

# Social Media and the Police— Tweeting Practices of British Police Forces during the August 2011 Riots

**Sebastian Deneff**

Fraunhofer FIT

Schloss Birlinghoven

53754 Sankt Augustin

Germany

sebastian.deneff@fit.fraunhofer.de

**Petra S. Bayerl**

Erasmus University Rotterdam – RSM

Burgemeester Oudlaan 50

3062 PA Rotterdam

The Netherlands

pbayerl@composite.rsm.nl

**Nico Kaptein**

COT

Koninginnegracht 26

2514 AB Den Haag

The Netherlands

n.kaptein@cot.nl

## ABSTRACT

With this paper we take a first step to understand the appropriation of social media by the police. For this purpose we analyzed the Twitter communication by the London Metropolitan Police (MET) and the Greater Manchester Police (GMP) during the riots in August 2011. The systematic comparison of tweets demonstrates that the two forces developed very different practices for using Twitter. While MET followed an *instrumental approach* in their communication, in which the police aimed to remain in a controlled position and keep a distance to the general public, GMP developed an *expressive approach*, in which the police actively decreased the distance to the citizens. In workshops and interviews, we asked the police officers about their perspectives, which confirmed the identified practices. Our study discusses benefits and risks of the two approaches and the potential impact of social media on the evolution of the role of police in society.

## Author Keywords

Police; Twitter; UK Riots; Crisis Communication; Microblogging

## ACM Classification Keywords

H.5.3 Information interfaces and presentation (e.g., HCI): Group and Organization Interfaces – Collaborative computing, Computer-supported cooperative work

## General Terms

Human Factors

## INTRODUCTION

On Thursday August 4<sup>th</sup>, 2011, at about 6:15 PM, Mark Duggan, 29, was shot dead by the police in Tottenham in the Greater London area, during an operation aimed to arrest him. Questions about whether or not Duggan shot first and whether this was an act of self-defense started a debate that put the police operation into question. On

Saturday evening, August 6<sup>th</sup>, a crowd of about 300 people gathered at a police station. What started as a peaceful demonstration, turned into a forceful riot that spread in the following days across neighborhoods and to other cities such as Birmingham, Liverpool and Manchester. Buildings were set on fire and stores were looted. Thousands of people were arrested. Five people died and over 200 people injured; 186 of them police officers [2]. In London alone, 3,443 riot-related crimes were reported [25] which caused damages of over 200 million pounds [18]. During the riots, social media became a contentious topic of public debate, as offenders used different networks and mobile communication services to organize themselves—even leading to a discussion on governmental orders to shut off Twitter [14].

Yet, the UK riots also saw the entry of other users into the social media space. UK police forces likewise used Twitter extensively, in this case as an outreach channel to communicate with the public. During the riots, British police forces not only saw a tremendous growth in the number of Twitter followers. They also, for the first time, engaged with the public on such a large scale via social media, using Twitter as the main platform.

Twitter, as a microblogging system, allows its members to post messages (so-called ‘tweets’) of up to 140 characters. These tweets are displayed on a member’s page as a running stream of messages. Members can choose to follow others. Messages of people they follow are then displayed on their own Twitter page. Tweets usually are posted publicly, giving anybody the chance to access them, regardless of whether they are Twitter members or follow each other. As members can also directly react to tweets of others, Twitter becomes an interactive space of open communication. Given that effective communication is vital in containing and controlling crisis situations, Twitter with its free availability, possibility for dynamic and faced-paced dissemination and unrestricted reach seems imminently well suited for this task.

The appropriation of Twitter, and social media more generally, is, however, not straightforward for the police—not only due to extensive legal frameworks that bind police

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, to republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

CHI 2013, April 27–May 2, 2013, Paris, France.

Copyright © 2013 ACM 978-1-4503-1899-0/13/04...\$15.00.

behavior. The police also have a unique position in society. As the ‘coercive arm of the state’, they are the only organization that can enforce law and order in a population. At the same time, the police are dependent on the cooperation with the public to fulfill their role successfully. The police thus have to manage a continuous balancing act between repressing problematic elements and supporting and protecting the rest of society. For this balance, aspects such as image and legitimacy are vital for the function of police, yet are affected and challenged by novel computing systems. In this context, the openness of social media for appropriation makes technology adoption and use very challenging.

In the present paper, we investigate police use of Twitter and reactions by followers during the UK riots in August 2011. The events constitute a ‘natural experiment’ on technology-mediated group interaction during a large-scale incident. Our main focus is here on the appropriation of microblogging by police forces. For this purpose, we compared the Twitter communication of the London Metropolitan Police (MET) and the Greater Manchester Police (GMP). The choice of the two forces was driven by theoretical considerations: MET were at the center of the riots; GMP was less effected by the riots, yet, is known among UK police forces for embracing Twitter and has experimented with its use in campaigns before [8].

In the following, we summarize related work on police and social media in crisis situation more generally. We then describe the methods we applied in our study, followed by an integration of our quantitative and qualitative results. In the discussion we highlight respective benefits and challenges of the two communication approaches identified in our data and end with implications for police and other first-responder organizations, as well as the relevance of our findings for HCI research.

## RELATED WORK

Regarding the social media use of police forces, a 2011 trend study on ICT use in European police forces [6] points to social media as a topic with increasing relevance. Only recently have social media emerged as communication channels between the police and the public. While police forces in some European countries, such as the Netherlands and the UK, already made recognizable progress in adopting social media for their daily operations, police forces in other countries consider social media as the most important topic still coming.

