



MSc Public Administration

Master thesis

**Analyzing the Impact of Digital
Technologies on Police Legitimacy in
Enschede**

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Abstract

This research examines the influence of NFC smartphones and body cameras on the view police legitimacy in the eyes of students in Enschede. The basis of the research is procedural justice theory, which outlines fairness, openness, and respect in institutions. The paper seeks to understand how the tech can influence the view of police performance and legitimacy, so that citizens have a higher chance of cooperating with the officers. The study uses a survey, distributed to University of Twente students where the main five factors are highlighted: legitimacy: personal experiences, police performance, visibility of technology, media portrayal, and data privacy concerns. The outcome of the research has shown that smartphones and bodycam technologies can significantly increase trust in the police, promoting cooperation with the officers. Almost all factors have had a trend of viewing bodycams as a positive addition to the police force, while media portrayal and data concerns have had limited effects. Overall, findings show that students see these technologies as a good tool for the police force, where transparency and performance of the policing body is improved drastically. This study advances knowledge of the use of technology in law enforcement and emphasizes the significance of a balance between privacy and transparency. The paper outlines visible accountability methods as a way to improve police-community interactions and increase public trust, which also has broader implications for digital policing strategies.

Keywords

Dutch police, digital technologies, policing, students, NFC smartphones, public safety, privacy

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1. Introduction

In a time of fast technological advancement, smartphones have become ubiquitous instruments that touch nearly all aspects of contemporary living. Police departments are working harder to maximize technology usage in policing and law enforcement while also getting ahead of any technological, organizational, and legal obstacles (Custers & Vergouw, 2015). The multifunctional gadgets, which come with cutting-edge capabilities have entirely changed how police departments interact with one another, obtain information, and do business (Rahul et al., 2015). In this digital age, law enforcement organizations consider smartphones powerful allies in their quest for increased operational productivity and efficiency (Rahul et al., 2015). The goal of using innovative technologies within the Dutch police is to transform identification verification procedures, which are essential to law enforcement operations (Ernst et al., 2021). The police work for confirming ID cards, driver's licenses, and passports can be characterized as labor-intensive, time-consuming, and prone to human error (Ernst et al., 2021). Incorporating smartphone technology is expected to mitigate these difficulties by providing a simplified, intuitive method that improves identification verification processes in speed and accuracy (Ernst et al., 2021). However, there are concerns about the proper use of these technologies and their impact on citizens' perception of police operations (Ernst et al., 2021).

Therefore, this research investigates how the NFC smartphones and bodycams shape students' perceptions of police legitimacy. It is crucial to analyze how NFC smartphones and bodycams are changing law enforcement in the Netherlands by investigating the implementation of these technologies and students' perceptions of them. It is crucial to examine NFC smartphones and bodycams in Dutch law, as research suggests that these tools might improve transparency, effectiveness, and public confidence by providing more credible recording of law enforcement operation, improving accountability, and enhancing confidence through better oversight and evidence gathering. (Murphy et al., 2016; Custers & Vergouw, 2016). While NFC smartphones enhance communication and data sharing, bodycams allow impartial and open documentation of police operations for internal evaluations and legal processes. Investigating students' perceptions assists in evaluating the societal acceptability of these technologies and regulates future progress in policing tactics.

This study explores the broader influence of these technologies, focusing on how modern devices affects students' perception of police legitimacy. It seeks to evaluate not only the effects of using these technologies on legitimacy but also to analyze why these effects occur.

1.1 Background

For some time, the police organization of the Netherlands has gradually adapted to the transition to a new technological era. From the 1918s, when the main methods of information gathering were the use of card boxes, informants, witness statements, or traditional surveillance methods, to the present day, there has been a significant increase in the impact of technological progress on police practices (Politieacademie, 2023). However, for a long time, the police force in the Netherlands needed a comprehensive overview of the utilization of technology, and no regular, systematic assessment of applied technologies was conducted (Custers & Vergouw, 2015).

A subsequent transformation occurred in 2013, when the Netherlands restructured its police force into a single national structure, including ten regional groups and one central division (Politie Nederland, n.d.) This restructuring aimed to streamline work and strengthen cooperation between police forces (Ernst, et al., 2021).

