DCAF Geneva Centre for Security Sector Governance

THE USE OF VIDEO SURVEILLANCE FOR POLICE ACCOUNTABILITY: BENEFITS, LIMITATIONS, AND CONSIDERATIONS

THEMATIC BRIEF

ABOUT THIS THEMATIC BRIEF

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NOTE

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BACKGROUND

Increased calls for evidence-based policing, together with technological advancements in recent years, have led to a rise in the use of surveillance tools such as Closed-Circuit Television (CCTV), dash-cams, and body-worn cameras (BWCs) in policing, both for accountability purposes and for crime prevention and responses.

According to the theory of situational crime prevention, formal surveillance is designed to increase the perceived risk level associated with committing a crime. Hence, video surveillance tools are said to reduce both crime rates and police misconduct. However, the effectiveness of surveillance has often been questioned and concerns have been raised repeatedly about privacy, wrongful criminalization, the laterality of police officers' access to footage, erratic and selective use of camera technology, and the erosion of civil rights.

This Thematic Brief examines research on the use and impact of the application of surveillance tools on police-citizen interactions, specifically aiming at curbing or preventing police misconduct and improving therefore the accountability of police services. The aim of this analysis is to discuss the extent to which surveillance tools bring the hypothesised benefits, the disadvantages that arise out of their use, and how these issues can be overcome. Focusing on CCTV and BWCs, and with reference to dash-cams, this paper will explore the effect of surveillance on police accountability and the number of committed crimes or misconduct. Finally, to contribute to the wider discussion around surveillance techniques and to promote the responsible use of video surveillance tools, several examples of common practices for law enforcement agencies are provided.

Furthermore, the use of so-called "civilian filming", mostly done via smartphones by ordinary citizens, is also briefly discussed, with a focus on how and to what extent it has affected police-citizen interactions and police accountability.

Please note that this Thematic Brief was developed to provide basic research and considerations to both law enforcement agencies and external oversight organisations, at state and non-state levels, such as civil society organisations, media, academia, and formal oversight bodies. The findings detailed in the Brief are based on the evidence discussed and can be used as a basis for the development of policies and procedures governing the use of video surveillance tools. We advise system operators to consider the findings in this Brief to safeguard both privacy and security. Last but not least, the findings can be applied to all law enforcement agencies, including the police, border police, gendarmery, or any other state security agency with police powers.

KEY CONCEPTS

Formal surveillance: A type of surveillance that aims to deter potential offenders through the deployment of security personnel or the introduction of some form of technology, such as CCTV (Welsh et al., 2010).

Use of force: The amount of effort required by a police officer to compel compliance by an unwilling subject (International Association of the Chiefs of Police, 2001). While it is inevitable that officers use force in certain situations, they should only use the amount of force necessary. When a police officer responds to a situation with an amount of physical force that is neither proportional to the circumstances nor necessary in order to carry out his/her duties safely and efficiently, he/she has used excessive force (Geneva Centre for Security Sector Governance, 2019).

Police misconduct: Illegal or unethical actions by police officers that do not directly benefit their material needs but are detrimental to the image of policing, including internal misbehaviour (Geneva Centre for Security Sector Governance, 2019).

Police accountability: A system of internal and external checks and balances aimed at ensuring that police forces carry out their duties properly and are held responsible if they fail to do so (United Nations Office on Drugs and Crime, 2011).

Principle of proportionality: Actions interfering with qualified rights, such as the right to privacy, should not be more severe than necessary, i.e. the least intrusive means should be used.

1 INTRODUCTION

Public surveillance systems are increasingly used by law enforcement agencies. Technological advancements over the past decades have led to the rapid development of surveillance technology, changing the way in which the police and the public interact. While reasons for initiating surveillance projects vary from country to country, the underlying assumption is that surveillance is beneficial to both the police and the communities that they serve (Hedberg et al., 2017). Surveillance tools are installed with the intention of preventing and deterring crime, collecting evidence for investigations and prosecutions, and providing virtual guarding (Vigne et al., 2011). Moreover, surveillance is said to increase police accountability and transparency, reduce police use of force, and provide an "objective" account of events (Hedberg et al., 2017). It is assumed that surveillance improves civilian-police relations: if the police are perceived as more legitimate due to their greater competence or procedural justice, citizens should be more cooperative and trusting (Hedberg et al., 2017).

To understand the impact surveillance can have on the police and citizens alike, it is important to consider the theory of situational crime prevention. Situational crime prevention can be defined as "a preventive approach that relies not upon improving society or its institutions, but simply upon reducing opportunities for crime" (Clarke, 1992, p. 3). This form of prevention does not aim to change an offender's motivation or intent but to alter the situational factors that facilitate crime. It is assumed that the likelihood of misconduct decreases when the certainty, severity, and

swiftness of punishment increases (Hedberg et al., 2017).

In this regard, 25 techniques that reduce the opportunity for crime have been identified and classified into five categories: increase of the effort required to commit a crime, increase of the associated risk, reduction of rewards, reduction of provocations, and removal of excuses (Tilley and Sidebottom, 2014). Public surveillance technology represents a type of formal surveillance and is said to increase the risk of committing a crime (Cornish and Clarke, 2003).

The presence of video surveillance deters potential offenders as it increases the subjective probability that they will be detected and therefore punished (Welsh et al., 2015). Surveillance encourages the potential offender to reassess the expected costs and benefits connected to engaging in a criminal act (Tilley and Sidebottom, 2014). Consequently, a citizen may be deterred from stealing a car or a police officer may be deterred from accepting a bribe "because of the cognizance that someone else is watching" (Ariel et al., 2015, p. 516).

There has been a clear, rapid, and global spread of the use of CCTV, dash-cam, and BWC tools, especially in high-income countries. Programs deploying video surveillance have either begun out of necessity, for example, as a reaction to long-standing records of corruption or abuse of power in law enforcement agencies, or as an attempt to prevent misconduct. According to research conducted by the Carnegie Endowment for International Peace (2019), at least 75 out of 176 countries are using artificial intelligence (AI) technologies for surveillance purposes.

Most countries officially state that they use BWCs, dash-cams, and CCTV surveillance to provide a heightened sense of security to citizens and to gather objective evidence in the case of criminal investigations. Some also see these tools as relevant in their potential to improve police accountability.

Below, you can find a table depicting the ten countries with the highest number of CCTV cameras per 1000 people.

Table 1: Estimated Number of CCTV Cameras per 1,000 People

US	152.83 (2018)
China	143.60 (2018)
Denmark	86.97 (2017)
Estonia	75.71 (2019)
UK	75.20 (2017)
Germany	62.71 (2016)
The Netherlands	58.03 (2013)
Australia	40.01 (2019)
Japan	39.52 (2018)
Vietnam	27.21 (2018)

Source: Comparitech, available at https://www.comparitech.com/vpn-privacy/the-worlds-most-surveilled-cities/ (accessed 29 June 2020).

In general, the use of CCTV is more widespread than that of dash-cams and BWCs because CCTV was introduced as a surveillance tool earlier. CCTV was first installed in London in the 1960s when temporary cameras were set up to monitor crowds during a visit of the Thai royal family (Taylor, 2016). In the late 1980s, dash-cams were trialled in the US (Taylor, 2016). However, as a result of the limitations of both technologies, including their limited perspective and area covered, European and Canadian law enforcement agencies began to

test BWCs in the early 2000s (Gaub and White, 2020). The first generation of BWCs in policing was eventually introduced around 2005 in the UK (Taylor, 2016).

Thanks to technological advancements, law enforcement organisations also currently make use of other surveillance tools, such as unmanned aerial vehicles (UAVs), smart sensors, robotic cameras, and automatic license plate recognition (ALPR) systems. While a discussion of these tools extends beyond the scope of this paper, an awareness of the full range of surveillance tools is relevant when considering the relationship between technological innovation and the transformation of policing in the 21st century.

The rapid expansion of surveillance tools has taken place without much public debate or evaluation. Hence, this paper reviews prior research on the impact of surveillance in policing in an attempt to evaluate the effects of video surveillance tools on interactions between police and civilians. More specifically, the paper discusses the extent to which surveillance tools deliver their hypothesised benefits, the disadvantages that arise from their implementation, and the way in which those shortcomings can be overcome.