Social media possess two potential benefits for police: They can support primary functions such as crime investigations and prevention, and they offer a faster, more direct path of communication with the public [6]. At the same time, social media can be a threat to police: not only do offenders employ social media to organize themselves, but they also open the police up to continuous scrutiny and comment by the general public. Although the police themselves discuss vigorously about the potential of social media for crisis

communication (e.g., [19, 5]), systematic (academic) investigations of social media adoption by public organizations such as police are still rare.

In HCI, there exists a broad set of studies and knowledge about the use of microblogging and social media in crisis contexts. The use of Twitter and comparable systems, for instance, have been described for the 2008 Sichuan earthquake [17], the 2009 earthquake in Haiti [21], the 2010 earthquake in Chile [15], as well as the 2009 Oklahoma grassfires and Red River floods [20, 28]. These studies show how citizens become a resource in crises situations and how systems can support the extraction of this information for emergency responders and others in real-time [9]. They further show that rumors spread and can be identified in social media [15] and how people in crises situations use social media for grassroots coordination and support. Looking beyond specific incidents, researchers have classified the public’s reaction on social during disasters [13].

For established crises response organizations, such as the police, these works present insights of what information to expect from the public and possible uses of them. They say, however, relatively little about how professional emergency response organizations can have their own voice and impact in this communication space. One of the main challenges, here, is to communicate successfully with the multitude of groups the police comes in contact with—from suspects to victims to supporting organizations [3]. Managing this *relational complexity* [4] successfully is very challenging, especially in highly dynamic, fast-paced and dangerous situations such as the UK riots. As social media are a very new means of communication—particularly in the repertoire of police forces—there is currently little guidance on how to approach and use them. At present, forces are required to experiment. Studying Twitter usage and its effects during extreme situations such as the UK riots has the potential to add new insights for first responders such as police, but also opens new avenues for research on crisis communication and system design.

## METHODS

### Data Collection

#### *Messages from the Police*

Our empirical database was the complete set of 547 tweets posted by MET and GMP police forces from August 2<sup>nd</sup> to August 13<sup>th</sup> that we continuously captured using Twitter search. We decided to include the days immediately prior to and after the riots to investigate whether police use of Twitter altered during the crisis. In addition to these messages, we also followed the further Twitter communication of the forces one month after the events to detect instances, in which previous events from the riots became relevant again.

### Messages from the Public

While our primary focus of analysis was on Twitter use by the police, we also captured tweets sent to the two forces by the public to put the police tweets into their context. For this purpose we made use of the Twitter-specific formatting of messages. To direct messages to a specific person, users typically insert an @-symbol before the name of the user. In our case addressees were @metpoliceuk and @gmpolice. Given the large number of messages (the website Peoplebrowsr.com listed 15,000 mentions for MET and 35,000 for GMP for a single day in that period) and the limitations of the Twitter API to search for that many messages, we combined a number of approaches to select public tweets. First, we captured all messages marked as ‘top tweets’ in Twitter, indicating messages that are especially popular. We further captured all messages that the police chose to reply to, if not already included in the database. A large number of tweets from the public were forwarded tweets (‘re-tweets’) that we excluded, as they did not provide additional information. Using these methods we captured a total of 6,125 tweets from the public. All these tweets and the ones from the Police had been openly published. They do thus not include direct private messages that people might have sent using Twitter, too.

### Number of Followers

We also captured the number of followers for the two forces from beginning of June to beginning of September 2011 as a general indication of popularity of the police forces and the possible spread of their communication. The data was collected using the website twittercounter.com. Interpolated values were removed prior to analysis.

### Workshops and interviews with the Police

For a more direct investigation of social media use by the police we used two workshops on social media as a tool for police communication, which included officers from both forces. In addition, we also conducted interviews with officers and a communication strategist from GMP actively twittering during the crisis.

### Data Analysis

Our interest in investigating tweets was to identify how police used Twitter to communicate with the public during the crisis. To allow for a comprehensive description, we analyzed messages on three dimensions: content, function, [11], and style. For content, we used open coding [22] to identify topics such as *advice*, *refute rumors* or *success story*. For function, we used 20 categories adapted from [1] (e.g., *informing*, *disconfirming*, *threat*, *thanks*). For style, we analyzed the *degree of formality* and *type of address*, both of which were coded with two categories (Table 1). We coded all 547 tweets from the police on these aspects.

Our interest in identifying how the police forces used Twitter throughout the crisis focused on two aspects: firstly, whether the two forces differed in their usage of the medium; secondly, whether usage changed over time. To compare the two police forces we operationalized Twitter

use as *quantity* (i.e., frequency of tweets) as well as *form* based on the four coding dimensions described above. Time developments were analyzed in two ways: (1) behavior of a force during the crisis compared to its behavior prior to the crisis and (2) changes within a force across consecutive days. Public messages were not systematically coded, but used in a selective way to illustrate reactions to police communications.

