Social Media and the New Organization of Government Communications: An Empirical Analysis of Twitter Usage by the Dutch Police

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Abstract

Do social media de-bureaucratize the organization of government communications? Key features of the bureaucratic ideal-type are centralized and formalized external communications and disconnection of internal and external communications. Some authors argue that this organizational model is being replaced by a less bureaucratic model that better fits the communication demands of the information society. To explore this argument empirically, the use of twitter by Dutch police departments is investigated through an analysis of 982 accounts and 22 interviews. The empirical analysis shows that most twitter communication takes place through decentralized channels. While a minority of police officers use personal names on twitter, most use their formal identity. Twitter is mostly used for external communication but the mutual interest in the twitter communications of other police officers is substantial. The study nuances the idea of transformative change: the old bureaucratic and the new models manifest themselves in the hybrid organization of social media communications.

Keywords

social media, police, (post) bureaucracy

Introduction

While government communications used to be limited to leaflets and press contacts, government organizations have now become "communication machines" (Wright, 2001). The Internet is used for 24/7 interactive communications with outsiders such as clients, citizens, and stakeholders. The latest addition to the variety of digital communication channels are social media. Twitter, Facebook, and Google+ enable government organizations to build new communication networks for interacting with citizens and stakeholders (Bertot, Jaeger, & Grimes, 2010; Mergel, 2013; Mergel & Bretschneider, 2013). They generate more openness about government activities, create new opportunities for citizens" participation, enable citizens and stakeholders to collaborate with government, and stimulate processes of innovation in the public sector (Criado,

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Sandoval-Almazan, & Gil-Garcia, 2013; Mergel, 2012). The use of social media has attracted the interest of researchers and, recently, interesting work has been published about a variety of issues: social media monitoring (Bekkers, Edwards, & de Kool, 2013), social media strategies (Meijer and Thaens, 2013), drivers and barriers for social media (Zheng, 2013), the use of social media in crisis management (Chatfield, Scholl, & Brajawidagda, 2013), and their use for communication with citizens (Mossberger, Wu, & Crawford, 2013). These recent studies help us to understand how the new technology is being implemented in government, and to what extent it is helpful for strengthening government capacities, but fail to show us how government organizations themselves are being reconfigured.

The relation between new media and government communications is of great importance to understanding current challenges to government bureaucracy (cf. Olsen, 2006). Throughout the 20th century, government organizations have come to organize their communications through a set of centralized and formal working methods (Yates, 1989). External communication to broad audiences widely came to be seen as an activity that needs to be controlled, to prevent damage to the bureaucratic organization (Perrow, 1986; Weber, 1968). This approach to organizing external government communications, however, may be challenged by new technologies in the information age. Indeed, various authors present post-bureaucratic, leaderless, and networked organizations as the successors of the traditional, bureaucratic organization (Brafman & Beckstrom, 2006; Shirky, 2008). For the public sector, the core argument is that a bureaucratic organization no longer fits the dynamic and complex nature of the information society and needs to be modernized to retain its effectiveness and legitimacy (Osborne & Plastrik, 1997; Meijer, 2008). This reconfiguration of organizational structure affects not only internal processes but also the organization of external communication. The argument that the centrally controlled and formal system of government communications does not fit current social media communications may sound compelling but it has never been tested or even explored on the basis of empirical research.

As a first step, we need in-depth empirical research to advance our understanding of how the use of social media challenges the organization of government communications. In this article, we explore the relation between social media and the organization of government communications by focusing on microblogging by the Dutch police. Microblogging is increasingly seen as a valuable contribution to strengthening communications between police and citizens (Meijer et al., 2013). New media, such as twitter, are supposed not only to help the police to communicate effectively and fast with large groups of citizens but also to facilitate citizen input in police work. The perceived medium opportunities of twitter induce police departments all around the world to open twitter accounts. Several studies have investigated the opportunities of twitter in terms of its contribution to police effectiveness and public trust in the police (Crump, 2011; Heverin & Zach, 2010). The police are a bureaucratically organized government organization and, therefore, the appropriate empirical context for exploring changes in the organization of government communications in response of the introduction of new communication technology. We need to be cautious, however, when interpreting what an analysis of the police means for the diverse group of government organizations.

The central question in this article is, "Does the use of twitter de-bureaucratize the organization of police communications?" The objective of this article is enhancing our theoretical understanding of the organization of government communications in an information age. The article will, first, present a theoretical perspective on the bureaucratic and new organization of government communications. The empirical part presents descriptive quantitative data from an investigation of all 982 police twitter accounts in the Netherlands in combination with qualitative material from 22 interviews with both police officers and communication officers. An analysis of the empirical data shows that, in this case, social media indeed result in a new organization of government communication in the sense that decentralization, informality, and connections between internal and external communications are increasingly important. This change,

however, is hybrid rather than transformative: both the bureaucratic and the new model manifest themselves in social media communications.

Bureaucratic Organization of Government Communications

While the literature on political communication (see *Political Communication* journal) and the mediatization of government (Mazzoleni & Schulz, 1999; Schillemans, 2012) is extensive, few authors explicitly discuss how external government communications are organized. Traditionally, government communication has been organized in line with the bureaucratic nature of government (Yates, 1989; Meijer, 2008). The bureaucratic organization of government communications can be regarded as an ideal-type that stresses the regulation of both inward and outward communications by administrative procedures. A bureaucratic mode of organization aims to result in efficiency, effectiveness, and reliability (Olsen, 2006; Perrow, 1986; Weber, 1968) and the organization of external communication would also need to stand up to these criteria. The basic idea behind an ideal-type of external government communications is that such communications need to be connected to the internal bureaucratic organization as to not disrupt it. We have used this idea to identify three characteristics that are typical to the bureaucratic model of government communications: centralization, formalization, and boundary creation.