The thematic briefing will proceed as follows: first, the impact of surveillance tools on the police will be discussed. Specifically, relevant is an examination of the influence of CCTV, BWCs, and dash-cams on the behaviour of law enforcement officials, as well as a review of officers' attitudes towards the implementation of the tools. Second, the paper will examine citizens' behaviour and perceptions with regards to surveillance. Third, the potential downsides of the usage of surveillance tools will be explored, including privacy and policy issues. Finally, this paper concludes by summarizing main findings and discussing considerations for regulators.

However, before continuing with the rest of this thematic brief, it is important to note that the great majority of available and reviewed studies were conducted in Anglo-Saxon countries, particularly the US, the UK, Canada, and Australia (Lum et al., 2019). While the evidence presented in this paper provides valuable insight into the ways in which surveillance programs impact law enforcement processes in the aforementioned countries, it does not claim to represent the global experience nor detail developments in other countries. Most of the countries from which the evidence is taken have historically followed a "policing by consent" model, i.e. the power of the police comes from a general consent of the public to be policed. Policing organisations that do not have a similar model may see significant differences in the effects of video surveillance, if adopted. Hence, generalisation should be exercised with caution. Nevertheless, the authors of this paper believe that important knowledge can be derived from the available evidence, taking these limitations into account.

2 THE IMPACT OF VIDEO SURVEILLANCE ON POLICING

The following section presents a review of studies conducted on the impact of video surveillance tools on the behaviour of the police, internal control mechanisms inside police organizations, and external oversight mechanisms. Moreover, it discusses the attitude of police officers towards the use of formal surveillance.

LAW ENFORCEMENT BEHAVIOUR

As previously mentioned, surveillance tools signal an increased risk of detention and capture to potential offenders (Ratcliffe, 2006). They are said to reduce crimes such as theft and armed robbery, protect citizens against police misconduct, and protect officers from malicious complaints (Goold, 2003). Moreover, video footage makes officers' actions more visible to both their superiors and the general public, which should result in greater accountability. Hence, advocates of surveillance argue that the use of surveillance tools increases human security.

Surveillance tools as forms of crime prevention are linked to police accountability. Police officers are supposed to be role models in society and set a precedent for others to follow. If the public perceives the police to be acting in violation of the law, this could lower their own moral standards and make them more willing to engage in criminal behaviour (Geneva Centre for Security Sector Governance, 2019). Hence, police corruption, and other forms of misconduct, can influence citizens' behavior and negatively affect crime prevention (Geneva Centre for Security Sector Governance, 2019). Therefore, police accountability, and the public perception of such accountability, is a value that can be reinforced by the presence of surveillance tools as they can indicate a commitment to transparency by police organizations.

Initial reports have provided substantial evidence that links the use of surveillance tools to an increase in accountability and professionalism within police organizations, but more recent studies cast some doubt on these earlier findings. A more detailed discussion of this evidence occurs hereafter.

CCTV

Historically, police officers have enjoyed a great degree of autonomy, particularly during street patrols, and the police have been keen to maintain this autonomy (Holdaway, 1979). The proliferation of CCTV, however, has reduced officer autonomy by introducing opportunities for internal and external control and oversight. As a result, officers are said to act with greater caution and therefore follow protocol more often (Goold, 2003).

When asked about the impact of CCTV on their work, officers in the UK initially responded that surveillance had not changed their behaviour (Goold, 2003). However, when pressed further on the subject in individual interviews, many officers admitted that they act more cautiously for fear of being prosecuted with CCTV evidence (Goold, 2003). If widespread, this could present a potential risk: if officers become reluctant to act because they fear that their actions may be 'misinterpreted', their own security and the security of the public can be endangered, particularly in potentially violent incidents (Goold, 2003). Despite this nuance and in contrast to this potential area of risk, studies suggest that the presence of CCTV has reduced the number of assaults on police officers, thus improving officer safety in general (Goold, 2004).

Additionally, CCTV footage has enabled officers to obtain admissions of guilt and ensure convictions more quickly and in an easier manner (Goold, 2004). During interviews, subjects often admit an offense as soon as they hear that the police are in possession of CCTV evidence (Goold, 2004). Furthermore, if local legislation and admissibility regulations allow it, the footage can be used in courts to press for more serious charges (Goold, 2004). In a study

conducted by Ashby (2017), video evidence from CCTV cameras was used by investigators in 45% of cases and it was deemed useful in 65% of cases in which it was available. The general advantage of using video evidence in legal processes is that, as an independent record, it provides an alternative to evidence gathered from memories and interpretations of involved parties (Ariel et al., 2017).

Overall, the available evidence suggests that the presence of CCTV motivates police officers to act more professionally (Goold, 2003). However, it has to be noted that only a small number of studies examine this relationship between police behaviour and CCTV. One of the reasons for this may be that the proliferation of CCTV has been driven by and linked to the goal of increasing a citizen's perception of the likelihood of apprehension by a police officer (Ariel et al., 2015). In this way, much research around this tool is focused on the behaviour of citizens rather than that of officers. The majority of police departments use CCTV to detect and identify civilian offenders within investigatory processes rather than to monitor the behaviour of officials (Ratcliffe, 2006).

DASH-CAMS AND BWCS

Prior to the introduction of BWCs, dash-cams were the first mobile technology used by police officers for the purpose of increasing both officer safety and police accountability (Lin, 2016). However, the introduction of BWCs has shifted the focus away from dash-cams; unlike dash-cams, BWCs are not fixed to law enforcement vehicles and allow officers to record video and audio anywhere they go (Lin, 2016). [1] As a result, the relationship between dash-cams and police accountability has received little scholarly attention and existing studies focus exclusively on police perceptions of the tool.

On the contrary, the use of BWCs has been discussed extensively by scholars, partly due to their rapid proliferation in response to highly publicised cases of police misconduct (Lum et al., 2019). It is theorized that BWCs have a deterrent effect on excessive use of force and other forms of misconduct (Ariel et al., 2015). Further, it is believed that violent behaviour from both officers and civilians is discouraged by the presence of BWCs, thus reducing the possibility of negative interactions between officers and citizens (Lum et al., 2019). In general, the use of BWCs is aimed at 1) increasing police transparency, 2) preventing corruption and holding officers more accountable, and 3) increasing support for police officers in their respective communities (Coudert et al., 2015). Moreover, BWCs can also be used to improve evidence collection (Coudert et al., 2015); this will be examined in detail in the section on external control.

According to Lum et al. (2019), researchers have taken great interest in studying BWCs in the last five years. Out of 32 reviewed studies, seven show that officers wearing cameras use less excessive force than officers who do not wear cameras (Lum et al., 2019). At the same time, eight find no statistically significant difference in the use of force (Lum et al., 2019). Among these nonsignificant findings, the direction of the effect is not consistent (Lum et al., 2019).

[1] It has to be noted, however, that BWC's can only be used in certain circumstances and for specific police actions; many police operations are conducted undercover or by officers who wear plainclothes and do not carry a BWC as part of their daily attire.

Further studies offer mixed findings. A study conducted in London, UK, reported no change in officer behaviour as a result of using BWCs while a study on the impact of BWCs in Mesa, US, found that there was a 75% reduction in use of force complaints against officers with cameras (Shoaf, 2015). A study in Rialto, US, found further favourable results, reporting a 60% decrease in use of force incidents (Katz et al., 2014). Orlando, US, reported a similar decrease, finding a 53.4% reduction (Jennings et al., 2015). However, a study conducted in Phoenix, US, did not uncover any findings related to use of force incidents (Katz et al., 2014) and a study in Washington D.C., US, concluded that BWCs had no impact on the use of force by officers (Yokum et al., 2019).

Such mixed findings highlight areas of inquiry that merit further exploration. Apart from methodological differences in the studies, one possible explanation for the mixed findings are the differences between law enforcement agencies. Agencies that display greater amounts of poor practice prior to the use of BWCs, i.e. excessive and unnecessary use of force, high levels of citizen complaints, and low levels of police legitimacy, have substantial room for improvement (Gaub and White, 2020). However, professional agencies with robust training, effective supervision, and proper accountability systems are unlikely to experience large reductions in use of force and citizen complaints because officer behaviour is largely unaffected by the presence of BWCs; appropriate levels of force were already the norm (Gaub and White, 2020). These vastly different starting points need to be considered when assessing the impact of surveillance tools.

Additionally, Ariel et al. (2016) have found that officers who display great discretion when turning on their cameras tend to use greater force compared to officers who are less discrete (Ariel et al., 2016a). This disparity clearly indicates that the use of BWCs needs to be regulated, which will be discussed further at a later stage of this paper.

