Technology in Policing: Impact and History

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Abstract

This essay is to explain about how police technology shaped policing today. The impact and history of technology explained in this paper will tell about how different technology is today compared to when policing began. How did the police manage problems with lower levels of technology like the nightstick? It will go over the pros and cons of technology and its importance today. Some examples of technology will be mentioned. Practices with technology such as body cameras and crime mapping will give us a clear understanding of how technology helps police get hard tasks done. First, we will explore the history of technology in policing and look at some research on the effectiveness and impact of technology in policing. Second, we will look at some of the detriments of technology, such as abuse of technology and if it gets into the wrong hands. Finally, we will determine if technology is truly beneficial or detrimental to police.

Technology in Policing

Technology is a variable word, meaning that using various tools that are available are what can craft the technology of today. When policing began in England, there were no radio systems, cellular phones or DNA testing kits, most of it was done by eyewitness testimony and pointing the fingers at people, along with writing notes. As time came and went, technology also evolved. With technology, there also has been some controversy applying it to solving crime scenes or applying it to our everyday lives.

The focus that scholars have is how technology has the nearly magical role of improving our lives or solving complex social problems. There have also been some arguments that law enforcement has about new technologies aiding them (Nunn, 2001). For example, the use of technology in using GPS trackers to track suspects. With new technologies appearing, it questions about how they should be used and some possibly invade the Fourth Amendment rights of suspects. If a GPS tracking device was to be put onto a suspect's vehicle, generally a warrant is required as it is considered an invasion of privacy.

The role of technology in policing has always been relevant and ambivalent. It is because of how helpful technology can be to influence organizations and practice. Also, it can help police function better in detecting crime. With technology being a helpful tool, there is also a criticizing side to combat. Deflem (2002) tells us that high-tech policing can erode civil liberties and distort conceptions of a crime-free social order. What he means is that technology can be abused in a sense that it can deprive people of any rights if mishandled (Deflem, 2002).

History of Technology

Before the age of computers and DNA evidence, police technology was the basic note-taking, eyewitness testimony, and accusations. At first, there was no such thing as crime mapping software such as CompStat or GIS. As time went on, technology also evolved.

There were four eras where technology policing began and described the technology in each. The political, reform, community, and the information technology era. In the political era, from the 1840's to the 1930's, there were no walkie-talkies, police patrol cars, or cell phones. A way to be successful in this era was the use of a nightstick, or gun, and having connections with political bosses. Without cell phones or computers, police had to base their reports on eyewitnesses and notes about a suspect or crime. In the reform era, it was the period of reformation for the police, thanks to the ideas from J. Edgar Hoover and August Vollmer. In this era, the introduction of police cars, establishing a uniform crime reporting system, and the creation of W. Wilson's theory on police management that focused on changing to preventative patrolling and suppressing of crime. Those two became the main mission of most police organizations. The community era and information technology took place at the same time and pushed for response to terrorism, engaging in hot spot policing, and many more (Rosenbaum, 2007).

Before the political era, Sir Robert Peel, the founder of policing, expressed that police kept records of their daily activities. It is in fact one of the fundamental mechanisms of police administration. At this time, police were limited to nightsticks and guns, along with eyewitness statements and he-said-she-said types of accusations (Harris, 2007).

The Political Era

The Political Era, began in the early 1840's to the 1930's. As mentioned before, this era had no computers, cell phones, police cars, or walkie-talkies. It also marked the beginning of bona fide police agencies in the United States. It was a need that was met by citizens, but had no idea where police fitted in society (Oliver, 2006). The only tools they had access to nightsticks, guns, and any connections with political bosses. This era showed the debatable side and legitimacy of a police force. It was debatable because of how officers were unmotivated, corrupt, and abusive of their power (Rosenbaum, 2007). For example, police had no body cameras on them in this time and could do whatever they wanted. It meant that abusing their power is very easy during this era.