In addition to these organizational reforms, the Netherlands has accepted community policing as a pillar of its law enforcement policy. The police have learned that they cannot function effectively without public support and are building policing strategies designed to build such support (van Sluis et al., 2013). Police strategies for preventing crime were historically reactive. In simplicity, police were patrolling neighborhoods apart from the general community. Officers would only interact with the public in response to emergency calls. The threat of arrest and punishment was believed to prevent and regulate crime. The policy of "saturation patrols," traffic stops, and field interrogations were manifestations of this belief (Sunshine & Tyler, 2003). It has been evident that the policing strategy has alienated both the public and the police (Reiss, 1992). The public's trust in the police's ability to provide safety has decreased, therefore the police have found it increasingly difficult to rely on civilian cooperation and assistance. Community policing quickly gained widespread acceptance as an abbreviation for various methods intended to improve crime statistics and restore the relationship between the people and the police (Sunshine & Tyler, 2003). Police/community relations and the fight against crime were increasingly seen as closely connected (Friedman, 1992).

The three main objectives of the community policing can be identified:

- to develop stronger bonds and foster connections with citizens, the proactive police participation method seeks to involve officers in communities in ways other than only managing criminal complaints;
- community policing involves offering junior police officers more command authority by teaching them to be comparatively independent and to utilize discretion;
- the planning and supervision of police operations by the general public is a component of community policing (van Sluis et al., 2013).

Technological developments have been complemented by the inclusion of community policing concepts, which ensure that police methods stay grounded in the needs and experiences of local communities even as they grow more efficient and data-driven.

1.1.1 NFC Smartphones

Near Field Communication (NFC) is a form of short-range communication was introduced in 2004 by Sony, Nokia, and Phillips (Capra, 2015). It helps the police in transferring the data wirelessly between the officer and the receiver, which can act as a control room or other officers of law enforcement. Despite not being a unique feature, NFC technology has been dubbed "the next big step" (Capra, 2015). Smartphones, alongside credit cards and electronic tickets, are among the many devices that use this technology. Moreover, applications like Facebook, Instagram, and Twitter also use this technology, making photo or video sharing more convenient (Capra, 2015). The video game industry, beginning with Nintendo's Amiibos or Activision's Skylander Adventure Sets, uses NFC technology to store and transfer data of each figurine to the game console (Capra, 2015). NFC-enabled devices can function as keycards or electronic identity documents thanks to identity and token access (Capra, 2015).

Concerning the NFC smartphones used by the Dutch police, these devices are characterized as mobile phones with NFC technology for such procedures as:

- to verify or confirm an individual's identity (e.g., cross-referencing a person's name and address, taking their fingerprints where accepted, and confirming the legitimacy of a driver's license or identity card);
- to obtain details about the subject that the police might need to know, such as whether they have a violent past or are wanted with a serious crime;

- to provide and finish tasks, including issuing a penalty ticket (for instance, for parking or speeding)—not just to input the necessary information, but also to validate it and send the transaction to the system so the penalty can be enforced—without needing to go back to the police station to enter more information;
- to get information from superiors or other coworkers (e.g., notifications concerning pertinent police information for the current area, video from other places, directions from the control room, and the map location of other units). (Smith, 2018).

As was revealed at the end of 2015, the Dutch police are using their smartphones to advance identity verification on the street (Inverid, 2024). 10.000 Dutch police officers (as of October 2015; that number will rise to 33.000) use Android smartphones, specifically a Samsung S5, and use the NFC and camera features to confirm the legitimacy of ID cards, passports, and driver's licenses (Inverid, 2024). The advantages include easy access to police databases, such as those related to warrants or stolen identification documents, recognizing false ID documents without training, and the ability to input personal data without physically entering sensitive information (Smith, 2016).

1.1.2 Bodycams

Another technological equipment, which was first tested by the Dutch police in 2009 (Timan, 2016), started to gain significant relevance in the following decade. Body-worn video cameras were implemented following the perceived success of bodycam initiatives in the United Kingdom (UK). Bodycams have caused controversy and prompted concerns about their usage and purpose, even if they are soon to be considered standard police equipment (Timan, 2016). Insofar as they would be an unbiased witness to their acts, they are frequently introduced as a way to protect and safeguard police officers who are on duty (Timan, 2016).