Dimension	Category	Definition
Degree of Formality	Formal	Written language style
	Informal	Close to spoken language, e.g., using slang
	Uncertain	Text is too short for a clear distinction
Type of address	Generic	Tweets do not name a specific addressee
	Direct	Tweets are addressed to a person by name (@x)

Table 1: Definition of style categories

## RESULTS

### Identifying Differences

#### Number of Messages Sent

A first glance on the number of messages suffices to see that the two forces used Twitter to a very different extend. From August 4<sup>th</sup> at 6:15 PM, the beginning of the riots, until Saturday, August 13<sup>th</sup> at 11:59 PM, MET posted 132 tweets. During the same period GMP posted a total of 371 tweets, almost 3 times as many. Not surprisingly, the frequency of tweets during the crisis increased dramatically in both forces: about one fifths of the messages were sent in the seven days prior to the crisis, the remainder in the seven days after the start of the riots. This ratio was nearly identical for both forces (18% vs. 20% for GMP and MET respectively for pre-riot messages, 82% vs. 80% after the start of the riots).

#### Communication Style, Content and Function

Comparing communication style, it becomes apparent that MET used a much more impersonal style than GMP. MET’s tweets were mostly formal tweets and directed to a generic audience rather than individual followers (cp. Table 2). Interestingly, this difference only emerged after the start of the riots ( $\chi^2$ -tests MET vs. GMP pre-riot are non-significant;  $\chi^2$ -tests MET vs. GMP after the start of the riots significant with  $p < .001$  for both dimensions). This suggests that the two forces did not differ in their communication strategies in general, but developed disparate reactions to the crisis (table 2).

Concentrating on the period after the start of the riots, the forces differed considerably in which topics they approached in tweets, starting with the range of topics. In total, we identified 49 unique topics. GMP covered 46, MET only 25. The same could be observed for function, where GMP covered 19 and MET only 13 functions of the 20 coded. Generally, communications by MET were thus much narrower in intent and much more focused compared to GMP.

MET police used Twitter primarily for informing the public about their own performance (31% of all tweets). To a lesser extent, Twitter was also used for information gathering from the public (17.8%) and information dissemination to the public (13.2%). Nearly one third of MET's tweets reported on arrests made during the riots (29.5%). Tweets with requests for help and reports on police actions accounted for only 7.8% of all messages, and other topics appeared even less.

<b>Formality</b>				
	<b>Category</b>	<b>TOTAL</b>	<b>Pre-crisis</b>	<b>During crisis</b>
MET	Formal	151	96.9%	93.0%
	Informal	10	3.1%	7.0%
GMP	Formal	163	80.0%	36.2%***
	Informal	209	20.0%	63.8%***
<b>Type of Address</b>				
	<b>Category</b>	<b>TOTAL</b>	<b>Pre-crisis</b>	<b>During crisis</b>
MET	Generic	158	90.6%	100%***
	Direct	3	9.4%	0%***
GMP	Generic	234	92.3	56.7%***
	Direct	138	7.7%	43.3%***

\*\*\* pre-post comparison  $\chi^2$ -tests significant at 1%-level

**Table 2: Comparison of style dimensions**

For GMP, the most important function of Twitter seemed to reassure the public that all was well (25% of all tweets), as the most frequent type of tweets sent by GMP were messages of reassurance, noting that everything was calm and the public should not worry (16.5% of all tweets). Similar to the MET, the secondary function was information gathering and information dissemination (15.1%, 12.5%). This was, followed by indicating police performance (11.5%). Reports of arrests represented 10.3% of all tweets. The third frequent topic was meta-communication about the forces' own Twitter use (7.3%).

The quantitative analysis of messages suggests that the two police forces followed very disparate strategies in their adoption of Twitter during the crisis. MET used Twitter in a rather narrow way, mostly to support primary police functions of keeping law and order. The communication style remained formal and directed at the general public. GMP in contrast used Twitter in a much broader way and also with a much more personal touch. Where MET thus emphasizing the separation between police and public, GMP aimed to establish a close personalized relationship. MET's communication can thus be described as an *instrumental* strategy, while GMP followed an *expressive* approach [26].

### Detailed Analysis

To verify the existence of the two disparate approaches and to obtain a deeper understanding of the differences between the two communication strategies, we conducted a further qualitative analysis of the messages. Firstly, we compared how forces formulated their messages when communicating the same topics. Secondly, we also identified unique topics and functions in each force using a qualitative text-based analysis.

### Reporting Police Performance

The first tweet from MET dealing with the riots stemmed from Sunday, August 7<sup>th</sup> at 11:32 AM and reported the number of arrests made following the first riots in the previous night:

*MET: There have been 42 arrests so far following last night's disorder in #Tottenham. Full statement: <http://bit.ly/phSbcz>*

This type of message became typical for MET over the following days, and—as noted above—the prominent type of communication to the public. During the riots MET soon established a specific format for these messages; only the numbers were changed. These messages provided a constant update on the overall progress of police arrests. Nearly exactly one week after the first message, MET posted the final message of this type in the batch that we reviewed:

*MET: The Met has now arrested 1401 people in connection with violence, disorder and looting. 808 of these have been charged.*

GMP provided similar updates on the arrests, although less frequently. In contrast to MET these messages did not have a fixed format, as these messages from Saturday, August 13<sup>th</sup> and Wednesday, August 10<sup>th</sup> show:

*GMP: 21 more arrests in last 24hrs. Total arrests now 210 and rising.*

*GMP: Two people already jailed for their part in last night's disorder - swift justice*

As these examples show, GMP used a less formal way of communicating police performance, adding future expectations such as “and rising”, in the first, and “already” in the second message. GMP also commented on the progress as “swift justice”.