The first feature of this ideal-type for organizing government communications is centralization. Outward communications are to be channeled through a limited set of gatekeepers to ensure that the external communication can be monitored and controlled by central management (Bekkers, 1998). Tushman and Katz (1980) conceptualize organizational gatekeeping connecting internal audiences and external audiences and translating organizational information across communication boundaries (see also Ruth-McSwain, 2011). Street-level bureaucrats can communicate with individual clients (Lipsky, 1980) but communication to broader audiences is subjected to organizational gatekeeping. Central control is important to prevent communicative risks, such as damage to the organization's reputation, the dilution of accountabilities, incorrect communication and a limited operational coordination. Gatekeeping is a response to these risks and aims to ensure that the information presented to outsiders is correct and prevent that sensitive information is disseminated outside the boundaries of the organization. Inward communications is also channeled through gatekeepers as to ensure that signals are processed adequately (Bekkers, 1998; Ruth-McSwain, 2011). The main risk for the organization is that external signals are ignored or not redirected to the right function within the organization (Deutsch, 1963). Communications offices, client contact services, emergency rooms, and call centers are examples of a centralization of external communications.

The second feature of the bureaucratic model of government communications is formalization. Formalization in the ideal-typical bureaucracy means that personal matters and execution of tasks need to be strictly separated (Perrow, 1986; Weber, 1968). In that sense, the idea of formalization is directly connected to a depersonalization of functions: Personal characteristics become irrelevant to the role in the organization (Kallinikos, 2004). For the organization of government communications, this means that government officials communicate as officials and not as individual persons. They represent the government organization and they communicate as such. This means that behind a formal organizational identity such as "helpdesk" there can be different natural persons. This fits Selznick's (1957) notion of reducing the organizational dependency on personal characteristics and highlighting organizational features. External communicators, such as spokespersons, workers at client contact centers, and employees in emergency centers, will communicate as functionaries and not as individual persons.

The third feature of the ideal-type of government communications is the existence of clear organizational boundaries (cf. Egeberg, 2003). While most analyses of internal communication focus on the role of this type of communication in managing the organization (Yates, 1989),

internal communications are inevitably connected to external communications. The connection moves in two directions. First, external signals are to be processed internally (Deutsch, 1963). Components of the organization, or members, may detect external signals that are relevant to the organization. However, if these signals are not processed internally—through systems of internal communications—the external signals will not trigger any organizational responses. Second, external communications need to be informed by knowledge about the internal processes. Street-level bureaucrats may communicate directly with individual clients (Lipsky, 1980) but communication to broad audiences is channeled through external communicators. If information from within the organization is not channeled to external communicators, the organization will not be able to provide accurate information to external audiences.

The dependency between internal and external communication implies that all organizations need to develop mechanisms and practices for connecting these two. Bureaucratic organizations tend to develop centralized and formalized structures to separate internal and external communication in a clear manner. Communications offices have been formed in most large government organizations to streamline the interface between internal and external communications. In essence, they act as a "gatekeeper" (Bekkers, 1998) for communication with the outside world. Previous waves of technological development have, to some extent, challenged this distinction (Meijer, 2008) but in most organizations the boundary is reproduced in online media; think, for example, about the distinctive difference between the external website and intranet of organizations.

The argument can be summarized in the following set of core characteristics of the bureaucratic organization of government communications:

- Government communications to a general public are centralized and controlled by communication professionals.
- Government communications are connected to formal positions within the organization: officials communicate from their position.
- Internal and external government communications are organized in a separate manner. Different channels are used for the two spheres of communication.

While these features are still highly relevant in most government organizations, some authors argue that new technologies challenge the practice of bureaucratically organizing government communications in all three aspects (Brafman & Beckstrom, 2006; Shirky, 2008). They call for a new organization of government communications.

Toward a New Organization of Government Communications

As noted above, the bureaucratic model of organizing government communication is firmly rooted in Weber's (1968) foundational work on organizational structure. Therefore, any new type of organization would be regarded as a "post-bureaucratic" model of government communications—although this term is often reserved for the internal communication of government (Huber, 1984; Josserand, Teo, & Clegg, 2006; Powell, 1990). New models sometimes rely on a normative critique of the bureaucratic model (Clegg & Courpasson, 2004), and often stress instrumental shortcomings (Maravelias, 2003). A popular model of organizing government communication that radically departs from Weber's design principles for organizations has been developed by Brafman and Beckstrom (2006). They refer to a type of organization reflecting a "starfish" for its decentralized neural structure. Similarly, Shirky (2008) highlights that new tools—such as social media—themselves allow for instant group coordination. Therefore, bureaucratic modes of coordination would no longer be needed. While Weber's bureaucracy was all about stability and control, these competing organizational models thrive on change and adaptation.

We can use these ideas about post-bureaucratic organization to develop a new, post-bureaucratic model of government communications. This model first differs from the bureaucratic model in its emphasis on decentralization rather than centralization of government communication. The idea that centralization of organizations hampers the production of new ideas and exchanges about current developments has already been presented by Ullrich and Wieland (1980). Brafman and Beckstrom (2006) highlight that decentralized organizations are "smarter" since they use the intelligence that is spread throughout the organization (p. 39). Josserand et al. (2006) stress that post-bureaucratic organizations are decentralized and rely on cross-cutting networks of all kinds for more flexible coordination. Maravelias (2003) stresses that a distinguishing characteristic of post-bureaucracy is its decentralization to the level of individuals. This far reaching decentralization displaces the responsibility for setting limits between professional and non-professional concerns from the organization to the individual. Hence, government communications will not be centralized in communications offices, or client contact services, but rather distributed throughout the organization to enable flexible responses and exchanges.

