citizens use social media to obtain information or interact with the police.
Table 2 - Descriptive results

<table>
<thead>
<tr>
<th></th>
<th>% Female</th>
<th>% higher educated</th>
<th>Av age (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twitter general</td>
<td>50.7</td>
<td>36.4</td>
<td>46.3 (11.8)</td>
</tr>
<tr>
<td>Twitter police</td>
<td>47.1</td>
<td>32.2</td>
<td>44.3 (11.0)</td>
</tr>
<tr>
<td>YouTube general</td>
<td>49.0</td>
<td>35.3</td>
<td>49.1 (12.7)</td>
</tr>
<tr>
<td>YouTube police</td>
<td>39.4</td>
<td>23.1</td>
<td>50.0 (12.0)</td>
</tr>
<tr>
<td><strong>Full sample</strong></td>
<td>53.6</td>
<td>30.5</td>
<td>50 (17.4)</td>
</tr>
</tbody>
</table>

Interestingly, various social media channels attract different groups of people. Over sixty percent of respondents who indicated to be having watched a Police YouTube clip recently, more than sixty percent is male. This is more evenly spread for those who follow the police on Twitter (52.9 percent male). Further, the YouTube police respondents have different characteristics overall. They have attained less education and are older compared to other groups in the sample.

Although Twitter has been said to be used by the younger population, at first sight this does not seem to be the case in our sample. Average age is 46.3 and 44.3 for police followers. YouTube watchers are even older. However, it should be noted that the average age is slightly skewed, since only respondents of 16 years and older were allowed to complete the survey. Further, the average age in our full sample is 50 years, which means that Twitterers in general and especially police followers are indeed younger than average.
Table 3 – descriptive statistics for all variables

<table>
<thead>
<tr>
<th></th>
<th>Range</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legitimacy</td>
<td>1-5</td>
<td>3.59</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>Outcome justice</td>
<td>1-5</td>
<td>3.30</td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td>Procedural justice</td>
<td>1-5</td>
<td>3.34</td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td><strong>Use of social media (police)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passive use Twitter</td>
<td>0-1</td>
<td>.03</td>
<td>.18</td>
<td>155</td>
</tr>
<tr>
<td>Interactive use Twitter</td>
<td>0-1</td>
<td>.00</td>
<td>.026</td>
<td>3</td>
</tr>
<tr>
<td>Passive use YouTube</td>
<td>0-1</td>
<td>.06</td>
<td>.23</td>
<td>251</td>
</tr>
<tr>
<td>Interactive use YouTube</td>
<td>0-1</td>
<td>.00</td>
<td>.039</td>
<td>7</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched police shows TV</td>
<td>0-1</td>
<td>.36</td>
<td>.48</td>
<td>1608</td>
</tr>
<tr>
<td>Gender (2=female)</td>
<td>1-2</td>
<td>1.54</td>
<td>.49</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>16-92</td>
<td>49.99</td>
<td>17.44</td>
<td></td>
</tr>
<tr>
<td>Education (1=high)</td>
<td>0-1</td>
<td>.30</td>
<td>.46</td>
<td></td>
</tr>
<tr>
<td>Perceived safety</td>
<td>1-5</td>
<td>3.89</td>
<td>1.04</td>
<td></td>
</tr>
<tr>
<td>Victim preceding year</td>
<td>0-1</td>
<td>.06</td>
<td>.25</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows the descriptive results for all variables that will be entered in the regression analysis. Most importantly the independent variables show that only very few people have used Twitter and YouTube to contact the police. Hence the interactive use is very limited. Because of this very low N, we will not include these variables in the regression model, since one or two respondents can easily bias the results that the regression will yield. We will get back at this in the discussion section.

155 respondents indicated they follow the police on Twitter and 251 have watched a YouTube clip from the police recently. This is 3.4 percent and 5.6 percent of the total sample. We can we conclude regarding this about the over social media use in the population? In comparison, 15.2 percent says to use Twitter and 59.5 percent to have used YouTube in some way. In sum, social media use in the public domain may be on the rise, but is still very much behind the overall use in the population.

*Social media use, perceived justice and legitimacy*
Table 4. Transparency Regression Analysis Results (N=4,492)

<table>
<thead>
<tr>
<th></th>
<th>Model 1 Procedural justice</th>
<th></th>
<th>Model 2 Outcome justice</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient (SE) β</td>
<td>Sig</td>
<td>Coefficient (SE) β</td>
<td>Sig</td>
</tr>
<tr>
<td>Twitter (passive)</td>
<td>.125 (.064) .030 *</td>
<td>.218 (.063) .052 **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YouTube (passive)</td>
<td>-.069 (.064) -.020</td>
<td>-.078 (.051) -.023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched police on TV</td>
<td>.096 (.024) .060 **</td>
<td>.120 (.024) .075 **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.018 (.023) .012</td>
<td>.128 (.023) .083 **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.002 (.001) .043 **</td>
<td>.002 (.001) .042 **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education (1=high)</td>
<td>.060 (.025) .035 *</td>
<td>-.018 (.025) -.011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived safety</td>
<td>.109 (.011) .147 **</td>
<td>.112 (.011) .152 **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim</td>
<td>-.035 (.047) .011</td>
<td>-.105 (.046) .034 *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant (B)</td>
<td>2.666 (.110)</td>
<td>2.335 (.108)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>.028 F 17.05***</td>
<td>.037 F 22.79 ***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Table 4 shows which variables yield significant effects on the dependent variables perceived procedural justice and outcome justice. We will discuss each variables dependent variable separately.³