### Reports of Police Action on the Street

Related to messages on police performance, were messages reporting concrete police actions on the street. MET, for instance, reported on Monday August 8<sup>th</sup>, 0:45 AM and Tuesday, August 9<sup>th</sup>, 2:36 AM:

*MET: Police are responding to a significant amount of criminal activity across London and are deploying officers to tackle it.*

*MET: Armoured vehicles used to support officers on the ground to stop disorder by pushing back over 150 people in Lavender Hill area.*

The function of these tweets can be seen in reassuring the public that the police ‘is on top of things’, to a smaller extent to demonstrate to potential offenders that police will react if needed (threat function). Equivalent messages were absent in the communication by GMP. Indeed, despite general promises made early in the crisis and later also to followers directly to provide updates on Twitter, the first information message did not appear until Tuesday night at

7:19 PM—and this message pointed only indirectly to the start of the riots:

*GMP: GMP actively trying to arrest anyone involved in disorder. Asking people to stay out of harms way while we apprehend criminals*

The subsequent messages asked the public to report people involved in the disorder and mentioned seven arrests. Two further messages addressed the perpetrators, and one linked to police contact information. At 9:36 PM GMP announced a press conference without giving further detail. At 0:10 AM, GMP issued the message below which points to a video of a traditional police media update:

*GMP: Assistant Chief Constable Garry Shewan said: "Over the past few hours, Greater Manchester Police has been faced ... <http://bit.ly/q8C7mW>*

Still, during this period of the riots, numerous followers sent supporting messages, such as the following message that became a top tweet:

*USR13: Dear @gmpolice , the good people of Manchester are behind you 100%. Do what it takes to suppress this.*

Followers also positively commented on the response of GMP actions on the street and expressed their gratitude for prompt reactions. Only later (Saturday, August 13<sup>th</sup>) a tweet asking directly for feedback led followers to express their disappointment. Many would have hoped for more information, such as a journalist who found the Twitter communication during the riots “absolutely invaluable”. In reaction to those messages, GMP finally provided an explanation for their silence during the riots on Tuesday.

*GMP: when disorder started it was all hands on deck so couldnt get onto Twitter immediately to update people, but appreciate feedback about this*

In another tweet GMP also commented on a follower’s suggestion that the police were trying “to deliberately downplay” the riots on Twitter to stay in control of social media. GMP refutes this accusation, pointing to the difficulty of handling the riots and communicating on Twitter at the same time:

*GMP: @USR16 certainly did not mean to downplay things. Was hard to Tweet and try and deal with disorder, but do take this on board*

#### **Providing Reassurance**

GMP put considerable effort into fighting rumors that suggested riots in Manchester and into assuring that ‘everything is calm’. Especially, in the beginning of the crisis no clear information existed on whether or not the riots had spread to Manchester. The GMP issued messages such as the following on Monday night that addressed such rumors:

*GMP: No disorder or riots in Manchester. Speculation about ongoing riots totally inaccurate. GMP monitoring the situation.*

In addition to the “all calm” message, they further indicate that the police monitors the situation, thus indicating control of the situation. This message was very well received by followers, who commented on this with “good news”, “thank god” or “thankfully”. Followers put great trust in such messages, as this reply shows:

*USR7: @gmpolice Thank you much appreciated Will sleep more easily.*

GMP not only issued general messages of reassurance, but also tried to fight rumors. One way was to comment directly on news reports:

*GMP: BBC reports of rioting/disturbances in Greater Manchester inaccurate. No rioting whatsoever, no major disturbances. All quiet at moment.*

Further, GMP addressed concerns of Twitter users directly, as shown in the following dialogue:

*USR1: @gmpolice is it true that chaos has started in town, carphone warehouse has been done over already??*

*GMP: @USR1 nothing at the moment follow us and we will let you know if there is anything to report*

As reported earlier, the promise of updates on Twitter was repeated frequently and reiterated to many people in direct messages. For MET, messages of reassurance were less frequent and not as diverse in nature. In their messages, MET rather underlined the strength of their force, for instance, by naming the number of officers available, instead of offering concrete reassurance:

*MET: In the next 24 hours there will now be 16,000 police officers on duty in London.*

Again, for MET reassurance and threat seemed closely linked together.

#### **Crowd Sourcing (Information Gathering, Requests for Help)**

Both forces used Twitter extensively to support investigations and to seek information on offenders. Both forces also used the photo sharing site Flickr to publish photos of perpetrators captured on CCTV. The general public was asked to help in the identification of these people. Moreover, they regularly provided phone numbers and websites where citizens could submit information:

*MET: New CCTV images of people police need to identify on our Flickr page <http://bit.ly/rnax8U> Pls look and RT*

*GMP: Can you you help identify these people? Check our Flickr gallery of wanted suspects and call 0800 092 0410 <http://bit.ly/oyfZiN>*

The above tweets again highlight the difference in tone between police forces. GMP addresses the reader directly with a question, while the MET message is a formal

statement that only indirectly addresses the reader as helper in police's "need to identify". This disparity in addressing followers remained a consistent feature between MET and GMP tweets. On Friday, August 12<sup>th</sup>, GMP further promoted their crowd sourcing efforts and launched a campaign entitled 'shop a looter'. Large posters in the city showed the faces of suspects and asked people to help with their identification. Twitter was used to announce the campaign and also to introduce the hashtag #shopalooter:

*GMP: GMP launches #shopalooter campaign. Give us info and make the looters pay for their crimes.. Upload info at <http://bit.ly/c3q1qk>*

Yet, information gathering was not a one-way process. Both forces provided phone numbers or links to their websites where the public could submit information. They also directly asked for hints to be sent via Twitter. In addition, people actively submitted hints as Twitter messages.