There was also very little information on tactics during this time period. This era had local beat officers and foot patrol be the most frequent way of police delivery. The police era relied heavily on a political machine's will and maintain satisfaction with the citizens. This era showed that the police were unsuccessful in controlling crime, delivering social services the citizens needed, or maintain any form of control (Oliver, 2006).

The Reform Era

This era began in the 1930's and ended in the 1970's. From the ideas of August Vollmer and J. Edgar Hoover, it changed the focus of policing from a narrowed state to becoming a honed crime fighting group. Citizens in this era also called for a reform of the police (Oliver, 2006). There were three forces of this era were: Introduction of police cars, creating a Uniform Crime Reporting, and the introduction of O.W. Wilson's definitive theory of police management (Rosenbaum, 2007).

O.W. Wilson's theory of police management focused on preventive patrol by vehicle was used as an anticrime tactic. He noted that if unmarked vehicles were used to go around the streets randomly, it would give the feeling of police being omnipresent, meaning that police would be able to be anywhere they are needed in a reduced amount of time. It acted as a deterrent for criminals while it acted as a buffer of reassurance to citizens (Kelling & Moore, 1988).

The introduction of police cars brought about removing police officers from walking a lot of the time. However, some police stations use walking as a form of punishment back in the early days but is not practiced as much anymore. With the aid of patrol cars, dispatching to 911 calls were a lot quicker than on foot (Lum, Koper, & Willis, 2017).

An important invention in this era was the 911 calling system. It was introduced in 1968 to report emergency situations and became the principal program as it focused on preventive patrol by vehicle and rapid response to events of crisis (Kelling & Moore, 1988). For example, a person calls 911 on a telephone to report an emergency of a suspected person committing a violent crime and the dispatcher sends the appropriate responder to the situation. In the past, people had to find a nearby officer to reach for help. Today, people can call 911 on their cellular phones at any time. There also has been use of text messaging 911 in a robbery without the suspects hearing the caller speak. Some people also have called 911 in non-emergency situations. As the system became more prevalent, there was a significant demand for this system to become used (Harris, 2007).

The Community Era

This era began in the 1980's to the early 2000's. Policing at this time was reactive, meaning that police waited for crimes to occur and then respond to them. There was a push for a

proactive style rather than waiting all the time. It meant that police would come in response to a crime in progress (Rojek in *Critical Issues of Policing*, 2015).

Policing in this era focused on using technology to help direct resources to crime-prone areas. In order to do so effectively and efficiently, resources must be directed to the problem areas. Fortunately, where resources are placed, there has been reduction in criminal activity. Crime mapping at this time became an effective tool to find crime at where it is frequent at (Rojek in *Critical Issues of Policing*, 2015).

This era also focused on local community support and the outcome of citizen satisfaction with the police and improve the community's quality of life. The police also had to learn a new way on dealing with crime, fear of crime, and disorder in a new lens by providing a long list of services beyond controlling crime from the reform era. Also, the police gradually brought back foot patrols, horses, bicycles, and etc. to improve their way of contact with citizens. It also brought about the deployment of various problem solving and geographical information systems in order to combat against trends and solve underlying problems instead of dealing with its symptoms. This era showed success in reducing the fear of crime and increase the quality of life in communities, there is a small amount of proof that it was successful in reducing crime (Oliver, 2006).

The Information Technology Era (Homeland Security Era)

Rosenbaum (2007) mentions that advances in technology is a push for data-driven policing, finding concentrated areas of crime, and suspect surveillance. He also mentions that information technology is also a powerful tool in response to terrorism. With technology evolving, it serves in detecting, investigating, prosecuting, and crime prevention for many law

enforcement communities. The Information Technology Era began in 2001 and is currently ongoing (Rosenbaum, 2007).

Oliver (2006) points out that after the 9/11 attacks, technology in policing and the USA PATRIOT Act helped create the United States Department of Homeland Security. The Department of Homeland Security helps prevent acts of terrorism from occurring through information technology by spotting the early signs of a planned terrorist attack such as phone conversations with suspected terrorists and the use of US Customs and Border Protection. The methods of technology they use are risk assessment, police operation centers, and information systems (Oliver, 2006).