One of the ideas behind the introduction of bodycams is the captioning of video and audio evidence when police officers are attending particular missions. All law enforcement agents interacting with the public are provided with those devices. All law enforcement agents who interact with the public are given these. The video observers can see the scene from the officer's point of view due to the camera's placement. The camera serves as a neutral bystander. The video camera stores the video recordings on an internal storage device (College of

Policing, 2014). The video is uploaded to a safe website after the officer's shift, where it can be destroyed if not needed or utilized as evidence in court or other legal processes (College of Policing, 2014). A rolling 60-second loop of video without audio is what the camera does when it is turned on (Metropolitan Police, 2024). The camera will only save 60 seconds of footage if the officer turns it on to record (Metropolitan Police, 2024). When an incident begins, officers turn on their cameras. Unless another system takes over, such as CCTV at a police station, or the recording becomes no longer "proportionate or necessary," the cameras will generally continue to record (Metropolitan Police, 2024). Officers will only be recorded as part of routine patrolling unless they are part of a particular operation. Bodycam use is incident-specific. Officers will alert people that they are being captured by activating the camera's flashing red lights, which are displayed in the middle of the screen (College of Policing, 2014). The visual signal is intended to warn civilians that they are being recorded, which may influence their encounters with law enforcement.

Typically, officers use the cameras when they:

- offer data in the course of looking into an offense or suspected violation;
- being transparent, for example, while using force or conducting a stop and search;
- assistance officers who know they must provide a written report of their interactions or incidents, an aide-memoire (Metropolitan Police, 2024).

Officers will almost always use a camera when they are:

- stopping a vehicle;
- going somewhere to arrest someone;
- searching a property, land, or a vehicle;
- performing a stop and search;
- attending a critical incident;
- using force against someone or someone's property;
- attending a domestic abuse response (Metropolitan Police, 2024).

Following that, bodycams can be conceptualized as small, visible devices attached to the officers' uniform, assisting them during police operations and making them more transparent and accountable.

From 2017 to 2018, an extensive experiment within the Amsterdam police force was conducted, indicating the assessment and usage of bodycams or Body Worn Video Cameras (Flight, 2019). The introduction of bodycams aimed to improve surveillance practices, increase the efficiency of police work, and protect officers from external threats. This experiment was one of more than thirty regional pilot programs in Netherlands designed to test the idea that police officers should carry body cameras as standard equipment (Flight, 2019). Each pilot had a different objective, and in Amsterdam, the primary one was to raise the public's perception of frontline police officers' safety (Flight, 2019). Additionally, the second objective was aimed at reducing the use of aggressiveness and violence against the police (Flight, 2019).

1.2 Research problem and objectives

The integration of NFC smartphones and bodycams has the potential to improve the work of the Netherlands Police and transformed law enforcement practices. Although the introduction of new technologies has significantly affected the work of police officers, it is also important to note that this implementation has a specific impact on the relationship between the police and society. However, due to limited research on how NFC smartphones and bodycams shaped the citizens perception of police legitimacy, there is an unclear idea of what impact this formation has on the legitimacy, and what factors lie behind the reasons for the influence. To conduct the research, students were chosen as the main subgroup of interest, since, as the younger generation, they are a specific group whose opinions can significantly influence the future development of police strategies and public safety management.

Additionally, these findings may assist scholars in investigating the dynamics of police-student interactions and contribute to the extended discussion regarding improving police-community relations and creating trust.

The main objectives of the research should be outlined in the following way:

1. To understand what criteria are most important for the perception of police legitimacy in students in relation to NFC smartphones and bodycams.
2. To explore the factors influencing changes in the perception of police legitimacy with the use of NFC smartphones and bodycams.
3. To investigate possible problems and concerns of students regarding the use of NFC smartphones and bodycams.

4. To contribute to the existing research on the impact of NFC smartphones and bodycams on students' perception towards Dutch police operations and address the lack of relevant publications in this field.

By addressing the research problem and objectives mentioned above, the research attempts to contribute a more complete knowledge of the influence of NFC smartphones and bodycams on police legitimacy in the Dutch police. The results of the investigation through empirical research and analysis can form decisions based on justified facts, supporting evidence-based decision-making. Finally, the findings from the study can assist with initiatives aimed at raising police productivity, increasing accountability and openness, and enhancing public safety in the district of Enschede.

1.3 Research questions

The relevant research questions must be formulated to compose a reliable analysis for the study objectives. The general research question for this study is:

How do police use of NFC smartphones and body cameras affect police legitimacy?

The main research question describes the focus of the research. It helps understand how NFC smartphones and bodycams affect students' perceptions of police legitimacy. In addition, the information resulting from answering this question can contribute to developing future policy strategies and public safety initiatives.

The following sub-questions are posed to address the central question sufficiently:

1. What makes policing legitimate?

This question refers to constructing a theoretical framework derived from the study of literature that indicates the possible factors that explain citizens' conviction of police legitimacy. It looks into the specific actions, attitudes, and characteristics of law enforcement agents that contribute to citizens' belief in the legitimacy and effectiveness of their actions.