A second difference between the bureaucratic and the new model for the organization of government communications concerns the emphasis on formal instead of personal identities. On the basis of extensive empirical research in more than 90 different public sector organizations, Willem and Buelens (2007) conclude that informal coordination strengthens knowledge sharing between the organization and outsiders. The role of individuals in their study reflects Shirky's (2008) model of self-organization. He discusses Wikipedia and highlights that that is an organizational form in which people rather than organizations collaborate to produce services. The basic premise is that communication requires rich contacts between individuals. These contacts would entail not only task-related communication but also, according to the bureaucratic model superfluous, aspects of the specific person such as hobbies, observations, opinions, and so on. Building upon these notions, a new model for organizing government communications would imply that people communicate with outsiders as they would with colleagues within an organization rather than as functionaries for the organization.

The third difference between the two models concerns the connection between internal and external communications. While a clear definition of organizational boundaries lies at the heart of the bureaucratic model of government communications, the new model highlights the importance of connecting internal and external communications. Boundary spanning by individuals who are well connected internally and externally is increasingly emphasized as an activity that is needed to enhance the creativity and performance of organizations (Meier & O'Toole, 2003; Tushman & Scanlan, 1981; Torenvlied et al., 2013). Brafman and Beckstrom (2006) put the emphasis on openness as a design principle for organizations and stress that knowledge should be available to everybody. This idea can be used to formulate a third characteristic of the new model of organizing government communications: The disconnection between internal and external communication loses relevance because communication needs to facilitate the exchange of ideas both within and outside the organization.

The ideal-type of a "new organization of government communications" can be positioned vis-à-vis the "bureaucratic organization of government communications" (see Table 1).

This research focuses on the issue whether the use of social media results in a transition to a form that leans more toward new organization of government communications. The theory of media affordances highlights that media facilitate certain communication practices and, therefore, the availability of new media may result in a change in communication patterns. Sellen and Harper (2002) explain, "An affordance refers to the fact that the physical properties of an object make possible different functions for the person perceiving or using that object" (pp. 17-18). This theory stresses that the affordances are not objective features of the media but characteristics that are attributed to them. On the basis of previous research into social media, the following affordances can be identified: informing large groups of people in a fast and timely but relatively poor

Table 1. Two Models for the Organization of Government Communications.

	Bureaucratic organization of government communications	New organization of government communications
Control over external communications	Centralized	Decentralized
Identity of actor in external government communicators	Formal (function)	Informal (person)
Relation between internal and external communication	Disconnected	Connected

manner and (open) interaction with specific individuals in a large group of people (Bertot et al., 2010; Mergel, 2013; Mergel & Bretschneider, 2013). These technologies can be used for both internal and external communications and, in view of their open character, one could expect that internal and external communications could increasingly be intertwined. On the basis of this discussion of the literature, we can formulate the following propositions concerning the organization of social media communication in the police:

> **Proposition 1:** Control over external social media communication from the police will be *decentralized*—Individual police officers will have to manage external communication channels.
> **Proposition 2:** The identity of external social media communicators in the police will be *personalized*—Police officers will tend to use their personal names in external communication.
> **Proposition 3:** Internal and external social media communication from the police will be *connected*—External communication also plays a role in internal information exchange.

Empirical research was conducted to test these propositions.

Research Design and Methods

Although the theoretical ideas about a different organization of government social media communication have been illustrated with anecdotal evidence, no systematic empirical research is available about the "new organization of government communications." The new model basically is a competing and normative, "ideal-type" organization rather than a description of empirically observable government practices. But the model has empirical implications and makes empirical statements. To explore whether we observe a transformation from one ideal-type to another in the organization of government communication, empirical research is urgently needed.

Case Study Selection

This article does not pretend to present generalizable findings but instead analyzes a consciously selected case study: the Dutch police force. The Dutch police has more than 60,000 employees and most of them, more than 50,000, are police officers. At the time of research, the Dutch police force consisted of 25 regional departments and 1 national department. Within the general code for police work, individual police officers have considerable autonomy in communicating with citizens and stakeholders but limited autonomy in their external communication with a broader audience. External communication has been centralized in the hands of departments of communications (Rosenthal & Torre, 2007). This research investigates whether in the use of twitter, individual police officers have more control over external communication to a broad audience.

The police are a specific type of government organization and findings from this study cannot be generalized to other government organizations. Still the police are no different from other government organizations in their focus on upward and downward vertical communications and their disconnection between internal and external communications. One could argue that these features have an even more prominent role in the police because of their specific role and specific responsibilities. For example, specific features of the military have been reproduced in police organizations to safeguard that force is not used in an unwarranted manner and reported in a strictly prescribed manner. The police in countries around the world have been qualified as traditional, hierarchical organizations with a strong emphasis on hierarchical roles and formal mechanisms for communication (Garland, 2001; Reiner, 2010). In addition, the police have been subjected to the introduction of new social media to a large extent. In that sense, the police can be regarded as a critical case study in the sense that "it has strategic importance in relation to the general problem" (Flyvbjerg, 2006, p. 229): If such a formal and centralized organization can change, this pattern can be expected to be more widely applicable to organizations in the public sector.

Twitter is the dominant social medium in the Dutch public sector and used extensively by the Dutch police. At the moment of our study in 2012, more than 1,000 twitter accounts existed in the police—amounting to 1.65 accounts per 100 employees. The Dutch police use twitter to strengthen their contacts with citizens, to boost feelings of safety, to urge citizens to take preventive action, to improve the knowledge about and the image of the police, and to obtain information from citizens for criminal investigations (Meijer et al., 2013). The message content of "tweets" is quite diverse. The police tweet messages about criminals that have been apprehended, they tweet informative messages about traffic situations and warnings for specific crime schemes, they ask citizens for information about (petty) crime and inform them about safety in the neighborhood, and they urge citizens to stay alert for certain types of crime (e.g., burglaries). The police tweet thousands of messages every day which are received by more than one million (non-unique) followers. Within a few years, twitter communication has developed into a major communication channel for the Dutch police.