In this new era, economics played a role in shaping how the government was going to fund such as budget cuts to current or prior programs in order to fund Homeland security. Public concern also shifted from little to no concern, all the way to change in views. Oliver (2006) pointed out that Americans now agree with that the government should address problems relating to terrorism and security in the homeland (Oliver, 2006).

This era changed our perception of policing, changing the philosophical side in policing and an increased use in information technology as police are gaining it rapidly. Some police departments for example switched from using paper to gather information to storing information electronically onto a hard drive with typing it on a keyboard and hitting the save button (Harris, 2007).

Technology as an Aid to Arrest

In the early days of policing, there were only a few aids in arresting suspects. At first, in the political era, there was the nightstick. It was a basic, miniature-sized stick used to hit suspects to render them less likely to run any faster. This tool was common in the political era

(Rosenbaum, 2007). As time went on, technology for the police evolved both in physical and in cyberspace.

Byrne and Marx (2011) note that changes in hard and soft technology of policing have transformed numerous police departments fundamentally. Hard technologies had the intention to prevent crime, such as tasers, bulletproof windows for bank tellers, and many lifesaving mechanisms while soft technology approached crime-stopping in a strategical sense such as software programs, risk assessment, and threat assessment. (Byrne & Marx, 2011).

However, police technology is not related to the officer's performance. However, it brought more about safety, such as the creation of non-lethal weaponry, non-electric immobilization devices, ways to lessen vehicular pursuits, and officer safety. Starting in the Reform Era, police cars were beginning to be used to help keep patrol officers from walking for long periods of time (Rosenbaum, 2007). Police also use soft technology to collect information, such as with crime-mapping and amber alerts. For example, police use crime-mapping to find what areas are impacted most by crime. It helps them gather information about what areas to look out for in terms of criminal activity (Byrne & Marx, 2011).

Weaponry in Policing

When technology evolved, so did weapons used by police and criminals alike. As technology advanced overtime, more complex ways to find where crime was frequent at began to show its hidden colors. The types of weapons most suspects would often use are lethal weapons such as high-powered machine guns (AK-47 Kalishnikov) to defeat the police in their attempts to stop them while police use the least- to non-lethal weapons to help keep their communities safe and keep a good reputation in their records.

The taser, also known as a stun gun or a “Thomas A. Swift Electric Rifle” (derived from the fictional character Thomas A. Swift) is a form of technology that helps make a suspect’s movement limited and gives officers complete control of a situation involving the arrest of a suspect (Jefferson, 2013). This is a non-lethal weapon that shocks the suspect to subdue them from making any further movement. It is also a tool to make suspects compliant to an arresting officer’s commands. The death rate for this device is very low.

Jefferson (2013) conducted a research on this non-lethal weapon. She stated that there is very little empirical research on how effective the taser is. There is also controversy with this device because of the health risk involved with individuals who get shocked with 50,000 volts and a possibility that death can occur along with the use of force involved in using such a device. Since 2001, there have only been 513 reported deaths related to taser use. However, the death report from the use of tasers was found to be inconclusive. Some of the benefits of using a taser in today’s policing is that it can be used to reduce suspect and officer injuries. It also helps keep the officer using the device by keeping control of suspects from a safe distance (Jefferson, 2013).

Pepper spray, another tool used by police to control a suspect from a safe distance during an arrest. This instrument is also known as Oleoresin Capsicum (OC) spray. It is made from concentrated oil by extracting hot peppers and contains hundreds of thousands of chemicals. They are designed to spray chemicals to give the target a burning sensation to the target’s eyes and skin. The effectiveness of this device can vary by its strength and characteristics, along with its accuracy and delivery of the capsaicinoid solution put into a single canister (Reilly, 2003).

Crime Mapping Software (GIS, etc.)