INTERNAL CONTROL

Police accountability is ensured through both internal control and external oversight; a well-structured internal control system can help to detect and prevent corruption and ensures that officers operate in line with their agencies' policies (Geneva Centre for Security Sector Governance, 2019). In general, internal control is the term for internal procedures that ensure an organization's security and minimise any potential risky, illegal, corrupt, or unethical behaviour by its employees (Geneva Centre for Security Sector Governance, 2019). It covers everything from procedures for handling money to securing doors and buildings, investigating complaints against officers, and conducting regular audits (Geneva Centre for Security Sector Governance, 2019). Surveillance tools are mostly used for internal investigations, for training purposes, and to promote a culture of accountability.

Video evidence gives superiors an opportunity to monitor officers' actions in the field, which is especially useful in cases where geographical limitations affect communication (Albright et al., 2005). Yet, this form of supervision has been hypothesised to reduce contact and erode trust between superiors and officers, although this claim is not backed by empirical evidence (Goetschel & Peha, 2017). It is important to note, however, that a correlation was found between the use of cameras for internal investigations and a perceived increase in stress levels of some officers (Albright et al., 2005).

A criterion that is inherently difficult to measure is accountability levels. One potential indicator of improvements in accountability is a decrease in misconduct. Officers who have used BWCs, and surveillance technologies generally agree that BWCs improve their behaviour and the behaviour of fellow officers (Jennings et al., 2014). Additionally, in a study conducted by the Police Executive Research Forum from the US Department of Justice, it was found that commanding officers believe that BWCs increase the professionalism of their subordinate officers (Goetschel & Peha, 2017). This could indicate an increased presence of accountability; however, more research is needed.

Another potential measure of increased accountability relates to peer reporting. While the researchers of this paper have not found any studies on the impact of surveillance on peer reporting within law enforcement agencies, it seems reasonable to assume that officers are more likely to report misconduct if surveillance can corroborate their story. Furthermore, surveillance tools could help to break the "code of silence", which is the unwritten rule among police officers that a colleague's errors, misconduct, or crimes should not be reported (Geneva Centre for Security Sector Governance, 2019). A sense of loyalty between officers informally prohibits them from disclosing a fellow officer's wrongdoings, which is considered to be the biggest obstacle to identifying and investigating unethical practices of police personnel (Albright et al., 2005). It seems possible, however, that if there is video evidence of an officer's misconduct, other officers might be more likely to report the incident.

Finally, footage recorded by surveillance tools can be used for training purposes. Many studies report that both police officers and their superiors review tapes for the purpose of self-critique and training (Harris, 2010). Superiors in particular noted that BWC footage serves as a useful tool in identifying ineffective behaviour and improving the overall performance of officers (Goetschel & Peha, 2017). Dash-cams have similarly been found to act as a valuable learning tool for new officers, who can review their actions with their training officers (Albright et al., 2005). These training benefits seem to be the greatest positive aspect of using surveillance tools for internal control. Police institutions should monitor the collected footage on a regular basis to gain an understanding of how their officers behave in the field. Gathering and analysing data from surveillance technologies on a greater scale can help police agencies identify early indicators of actual or potential excessive use of force.

BOX 1. BEST PRACTISE EXAMPLE

The Sunnyvale Police Department's policy on BWCs requires training and retention officers to conduct weekly reviews of videos for 'proper use and training issues' (Koen et al., 2018). When viewing footage of particularly serious incidents, such as interactions that feature use of force, training officers can recommend that the offending officer receive additional, remedial training if deemed necessary (Koen et al., 2018).

BOX 2. BEST PRACTISE EXAMPLE

During a BWC trial run in London, officers reported watching footage from a Taser incident to talk through how they could have handled the situation differently as part of a team debriefing session (Grossmith et al., 2015).

EXTERNAL OVERSIGHT

While internal control is crucial to ensure police accountability, external oversight is, at the very least, of equal importance. External oversight is concerned with the review and monitoring of police behaviour by institutions that are outside the police (Geneva Centre for Security Sector Governance, 2019). Oversight generally takes the form of an ex post review, a process in which the actions of a law enforcement agency are retroactively assessed, but it also involves ongoing monitoring (Geneva Centre for Security Sector Governance, 2019). Surveillance can play an important role in external oversight, particularly as a resource for video evidence in court cases (Haward Law Review, 2015).

The great majority of available studies on surveillance highlight the importance of video evidence.

BOX 3. USE OF BWC FOOTAGE IN INVESTIGATIONS AND COURT

In the 2017 shooting of Jordan Edwards in Texas, US, the footage from a BWC along with its analysis has been crucial in holding former police offer Roy Oliver accountable. Oliver had shot Edwards in the back of the head while Edwards was riding in the front passenger's seat of a vehicle (McCullough, 2018). Following the incident, Oliver claimed that the car carrying Edwards was moving towards him aggressively, which prompted him to shoot (McCullough, 2018). However, the BWC footage clearly showed that the car was driving away (McCullough, 2018). Subsequently, Oliver was charged with murder and a jury handed down a guilty verdict after repeatedly watching the video evidence during the trial (McCullough, 2018).

By contrast, in the 2021 shooting of Marvin Veiga during a traffic stop in Nashville, US, BWC footage showed that the use of force by officer Christopher Royer was appropriate. In the video, Veiga can be seen advancing towards Royer and wielding two butcher knives (Morris, 2021). The BWC footage also shows Royer attempting to de-escalate the situation by commanding Veiga to drop the knives (Morris, 2021). Subsequently, Royer fired three shots at Veiga, who later died in the hospital (Morris, 2021). Police chief John Drake announced that he believes Royer acted appropriately as Royer was in a lethal situation (Sisk, 2021).

For example, a study by the Police and Crimes Standard Directorate in the UK found increased evidentiary quality when using BWCs (Katz et al., 2014). A study conducted in Renfrewshire, UK, found a decrease in the amount of time required to resolve cases due to the availability of this video evidence (Katz et al., 2014). Overall, several studies suggest that BWCs and CCTV provide benefit to investigations and result in increased detection and clearance rates (Lum et al., 2015). Notably, high-end CCTV, some dash-cams, and most BWCs also have audio recording capabilities, allowing interactions to be captured both visually on film and aurally as an audio recording. This combination of video and audio recording can secure greater evidence for legal proceedings.

Despite this, legal cases display a striking imbalance in the use of video evidence. Merola et al. (2016) have found that 93% of interviewed officers have used BWC footage in the prosecution of citizens while only 8.3% of respondents reported that BWC footage was used in a case against an officer. While surveillance footage can certainly be used in

cases against civilians to monitor officer behaviour, it seems striking that it is rarely used in cases against officers.[2]

It needs to be stressed here, however, that a sole reliance on video evidence can have negative consequences. For example, a study conducted by Turner et al. (2019) shows that BWCs can introduce observer bias; the use of footage from BWCs in a courtroom decreases the likelihood that a jury will indict an officer in comparison with the use of footage from dash cams or written reports (Turner et al., 2019). Furthermore, contextual frames[3] and other external factors that affect perception, such as lighting and perspective, lead to biased observation (Baker and Bacharach, 2017). Another concern is that an increased use of, and reliance upon, video evidence will cause judges and jurors to discredit traditional evidence sources such as witness testimonies, choosing instead to rule solely based on the video evidence itself (Evans, 2015). This is discussed in more detail in section 3 of this paper.

While video evidence improves evidentiary quality and aids in court cases, questions remain as to whether this truly impacts external oversight. For external oversight to be effective, external organs must have the power to hold individuals accountable for their actions and punish them for their misconduct. However, despite the presence of video evidence, officers are rarely convicted. In the US, for example, the conviction rate for officers is only half that of citizens (Lopez, 2014). Due to these systematic biases, many consider surveillance a "band-aid" solution that ignores root problems in both society and policing (Dhillon, 2015, p. 84).

BOX 4. BEST PRACTISE EXAMPLE

In the Island state of Barbados, a civilian oversight body, the Police Complaints Authority, was established in 2004 to supervise the investigation of complaints, conduct the direct investigation of complaints in instances where the body deemed it necessary, and review complaints (The Barbados Parliament, 2006). The annual report of the Authority is reviewed by parliament. The police are widely perceived as being respondent to this oversight mechanism (Geneva Centre for Security Sector Governance, 2015).