Research Design and Data Collection

This research answers the following questions to enhance our understanding of the impact of this social media use on the organization of government communications:

Research Question 1: To what extent is the use of social media centralized?

We will investigate the types of twitter accounts that have been created by the police departments and assess to what extent these are controlled at the central level.

Research Question 2: Are formal identities used in social media communications?

We will investigate specific accounts to assess whether these are directly related to formal positions within the police or whether personal names are used as handles.

Research Question 3: Does the use of social media connect internal and external communications?

We will analyze to what extent social media are simultaneously used for external and internal information exchange, for example, when police officers read tweets of other officers to find out what they have been doing.

The organizational unit under study here is the "police department": We analyzed the twitter accounts of all 25 regional departments and 1 national department. We aimed to build a comprehensive list of twitter accounts but this was complicated as there was no overview of all accounts available and the number of accounts is still continuously growing. For this reason, the first 1,000 accounts created by either communication officers of Dutch police departments or individual police officers were listed via a systematic search on the websites of the police departments. Accounts were also added to the list based on previous lists and by looking at the lists of followers of some accounts, because police officers quite often follow their colleagues. Several times, a preliminary list was posted on online community "Politie 2.0" (Police 2.0). This led to about 10 useful reactions with additions. Incidentally, we also checked the list via direct communication with communication officers of a police department. The 1000th account was created in March 2012, when the entire list was updated with information about the number of tweets, followers, and following accounts. In all, 18 accounts have disappeared between collecting the first 1,000 accounts in March and analyzing the new data gathered for this study in September 2012. This might be because they were renamed (e.g., because a neighborhood officer moved to a new neighborhood), because the police officer decided to stop using twitter or because 2 accounts were merged. This resulted in a corpus of 982 accounts, nested within 26 police departments, which were analyzed in this study. We investigated all the tweets that had been sent through these accounts from the first police tweets in March 2009 up to the data collection for this research in September 2012.

In addition to the quantitative data, interviews with community police officers and communication officers were conducted to obtain a better understanding of the evolving communication patterns. We selected police departments with advanced practices in terms of social media usage and interviewed officers that were at the forefront of social media usage. These findings cannot be generalized but provide insights in the changes that are taking place. Eighteen police officers in four police departments (Eindhoven, The Hague, Apeldoorn, and Utrecht) and 1 communication officer for each of these departments were interviewed between September 2011 and February 2012. The interviews with the community police officers focus on their motives and communication behaviors and the interviews with the communication officers on the departmental communication policies and practices. The interviews were typed out and coded on the basis of issues such as police guidelines, (management) support, motives to use twitter, instructions, contents of their messages, interactions with followers, and time investment. Both types of interviews were used to provide explanations for the analyses of the quantitative data.

Operationalization

The level of centralization of government communication in each police department was operationalized as the extent to which communication was controlled by the central communications office. To investigate this level of centralization, we looked at the level within the organization that was connected to a twitter account. Police twitter accounts can be connected to a person, a neighborhood or town, a function, and so on. To analyze the twitter accounts, we make a crude distinction between centralized accounts (i.e., accounts at the level of the regional police department) and decentralized accounts (all other twitter accounts). The number of decentralized accounts gives an indication of the decentralization of communications but needs to be supplemented with information about the extent to which centralized and decentralized accounts are used and how many citizens are reached with the messages. To establish the level of centralization of government communication, we measured the percentage of centralized accounts, the percentage of tweets from centralized accounts, and the percentage of followers of centralized accounts.

The level of formalization of communication identities was operationalized as the percentage of twitter accounts in each police department with a formal identity. This level of formalization

was established by analyzing the twitter handle (i.e., name) and if there was any doubt the description of the account was investigated. If only the personal name of the police officers was used in the twitter handle, this was categorized as an informal twitter account. References to a specific police department or the police in a certain town or neighborhood were seen as formal accounts. Hybrid accounts contained combinations of personal names and references to the police.

The level of internal communication was operationalized as the percentage of twitter accounts per department following other police twitter accounts. We make a distinction between the extent to which police twitter accounts are being followed by internal accounts and to what extent they follow internal twitter accounts. Twitter provides public information about the followers of twitter accounts. We constructed a matrix of all the 982 police accounts in the study—with binary information about whether or not a police account was following another account as entries. The matrix was generated with the automatic tool NodeXL. The results produced by NodeXL were checked manually for one regional department, resulting in a 94.9% consistency rate between the manual coding and the automatic coding of followers. An additional analysis revealed that the 5.1% inconsistencies were primarily due to errors in the manual coding.

Findings

Centralization of Communications

We explored the level of centralization by analyzing the 982 police twitter accounts in terms of the number of accounts, the number of tweets, and the number of followers. We made a distinction between centralized accounts and decentralized accounts on the basis of the name and description of the account. Almost every department has a central "department account" that is used for general messages about the police department, like arrests and missing children. Other centralized accounts are those of communication officers and police chiefs. Some departments also have thematic accounts which send messages about traffic, burglaries, or events in the entire police department. These accounts are also considered as centralized accounts. Decentralized accounts are accounts of individual community police officers, accounts for specific town or neighborhoods or accounts of police stations.

The following figures present, per police department, the percentages of centralized and decentralized accounts (Figure 1), the percentages of tweets from centralized and decentralized accounts (Figure 2), and the percentages of followers for centralized and decentralized accounts (Figure 3).

Figure 1 shows that the level of centralization of twitter accounts is quite low. The overall level of centralization—defined as the number of centralized twitter accounts divided by the total number of twitter accounts—is 7.4%. Remarkably, 17 out of the 26 police departments have less than 10% centralized accounts. The only police departments with more centralized than decentralized accounts are Flevoland and the national police department. In general, we see that the number of decentralized accounts rises if the department uses twitter for a longer time. The 100 newest accounts in our data set are all decentralized accounts.