Technology was not limited to just advancements in weaponry or responding to an incident in a small amount of time, it also helped us with locating where most crime occurs in a

given jurisdiction. During the 1970's and 1980's, many police departments began capturing crime and arrest reports electronically. Before computers were invented, police placed pins on paper maps, telling other officers where crimes were committed most at, especially in gang-infested neighborhoods. These software systems and electronic storage of crime and arrest reports also gave us clear statistics in where crime occurs most (Harris, 2007).

One of the first crime mapping software used was geographic information systems (GIS). This system allowed police agencies to map a lot of information in a small amount of time. Beneficially, the system increased the police departments' knowledge and craft ways of effectively responding to crime (Rojek in *Critical Issues in Policing*, 2015).

Another crime mapping system is CompStat. CompStat stands for Computerized Statistics. This system collects statistical data in policing, such as areas where crime is prevalent, accountability for police officers and managers in the police departments, and revamping expectations from what the state that uses the system to accomplish and heighten concerns. From this system, Malcolm Feeley and Jonathan Simon developed a perspective called "a new penology". It shifted the focus of criminal justice from individual offenders, assignment of blame and responsibility, and the goals of treatment. The new penology focuses on rehabilitation to going towards an actuarial language aimed to minimize or managing the risk of harm, increasing an emphasis on internal system processes, and deploying new risk-based technologies (Willis & Mastrofski, 2012).

CompStat also brought about making police organizations rational and responsive to management direction. It made it easier for police organizations to make information accurate and available in a timely manner to all levels of a police organization, select the most effective tactics for specific situations, deploy people and resources to implement the tactics in a fast

manner, follow-up relentlessly and assess to learn what happened and make any tactical assessments if needed. This information was often used in Compstat meetings held by police departments (Harris, 2007).

Body Cameras

We all have seen police wear cameras on their persons when they stop people for traffic infractions. Body cameras are also used as tools of accountability in case an officer is ever in trouble for an inappropriate action during any situation they face. It is also a valuable tool to validate either party's side of their story. For example, if a suspect accuses an officer of an inappropriate action against them and the body camera is present, it can either help clear an officer or find an officer guilty of their actions and support the suspect's side of the story.

Body-worn cameras are seen as a solution to control the use of force by police. They are worn next to the officer's badge or can be worn as a headset. The most common way of wearing a camera is next to the officer's badge. A benefit of the cameras is that they are useful in snuffing out the corrupt officers, limit abuse of power, and restore credibility that police officers have to their communities (Coudert, Le Métayer, & Butin, 2015).

The use of body-worn cameras has three main goals, anticipation to increase the transparency of police behavior by documentation of events, exposure of good and bad behaviors, and deterrence. These three goals make a significant impact on the police and citizens alike to ensure privacy and hold police officers accountable for their actions for or against the public (Coudert, Le Métayer, & Butin, 2015).

Goals of the Body-Cameras

Body-worn cameras in terms of transparency help document events, such as contact with police officers and citizens. The videos from the devices serve as a reliable source of evidence as

it is the first goal of the use of body cameras. Exposure of good and bad behavior with police officers is the second goal. It focuses on deterrence against the inappropriate use of police force against citizens the interact with. For example, it would deter the police officer from using deadly force against a suspect in an attempt of apprehension. The third goal focuses in relation with the deterrence effect, the expectation of improving policing and restore the trust with their communities (Coudert, Le Métayer, & Butin, 2015).

Consequences of Technology

Byrne and Marx (2011) mention that it is possible with our reliance on technology that it will drag us down to a strong dependence on technology. Rosenbaum (2007) mentions that patrol cars also isolated police from gaining positive contacts with the community. Technology can also worsen a patrol officer's job and make them feel burdened and under a lot of stress from increased demands in reporting and monitoring certain types of new information and surveillance as some police officers are used to the old pen-and-paper type of policing (Koper, Lum, Willis, Woods, & Hibdon, 2015).