*USR2: @gmpolice gmpolice thought you might be interested in this facebook group <http://is.gd/V1JHez>*

GMP replied to such information and provided a short notice that the information had been taken into account, often together with a personal thank you note:

*GMP: @USR2 We have seen it and the information has been passed on. Thank you*

A scan of our database indicates that MET received similar messages:

*USR3: RT this mug! Get him nicked "@USR5: Some dick has taken pics of himself with looted gear in #Tottenham [http://\[URL anonymized\]](http://[URL anonymized])*

*USR4: @metpoliceuk [http://\[URL to the tweet by USR3\]](http://[URL to the tweet by USR3])*

MET, however, did not reply to such messages in their feed, leaving open the question whether this information had been dealt with.

#### *Disseminating Information*

Both forces used Twitter also to disseminate information, mostly as URLs to online resources. MET tweets, for instance, indicated where to apply for compensation or where to new information for businesses:

*MET: DirectGov advice on compensation claims for those who've suffered loss/damage as result of disorder: <http://bit.ly/pNe4HW>*

GMP issued similar messages, for instance, about the status of public transportation:

*GMP: Anyone wanting to check whether public transport is still running should visit [www.tfgm.com](http://www.tfgm.com) and/or [metrolink.co.uk](http://metrolink.co.uk)*

Most of the tweets by GMP in this category, however, were direct answers to questions from the public. In the

following example, a business requested police presence, and GMP provide a phone contact:

*USR31: @gmpolice As a Manchester Business, I request Police presence stationary in the NQ between 9-11pm. Pls DM me to discuss or call me.*

*GMP: @USR31 0161 872 5050. Thanks*

Comparing this communication with the previous business update by MET again shows a prevalent difference: GMP engaged in one-to-one interactions with their followers, MET did not. Additionally, GMP provided a greater variety of information, such as how to contact the police or how to provide legal information:

*USR29: @gmpolice Unclear here what the precise criminal offence is of two youths sentenced for 'swearing'. Can you clarify? Thanks*

*GMP: @USR29 an offence under Section Four of the Public Order Act*

This again reiterates the finding in earlier sections that GMP attached a broader role to Twitter than MET.

#### *GMP-Unique Topics*

As mentioned above, we found a number of topics in GMP that had no pendants in MET. These were the addressing of perpetrators, name and shame, discussions of GMP's own Twitter use, and purely social promotions of the GMP police force.

*Addressing perpetrators:* As mentioned above, GMP directly addressed perpetrators in messages with the intention to threaten and thus deter them from further violence. Such threats often warned that perpetrators would be identified through CCTV recordings and online investigations, or simply referred to recent successes:

*GMP: Captured lots of criminals on CCTV - we will identify you and we will be coming for you*

*GMP: If you have been using social networking sites to incite disorder, expect us to come knocking on your door very soon*

*GMP: Just arrested two men found with fuel can, balaclava, ball bearings - if you want to commit disorder, we'll lock you up*

Such messages are without counterparts in MET.

*Name and Shame:* Another type of tweets only to be found with GMP was a campaign we refer to as "name and shame". In these messages, GMP released full personal details of perpetrators convicted in fast trials after the riots (i.e., name, date of birth, place of residence). GMP announced the naming and shaming on Wednesday night:

*GMP: Criminals still going through the courts now - tomorrow they'll be named and shamed*

On Thursday, GMP released the following messages:

*GMP: We promised we'd name all those convicted for their roles in the disorder - here we go ...*

*GMP: Mark Smith (born 02/02/1980), of Manchester Street, Oldham, jailed for eight months for stealing clothes [name and personal details fictitious]*

As the following messages show, the responses to this campaign were mixed:

*USR9: In fact @gmpolice tweets are fascinating. Appears some rioters given longer sentences for swearing at police than assault*

*USR10: @USR13 @gmpolice surely this violates human rights. What happened to innocent b4 proven guilty. We are no different to tyrant nations*

*USR11: @gmpolice think it's great your naming & shaming. These people lost any "human rights" the minute they got involved in the riots.*

There are questions about the legality of this approach, the personal content, the choice of publishing them on Twitter, and any many more. GMP addressed these questions by referring to the public nature of court decisions in the UK:

*GMP: Lot of debate about publishing details - courts very clear, justice should be done publicly*

*GMP: @USR12 legally bound to publish address and dates of birth so no-one of the same name can be misidentified as the culprit*

Despite these straight answers, GMP dropped the practice of 'naming and shaming' after the publications of only ten names; without comment. Interestingly, the topic erupted again in messages of followers, long after the event on August 20<sup>th</sup>, after one of the people named in a GMP tweet was acquitted in second instance, because additional evidence put the identification from CCTV into question. Tragically, during his time in custody, his home had been set on fire—although it remained unclear whether this was indeed a direct reaction to the 'name and shame' campaign. Followers questioned GMP about the issue, and GMP posted the following message:

*GMP: After consulting with CPS, the case of XXX YYY, 18, charged with criminal damage, recklessly endangering life has been discontinued.*

MET, despite direct requests from the public, as shown below, did not engage in a similar campaign:

*USR14: @metpoliceuk You should tweet their names like @gmpolice have been doing. #NameAndShameCriminals*

*Meta Communication (Asking for Feedback and Discussing the Right Tone):* On Saturday, August 13<sup>th</sup>, GMP posted the following message:

*GMP: Mum-of-two, not involved in disorder, jailed for FIVE months for accepting shorts looted from shop. There are no excuses.*

This message triggered a massive reaction that made the tweet the most discussed during the riots. It also sparked a

discussion on police Twitter communication in general. Out of the many messages of criticism, the following two represent the public opinion fairly well.