OFFICERS' PERCEPTIONS

In general, it seems that police officers' opinions on the use of surveillance tools depend heavily on the purpose of the tool. If officers believe that the surveillance tools are being used to improve departmental performance and to increase officer and public safety, they are substantially more likely to be supportive of the technology (Albright et al., 2005). However, if officers think that surveillance is being employed to detect corruption and collect evidence for internal investigations, they are less likely to be supportive (Albright et al., 2005). In a study on dash-cams conducted in the US, the majority of officers believed that the surveillance tools were present to collect evidence for trials and protect officers from false accusations (Albright et al., 2005). The

[2] It has to be noted that the percentage may be higher for civilians because BWCs can only provide evidence of police wrongdoing when instances are recorded, i.e. the camera must be turned on and the action related to the complaint must be captured by the camera.

[3] A frame is a "template or data structure that organizes how people interpret information". An example of this is demographic characteristics such as race or ethnicity (Baker and Bacharach, 2017, p. 685.).

second most common purpose of the dash-cams, according to the officers' perceptions, was to monitor officer performance (Albright et al., 2005). The study also found that officers who believed that the cameras were primarily used for the purpose of conducting internal investigations experienced increased stress levels (Albright et al., 2005). However, the majority of officers (59%) did not report an increase in stress (Albright et al., 2005).

A consistent trend within studies of officer behaviour related to BWCs is that once officers begin to use the technology, they generally feel positive, or at least neutral, about the use of BWCs (Lum et al., 2019). Their feelings about the technology appear to become more positive over time. For example, after using BWCs, police officers reported that the tool can improve citizen's behaviour, their own behaviour, and the behaviour of fellow officers (Jennings et al., 2014). After making use of the BWCs, officers view the technology as a tool that can protect them from the public, particularly from false accusations, which constitutes the main reason for the increase in positive perception (Lum et al., 2019).

Police hold a positive view of dash-cams in particular because this tool has demonstrated its ability to improve officer safety (Katz et al., 2014). In a study by Albright et al. (2005), almost a third of the interviewed officers reported that they felt safer when the cameras were in use. The study also showed that the more experience officers had with the cameras, the more likely they were to report an increase in their perception of safety (Albright et al., 2005).

Overall, officers seem to believe that video surveillance tools increase citizens' accountability, but not necessarily their own accountability (Lum et al., 2019). Only one fifth of the officers questioned in the Albright et al. (2005) study reported that the presence of a camera in the car increased their professionalism and courtesy. However, once pressed further in individual interviews, almost half of the officers asserted that cameras did indeed improve their professionalism (Albright et al., 2005).

Negative reactions to the use of BWCs from law enforcement officials mostly relate to technical issues and issues of trust. Katz et al. (2014) have discovered that officers highlighted an increased workload as an issue, criticizing the extensive amount of time required to download data and the growth in reporting requirements. However, most of the officers who critiqued BWCs believe that the benefits brought by the tool make its negatives worthwhile (Katz et al., 2014).

Moreover, officers have expressed concerns that BWCs work to undermine trust between themselves and their superiors by providing a constant and direct overview mechanism (Goetschel & Peha, 2017). They also believe that BWCs could potentially hurt police-community relations by excessively recording interactions between police and citizens, thus removing anonymity (Goetschel and Peha, 2017). Excessive recording could place citizens in high-crime neighbourhoods at a higher risk as speaking to the police in certain areas constitutes a tangible threat to personal safety (Goetschel & Peha, 2017).

Furthermore, officers have expressed privacy concerns. These concerns are very common, especially with regard to general surveillance tools like CCTV (Welsh et al., 2015). There are not many cases in which CCTV evidence was used to resolve disputes, but when it was, the footage usually worked in the officer's favour (Goold, 2003). In general, some officers state that they do not really believe that CCTV impacts their everyday work while others say

that they feel the need to act more cautiously due to the presence of CCTV (Goold, 2003).

Officers are also worried about the lack of context in video recordings, specifically in regard to police actions. In their opinion, actions that appear as excessive use of force on tape are often the appropriate actions to be taken when considering the context of the interaction (Goold, 2003). The limitations of footage when it comes to fully capturing the context of an interaction and thus the potential misreading of interactions leads officers to suggest that video evidence should be treated with caution and ultimately taken with a grain of salt (Goold, 2003). It is possible that recordings miss crucial events that justify the use of force by a police officer (Sandhu and Haggerty, 2015). If context is only partially captured or entirely omitted, the audience can quickly jump to the conclusion that law enforcement officials are acting violently for no reason (Sandhu and Haggerty, 2015).

In summation, most officers seem to become comfortable with the use of surveillance tools once they have been implemented. This is tied to the belief of many of the questioned officers that "any police organization will contain some 'rotten apples', but most officers do 'good work', and this good work will be represented on any recording" (Sandhu & Haggerty, 2015, p. 11).

3 THE IMPACT OF VIDEO SURVEILLANCE ON CITIZENS

As previously mentioned, advocates of surveillance tools claim that they are beneficial to both the police and civilians. Hence, in the third section of this paper, the relationship between surveillance and citizens' behaviour as well as civilian complaints will be investigated. In addition, citizens' perceptions of surveillance tools will be explored.

CITIZENS' BEHAVIOUR

The impact of the presence of CCTV on civilian behaviour, especially on crime levels, has received a great deal of scholarly attention. A clear picture emerged from a 2019 study by Piza et al., in which the preventative effects of CCTV on crime were systematically reviewed and analysed: CCTV is associated with a modest and statistically significant reduction in crime and the effect is the strongest in car parks. This demonstrates that the presence of CCTV reduces certain types of criminal behaviour. In addition, it has also been proven that the presence of CCTV results in an increase in the number of reported crimes by citizens (Welsh et al., 2015). In contrast to the effects of CCTV on crime, a general deterrent effect stemming from the use of BWCs has not been found as of yet (Ariel, 2016), although more research is needed.

With regard to BWCs, the available studies focus on the relationship between BWCs and citizens' compliance, i.e. their physical response to the police (Lum et al., 2019). The findings are mixed: two studies conducted in Scotland found a significant decrease in assaults on officers when the officers were wearing BWCs (Headley et al., 2017). However, other studies found that BWCs increase the number of assaults and still others found no significant differences at all (Lum et al., 2019). While no clear conclusion can be drawn, there is little evidence of a 'civilizing' effect (White et al., 2017). Moreover, a study conducted in Phoenix, US, concluded that, in the presence of BWCs, there is no impact on civilian behaviour in terms of

resistance to arrest (Katz et al., 2014). This finding is interesting because police officers perceive increased security as one of the perks of video surveillance and thus there may be a significant discrepancy between the behaviour of citizens and the perception of the police.

However, a study conducted by the International Association of Chiefs of Police has demonstrated that nearly half of the questioned officers reported a decrease in civilian aggression once civilians were informed that they were being recorded (Albright et al., 2005). Following the logic of situational crime prevention theory, it is reasonable that behavioural changes only occur when citizens are aware that they are being filmed. Previous studies have shown that the signs informing the public of the presence of CCTV cameras often have a greater impact on the behaviour of citizens than the cameras themselves. There is no reason to expect that this nuance this will be much different for other types of formal surveillance (Flight, 2019).

CIVILIAN COMPLAINTS

As previously mentioned, BWCs and CCTV devices have also been introduced to restore civilian confidence in the police. While improved police-citizen relationships are empirically hard to measure, a common benchmark is the number of civilian complaints against police officers. If the presence of surveillance tools lowers the number of civilian complaints, surveillance could be an important mechanism in improving police-citizen relations, even if it does not necessarily directly alter the likelihood of excessive use of force. Moreover, the availability of evidence captured by video surveillance tools impacts the speed with which those complaints are resolved. According to the Haward Law Review (2015), the availability of CCTV, dash-cam, and BWC footage has helped to reduce the number of baseless complaints and increase the rate at which complaints can be resolved.

Researchers largely found that officers equipped with BWCs receive less complaints than officers without cameras (Lum et al., 2019). For instance, a study conducted in Mesa, US, discovered that a substantial decrease in civilian complaints correlated to the use of BWCs: almost three times as many civilian complaints were filed in the control group than in the treatment group (Shoaf, 2015). Furthermore, a randomized study conducted in Orlando, US, found that civilian complaints were reduced by 65.4% when officers were equipped with BWCs (Jennings et al., 2015). In a study in Rialto, US, officers wearing BWCs observed a 90% reduction in complaints and a 50% reduction in use of force reports when compared with officers without BWCs (Ariel et al., 2016b).