2. What impact on the behavior of the police do students expect from them wearing body cameras?

The following question covers the predicted implications of police officers wearing body cameras on their behavior while interacting with students. This question will be answered based on the results of the questionnaire developed for students. It will investigate students' perception of how the utilization of body cameras may influence the behavior of law enforcement officers, potentially affecting factors such as accountability, legitimacy, use of force, procedure adherence, and overall attitude during interactions with students.

3. Do students perceive the use of smartphones and body cameras by the police?

This question examines if students' perceive the police use of smartphones and bodycams. It aims to discover if students perceive the integration of these technologies into law enforcement activities.

4. Does perceiving police officers' using smartphones and body cameras influence the attribution of legitimacy by students?

The final sub-question seeks to explain the connection between students' perceptions of police officers using technologies and their perceptions of police legitimacy. It intends to determine whether students' attitudes regarding these technologies, such as considering them as tools for accountability and transparency or as possible instruments of monitoring and interference, affect their perceptions of police legitimacy.

These research questions aim to provide an understanding of how NFC smartphones and bodycams influence the perception of police legitimacy. They correspond to the set research objectives and aim to identify the level of effective police-community cooperation in implementing of digital technologies.

1.4 Societal and scientific relevance

The investigation into the perception of police legitimacy holds significant relevance for societal and scientific perspectives. The research focuses on how technology affects students' perception of police legitimacy. With a detailed analysis of the research's societal and scientific relevance, the consequences of device integration become more evident.

The social implications of analyzing students' attitudes towards Dutch police with NFC smartphones and bodycams seem like they need to be more prominent. The ability to reshape

the relationship between law enforcement and the public they protect is at the essence of this technology convergence. More specifically, bodycams have generated a public discussion about legitimacy, police observations, and striking a balance between personal freedoms and security. These tools provide many records of police-community relations, which is useful when disagreements or accusations of misbehavior occur, even though the records are mostly private. The open and honest use of this equipment helps to build trust among citizens regarding the work of the police since all actions are documented on camera and reflect the picture of a particular conflict. Moreover, the legitimate use of NCF smartphones and bodycams makes the social community more digitized.

It is assumed that technological capabilities, such as visible video recording and real-time data sharing tend to increase the level of trust among students, which implies a positive perception towards Dutch police. However, there may also be bad tendencies if the police is not shown in a good light, decreasing trust in students. The study aims to identify potential positive or negative perceptions to address the main research question sufficiently.

1.5 Thesis outline

This introductory chapter provides background information regarding the research problem and objectives, emphasizing the social and scientific relevance of the formulated research questions. The second chapter drives into the theoretical framework and uncover concepts of citizens' legitimacy in the police and factors that promote this concept. The third chapter covers the methodology part and explains the essence of the research design, case and respondents' selection, the methods of data collection, and ethical considerations. The results will be discussed and interpreted in the following two chapters to make proper conclusions. The final chapter will focus on the study's limitations and future research perspectives.

2. Theoretical framework

This chapter elucidates the first sub-question of this research:

1. What makes policing legitimate?

To answer this question, relevant theories on the factors that contribute to police legitimacy will be examined, with a general focus on citizen perspectives. Legitimacy itself is often regarded as public acceptance of a policing body in creating and enforcing rules. When it comes to police legitimacy, it is the trust of public in believing in the police rightful authority and trusting their actions to be in the best interest of the public. Legitimacy in police departments is often related to crucial outcomes such as following laws, helping in investigations and better engagement with the citizens, which creates better and safer environment.

The chapter begins by analyzing police legitimacy, focusing on why the public considers the police trustworthy, impartial, and acting in their best interests. In this context, legitimacy is defined as the extent to which the public accepts and supports the police as a legitimate authority. This section explores factors influencing police legitimacy and the conditions under which public attitudes can be changed. A critical theory that derives police legitimacy is procedural justice, primarily explained by Tom Tyler, which underlines the significance of fairness in the strategies and procedures police use when dealing with citizens. According to Tom Tyler's theory of procedural justice, public trust in the police is more concerned with whether citizens believe they are treated fairly during interactions with law enforcement agents. This concept will be further investigated later in this chapter. In the end, the five external factors that influence perceptions of police legitimacy will be addressed. These factors include personal experiences, police performance, technology visibility, media portrayal, and data privacy concerns.