The level of centralization of government communication remains to be low—albeit somewhat less—if we take a look at the number of tweets (see Figure 2). The overall level of centralization—defined as the number of tweets from centralized accounts divided by the number of all tweets from all accounts—is 20.0%. The average number of tweets sent from centralized accounts (1926 tweets) is more than 3 times higher than the average number of tweets sent from decentralized accounts (619 tweets). This shows that the number of centrally controlled twitter accounts is lower but these accounts are used more intensively.
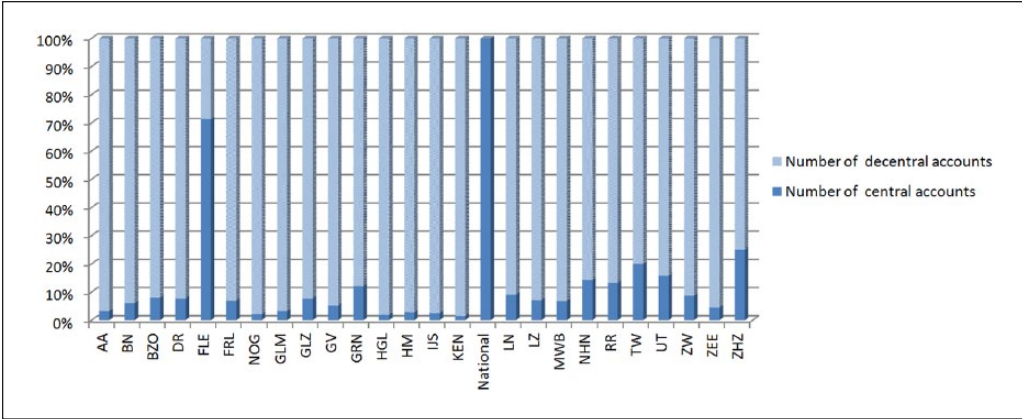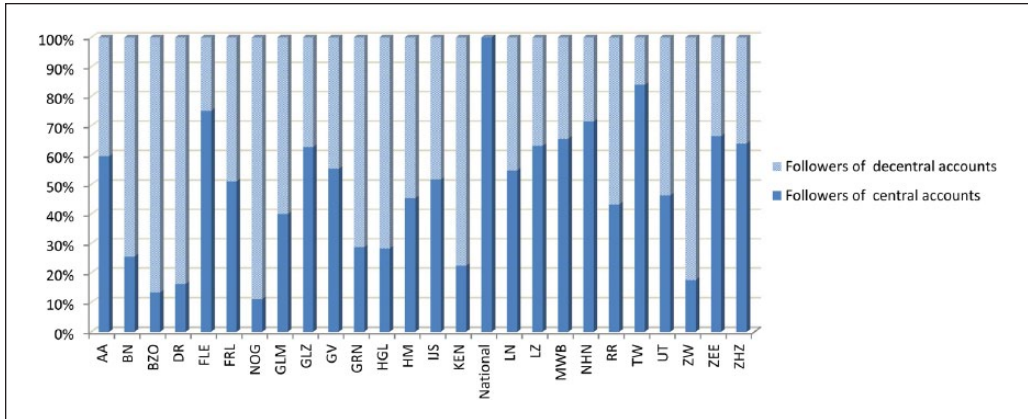
Figure 1. Level of centralization of twitter accounts per department (26 departments, 982 twitter accounts).
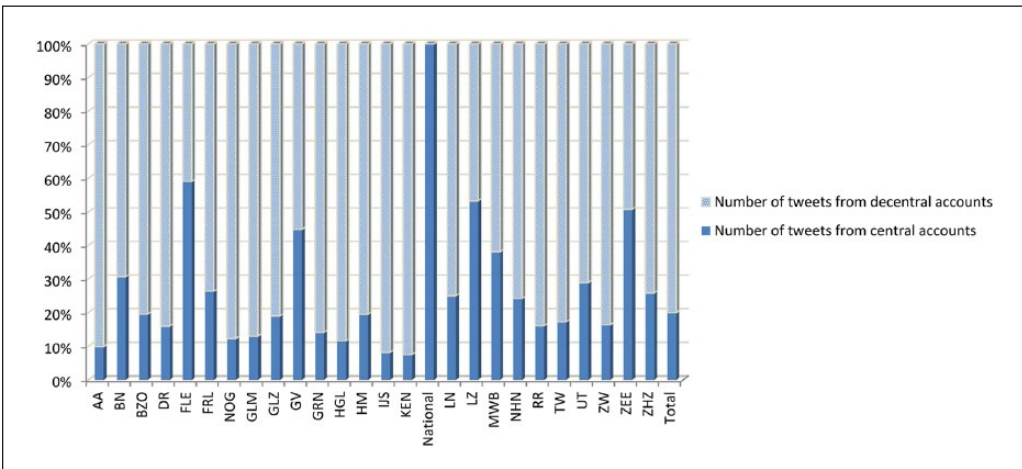
Figure 2. Level of centralization of tweets per department (26 departments, 703,459 tweets).

The level of centralization of government communication approaches 50% when we look at the number of followers of centralized and decentralized twitter accounts (see Figure 3). The overall level of centralization—defined as the number of followers of centralized accounts divided by the total number of followers—is 42.3%. The average number of followers of centralized accounts is (5,990 followers) more than 9 times higher than the average number of followers of decentralized accounts (657 followers). This indicates that, although the number of centralized twitter accounts is much lower, but the total size of the audiences of all centralized accounts together almost equals that of the audiences of all decentralized accounts together.