Interestingly, some studies observed a reduction in complaints among officers who wore BWCs for a certain time period and then continued their work without BWCs, during which this reduction was sustained (Maskaly et al., 2017). This could indicate that repeated exposure to surveillance changes officers' behaviour, even if they are no longer under surveillance ("contagious accountability") (Ariel et al., 2017).

However, one reviewed study found no significant correlation between the number of complaints brought against officers and the presence of BWCs (Yokum et al., 2019). One explanation for the missing connection in the study could be that BWCs only have an impact on certain categories of complaints. For example, in a trial conducted in London, significant differences in the number of complaints were only found when looking at

complaints linked to police-citizen interactions (Grossmith et al., 2015). Further, if the number of complaints linked to such interactions is generally low, it is unlikely to observe a significant difference.

Overall, the evidence suggests that the presence of BWCs can help to improve the civility of police-citizen encounters. With this conclusion in mind, the question that remains is why. Are officers changing their behaviour because they know that they are being recorded, leading to less civilian complaints? Do civilian complaints decrease because many complainants refrain from submitting fallacious claims due to the availability of video evidence? Or is the decrease achieved because the presence of BWCs represents a genuine attempt by the police to be more accountable, and thus sufficiently satisfies the critical civilian? These are all important questions that should be explored in the future.

CITIZENS' PERCEPTIONS

For the most part, citizens are substantially more likely than police officers to be supportive of surveillance tools that directly monitor police forces, such as dash-cams and BWCs (Goetschel & Peha, 2017). In terms of CCTV, civilians express similar concerns as the police about privacy (Piza et al., 2019). In a study conducted in the UK, those who voiced privacy concerns related to CCTV highlighted the potential excessive surveillance of certain groups, such as young Black men, and the abuse of these systems by their operators as a danger (Honess and Charman, 1992). Despite this, objections from citizens are less frequent in some settings, such as parking lots, out of a perception that, in certain scenarios, the benefits outweigh the inconvenience (Welsh et al., 2015).

The majority of citizens have high expectations as a result of the proliferation of video surveillance and believe that these tools hold officers more accountable (Lum et al., 2019). They find the use of surveillance tools, specifically BWCs, comforting when implemented in their local police forces (Harris, 2010). This favourable attitude towards the widespread implementation of BWCs stems from a belief that their presence can positively influence police officers to improve their behaviour, reduce misconduct, and treat all citizens with more respect (Goetschel & Peha, 2017). In a quasi-randomized, controlled trial conducted during traffic stops, drivers expressed that, in their opinion, BWCs would decrease corruption as well as complaints and improve the police's treatment of civilians and police lawfulness (Demir, 2019). Sousa et al. (2018) conducted a survey and found that the majority of citizens believe that BWCs have an ability to increase the transparency of police work and reduce the use of force.

However, the public is less convinced that BWCs can improve trust in the police or police-citizen relationships, and the majority do not think that BWCs can reduce racial tensions (Sousa et al., 2018). This is an interesting finding given that lawmakers in countries like the US have promoted BWCs as one viable solution for reducing the unjust treatment of minorities during police encounters.

It is also important to note that non-white civilians and the younger demographic, in comparison with other groups, generally detect less benefits in the use of BWCs (Crow et al., 2017). This finding is in line with various other studies that show that societal groups perceive the legitimacy of the police differently (Lum et al., 2019). For example,

survey data from the US has repeatedly highlighted a racial gap when it comes to confidence in the police (Gallup, 2014). This is a direct result of the disproportionate killings of Black Americans by the police: according to a study by Krieger et al. (2015), Blacks are 3.5 times more likely to be killed by the police than Whites in the US. It follows that a targeted or untrusting demographic would similarly distrust the ability of new technology to radically improve or alter their relationship with and treatment by the police.

Looking specifically at dash-cams, a survey found that 94% of interviewed citizens supported the use of in-car cameras and that 71% agreed that citizens should be informed when they are being videotaped (Albright et al., 2005). In addition, 51% of citizens surveyed stated that they would modify their behaviour if they knew they were being recorded (Albright et al., 2005). In terms of civilian complaints, there was no consensus: 48% stated that a camera would make them less likely to file a complaint while 34% said that it would make them more likely (Albright et al., 2005).

Overall, civilians seem to be more supportive of surveillance tools than law enforcement officers. Citizens perceive these technologies to provide many of the hypothesized benefits, such as a reduction of the use of force and an increase in accountability. However, one belief about video surveillance tools, particularly BWCs, is shared by both citizens and police; both seem to assume that video surveillance can protect their group from the other. This understanding of the purpose of video surveillance, as well as the image that it paints of police officers and citizens as antagonistic groups in need of protection from the other, may expose a dysfunction in police-citizen relations in some societies which cannot be resolved through surveillance (Lum et al., 2019).

BOX 5. CIVILIAN SURVEILLANCE

Video surveillance tools, which have traditionally been used by police officers for the surveillance of others, are increasingly used for the surveillance of the police's own work. Instances of civilians recording police officers on duty, also called cop-watching, have become more common. A recent report from the US Department of Justice identified civilian recording as one of the main challenges for American law enforcement, both contemporarily and for the future (Roche, 2017).

Civilian filming has been framed by many as a form of counter surveillance (Newell, 2019). In many cases, photography, videography, and audio recordings have been used to provide evidence of police misconduct and unlawful behaviour. One example is the 2015 shooting of unarmed Walter Scott. After Scott's death, former officer Michael Slager claimed that he feared for his life because Scott seized his taser (Vann and Ortiz, 2017). Yet, an eyewitness video surfaced, showing that Slager shot unarmed Scott from behind; Slager was consequently charged with murder (Vann and Ortiz, 2017). It is unlikely that the death of Scott and others would have been prosecuted or have become public knowledge were it not for smartphone surveillance (Roche, 2017). Thus, civilian recordings can help to protect marginalized communities and potentially reduce police misconduct.

Nevertheless, the filming of police by civilians has sparked controversy and police departments have put up strong resistance (Simonson, 2016).

It has been claimed that civilian filming interferes with officers' work, places officers in danger, and makes officers hesitant to engage with their work out of fear of being filmed (Simonson, 2016). Yet, citizens who are recording usually pose little risk and rarely interfere (Simonson, 2016).

Another argument against smartphone surveillance is that the use of BWCs renders civilian recording unnecessary (Simonson, 2016). This appears as a flawed argument, however, as police officers have the authority to turn BWCs on and off. When civilians are recording, police officers are more likely to leave their cameras on (Simonson, 2016). Hence, bystander videos can be a meaningful tool to increase police accountability, representing "a transfer of power from the police to the community" (Simonson, 2016, p. 1560).

Another great concern of police officers has been the loss or manipulation of context (Newell, 2019), which is closely related to police officers' concerns regarding the use of BWC and CCTV footage in court. Bystander videos do, usually, not capture the entire sequence of events that led to the incident of interest (Clayton Newell, 2014).

Moreover, the dissemination of recordings by civilians is unregulated and difficult to control, once released. Hence, the key for law enforcement is to establish procedures that counter and react to social media, rather than suppress or marginalize it. For example, allowing citizens to upload their recordings to a designated and secure platform could be a regulated form of civilian surveillance.

4 REGARDING THE USAGE OF SURVEILLANCE TOOLS AND POSSIBLE SOLUTIONS

As previously discussed, advocates of surveillance tools argue that these tools increase police accountability, reduce police misconduct, improve citizen behaviour, reduce unwarranted complaints against officers, increase both officer and public safety, assist in criminal prosecutions, improve police-citizen relations, and facilitate the training of police officers (Smykla et al., 2016). However, the available studies on the impact of video surveillance on police work have produced mixed results and several issues have been raised, which shall be discussed below.

PRIVACY AND WRONGFUL CRIMINALIZATION

As surveillance technologies have become more widespread, increased attention has been paid to legal issues related to privacy and data protection policies. Concerns about the privacy of both police officers and the public, wrongful criminalization, the ease of access of police officers to the footage, the turning on-and-off of the camera technology, and the erosion of civil liberties have been voiced repeatedly (Taylor, 2016).

Privacy concerns are linked to the concept of proportionality: how much invasion of privacy is appropriate for the good that it can yield? If actions are substantially invasive, there needs to be concrete proof that the level of invasion is absolutely necessary to yield results and that it is worth the sacrifice for the benefits that it can draw (Coudert et al., 2015).

While all surveillance tools have concerns in this regard, the nature of BWCs raises particular issues (Lin, 2016). Unlike dash-cams or CCTV, the mobility of BWCs allows for recording in private spaces, which are normally closed to the general public, and video and audio to be captured in close proximity (Lin, 2016).