2.1 Citizens' perception of police legitimacy

Political philosophy's legitimacy theories are frequently limited to a relatively particular set of social relationships: those between individuals and institutions, such as the police, and larger structures like the state (Jackson & Bradford, 2010). Legitimacy is commonly associated with the right to be recognized, to have authority over a specific aspect of life, and to command and be obeyed (Jackson & Bradford, 2010). In the criminal justice system, the

concept of legitimacy emphasizes the relationship between power and authority (Jackson & Bradford, 2010). While definitions of legitimacy differ significantly, many agree that it provides the right to command while encouraging the obligation to comply (Tyler, 1990). Citizen's respect and comply with legitimate authority because they perceive it right (Sunshine & Tyler, 2003). Since Weber, all the theorists believed that legitimacy is vital for social institutions' sustainability (Jackson & Bradford, 2010).

The idea dates back to Weber, who defined legitimacy as the approbation or sincere recognition of a rule, legislation, or social institution (Jackson & Bradford, 2010). This definition focuses on the subjective perceptions of the governed. In contrast, the normative idea of legitimacy establishes 'objective' criteria that define legitimacy in terms of some key requirements - typically justice and rationality (Jackson & Bradford, 2010). While these criteria are described as objective, they have intrinsic normative implications, as they specify requirements that an authority or organization must achieve to be judged legitimate, regardless of the subjective beliefs of the individuals it controls. (Jackson & Bradford, 2010). Furthermore, any normative understanding of legitimacy must explain why achieving these conditions confers authority on regulations, institutions, or individuals (Jackson & Bradford, 2010). Why do the criteria provide morally binding rules (Jackson & Bradford, 2010)? Empirical legitimacy implies that people believe an arrangement to be correct and just (Jackson & Bradford, 2010). Normative legitimacy is the substantive acceptance that these arrangements' truth (or validity) is correct and just (Jackson & Bradford, 2010).

Tyler's procedural justice model explores the concept of police legitimacy, which draws on the distinction between empirical and normative legitimacy. According to this paradigm, people's inclination to respect authority is motivated not by external incentives or pressure but by an internal sense of obligation and trust in the authority's processes (Tyler, 1998). The model proposes that procedural fairness, or the sense that legal authorities behave reasonably and with integrity, leads to higher legitimacy because people feel morally obligated to comply with authorities, they perceive to be fair (Tyler, 1998). This internal sense of obligation, related to sentiments of responsibility to the community and authority, differs from simply coercive types of social regulation (Tyler, 1998). Authorities can generate convictions of obligation, resulting in a more durable and cooperative relationship with the public.

Following the procedural justice model, the police legitimacy can be conceptualized as the property of an authority or institution that leads people to feel that that authority or institution is entitled to be deferred to and obeyed (Sunshine & Tyler, 2003). It represents an "acceptance by people of the need to bring their behavior into line with the dictates of an

external authority" (Tyler, 1988). This feeling of obligation is not simply linked to the authority's possession of instruments of reward or coercion but also to properties of the authority that lead people to feel it is entitled to be obeyed (Sunshine & Tyler, 2003)

The legitimacy of the law enforcement agents in the eyes of the public is necessary because it is the foundation of their relationship (Sunshine & Tyler, 2003). Police legitimacy can impact the following aspects:

- public compliance: if the public views the police as legitimate, then they are more likely to obey the law;
- public cooperation: if the public views the police as legitimate, they will be more likely to assist the police with crime prevention (i.e., reporting crime or calling for help);
- support for police policies: if the police are viewed as legitimate, they have greater freedom to perform their responsibilities. When they are not seen as legitimate, people doubt their acts, respect their decisions, and disregard their orders (Sunshine & Tyler, 2003).

The core idea of Tyler's procedural justice model (which will be discussed in more detail in section 2.3) holds that activating individuals' feelings of responsibility and obligation to their community - and to community authorities - results in a more favorable orientation toward those authorities (Jackson & Bradford, 2010). A model of social regulation based on such internal reasons, often known as normative commitment to the law, is safer and more efficient than coerced compliance (Tyler, 1998). Authorities can rely on residents' internal motivations for self-control rather than incurring the cost, danger, and alienation of deploying actual or threatened force (Tyler, 1998). Internal moral drivers to respect the law and cooperate with the system may also be more potent than exterior regulations with deterrent threats (Jackson & Bradford, 2010). These internal moral motivations could be inextricably related to the perceived legitimacy of the legal system (Jackson & Bradford, 2010). Tyler defines such legitimacy as the need to obey police authority, distinct from personal morality, as previously stated (Tyler, 1998).