*USR17: What abt her kids? RT@gmpolice Mum-of-2, not involved in disorder, jailed for FIVE months for accepting looted shorts. There are no excuses!*

*USR18: That last @gmpolice tweet: wrong sentence, wrong tone, wrong everything. Pissing away goodwill collected over last week.*

A blogger described the reasons for this critique in detail: "The tweet shows enthusiasm, maybe even glee, over the length of the sentence. Particularly with the emphasis of 'FIVE months' and 'There are no excuses!' It is not the place of the police to comment on, recommend or celebrate the length of a sentence or the defence used in court" and continues arguing that the police "should remain detached and professional when it comes to presenting information to the public" [24]. A Google search for the tweet listed 10,300 results ranging from blogs to major newspapers that commented on the event. About an hour after the posting of the original message, GMP deleted the tweet in question and posted the following messages:

*GMP: Apologies for any offence caused from last tweet. Comment was not directed at individual person.*

*GMP: Thanks to all for feedback messages - all your comments have been noted. You are right, it is not our place to comment on sentences.*

*GMP: appreciate all feedback. Changing tack slightly - we really want to know what you think we've got right or wrong this week on Twitter*

In the aftermath, GMP received numerous questions and comments on their Twitter communication. The informal way of communication was discussed, as was the problem of having different officers writing messages that might have different tones. The response was overwhelmingly positive. Users asked for the continuation of the more 'human' police communication approach, showed empathy for making a mistake, and were forgiving about the tweet:

*USR19: Hats off to @gmpolice embracing social media. Someone made a mistake, tweet removed and apology issued. FFS it's human behaviour.*

*USR23: @gmpolice everything right, more transparency = more faith in you guys*

As in the previous example of the contentious name and shame tweet, the sentence for the mother was diminished, and followers asked GMP for a statement. In this case, GMP did not react. While there were positive words of encouragement and gratitude for MET as well, there was no communication about the Twitter messages on a meta level. We could also not find messages by followers that commended the force as 'human'.

*Promoting Police Culture:* Already before the start of the riots, GMP posted messages that were not directly related to

current police operations. For instance, GMP posted a weekly survey question asking followers to vote on police practices via hashtag. The results were then posted the following week:

*GMP: This week's q: Should @gmpolice send a crime scene investigator not PC if it is more likely to lead to arrest? Reply #gmpyes or #gmpno*

GMP also promoted the anniversary of their police museum and other social events related to the police. They posted links to images showing historic police cars and GMP officers of the past. For all these messages, they received some amount of feedback and questions. Noteworthy for the reactions it elicited was another tweet, posted on Saturday, August 13<sup>th</sup>:

*GMP: It won't be long before Jack is helping out, he is training hard. flic.kr/p/a19R3N*

Jack was a young police dog currently in training. Discussions ensued and followers asked questions about its race and age. Later that evening, after several additional tweets about Jack, GMP also issued a video of the dog. On August 15<sup>th</sup>, GMP posted a message in which the shooting star Jack could be seen at the anniversary of the museum:

*GMP: So who wants to meet Jack? He will be making an appearance at the museum's 30th anniversary tomorrow at 14:30. flic.kr/p/a19R3N*

Again, this type of personal, purely social use of Twitter did not take place with MET.

### **Number of Followers**

With the start of the riots, both police forces increased their number of followers. MET increased the number of followers from about 4,000 to more than 42,000. GMP increased its followers from below 23,000 to more than 100,000. This record number made the Greater Manchester Police, to the best of our knowledge, the world's second most popular police force on Twitter—only superseded by the U.S. FBI, which moreover operates on a national level, in a country with a much greater population, and is internationally renown. Intriguing about the follower numbers is that GMP, as the smaller police gained, a considerable following nearly 'over night'. Their follower numbers were moreover 2.5 times as high as the ones of MET police. At the time of writing, i.e., twelve months after the events, both forces sustained their followers, with @gmpolice now with 109,000 followers—an indicator for the relevance and interest the public has in police communication. The MET, in the meantime, has seen a larger increase and currently has more than 74,000 followers. This indicates that communication between police and public is also sustainable in the long run, especially when considering the dynamics in unfollow behavior [10]. This is especially remarkable as in our case there is no reciprocity in the relation between poster and follower.

### **Workshops and interviews with Police Officers**

To this point our analyses relied solely on the messages posted on Twitter. This left open, in how far the disparate communication approaches were strategies or 'spur-of-the-moment' decisions. We thus further wanted to learn about the forces' subjective experiences and perspectives and present and discuss our findings with them.

In cooperation with GMP, we organized on-site interviews in the communication offices and also a workshop on the topic of social media as a communication tool for the police at their police academy. The workshop was attended by people of our team as well as by 14 police officers from the UK, other European countries and Canada, including 5 officers from GMP. We asked the officers to share their experiences about the communication during riots and present their overall social media strategies. We also discussed with them our analysis and findings.