Additional information about the perceptions of police officers was obtained through qualitative interviews. These interviews indicated that the decentralized use of twitter leads to resistance from their middle managers and from their Communications Office. These actors have a strong tendency to control the external communication of community police officers [2,7,9].[1] Still, the fact that decentralized twitter accounts are abundant does not imply there is no control from the central Communications Offices. Most police departments have strict guidelines for the use of

Figure 3. Level of centralization of followers per department (26 police departments, 1,034,395 followers).

twitter that prescribe how the medium should be used (e.g., Slide Presentation, Twitter Use, The Hague Police Department, May 2011; Guidelines Twitter Use Apeldoorn Police Department, August 2011). Police officers are told, for example, not to tweet about suicides. Many police departments pay close attention to the training of police officers to ensure that the officers know what they can and cannot communicate through twitter [1,7,10,11,15,17]. Police officers are generally instructed to ensure that what they communicate is in line with departmental policies [21]. "It cannot be the case that my messages differ from what the Communications Office communicates. That would be disastrous, since we have many journalists who follow us" [1]. Some superior officers and the Communications Office themselves follow community police officers to monitor their twitter communication [2,5,18,19]. Monitoring is a way to enforce guidelines but this is done in a supportive rather than a repressive manner. Some community police officers emphasize that no additional guidelines are needed as the general "Code Blue" for all police officers stipulates how they should behave, and this code applies as much to twitter as to the offline world [5,11,19].

These empirical data provide us a first clue on the question to what extent the use of social media is centralized. The findings show that the organization of government communications through twitter is decentralized and hence provide support for Proposition 1. The social medium is used by police officers at various levels in the organization and only few accounts are controlled by the central communications office. At the same time, the centrally controlled accounts tweet more messages and have a much bigger audience than the decentralized twitter accounts. Yet, more than 50% of the twitter communication is not directly controlled by the central communications office. The decentralized twitter activities initially led to resistance from middle managers and communications offices but now these actors broadly support its decentralized use. We also revealed that, to prevent communicative risks, police departments apply internal controls in the form of a combination of twitter monitoring, guidelines, and training.

Formalization of Communications

We analyzed the level of formalization of communications by looking closely at the identities of the twitter accounts. We made a distinction between formal, informal, and hybrid twitter accounts. Formal identities of twitter accounts are often directly related to the area. Community police officers generally use an identity that refers to the area they work in such as "wijkaglaaknoord"

Table 2. Level of Formalizations of Twitter Accounts (*N* = 982).

Police department (*n* = 26)	Formal identity (%)	Hybrid identity (%)	Personal identity (%)	Total (%)
Predominantly formal social media usage (18 departments)	67.4	2.9	4.1	74.3
Predominantly hybrid social media usage (5 departments)	3.4	8.1	0.1	11.6
Predominantly informal social media usage (3 departments)	2.3	0.5	11.2	14.1
	73.1	11.5	15.4	100

which mean "community police officer the neighborhood of North Laak." Other formal accounts refer to a function such as "politie_voetbal" which means "police football." These local and formal accounts may be used not only by one person but also by several police officers (e.g., @ Wijkagenten_HOZ).

Personal identities are always connected to no more than one police officer. Personal identities are sometimes isolated from the police when only the personal name is used (e.g., "marcel_ groot") but sometimes also embedded in the police when the personal name is connected to an acronym that refers to the police (e.g., "jeugdagent_inge" or "youth police officer Inge," "wijka-gentarthur" or "community police officer Arthur"). The latter shows that the distinction between formal and personal identities is sometimes too strict: hybrid identities exist that refer to both persons and functions within a formal organization. We found that even some of the spokespersons of police departments use hybrid identities on twitter (e.g., "LeoD_112" [i.e., Leo 911] the spokesperson for the Police Department Flevoland and "woordvpolitiebj" [i.e., Spokesperson Police Bernard Jens] for the spokesperson of the Utrecht Police Department).

These twitter identities were analyzed at the level of the police department to establish the level of formalization of twitter communication. This led us to identify three types of social media usage: predominantly formal social media usage, predominantly informal social media usage, and predominantly hybrid social media usage. The findings are presented in Table 2.

The table shows that the biggest group (*n* = 18) are the departments in which primarily formal twitter identities are used, the second group (*n* = 5) are the ones in which hybrid twitter identities are used, and the smallest group of police departments (*n* = 3) are the ones in which that primarily personal twitter identities are used. The variation reflects choices made by the police departments to allow the use of personal or hybrid identities. Among the least restrictive departments, the Regional Rotterdam Police Department had the policy that all community police officers needed to put "prr" (Police Rotterdam Region) first and then their surname. The Groningen Police Department allowed police officers to use their personal names. This mix of personal and police-related communications is, however, absent in many other accounts. The Apeldoorn Police Department, for example, deliberately chooses to use a combination of "pol" (for police) and then "name-of-town" as the twitter handle: "In this way citizens can keep on following the twitter account the community police officer change from location or when the local team changes" (Guidelines Twitter Use Apeldoorn Police Department, August 2011, p. 7).

Both the personal and hybrid account names show that social media is used by police professionals with a personal identity. The level of mixing of formal and personal identity becomes even clearer in the descriptions of the accounts on twitter and their use of the medium for both formal and personal communication. Police officer De Leeuw uses an informal handle ("mmad-eleeuw") but in her description she mentions both formal elements ("designer for safety, integrity

and complaints in East Brabant") and her messages are sometimes personal ("Kids are playing. I have been busy working from home all day but now suddenly the connection is failing. That means compulsory household chores!") and then again more formal ("Now in a meeting with the independent complaints board in East Brabant. It is always good to discuss how we can learn from complaints"). This illustrates how formal and personal elements are used in twitter description and tweets. Other officers also highlight that opinions or messages that are not directly related to police work help to make the account more lively and interesting for the followers [11,18,21].