First off, procedural justice, or whether people perceive the police to be treating people justly and have just procedures. Social media use has limited effect on procedural justice. Following the police on Twitter does have a positive relationship (beta=.03, p <.05). Watching YouTube has not significant effect, although it is interesting to observe the negative association it has with perceived procedural justice. To place the effects of social media in perspective we added and “old media” variable. We asked respondents whether they regularly watched an informative (not sensational) program about the police on television variable. The relationship between

³ We checked for multicollinearity, but all VIF-statistics were all around 1.0. A VIF of 5 or above indicates multicollinearity.
watching police on TV and procedural justice is twice as large compared with following Twitter.

Secondly, there is perceived outcome justice, which is mostly related with the performance and just distribution of outcomes. A highly significant and positive relationship for Twitter can be observed from Table 4 (beta=.052, \( p < .001 \)). Again, watching TV has a stronger association (.075) although the difference with following Twitter is not as large when compared to perceived outcome justice. Further, no significant for watching YouTube can be found.

Overall, the variables explain only very little of the variance in perceived outcome and procedural justice. Only as much as 2.8 and 3.7 percent is explained by the variables in our model (that includes control variables). Apparently other thing in police-citizens contact determine perceived justice by citizens.

The third central variable in the model is perceived legitimacy (Table 5), which indicated trust, respect and voluntary compliance with the police.
Table 5 – Perceived legitimacy

<table>
<thead>
<tr>
<th></th>
<th>Model 1 Legitimacy direct</th>
<th>Model 2 Legitimacy mediated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient (SE) β Sig</td>
<td>Coefficient (SE) β Sig</td>
</tr>
<tr>
<td>Twitter (passive)</td>
<td>.191 (.057) .050 ***</td>
<td>.066 (.036) .017</td>
</tr>
<tr>
<td>YouTube (passive)</td>
<td>-.061 (.046) -.020</td>
<td>-.006 (.029) -.002</td>
</tr>
<tr>
<td>Watched police on TV</td>
<td>.112 (.022) .077 ***</td>
<td>.031 (.014) .022 *</td>
</tr>
<tr>
<td>Sex</td>
<td>.068 (.021) .048 ***</td>
<td>.018 (.013) .013</td>
</tr>
<tr>
<td>Age</td>
<td>.004 (.001) .109 ***</td>
<td>.003 (.000) .073 ***</td>
</tr>
<tr>
<td>Education (1=high)</td>
<td>.111 (.022) .073 ***</td>
<td>.091 (.014) .060 ***</td>
</tr>
<tr>
<td>Perceived safety</td>
<td>.100 (.010) .150 ***</td>
<td>.016 (.006) .025 **</td>
</tr>
<tr>
<td>Victim</td>
<td>-.009 (.042) -.003</td>
<td>.040 (.026) .014</td>
</tr>
<tr>
<td>Procedural justice</td>
<td></td>
<td>.322 (.012) .354 ***</td>
</tr>
<tr>
<td>Outcome justice</td>
<td></td>
<td>.437 (.011) .486 ***</td>
</tr>
<tr>
<td>Constant (B)</td>
<td></td>
<td>0.979 (.046) ***</td>
</tr>
<tr>
<td></td>
<td>Adjusted R-squared .047</td>
<td>Adjusted R-squared .624</td>
</tr>
<tr>
<td></td>
<td>F 28.79***</td>
<td>F 744.78 ***</td>
</tr>
</tbody>
</table>

We hypothesized that the relation between social media use and legitimacy was mediated by procedural and outcome justice. By adding procedural and outcome justice to the regression equation we test this hypothesis. As can be observed from Table 5, after introducing the two justice variables, the significant effect of Twitter (YouTube was not significant even before that) disappears and is not determined very strongly by perceived outcome and procedural justice. The variance explained jumps from 4.7 percent to 62.4 percent. An extremely high explained variance and high beta coefficients are a warning sign for potential multicollinearity. However, the VIF-statistics were all below 2.0 and Tolerance statistics were above 0.5. A tolerance of less than 0.20 or 0.10 and/or a VIF of 5 or 10 and above indicates a multicollinearity problem (Field, 2009).
6. Conclusion & discussion

In conclusion, social media use to obtain information about the police is limited to 3 to 7 percent of the population. Interactive use even less so and no relationships with perceived justice and legitimacy could be calculated. Only a few respondents indicated to have contacted the police due to a Twitter message or YouTube clip. The people who use Twitter show slightly more positive attitudes toward police procedural and outcome justice. Negative association were found regarding YouTube use, but these were not significant. It should be noted that Twitter has a stronger association with outcome justice than with procedural justice. Further, using traditional media (television) to follow the police has stronger associations with positive attitudes toward the police than social media use. All in all, this provides a mixed bag of results, which are displayed in Figure 3.