Based on the theory of procedural justice, five external factors can be identified that will be used to explain the presence (or absence) of legitimacy in the police among citizens. The following are highlighted among these factors: personal experiences, police performance, the visibility of technology during the interaction, media portrayal, and protection of personal

data. These aspects were selected because they symbolize external, visible influences that can shape people's opinions without modifying their internal beliefs. They provide a basis for analyzing how specific manifestations of police activity and organizational practices affect citizen opinion regarding legitimacy. Those variables were derived from Tyler's theory, and here is how they were derived:

1. Personal experiences variable is related to all Tyler's concepts at once. People typically want to be heard by police officers, even if the outcome is not in their favor. They also may want to be respected by the officer and have an equal judgement along with the neutrality of the officer to a specific case or outcome for the person.
2. Police performance variable is mainly related to the trustworthiness of the police and neutrality of officers. Citizens tend to have a better view of police, if they can trust the governing body to treat them neutrally, operate trustfully, within the boundaries of law.
3. Technology visibility is another variable that is related to various concepts of Tyler's theory. All interactions where technology is visible and has a clear use may be viewed as more legitimate, since recorded footage or other data that might be retrieved in the future may have a direct consequence on the result of police interaction and can help citizens to defend their rights in the court of law if needed, making it possible evidence for people to have.
4. Media portrayal is derived from trustworthiness and is crucial for people to learn about how the technology is used and how can it help in preventing and resolving crimes better.
5. The last variable, data privacy concerns is related to trustworthiness and respect of the police. People are more likely to cooperate with the police if they think that all the data is safely stored, and they have no concerns that their privacy might be violated. It also shows that they are respected by the governing body and the data that might be crucial to them is not distributed or stolen.

These factors might be split into two categories: institutional and personal. The split of the factors is done to see whether personal experiences or institutional influence is the main force of shaping students' perceptions when it comes to police legitimacy using bodycams and smartphones. For instance, media portrayal, data privacy concerns and technology visibility are a governmental issue, since citizens are not able to influence it much, but it is a possible factor that might change how the legitimacy is perceived. On the other hand, police

performance and personal experiences are mainly influenced by the person that have had an interaction with the police. By investigating these variables, a better understanding of how citizens form their opinions about police legitimacy can be gained, and how these beliefs influence their willingness to communicate with law enforcement agents.

Thus, comprehending police legitimacy involves investigating both institutional and personal aspects that impact citizen perception. By evaluating variables such as personal experiences, police performance, technology visibility, media portrayal, and data privacy concerns, we can acquire beneficial knowledge regarding how citizens form attitudes about law enforcement agents. This understanding provides an insight into the factors that promote public confidence and collaboration, resulting in a more efficient and transparent relationship between police and general public.

2.3 Procedural Justice

According to Sunshine and Tyler, procedural fairness significantly impacts legitimacy assessments when individuals evaluate the police in general and react to personal experiences with specific authorities (Sunshine & Tyler, 2003). This concept underpins the procedural justice approach to policing.

Procedural justice-based policing rests on four key assumptions (Sunshine & Tyler, 2003). First, considering predicting compliance with the law, people's assessments of the legitimacy of the police are equally essential as their estimations of the chance of being caught and penalized. Authorities must be able to rely on people's internal motivations for obeying the law for procedural justice-based policing to be a realistic alternative to instrumental judgments (Sunshine & Tyler, 2003). The concept of procedural justice emphasizes that if authorities are considered legitimate, citizens will freely obey their instructions. Second, legitimacy is more important than instrumental assessments of factors such as performance in determining whether or not community members will demonstrate helpful behavior toward the police and assisting in the investigation of crimes (Sunshine & Tyler, 2003). Third, legitimacy is more important than instrumental judgments in shaping public deference to police activities (Sunshine & Tyler, 2003). In other words, the public is more inclined to empower law enforcement to perform their policing duties and less likely to attempt to restrict or limit police discretion when they perceive the police as legitimate. Finally, legitimacy evaluations depend more on procedural justice than distributive fairness or other instrumental indicator evaluations (Sunshine & Tyler, 2003). Politicians and law enforcement agents commonly believe that the police are evaluated

based on their ability to prevent crime (Sunshine & Tyler, 2003). It is believed that the legitimacy of the police is based on the effectiveness with which the police perform their duties, the degree to which they punish lawbreakers, and the equal distribution of police services throughout society (Sunshine & Tyler, 2003). By contrast, policing according to the procedural justice process judgment, is predicated on the idea that the way police use their power determines people's perception of their legitimacy more than their efficiency or the fairness with which they serve the communities (Sunshine & Tyler, 2003).