The qualitative research provides additional information about perceptions and highlights that most police officers choose to tweet only messages that are related to their tasks. They highlight that there is a clear separation between their private life and their work as police officers [9,10,15]. "[Twitter use] has to be functional. Some [police officers] tweet messages such as "I have just eaten pancakes with bacon." That does not appeal to me" [4]. There is an interesting difference between police departments here: Police officers in The Hague are told not to twitter any information about their personal lives whereas this is quite accepted in Eindhoven [10,11,22]. In other police departments, police can decide how to use the medium and some choose to use it in a more informal manner while others only focus on task-related communications [15].

We can now answer the question to what extent formal identities are used in social media communications. The empirical findings show that police departments markedly differ in their levels of formalization of government communications through twitter. Most police departments—18 out of 26—have predominantly formal twitter accounts but even in these police departments some informal accounts exist. Three police departments have predominantly informal twitter accounts and 1 department has predominantly hybrid identities. This highlights that twitter does not, by any means, result in a massive informalization of external communication. Taken all together, only around 25% of all twitter accounts have either a hybrid or a personal identity. This means that Proposition 2 is rejected.

Disconnection of Internal and External Communications

To empirically explore whether social media connects internal and external communication, we studied the numbers of internal followers. One has to realize that twitter is not a symmetric system: One can follow another person without being followed by that same person. For this reason, we analyzed (a) what percentage of followers of police twitter accounts comes from within the own police department (i.e., percentage internal audience), and (b) what percentage of the accounts that they follow are other police accounts within their police department (i.e., percentage internal information resources).

The total number of followers of all police twitter accounts in the Netherlands in 2012 was 1,049,386. Many people may follow more than one police twitter account and hence the number of unique followers is lower. We found that only 1.7% of the followers of the police twitter accounts come from within the own police department. The Den Bosch Police Department (BN) has the highest percentage of internal followers with 4.3%. Ten police departments have a score below 1%. This indicates that twitter is predominantly—almost exclusively—used for an external audience.

We also analyzed the percentage of followers within the police department. One has to note here that the ratio between twitter accounts followed by police accounts and the number of accounts they are followed by themselves is 1:5. The total number of accounts police officers follow is 220,953. The average percentage police accounts they follow is 8.3%. The Nijmegen Police Departments has the highest number of internal followers with 21.4%. This percentage indicates that police twitter accounts in that department have a fairly high interest in one another.

Table 3. Top 10 Twitter Accounts With Most Followers Within the Police.

Name	Type	Regional or national police department	Number of followers within the police	Followers (total)	% of followers from within the police
1. depolitiezoekt	Centralized	National	246	18.554	1.3
2. kwartiermakernp	Centralized	National	227	5.241	4.3
3. politieklpd	Centralized	National	221	24.025	0.9
4. g_vanbruggen	Decentralized	Groningen	165	2.974	5.5
5. politie_hgl	Centralized	The Hague	136	28.513	0.5
6. jeugdagent_inge	Decentralized	Groningen	127	2.897	4.4
7. Prrteamloverboy	Centralized	Rotterdam	123	2.668	4.6
8. wijkag_cuijkzui	Decentralized	Den Bosch	106	843	12.6
9. politiebn_ocbg	Decentralized	Den Bosch	101	1.343	7.5
10. peter_boekweg	Decentralized	Groningen	98	2.422	4.0

Overall, external twitter usage by their colleagues is a substantial internal source of information for police officers.

We analyzed the 10 twitter accounts with the most followers within the police to further deepen our understanding of the use for internal communications (see Table 3).

The results show that three of the national twitter accounts have a high number of followers within the police. These accounts either present messages that are of relevance to investigations all over the country but are specifically about the formation of the national police organization ("kwartiermakernp"). From the qualitative interviews, we have learned that police officers follow these accounts to obtain information but also to retweets messages to their own followers [1,10]. In the top 10, there are also decentralized twitter accounts such as "g_vanbruggen" and "jeugdagent_inge" with many followers. The interviewed officers highlighted that they retweet tweets from certain colleagues or use them as inspiration for their own tweets [4,5,6,7,11,12,13,15,17]. The interviewed managerial officers indicated that they follow twitter accounts to see what their employees are doing [2,8,16].

On the basis of these findings, we can now answer the third research question: Does the use of social media connect internal and external communications? We empirically explored this question by analyzing to what extent a medium that is meant for external communication is also used for internal communication. The findings show that police officers constitute only a very limited percentage (1.7% of the followers) of the audience of the twitter accounts of their colleagues but, at the same time, they form a substantial source of information for their colleagues (8.3% of those following). This clearly demonstrates that twitter is mostly used for external communication and only to a limited extent also serves as a channel for internal communication with colleagues and superior officers. This means that Proposition 3 is rejected. The social media communication stream runs in parallel to intra-police communications through closed circuits that can be used for sensitive information that should not become available to outsiders.

Reconfiguring the Organization of Government Communications?

The research has provided insight in the impacts of the use of social media on the organization of government communications and provides an addition to existing insights in social media strategies (Mergel, 2012; Mergel & Bretschneider, 2013; Meijer and Thaens, 2013). We have investigated patterns of microblogging within the Dutch police and we have focused our analysis on

Table 4. Testing the Propositions.

Proposition	Findings
1. Control over external social media communication from the police will be decentralized.	Confirmed. Most messages are tweeted through decentralized channels and most citizens follow these channels.
2. The identity of external social media communicators in the police will be personalized.	Rejected. Only a minority of police officers use personal names to communicate with citizens.
3. Internal and external social media communication from the police will be connected.	Rejected. Interest in twitter communications of other police officers is, compared with external audiences, limited.

patterns of following twitter accounts. These patterns have been analyzed within and between the 25 regional police departments to explore the centralization of external communications, the identity of external government communicators and the disconnection of internal and external communications.