In general, there are substantial concerns about which encounters should be recorded, particularly when it comes to personally invasive crimes such as domestic violence and sexual assault (Lin, 2016). In these instances, there is a risk that recordings of intensely traumatic experiences could be released into the public sphere (Lin, 2016). Further, video-recorded interviews with victims of sexual assault rarely help to solve rape complaints and can even bias jurors if victims do not react in the way the jury expects them to (Adams and Mastracci, 2017).

BOX 6. DOMESTIC VIOLENCE AND VIDEO SURVEILLANCE

Proponents of the use of BWCs in cases of domestic violence have argued that BWC footage could assist in overcoming difficulties when securing oral testimony from victims, circumvent victim's reluctance to report, and spare victims the secondary trauma incurred by participating in formal criminal procedures (B. Harris, 2018).

In many countries, like the UK, video footage is sufficient evidence to support a prosecution without the need for the victim to make a complaint (O'Reilly, 2021). Further, BWCs may also help to ease tensions when an officer arrives at a location in response to a report of domestic violence, reducing assaults on the police (Douglas and Goodmark, 2015).

Moreover, the video evidence could be used without the victim's permission, potentially resulting in revictimization and/or increased violence by the perpetrator (B. Harris, 2018).

However, critics have argued that the footage usually only captures the aftermath of a single incident, neglecting the dynamics of coercive control, trauma, and response (B. Harris, 2018). For example, by the time the police arrive, the perpetrator may appear calm again while the traumatised victim may seem frustrated, crazy, angry, or even violent – far from the "perfect victim" (Douglas and Goodmark, 2015). As a result, secondary trauma could be incurred if a victim views the footage (B. Harris, 2018).

While there is too little empirical evidence available to draw final conclusions, law enforcement should carefully assess the use of video surveillance tools in cases of domestic violence.

A case-by-case examination may be required. For example, the College of Policing (2014, p. 20) recommends that "in instances where allegations of assault are made and officers observe no injuries or other evidence of note, they should use BWCs cautiously and on a case-by-case basis. Injuries, such as bruising, may take time to show and thus BWC recordings may not adequately represent the whole picture".

As a response to these concerns, law enforcement agencies often give officers some leeway when it comes to turning cameras on and off (Lin, 2016). With this flexibility, officers can both ensure their own safety and better protect civilians from blatant violations of their privacy. In general,

crime victims should be allowed to ask not to be recorded to protect their privacy; capturing "such an exchange between the victim and officer would be sufficient to document the legitimate cessation of the recording" (Taylor, 2016, p. 131).

A potential downside related to the officers' authority over the recording process is the presence of this laterality itself. If officers are taking bribes or responding with excessive force, it seems unlikely that they would turn a camera on to record their actions. Thus, the worry that officers will simply turn the camera off and not record incidents at their choosing appears legitimate (Haward Law Review, 2015). In fact, in a study conducted in Phoenix, US, only 13.3-42.7% of offenses were actually recorded by BWCs, of which the most common were domestic violence and violent crime offenses (Katz et al., 2014). In addition, a study conducted by Hedberg et al. (2017) found that BWC activation was relatively limited, only appearing in 32% of incidents. Under these circumstances, BWCs are unlikely to have a positive impact on accountability and concerns over citizens' privacy remain valid.

The recent proliferation of facial recognition tools, which use databases of photos to identify individuals in surveillance footage, has exacerbated privacy-related concerns. CCTV cameras in particular, but also dash-cams and BWCs, offer the ability to track individuals (Lin, 2016), a function that could be abused by law enforcement agencies, particularly in authoritarian countries. According to Clayton Newell (2014, p. 90), "officer-mounted wearable cameras, paired with facial recognition, could easily become much like the current crop of automated license readers, constantly reading thousands of faces (license plates), interpreting identity (plate number), and cross-checking this information against national and local crime databases in real-time." Overall, Clayton Newell (2014) criticizes video surveillance tools, especially when used in combination with facial recognition tools, stating that they represent another step towards a surveillance state; in many cases, the tools are not used for the empowerment or protection of citizens but rather from a perspective that is suspicious of all citizens. Moreover, the accuracy of such software is not assured and the possibility of misidentifying someone, and consequently wrongfully convicting someone, poses a serious challenge. For example, studies have shown that people of colour are more often inaccurately identified by facial recognition technology (Cook et al., 2019). Despite this, it should be noted that most countries require further collaborative evidence to arrest and charge any person identified via facial recognition for being involved in criminal activity, a requirement which mitigates the identified risk of wrongful conviction.

Additionally, many individuals find it difficult to rationalize CCTV surveillance in terms of proportionality since it targets the general population. While surveillance in areas such as car parks and train stations can be more easily justified as necessary to prevent crime, more general surveillance in public places, such as town centres, engenders resistance (Welsh et al., 2015). This is an interesting finding as most CCTV cameras are privately owned - this includes most public car parks, shopping centres, transport hubs, etc. Hence, whilst public perception may consider the plethora of CCTV systems as indicative of a surveillance state, a majority of these systems are not controlled by the state nor the police. However, the police can usually obtain images from shops, banks (ATMs),

companies, and further private spaces for criminal investigations.

The presence of surveillance can also undermine the presumption of innocence or the right against wrongful criminalisation or wrongful perception of criminality (Hadjimatheou, 2017). In this context, wrongful criminalisation is defined as "treating someone as if they have a particular propensity towards criminality or indeed are already involved in criminal activity, without proper grounds for doing so" (Hadjimatheou, 2017, p. 45). Since surveillance does not target the population equally, with poorer communities experiencing greater surveillance (Maréchal, 2015), it can result in wrongful criminalisation through its selective placement. It can also stigmatise communities under surveillance, implying that they are of a more criminal nature (Hadjimatheou, 2017).

Notably, there are other types of surveillance that can be used to reduce crime levels without such social costs. Examples of these are improved street lighting and the presence of security guards (Welsh et al., 2015).

Further, it has to be noted that surveillance does not only interfere with the privacy of citizens but also with the privacy of police officers, i.e. the right to be free of monitoring during working hours (Coudert et al., 2015). While this interference can be justified by a need to protect citizens from the disproportionate use of force, other internal and external mechanisms may be equally suitable in attempts to reduce or avoid police misconduct (Coudert et al., 2015).

Finally, another concern related to privacy is the vulnerability of the technological systems in which the recorded material is stored to hacking. Data could be stolen and used for adverse purposes, constituting a threat to both individual and organisational safety. While encryption can protect the stored footage against hacking and cyber-attacks, this requires clear and comprehensive controls and protocols to be implemented by the agency (Laming, 2019).

LEGISLATION

There are also various legal questions surrounding the use of surveillance tools. One of these concerns is determining the circumstances for which filming is necessary. Especially in cases where the public has the right to access footage, precautions should be taken to ensure that footage is not improperly disseminated nor exposed to an excessive number of viewers.

In the case of BWC usage, it is important to adopt national legislation and/or create a clear departmental policy to define the degree of freedom awarded to police officers regarding camera operation (Coudert et al., 2015). The question of when cameras can be turned off is critical; if this is not properly regulated, officers can simply censor behaviour they do not want recorded by turning their cameras off (Coudert et al., 2015). For privacy concerns discussed previously, it is not recommended that BWCs always record. A possible measure to ensure that BWCs effect their desired impact on police accountability could be to track the frequency with which an officer switches their recording on and off. Those observed to exhibit this behaviour exceptionally often could be flagged (Coudert et al., 2015). In general, non-compliance with departmental policy is common (Hedberg et al., 2017) and law enforcement agencies need to ensure proper disciplinary measures to reduce such instances.

With regard to facial recognition tools, legislature has begun to form around privacy

issues. For example, in the US, both Oregon and New Hampshire have banned the use of facial recognition in BWCs, while the Utah Department of Public Safety has put forth a ban on the use of facial recognition for active cases (Martin, 2019). Generally speaking, the use of facial recognition tools should be kept at a minimum since facial recognition is not necessary for the purpose of surveillance (Coudert et al., 2015).

In general, citizens should be aware that they are being filmed and receive adequate information about the purpose of the recording (Coudert et al., 2015). To ensure the former, cameras can be equipped with a yellow label warning that audio and images are being recorded, as it has been done in Madrid (Coudert et al., 2015). In private spaces, sensitive areas such as hospitals, and cases involving sensitive information, consent should be gathered before taking a recording (Coudert et al., 2015).