At the invitation of the European Police College (CEPOL), the first author participated in CEPOL's first course on social media that took a full week and was attended by about 40 police officers from all over Europe. At the seminar, we had the opportunity to speak to social media specialist officers not only from the MET but also from the National Policing Improvement Agency that oversees and moderates change processes in UK police forces. Again, we listened to the officers' experiences, presented our findings and discussed them.

As a result, we learned that GMP had developed an overall communication strategy that included the comprehensive use of social media not only by using the main Twitter account that we studied but also by operating 60 additional localized Twitter accounts [8]. Using social media, GMP's local officers report about their daily work to their local communities. During the riots, fighting rumors, establishing a trusted voice and the support of intelligence gathering were the main priorities when using Twitter. Here, the #shopalooter campaign was a huge success to support investigations. As also shown in our examples, GMP had to handle issues of overstepping boundaries, the legality of publishing information and to learn when to engage and how to resource it. The need for speedy responses and the availability of respective resources were key challenges in managing the social media communication during the crisis. Yet, for both communication and investigative social media efforts, they could benefit from their past experience with the localized accounts and officers intimately familiar with Twitter communication.

For MET, the use of social media during the riots could not be based on similar extensive prior experience. The way in which social media was used, showed to be highly effective to support their work, nevertheless. Especially the use of Flickr to post images of suspects was highly successful. Here, Twitter served as a means to promote information on Flickr. Tweets using image links were 're-tweeted' at least 8,500 times. Within some hours Flickr images were viewed

4.3 million times. Investigations, especially as press attention decreased, were significantly supported by such identifications through social media.

In discussions at the workshops we also learnt that other forces, including GMP, used social media in the ways that MET did, when first introducing social media. This practice was based closely on ways in which police forces typically publish press information.

**DISCUSSION**

**Instrumental vs. Expressive Usage**

Our analysis on police crisis communication during the UK 2011 riots on Twitter identified two different approaches to engage with the public: MET preferred a formal, depersonalized style which emphasized the gap between the police and public. Messages were largely instrumental, either seeking or providing information or demonstrating police performance (e.g., number of arrests made, officers on the street, or requests for information). GMP, in contrast, developed a highly personalized, informal style including direct interactions with individual followers. Social messages of support, reassurance of the public and meta-discussions about the force’s way of Twitter use, for instance, were unique to GMP. Based on [26], we refer to these styles as *instrumental* versus *expressive* usage strategies. Interestingly, the different styles only emerged after the start of the crisis. They can therefore be seen as direct expressions of disparate approaches to crisis communication on Twitter.

**Benefits and Challenges of the Two Strategies**

The police can perceive itself as subservient to the public, emphasize its separation from society as regulated by abstract rule rather than public fiat, or take an active role in influencing public processes [12]. In choosing an instrumental strategy, MET clearly opted for separation in its interaction with society on Twitter, while GMP decided for an active role and therefore adopted an expressive strategy. Our analyses and the subsequent discussions with officers highlighted clear benefits and challenges of the two strategies which are summarized in table 3.

How the public reacts to police actions depends on the relationship between police and public, and more specifically on the image of the police within a society [16, 27]. While in more traditional media, these disparate approaches may not be as visible, the fast-paced, dynamic, and open nature of Twitter throws disparate communication strategies into contrast. Public reactions are strong and first responders such as the police need to be aware of this greater volatility and vulnerability of public relations. The informed choice of a communication strategy is here an important step to prevent loss of legitimacy and trust, as well as public backlashes.

**Relevance for HCI**

In HCI, researcher have described how users ascribe meaning to technology and called for designs that support

many forms of appropriation (e.g. [7]). Twitter can surely be described as a system that implements this concept with its limited prescriptions for use. In the context of the police, such open system meets an organization with a complex set of rules and trained practice. Our results point to the need for organizational change and practice and policy development, when police forces adopt these interactive tools highly open for appropriation. Aspects such as image and legitimacy are vital for the function of police, yet are continuously affected and challenged by novel computing systems.

	<i>Instrumental</i>	<i>Expressive</i>
<b>Benefits</b>	Effective support of primary policing functions; lower maintenance than expressive strategy; no interference in internal decisions by public	Create closer relations to the public; increases following and thus possible reach; creates greater tolerance for mistakes
<b>Challenges</b>	Loose relations with public; lower following, and thus lower potential to harness resources	High maintenance; overstepping of boundaries easy; easy polarization of public opinions

**Table 3: Benefits and challenges of strategies**

Consequently, HCI for crisis information systems for the police and other emergency responders is not only a technological problem or a problem of immediate man-machine interaction, but requires ‘zooming-out’ to a wider perspective [23] that takes into account policy designs, culture and the interaction and desired relation with the public. Understanding appropriation practices of social media by early-adopting organizations, such as the British police in our case, needs to inspire and influence the development of future tools and their use.

**CONCLUSION**

In this paper we analyzed Twitter use by the Metropolitan and Greater Manchester police in the run-up and during the UK riots in August 2011. As we found, even though both forces used the same communication tool, their practices during the crisis differed detrimentally.

Making these different options visible is a basis for future research to widen and deepen our understanding of social media in crisis communications. It also provides a basis to support first responders, such as police forces in our case, to make informed decisions on how to adopt and use social media effectively.

Our study goes a first step into detailing how disparate adoption and usages patterns of Twitter emerge during crises and it further provides a first indication of the effects on image and relationship with the public. Our data indicates that choosing an instrumental versus an expressive strategy may lead to different relationships between police and public. Given the dependence of police on public cooperation, the choice may well impact police performance in the short- and long-term.