The central question in this article was, "Does the use of twitter de-bureaucratize the organization of police communications?" An empirical analysis of the twitter practices of the Dutch police shows that many police officers now have direct channels for external communications that are not directly controlled by central communications offices. Most messages are tweeted through these decentralized channels and most citizens follow these channels. While a minority of these police officers use informal, personal names to communicate with citizens, most police officers use names that refer to their formal identity. Twitter is mostly used for external communication but the interest in one another's twitter communications is substantial (8.7%). The communicative autonomy of individual police officers is strengthened since many of them do no longer only communicate with individual citizens (Lipsky, 1980) but now have their own channel for external communications. Overall, these findings nuance the claim that government communications will be organized radically different under the influence of new media. The results for the three propositions are summarized in Table 4.

The findings show that many uses of twitter still fit the bureaucratic model of government communications. The organization of police social media communication is hybrid rather than radically different from the bureaucratic model because (a) police organizations communicate both through channels that are controlled by communications departments and by channels controlled by community police officers, (b) police organizations communicate both through organizational identities and personal identities (and sometimes hybrid identities), and (c) their internal communications are, to a limited extent, also used for internal exchange of information. The hybrid nature of the organization of police social media communications can be regarded as a reaction to changes that the outside world that require government organizations to be both centralized, formalized, and closed off from its environment and decentralized, personalized, and open to its environment. These contradictory demands seem to explain the emergence of a hybrid organization (cf. Pache & Santos, 2010). These findings highlight that authors such as Brafman and Beckstrom (2006) and Shirky (2008) downplay the embedding of bureaucratic structure in government organizations (cf. Olsen, 2006).

Another reason why the transformation to a new organization of government communication should not be exaggerated is the fact that much police communication still takes place through more traditional means of communication such as face-to-face contacts, telephone conversations, email, and written letters (Meijer et al., 2013). This research focused on twitter communication but this type of communication, still, is only a small part of the total communication. Social media do not subsume all forms of communication but form an, at the moment rather modest,

addition (see also Crump, 2011). Studying this new sphere of digital communications is important as it is definitely growing but its impact should not be exaggerated as government organizations use many other channels of communication.

The hybrid model of external police communication raises important challenges. The first challenge concerns the management of communicative risk: Lack of gatekeeping may result in confusing, improper, or even damaging external government communications (Jacobson, 1999; Schillemans, 2012). Dutch police managers and communications offices have stressed that they fear that improper use could damage the reputation of the police or have a negative effect on police investigations when sensitive information leaks out (Meijer et al., 2013). In contrast, many police officers emphasize that the so-called Code Blue for police officers is a satisfactory basis for defining how police officers should use the new medium. In the Netherlands, the risks have not yet resulted in a choice to limit access to twitter but in drafting and implementing guidelines for the use of this medium. In Toronto, where twitter is also used in a decentralized manner, the changes in the communicative role of police officers have resulted in the decision to give all police officers a training in external communications. These examples illustrate the more general ideas that a focus on the new communicative role of public professionals (Jacobson, 1999) is an important way to limit the risks of the new organization of government communications.

The second challenge is the risk of not processing communicative signals adequately (Deutsch, 1963). Messages and indications from citizens and stakeholders need to be passed on to the correct person within the organization. The bureaucratic model of government communications has a clear overview of all inward communications, registers messages and monitors the follow-up to these messages. Sometimes, for example, information that crosses a certain police investigation is sent to a decentralized twitter account as the community police officers was not aware of the investigation [11]. Police organizations have not yet identified this risk and largely rely on existing procedures. However, collecting and processing information in a decentralized structure demands more attention to optimize internal processing of external signals. Guidelines and training of public professionals also need to focus on their role as the "nerves of the police" (cf. Deutsch, 1963).

At the same time, the hybrid model also provides important opportunities for organizational learning about external communications. Police officers have considerable autonomy but they are also followed by communication professionals and their superior officers. Control over organizational communications does not take place through ex-ante rules and systems but through ex-post monitoring. Communication professionals in various police departments have chosen to monitor the communicative behavior of police officers and to coach or even reprimand them [19]. Some police departments have even chosen to discuss remarkable tweets and to decide whether this type of communicate behavior is appropriate. These approaches enable the police to learn through trial and error and this type of learning strategy may prove to be quite useful in a technological environment that changes rapidly.

We would like to emphasize that this explorative research has a number of limitations. The most important methodological limitation is the exclusive analysis of practices of the Dutch police. Further research will need to investigate whether similar patterns can be found in other sectors and other countries. A second, methodological limitation is a focus on numbers of followers. Some researchers argue that retweets is a much better indication for actual use of twitter for communication. We doubt whether this is correct as someone may use a twitter account to obtain information but not diffuse this communication to others. Nevertheless, analyzing the numbers of retweets may be interesting to do in subsequent research. A third limitation is the exclusive focus on social media communications. This research does not assess the relative value of this type of communication vis-à-vis other communication channels. In follow-up research, the relative importance of social media needs to be investigated. A fourth limitation is the measurement of centralization, personalization, and connectedness. The content of the communications is not

included in this measurement and further research will need to reconstruct this content to provide an in-depth understanding of these communication patterns.

Overall, the research shows how the traditional idea of connecting internal and external communications and channeling internal communication through formal relations is challenged by the use of social media. Interestingly, the relative importance of organizational boundaries diminishes now that social media communications are being used for both internal and external communications. Social media patterns stimulate (vertical and horizontal) network communications and, as a consequence, each police officer becomes a "hub" in a network of internal and external communications. The study highlights that in the use of social media the police is both a network organization and a centralized bureaucracy, both formalized and informal, and both a closed and an open organization. The reconfiguration of government organization into a post-bureaucratic form is much more layered than some authors suggest: social media seem to bring us a hybrid model of government communications.

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1. The numbers between brackets refer to the interviews.

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