In addition, there are also issues regarding the storage and usage of the footage itself, not to mention problems associated with the cost of the technology and its implementation (Katz et al., 2014). In general, electronic records often change hands and are accessible by a wide range of individuals, making the records vulnerable to alteration (Wood, 2017). Consequently, the following questions have been raised by both opponents and advocates of surveillance: (1) who should have access to the footage and who regulates this access, (2) how can tampering be prevented, and (3) how long should footage be stored?

Concerning the first question, an appropriate legal framework needs to be put in place that regulates access and oversight of access. People recorded by surveillance tools should have access to the footage for as long as the law enforcement agencies retain copies (Stanley, 2015). Disclosing footage to the general public should be limited to cases of high public interest. Unredacted or unflagged recordings should not be publicly disclosed without the consent of the subject (Stanley, 2015). Access should be regulated by both policy makers and law enforcement agencies. The latter play an especially important role in avoiding tampering: police officers should not have the opportunity to delete, edit, or otherwise modify any record (Coudert et al., 2015). Further, technological systems should be designed in a way that does not allow for the manipulation of footage. In addition, all access to video footage should be tracked and recorded (Stanley, 2015).

To reduce both administrative costs and concerns over privacy, Lin (2016) suggests that retention periods for surveillance footage be shortened; only videos showing events of public interest, such as use of force, protests, accidents, and evidence dismantling false accusations by or against the police, should be stored long-term (Lin, 2016). Time limits could be set for videos that have not been used in an investigation or identified as potentially useful evidence, requiring law enforcement agencies to delete such footage (Lin, 2016). For the vast majority of police encounters with the public, there is no valid reason to store video evidence and the footage should be deleted within a reasonably quick period (Stanley, 2015). The American Civil Liberties Union suggests a retention period of a few weeks unless a recording has been flagged (Stanley, 2015). In practice, retention periods should be aligned with local statutes of limitation and associated appeal periods.

Further, it is important that law enforcement organisations track and control the chain of custody with digital evidence. It should span from the initial data collection through

investigation, analysis, reporting, and the presentation in court; "it must be known who exactly, when, and where came into contact with evidence in each stage of the investigation" (Cosic and Cosic, 2012, p. 126). This is necessary to avoid giving the impression that the evidence has been compromised in any way and to ensure the legitimacy of it.

In sum, the rules around who uses the cameras, when the cameras are activated, and what is done with the footage have to be clearly defined and should be enforceable. Legislation must be designed to balance public safety and the security, privacy, and dignity of the monitored persons.

THE VALIDITY AND OBJECTIVITY OF EVIDENCE AND OVER-RELIANCE ON VIDEO FOOTAGE

Several studies have discussed how the perspective, lighting, and background of a video can impact the perception of that video evidence and consequently affect sentencing and the perception of guilt (Lum et al., 2019; Merola et al., 2016). For example, jurors are substantially less likely to perceive an interrogation as coercive if video evidence is provided from the perspective of the officer as opposed to a third-person perspective (Haward Law Review, 2015). This is especially relevant for the use of BWCs, as they always capture the officer's perspective and hence, the footage is systematically in favour of the officer (Haward Law Review, 2015).

Another limitation is related to informational and demographic frames, which are implicit biases that lead individuals to process video footage in different ways in addition to technical aspects (Haward Law Review, 2015). According to the research of Baker and Bacharach (2017), the demographic characteristics of a viewer greatly influence their perception of the use of force. Ethnicity is the most robust indicator: Black Americans generally view the police in a more negative light than white Americans, likely as result of prior negative experiences (Baker and Bacharach, 2017). Hence, Black Americans are more likely to make excessive force judgements (Baker & Bacharach, 2017), suggesting that White jurors would more commonly favour and side with the police than Black jurors. However, more research is needed.

Also, the concern of over-dependency is common within the discussion of video evidence. Police officers specifically point out two issues related to the use of video evidence in court: 1) the context is not given and 2) members of the public are usually not familiar with police tactics (U.S. Department of Justice, 1987). Concerns here are that, in a lot of cases, the events leading up to a certain incident caught on camera are not available on film. With this lack of context, police actions could appear to be inappropriate. The public may not realize that the police are allowed, trained, and required to use force under certain circumstances (Baker & Bacharach, 2017). Officers have expressed concerns about individuals viewing video evidence without prior knowledge of police tactics, as officers may be accused of using too much force even though they acted according to their training (Goold, 2003).

Moreover, there are concerns that an over-reliance on video footage will lead the legal system to devalue witness testimonies. This could lead to negative consequences in cases where video evidence is unavailable because a growing reliance on visible proofs may result in juries no longer recognizing other

sources of evidence or identification as equally important or reliable (Evans, 2015). It is of the utmost importance that surveillance footage is seen as supplementary to existing evidence collection and not as a means to replace human witnesses (Evans, 2015).

POTENTIAL CHANGES IN BEHAVIOUR

Finally, some counterarguments to the benefits of surveillance relate to potential behavioural changes that could arise from the implementation of such tools. The worry related to citizen behaviour is that, with increased surveillance, citizens will be less likely to interact with police officers due to privacy concerns (Lum et al., 2015). This will reduce non-essential civilian-police contact and potentially cause relations between police and civilians to worsen over time (Harris, 2010). Unfortunately, this hypothesis remains largely untested (Lum et al., 2019).

With regards to police behaviour, one commonly cited disadvantage is inherently tied to a positive effect of surveillance - the decrease in the use of force. Several studies have shown that officers equipped with BWCs use less force than officers without BWCs (Lum et al., 2019). However, this caution around the use of force could have dangerous consequences if the result is that police officers become less likely to intervene in situations where they would need to use force out of fear of retribution (Coudert et al., 2015). Both the ability to protect civilians and the personal safety of officers would decrease in such a scenario (Dhillon, 2014). However, with adequate training and experience, it seems unlikely that officers would hesitate to intervene accordingly.

A potentially important area in future research is the effect that the implementation of BWCs and other surveillance tools has on the likelihood of departments utilizing other oversight mechanisms. If video surveillance devices are being relied upon as the only tools to improve police behaviour, they need to have certain and defined positive impacts. As the reviewed studies have shown, this certainty is not a current reality.

Summing up, several issues related to the implementation of surveillance tools have been raised. Precautions need to be taken and appropriate legal frameworks established in order to protect the presumption of innocence for police officers and civilians alike. As the use of surveillance can come with social costs, the presence and purpose of surveillance should be communicated clearly. The benefits of surveillance must outweigh the costs, and if they do not, other strategies should be explored. In addition, surveillance tools should not become the "only measures of truth" (Evans, 2015, p. 230). Finally, potential changes in the behaviour of both citizens and the police need to be monitored more closely.

5 CONCLUDING REMARKS

While the amount of research available regarding surveillance in policing has grown over the past decades, many questions about the impact of surveillance on police accountability and other factors remain largely unanswered. Studies clearly identify differences between surveillance types as well as between their impacts, implying that greater attention needs to be paid to the specific advantages offered by each type of surveillance. It is clear from the reviewed studies that surveillance can offer material for training purposes and evidence in trials. Surveillance is also positively viewed as a

step towards increased accountability in the police by most civilians. However, it remains unclear whether these findings can be generalized because most studies focused on a small number of countries with similar law enforcement structures. Furthermore, more research about the impact of surveillance on the behaviour of both law enforcement agents and civilians is needed. While many studies conclude that a correlation between the use of surveillance tools and a reduction in the use of force is visible, the available evidence is too contradictory.

Overall, the anticipated effects of surveillance tools have perhaps been overestimated. So, what does this mean for the rapid adoption of these technologies? Generally speaking, agencies should not rush to implement these technologies nor expect to see a substantial behavioural transformation by their officers as a result. The benefits brought by these technologies, such as an improved civilian perception of the police and the greater availability of video evidence, must be weighed against the disadvantages of their use, with uncertainty remaining about their impact on police accountability. The authors do not discourage law enforcement agencies from implementing video surveillance tools; however, we advise that their implementation be deliberate, for example their use should be accompanied by the creation of adequate legal frameworks.

In all cases, pilot programs should be conducted before investing in expensive equipment which may not deliver the expected results. The installation of CCTV cameras, for example, typically costs millions of dollars and studies about whether these costs are worthwhile are rare (Piza, 2018). Further, the operation and maintenance of the technology requires significant investment, such as dedicated and specialised technical support.