For HCI, our study indicates that tools open for appropriation increase the need for professional organizations to develop strategies and policies on how to adopt them and to make them fit within in the given context.

#### ACKNOWLEDGMENTS

We would like to thank all our interview partners and workshop participants, as well as the respective police forces and our project partners, for their invaluable support in this research. This work is partially funded by the European Commission in the context of the COMPOSITE project (FP7 contract no. 241918).

#### REFERENCES

1. Bunt, H. The DIT++ taxonomy for functional dialogue markup. Proc. *AMAAS'09 Workshop: Towards a Standard Markup Language for Embodied Dialogue Acts* (2009)
2. CBC News. Getting to the root of the U.K. riots. (2011) <http://www.cbc.ca/news/world/story/2011/08/09/f-uk-riots-faq.html>
3. Chermak, S. and Weiss, A. Maintaining legitimacy using external communication strategies: An analysis of police-media relations. *J. of Criminal Justice*, 33,(2005).
4. Child, J. and Rodrigues, S. B. How organizations engage with external complexity: A political action perspective. *Organization Studies*, 32(6), (2011), 803-824.
5. Coleman, A. Twitter at the heart of communities. (2011) <http://connectedcops.net/?p=3931>
6. Deneff, S., Kaptein, N., Bayerl, P. S., et al. ICT Trends in European Policing. The COMPOSITE Project. (2011) [http://www.fit.fraunhofer.de/content/dam/fit/de/documents/composite\\_d41.pdf](http://www.fit.fraunhofer.de/content/dam/fit/de/documents/composite_d41.pdf)
7. Dourish, P. *Where the Action Is: The Foundations of Embodied Interaction*. The MIT Press (2001).
8. Greater Manchester Police. A day in the life of GMP on Twitter. (2010) <http://youtu.be/aulazCNbaDQ>
9. Guy, M, Earle, P, Ostrum, C, Gruchalla, K & Horvath, S. Integration and Dissemination of Citizen Reported and Seismically Derived Earthquake Information via Social Network Technologies. *Advances in Intelligent Data Analysis IX, Lecture Notes in Computer Science*, 6065, (2010), 42-53.
10. Haewoon Kwak, Hyunwoo Chun, and Sue Moon. Fragile online relationship: a first look at unfollow dynamics in Twitter. In *Proc. of CHI'11*, ACM (2011).
11. Halliday M.A.K. *Learning how to mean*. Edward Arnold (1975).
12. Herbert, S. Tangled up in blue. Conflicting paths to police legitimacy. *Critical Criminology*, 10(4), (2006), 481-504.
13. Hughes, A., L. Palen, J. Sutton, S. Liu, & S. Vieweg. "Site- Seeing" in disaster: An examination of on-line social convergence. In *Proc. ISCRAM'08*.
14. Hughes, M. and Sanchez R. London riots: Met chief Tim Godwin considered shutting off Twitter. (2011) <http://www.telegraph.co.uk/news/politics/8704239/London-riots-Met-chief-Tim-Godwin-considered-shutting-off-Twitter.html>
15. Mendoza, M., Poblete, B. and Castillo, C. Twitter under crisis: Can we trust what we RT? *1st Workshop on Social Media Analytics SOMA '10* (2010).
16. Murphy, K., Hinds, L., and Fleming, J. Encouraging public cooperation and support for police. *Policing and Society*, 18(2), (2008), 136-155.
17. Qu, Y., Wu, P. and Wang, X. Online Community Response to Major Disaster: A Case Study of Tianya Forum in the 2008 China Earthquake. In *Proc 42nd Hawaii Int'l Conf. on System Sciences*, (2009), 1-11.
18. Reuters. Riots to cost over £200 million - ABI (2011) <http://reut.rs/peJcRx>
19. Slater, S. Social media to the rescue When disaster strikes. (2011) <http://connectedcops.net/?p=4650>
20. Starbird, K, Palen, L, Hughes, A and Vieweg, S. Chatter on the red: What hazards threat reveals about the social life of microblogged information. In *Proc. of CSCW'10* (2010), 241-250.
21. Starbird, K. and Palen, L. (2011). "Voluntweeters": Self-organizing by digital volunteers in times of crisis. In *Proc. CHI'11*, ACM Press (2011), 1071-1080.
22. Strauss, A. and Corbin, J. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, 2<sup>nd</sup> edition. Sage (1998).
23. Suchman, L. *Human-Machine Reconfigurations: Plans and Situated Actions*. Cambridge Univ. Press (2007).
24. Sumpster, S. Police on Twitter. (2011) <http://www.latentexistence.me.uk/police-on-twitter/>
25. The Mirror. London riots: More than 2,000 people arrested over disorder. <http://www.mirror.co.uk/news/uk-news/london-riots-more-than-2000-people-185548>
26. Thomas, J.C. and Kellog, W.A. The Necessity of Expressive Communication in Organizations. (2001). <http://www.truthtable.com/ExpressiveCommunicationBuildsMutualTrust.html>
27. Tyler, T. R. and Fagan, J. Legitimacy and cooperation: Why do people help the police fight crime in their communities? *Ohio State J. of Criminal Law*, 6, (2008), 231-271.
28. Vieweg, S, Hughes, A, Starbird, K, & Palen, L. Microblogging during two natural hazards events: What Twitter May Contribute to Situational Awareness. In *Proc of CHI'10*, ACM Press (2010), 1079-1088.