The fairness of the procedures that produce the results is emphasized by procedural justice. It entails providing a voice to people in police interactions, making objective judgments, treating people with dignity and respect, and guaranteeing that police activities are transparent. NFC smartphones and bodycams can record conversations and ensure that police allow witnesses to share their side of the story. This can be examined later to guarantee that civilians had an equal opportunity to express themselves. Bodycams' objective recording demonstrates that police decisions are unbiased. This can be especially crucial when examining controversial interactions to ensure fair and equitable judgments. Officers are more inclined to treat people with more decency and respect when they know their activities are being videotaped. Officers' compliance with respectful behavior guidelines can be verified by watching bodycam recordings. Police operations can be more open with bodycams and NFC smartphones. To preserve transparency, bodycam recordings offer a transparent account of the events that took place during police encounters and can be made publicly available. Real-time information and updates can be obtained from NFC smartphones, confirming that the procedures are clear and accessible to the public.

2.4 External factors influence the legitimacy of the police

Reflecting on the procedural justice theory, this research emphasizes the underlying reasons behind police legitimacy. Investigations conducted in this study necessitate more detailed explanations and the identification of external factors that influence citizens' perception of police legitimacy. External factors arise outside the individual and entail impacts or situations caused by external agents or settings. Internal factors originate within an individual and are influenced by personal traits, feelings, convictions, and behavioral processes. External events do not immediately influence these characteristics but result from the individual's state of being. However, in this study, only external factors will be considered

since study aims to determine to what extent external independent variables based on procedural justice theory influence citizens' perception of police legitimacy.

Based on the procedural justice theory, the following external factors are identified:

- personal experiences: people's perceptions of police officers equipped with NFC smartphones and bodycams can increase or decrease based on their personal experiences.

This research will expect that:

1. If the student had a previous positive encounter with a police officer equipped with a smartphone or bodycam, she or he will consider such a police officer legitimate. A positive encounter means that, while performing their duties, the police officer acted in accordance with the rule of law.

2. If the student had a negative encounter with a police officer equipped with a smartphone or bodycam, she or he will not consider such a police officer legitimate. A negative encounter means that, while performing their duties, the police officer had violated the rule of law.

- police performance: the perception of police legitimacy can increase or decrease based on the police performance.

This research will expect that:

1. If the police officer operates effectively, especially in handling crimes, and if the officer adheres to legal norms, does not exceed their authority, and acts in accordance with the code of conduct, the student will consider such a police officer legitimate.

2. If the police officer does not operate effectively, especially in handling crimes, and if the officer does not adhere to legal norms, exceeds their authority, and does not act in accordance with the code of conduct, the student will not consider such a police officer legitimate.

- the visibility of technology during interactions: the perception of police legitimacy can increase or decrease based on the visibility of technology during interactions.

This research will expect that:

1. If the police officer uses an NFC smartphone and bodycam openly and visibly, without concealed gadgets, during interactions, the student will consider such a police officer legitimate.
2. If the police officer does not use an NFC smartphone and bodycam openly and visibly, or conceals gadgets during interactions, the student will not consider such a police officer legitimate.

- media portrayal: perception of police legitimacy can increase or decrease based on the media portrayal.

This research will expect that:

1. If a police officer equipped with a smartphone and body camera is represented positively in the media, demonstrating how effectively the police perform their duties, the student will consider such a police officer legitimate.
2. If a police officer equipped with a smartphone and body camera is represented negatively in the media, demonstrating how ineffectively the police perform their duties with these gadgets, the student will not consider such a police officer legitimate.

- protection of personal data: concerns regarding data privacy can increase or decrease perceptions of police legitimacy.

This research will expect that:

1. If students read stories online about a police officer equipped with a smartphone and camera, which, in accordance with all regulations, securely stores personal data without any data leaks to other organizations, the student will consider such a police officer legitimate.

2. If students read stories online about a police officer equipped with a smartphone and camera who does not adhere to regulations and data leaks to other organizations occur, the student will not consider such a police officer legitimate.