A consequence of technology is that most people are absorbed into their smart devices like smartphones and tablets. An example of such is when citizens use their smartphones to film the actions of police officers in the times of their wrongdoings. For example, if a police officer shot and killed a deaf suspect thinking that the suspect was not compliant with the officer's orders and a citizen was nearby, chances are that the citizen is recording it on their smartphone. In this incident, the individual that recorded the video will likely upload the actions of the officer on social media platforms such as Facebook, YouTube, Snapchat, and Instagram will go viral on the internet and will be criticized for their actions by the public (Coudert, Butin, & Le Métayer, 2015).

Limits of Technology

Technology has been a major source of expenditure and innovation in law enforcement for many decades. Also, it is seen as to increase an organization's technical efficiency and increase the performance of them. Like the power a police force has over the community it is in, technology in policing also has its limits (Lum, Koper, & Willis, 2017).

Some of the limitations in technology include resource limitations, crossing legal borders, and technical difficulties can stifle technology's full potential in policing. Limitations in resources can include funding limitations and boundaries. Legal concerns include doing certain actions without a warrant or invasion of privacy such as flying a drone in a non-traffic related event. Technical difficulties such as bugs can occur in the use of technology as well (Lum, Koper, & Willis, 2017).

Another limitation in technology is the expectation of privacy. People today expect to have a level of privacy during their everyday lives. In policing, wiretapping, attaching GPS devices to cars, and using drones can potentially invade that privacy expectation guaranteed to us by the Fourth Amendment. For example, police are surveying a suspect and want to attach a GPS below the suspect's car and want to track their movements. The suspect has the right to privacy and police must have a warrant to follow his everyday movements (Nunn, 2001). Even with technology evolving, the police cannot be above the law.

The use of force is a limitation in terms of arresting a suspect. Some of the devices such as the taser and pepper spray may cause certain chains of events to happen such as death have occurred before. However, causes of death from using either device is very rare. To reiterate, as of 2017, there have been more than 1,000 deaths reported from police using tasers. Nine in ten of

the suspects who died in the use of tasers were unarmed, while one in four who died from shock of the taser had mental health issues (Reuters, 2017).

Some technologies can be public after development, such as body-worn camera footage as per the Freedom of Information Act. In this law, it states that images recorded by police can be viewed by anyone in the general public. Anyone can request access to the images obtained from the cameras. With limitations of storing information is that only videos involving use of force, complaints against officers, or police misconduct be stored as suggested by the ACLU. Also, those videos are to be subject to public disclosure (Coudert, Butin, & Le Métayer, 2015).

Technology used as a tool for Accountability

Police effectiveness depends heavily on officer accountability and crime reduction. We all want to be safe at home and worry less about crime coming to the front door. As compared to the Political Era, officer accountability was hard to tell and corruption was prevalent (Rosenbaum, 2007). As time went on, accountability tools for police organizations and methods to reducing crime have improved.

A way to show police accountability is using body-worn cameras seen on most police officers. Body cameras are used to monitor the actions and decisions police officers make. It also holds police officers accountable for their actions in times of an incident with a suspect or witness to crimes as mentioned before with corruption and etc. The countries that use this technology the most are the United States and the United Kingdom while other countries in the world are testing the technology to see if it is feasible in their line of work and improves police credibility to the public (Coudert, Butin, & Le Métayer, 2015).

The movement of using body-worn cameras have also gained the support of police officers, the public, and the courts. It also helps reduce officer violence, discrimination, or

corruption. For example on corruption, a police officer takes a bribe from a suspect to avoid any form of punishment (Coudert, Butin, & Le Métayer, 2015).

The computer software CompStat also addresses accountability for crime statistics and electronical mapping of crime. There were meetings in this system to show that the organizations using this system to demonstrate seriousness in taking down crime along with selecting effective crime prevention strategies at the organization's disposal (Willis & Mastrofski, 2012). In comparison with CompStat, police can also use GIS to examine complaints filed against officers in their departments.