![Figure 3: Research model. N.B.: coefficient reflects association with Twitter use. YouTube use was non-significant in all cases.](image)

Although we cannot make any causal inferences on the basis of this dataset it does show some interesting patterns that contribute to our understanding of social media in the safety and public section.

First of all, the associations of social media with perceived justice are very limited in magnitude. YouTube had no relation whatsoever, and Twitter a small one. Explained variances show that procedural and outcome justice are mainly determined by factors
not taken into account in the model. In addition, watching police television shows where missing persons or suspects are sought has a stronger relation with both procedural and outcome justice. The idea that social media will strengthen trust and legitimacy in government, as proposed by some scholars (e.g. Bertot et al., 2010; Kim, Park and Rho, 2013) should be nuanced. However, this finding does fit what scholars in the field of government (e-)transparency have found (De Fine Licht 2011; Grimmelikhuijsen, 2012). This is related as social media can be seen as a means to increase public transparency (Bertot et al., 2010). These studies show that although transparency (for example through websites) may affect individual attitudes, these are only altered slightly and largely affected by people’s predisposition to trust government.

Secondly, not all social media are the same. Although we witnessed a positive relation between Twitter use and perceived justice, YouTube had a slight negative, albeit non-significant, relation. Supposedly, YouTube is a more superficial manner of following the police than Twitter. We asked whether respondents had used YouTube to watch a police videoclip in the last six months. Compared to Twitter, it is much less common to subscribe/follow an account. There is no ‘psychological contract’ in case of YouTube use, whereas following the police on Twitter does require such a psychological investment. In addition, the number of messages provided through Twitter is much higher than through YouTube (Meijer et al., 2013).

Thirdly, we saw that Twitter had a stronger relationship with outcome justice than with procedural justice. This is no surprise as especially the passive use of Twitter is mainly focused on ‘getting results’. From a police perspective this means that citizens are needed to catch criminals or to find missing persons, and for citizens this means that they can witness police success, for instance by reading about whether a criminal was indeed caught. Social media, and especially Twitter can be seen as another medium to create transparency (cf. Bertot et al., 2010) but its current focus on sharing success stories (Gasco & Plé 2013) means that mostly outcome justice is affected by using this medium. This thus seems to be a successful communication strategy but shows the fine line between creating transparency and spinning successful stories to the public (Grimmelikhuijsen 2011).
No study is without limitations. The main methodological impairment of this study is that its design is cross-sectional, i.e. on one group on one moment in time: no causal inferences can be made from this of type of research since the direction of relations cannot be established. In addition some of the measures might be improved in future studies. For example we measure ‘interaction’ by asking whether people ever contacted the police because of information requested through YouTube or Twitter. This is a rather narrow definition and as a result not many people answered ‘yes’, which meant we could not run analysis on this group of respondents.

The study highlights that the dominant perspective of citizen participation and coproduction may have its shortcoming when studying the effects of social media communications. These perspectives are important for studying the effects of new contributions of citizens to police work (Meijer, 2012) but one should realize that only a very limited percentage of the population actually interacts with the police through social media. Most citizens are ‘lurkers’. Many police departments also deliberately choose to use social media for disseminating information rather than for interacting with citizens (Meijer & Thaens, 2013). The coproduction perspective, therefore, cannot be used to study changes in citizens’ attitudes and other perspectives such as theories about transparency and disintermediation may be more useful.

The research enlightened our understanding of the effects of police communications through social media on perceived legitimacy but it has not yet positioned this within the context of other developments on social media. Use of social media by citizens, activists and journalists may have a more negative effect on police legitimacy. In that respect, the police increasingly establish direct – or disintermediated (Edwards, 2006) – contacts with citizens to enhance legitimacy. One may wonder whether this does not only result in ‘preaching to the converted’ since the police may fail to reach those citizens that are most skeptical about the police. Further research should aim to understand the interaction between different types of communication about the police to understand how perceived police legitimacy is influenced by these different types of communication from different sources.

In conclusion, this study is one of the first to present large-scale and representative survey data about the relationship between social media use and attitudes towards a
public sector organization. Our study debunks the myth that social media hugely increase the perceived legitimacy (which includes trust) of the police. At the same time, it highlights that the use of Twitter for disseminating news about police successes may contribute to police legitimacy.

Acknowledgements
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