BOX 7. COSTS OF SURVEILLANCE

At the Phoenix Police Department, US, the costs of BWCs, their maintenance, the storage space for video footage, IT staff, and staff handling requests amounts to 2883 USD per camera per year (Police Executive Research Forum, 2018). In this case, a budget of approximately 1 million USD is necessary to equip 10% of staff.

Often, surveillance costs exceed the available budget and the tools are too expensive to maintain; for instance, the Westminster Council, UK, decided to switch off its entire network of CCTV cameras in 2016 as it could not afford to continue running the network with all related charges (Evening Standard, 2016).

BOX 8. BEST PRACTISE EXAMPLE

In 2019, 20 police officers in the canton of Vaud, Switzerland, tested BWCs (Suhner et al., 2021). This pilot found BWCs to bring positive effects, especially on officer safety (Suhner et al., 2021). As a result, the Cantonal Security Council decided to continue the pilot experiment and eventually extend the use of BWCs to all Vaud police forces, following the creation of a legal basis (LeTemps, 2021) .

Furthermore, it is important to consider the proportionality of video surveillance and whether the violation of privacy can be justified, bringing enough benefit for implementation to be supported. As previously mentioned, other forms of surveillance exist that may be equally or even

more effective under certain circumstances (Welsh et al., 2015); law enforcement agencies should always implement less invasive surveillance techniques first, such as improved lighting, before resorting to more intrusive measures. The benefits derived from surveillance should outweigh its detrimental effects. Furthermore, clear department policies and/or legal frameworks governing all aspects of surveillance need to be established before surveillance technologies are implemented. Beyond that, facial recognition tools should not be combined with surveillance technology; this poses a serious threat to civilian privacy (for further information, see the Haward Law Review, 2015).

Finally, this document has placed a focus on the deterrent effect of surveillance tools on legal violations by both officers and civilians. The authors, however, want to emphasise that improving accountability involves many more aspects, including how and when disciplinary actions are taken. Further, the introduction of video surveillance tools should not be taken as a quick fix to the issue of the excessive use of force. The problem is much more complex. Video surveillance tools can inform accountability and enhance training processes, but police behaviour will continue to be shaped by the culture of a police organization as well as by recruitment, selection, and training practices. If police are over reliant on video surveillance tools, they risk creating "artificial integrity", meaning that some police officers will only behave legally and ethically out of a fear of getting caught. Video surveillance tools are a useful part of the response to accountability issues, but do not represent the solution themselves; strong leadership, a multi-faceted organisational strategy, a well-resourced internal affairs unit, proactive investigative techniques, and ongoing efforts to promote professional standards are required to promote and maintain accountability and true integrity within a police organisation (Punch, 2000).

As demonstrated in this paper, many of the challenges surrounding surveillance tools can be overcome, but this requires that the positive aspects of their use be carefully balanced with concerns about their misuse. For example, in a study conducted by McClure et al., (2017), officers wearing BWCs while also following a script to maximize procedural justice improved citizen satisfaction by 60–360%.

Given the vast differences between the contexts in which police forces operate, there is no general rule that defines a policy suited to all environments. Each police service needs to determine this for themselves. Finally, in this regard, departmental policies are only effective if they are introduced together with mechanisms to ensure compliance (Flight, 2019).

CONSIDERATIONS

The following guidelines for drafting departmental policies are based on common practises from the College of Policing (2014), Miller et al. (2017), the Stationery Office (2013) and the examples cited in the text unless stated otherwise. Given the vast differences in the contexts in which police organizations operate, this collection of considerations is not exhaustive. All law enforcement organisations should consider further research and pilot programs before embarking on new surveillance projects.

GENERAL

1. Clear rules, policies, and procedures must be in place before a surveillance camera system is used, and these must be communicated to all who need to comply with them.

2. The national and international legislation relevant to the police use of video surveillance tools has to be followed and departmental policies need to be in accordance with such law.

   For example, Article 8 of the European Convention on Human Rights (ECHR) provides for a right to respect for private and family life, home, and correspondence. Consequently, law enforcement organisations in member states of the Council of Europe must consider this article when recording and must not record beyond what is necessary for policing purposes.

3. The use of video surveillance tools must be as transparent as possible and should include an effective procedure for handling concerns and complaints from individuals and organizations.

4. Officers should receive training, including refresher courses, on the relevant aspects of the specific equipment being used. The training should include, among others:
   - Departmental policies and relevant national and international laws,
   - Procedures for operating the equipment safely and effectively,
   - Procedures for downloading and tagging recorded data,
   - Procedures for accessing and reviewing recorded footage,
   - Procedures for preparing and presenting digital evidence,
   - Scenario-based exercises.

RECORDING

5. Departmental policies should clearly state which personnel are assigned or authorized to use video surveillance tools and under what circumstances.

6. Civilians should be informed that they are being recorded and for what purpose the footage will be used. It should also be made clear to the civilian which law enforcement

individual is undertaking the recording.

For instance, video and audio recording devices could be clearly marked to alert third parties to their possible use; this could, for example, be achieved with the aid of a sticker stating 'camera in operation' (Haward Law Review, 2015).

7. In general, officers should begin recording when responding to calls or at the beginning of an incident. However, if camera activation is deemed as unsafe, impossible, or impractical, the officer should activate the camera at the first available opportunity.

8. Once activated, cameras should continue to record until the incident or encounter has ended, the officer has left the scene, or a supervisor has authorized that the recording can be ended.

There are some country-related exceptions to these rules that should be reflected in departmental policies. Such exceptions could include filming in private residences, obtaining prior consent, and filming victims of rape or serious sexual assault.

9. Ideally, verbal announcements related to the recording's initiation or conclusion are captured on the recording at its beginning, end, or interruption.

10. The use of video surveillance tools is not appropriate in some situations. This includes during intimate searches or in places where a reasonable expectation of privacy exists (for example, bathrooms), among others. Policies should clearly define the types of recordings that are prohibited by the agency.

RETENTION, DATA PROTECTION, AND ACCESS TO RECORDINGS

11. Footage should be available long enough to be used as evidence in an investigation; however, it should be deleted after a defined statutory period of limitation. The possibility that recordings may be of some legitimate use in the future, once the purpose for which they were made is no longer valid or no longer exists, is generally insufficient to justify their continued retention.

For example, the Home Office Association of Chief Police Officers (2007) National CCTV Strategy advises that material should be retained for a period of 31 days, after which it should be deleted unless it has evidential value.

12. Information about the duration of the retention period defined in the departmental policies should be made available to the public. For example, it could be published on an agency's website.

13. There are no circumstances in which deleting recorded images without authorization can be justified.

14. Data protection issues need to be addressed in departmental policies. This includes a consideration of the download and tagging of footage, the storage of data, and security features that prevent the misuse of data and hacking.

15. Access levels to the recordings must be regulated by departmental policies. Access regulations should include clear and consistent protocols for the external release of recorded data, both to the public and the news media.

16. A record of how images and information are handled should be kept as an audit trail if the images or information in question are to be used as evidence.

It should be ensured that meta data (for example, time, date, and location) is recorded reliably.

USAGE OF FOOTAGE

17. Images collected by the police initially belong to the police. When criminal proceedings are conducted, the prosecutor has to decide what to do with the footage.

18. Clear standards should be put in place for verifying the authenticity, reliability, and admissibility of footage to ensure the forensic integrity of recorded information.

Evidential continuity statements confirming that the evidence has not been tempered with may be necessary.

19. If footage is used for training purposes, agencies should adopt a procedure for deciding whether a recording is suitable to be used as a training aid prior to deletion, in order to ensure the protection of personal data.

INTERNAL REVIEW AND EXTERNAL OVERSIGHT

20. Any use of video surveillance tools should be subject to internal review and external oversight. The responsible oversight bodies should be defined in the departmental policy.

21. The system operator should review the continued use of video surveillance tools on a regular basis to ensure it remains necessary, proportionate, and effective in achieving its stated purpose. At a minimum, the review should be conducted annually and should also include a financial analysis.

22. An agency's internal audit unit should periodically conduct a random review of footage to monitor compliance with departmental policy. Regular reports on policy compliance in this regard should be published.

23. Agencies should collect statistical data on the use of surveillance footage, including data about the frequency of use of video footage in criminal prosecutions, internal affairs matters, and training.

The preparation of such data is crucial to ensure parliamentary oversight of the police. In many countries, such as Germany, parliament is provided with statistics on policing on a regular basis (Aden, 2017).

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