Studies to Illustrate Effectiveness

To demonstrate meaning in technology effectiveness in policing, we will look at three studies that illustrate technology's effectiveness and downfall. First, Jefferson's (2013) study will look at the difference between police officer injuries, suspect, relation of gender between the before and after using tasers in Texas' law enforcement agencies, and changes in policy with national organizations compared to law enforcement in Texas. The second study will focus on Lawton's, Hickman's, Piquero's, and Greene's (2001) study on police using GIS on complaints against officers in the Philadelphia area from 1998 to 2000 and look at one complaint on the map. The third study will focus on Coudert's, Butin's, and Le Métayer's (2015) overview of body cameras in four countries of Europe.

Jefferson (2013) looks at six research variables that each have an independent and a dependent variable about use of the taser. The first question about significance on injuries before and after the deployment of tasers in Texas law enforcement agencies. Jefferson (2013) found that with the Amarillo Police Department that there was a significant difference in prior to using the taser and after the deployment of tasers. This was also true with suspect injuries on taser use

prior to and after deployment of the taser. Jefferson (2013) found that there was no statistical significance of any deadly force incidents before and after the deployment of the tasers (Jefferson, 2013).

In terms of gender and race, Jefferson (2013) found that tasers were used primarily against males (399) while the number was low on females (52). Tasers were used as a primary means of force for 32% of arrests. Taser use on race primarily comprised of 205 African American, 242 White, 4 Asian, and no Native American. The sixth question that Jefferson (2013) asks about relation between race and gender, found that neither gender or race had significance in determining if a Fort Worth police officer would tase the individuals during the study (Jefferson, 2013).

In terms of policy, Jefferson (2013) compared recommended taser policies suggested by PERF (Police Executive Research Forum) and IACF (International Association of Chiefs of Police) along with the adoptions of the Texas law enforcement agencies. The two organizations made ten rules about using a taser. An example of such a policy is not using it on people, unless they are shown to resist or become combative against the arresting officers such as not listening to an officer's orders or the public (Jefferson, 2013).

Lawton, Piquero, Hickman, and Greene (2001) studied complaints against Philadelphia police officers from January 1998 to April 2000 in 23 of its districts. The categories of complaints were off-duty police action, physical abuse, verbal abuse, other misconduct, lack of service, other forms of force, harassment, and other. The most common form of complaint was off-duty police action (405). In the article, they created a map that showed each police district of Philadelphia and where complaints are most frequent by their color and what type of complaint it is (Lawton, Hickman, Piquero, & Greene, 2001).

For example, on figure 7 of the article, the map of Philadelphia shows the complaint about physical abuse. It is possible on the map that the areas that are lighter show that the districts are suburban and middle class in nature. The physical abuse information obtained showed that it is correlated with unemployed males and female households that have children in it. However, there was no correlation between physical abuse and the African American population in Philadelphia. It is possible that some districts have a lack of trust in their local departments to police themselves (Lawton, Hickman, Piquero, & Greene, 2001).

Coudert, Butin, and Le Métayer (2015) looks at five countries that use body cameras and how they are effective in policing in those particular countries. Coudert, Butin, and Le Métayer focuses their study on the United States, United Kingdom, Belgium, France, and Spain. Each country uses the system differently than one another. They found that the United States had 63 agencies equipped their officers with body cameras to improve evidence collection, strengthen officer performance and accountability, enhance agency transparency, document encounters with other officers and the public, and investigate and resolve complaints and quickly resolve officer-involved incidents. Body cameras in the United States were also used to reduce complaints of racial profiling in “stop and frisk” searches. It also has its limitations. As mentioned before, that the Freedom of Information Act subjects body cameras to be accessible to the public (Coudert, Le Métayer, & Butin, 2015).

In the United Kingdom, it all started with a couple of recent events that have peaked the interest of using the cameras. It all started with the death of an individual named Mark Duggan, who was shot during a planned operation. Pictures showing that Duggan was unarmed were disclosed by another person sparked violent riots. Later, there was a scandal that renewed interest in body-worn cameras. The main priority for the British police forces that used the cameras was

to improve policing and restore the public trust. In response, the Liberal Democrats, a party in the United Kingdom proposed to force selected police officers who had firearms and are members of territorial support groups to wear the cameras. The MET police tested TASER Axon cameras, which were small cameras that can be mounted on sunglasses, caps, shirt, or a head and found that the first tests were gaining positive results because it provided additional evidence towards crime solving or verifying an officer's account of events that occurred (Coudert, Le Métayer, & Butin, 2015).

In Spain, Madrid's police force tested five body-worn cameras. The purpose was to protect officers against attacks or insults from citizens. It also helped assess what the appropriate action an officer should take in order for it to be proportional, meaning that it is an equal response between officer and suspect. A limitation of the body-worn cameras would be only be used in risky operations, such as a situtation that involve the life of a police officer. There were five cameras tested in different cases. The Madrid police force did the same experiment as the UK's MET police force, using the TASER Axon cameras. There was no information on the success or failure of the experiment conducted in Spain. However, the images captured from the cameras are sent to a central station through the internet to be viewed. They are only kept the database for only seven days, unless the judge or criminal investigation needs the said video. Spain also has a Data Protection Act like the UK that allows police to use the cameras in public places, like parks, bars, and etc. with the individual's prior knowledge of being recorded. To comply with the requirements, the cameras got a yellow warning sticker that tells about images and audio being recorded. With residential areas, the police will need a warrant or authorization from the owner of the property (Coudert, Le Métayer, & Butin, 2015).

In Belgium, body-worn cameras were implemented in response to a death of a citizen threatening police officers with a cold steel weapon. The test was conducted in the city of Mechelen. Police were divided about the usefulness of such devices. The purposes of such was to identify purposes or document events. The other side argued that their value is limited as the recording from the cameras were only partial, not the complete picture. The police in Belgium found barriers of their usage such as Data Protection Act and prevent unlawful uses of recording done by an officer. The laws of extending the use of body-worn cameras are still facing scrutiny from the Belgian parliament (Coudert, Le Métayer, & Butin, 2015).

France uses the body-worn camera to reiterate documentation of interactions with the public in response to incidents police had with citizens while being recorded by other citizens on their smartphones. In 2014, the French government gave the police 4,500 body cameras for a period of five years. However, some police units use another brand, such as GoPro, a camera used in sporting activities like diving and mountain biking because of its ability to provide a wider angle of vision. France also had its limitations with body cameras in the legislative section, such as the Internal Security Code, which prohibits recording in buildings and preventing attacks against persons and goods in places particularly exposed to risks of aggression and etc. (Coudert, Le Métayer, & Butin, 2015).

All four of the European countries mentioned in Coudert's, Le Métayer's, and Butin's study had laws that were in common with each other, such as the Data Protection Act that limited what the police can record on their body cameras. An example of such was that Spain had the Freedom of Protections Act along with the Act of Video Surveillance that allows police to film in public places that had no restrictions like streets and parks. However, the individuals must be

informed about the recordings before recording can happen (Coudert, Le Métayer, & Butin, 2015).

Conclusion

Technology is a complex system in today's policing and its constant evolution. It has provided both beneficial and controversial sides of policing. However, information on the impact of technology has its biases and needs more research to demonstrate its effectiveness, especially with its constant evolution. Harris (2007) noted that there is very little evidence that information technology has fully revolutionized policing, phone usage, vehicles, and two-way radios (Harris, 2007).

Technology has its benefits in maintaining safety in policing and keeping the public aware of technological uses that the police have. After the 9/11 attacks, police gained the ability to use information technology to give them the upper hand against terrorism (Oliver, 2006). The use of body-worn cameras help with police being more accountable for their actions when dealing with the public (Coudert, Le Métayer, & Butin, 2015).

Technology also has its downsides in policing, such as questioning its true effectiveness on the impact of policing. Jefferson (2013) stated that there was very little empirical research on the taser's effectiveness (Jefferson, 2013). Also, Coudert's, Le Métayer's, and Butin's (2015) study yielded very little results from the United Kingdom, Spain, Belgium, and France (Coudert, Le Métayer, & Butin, 2015). As technology evolves constantly, policing will face new challenges along the road to successful crime fighting.

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