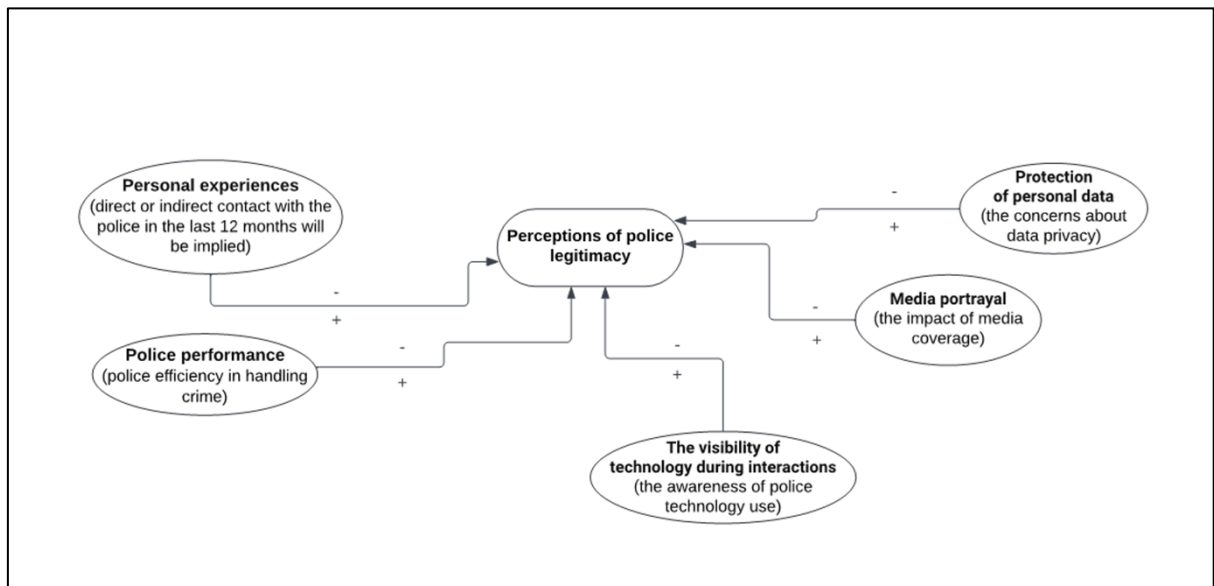
By identifying these variables in the following way, we can ensure that the survey questions are concrete and explicitly related to each variable, making it simple to test the connections with the dependent variables.

2.5 Remarks on theoretical framework

This conceptual structure generally examines to what extent modern technologies shape student perceptions of law enforcement agencies.

Table 1 represents the graphical representation of the main theoretical concepts. It establishes the model for an empirical study that will delve into the practical consequences of incorporating NFC smartphones and bodycams into police procedures, as well as their impact on students' trust and police legitimacy.

Table 1 - graphical representation of the main theoretical concepts.



Source: Author's own work.

Thus, this theoretical model tests the factors influencing students' trust and perception of police legitimacy. It explores how personal experiences, police performances, the visibility

of technology during interactions, protection of personal data, and media portrayal affect student's trust and perception of police legitimacy. The following relationships are present:

1. Positive personal experiences with the police equipped with NFC smartphones and bodycams intend to increase trust and legitimacy, while negative experiences intend to decrease trust and legitimacy.
2. Effective police performance using NFC smartphones and bodycams intends to increase trust and legitimacy, while ineffective police performance intends to decrease trust and legitimacy.
3. The visible use of NFC smartphones and bodycams by police during interactions intends to increase trust and legitimacy, while secret usage of these technologies intends to decrease trust and legitimacy.
4. Positive media portrayal with the implementation of these technologies intends to increase trust and legitimacy, while negative media portrayal intends to decrease trust and legitimacy.
5. Sufficient data protection during the implementation of NFC smartphones and bodycams intends to increase trust and legitimacy, while insufficient data protection intends to decrease trust and legitimacy.

Exploring these interconnected variables will be beneficial for developing initiatives aimed at raising police productivity and promoting trust and legitimacy between the police and students.

3. Methodology

3.1 Research design

The study will apply a procedural justice theory to students, including five external factors described in the theoretical chapter. The research design will imply a quantitative approach for gathering data. This method will comprehensively analyze the integration and usage of NFC smartphones and bodycams and their effects on police legitimacy. Assessing the factors that promote legitimacy in the police is essential to comprehend how the perception of NFC smartphones and bodycams can influence the perception of police legitimacy. Evaluating the interconnectedness of these variables is essential for making reliable answers to the proposed research questions.

This research collects quantitative data, including a questionnaire to students at the University of Twente who had previously interacted with the police. A questionnaire was chosen due to the ability to give structured data, allowing to assess respondents' opinions, experiences, and impressions of NFC smartphones and bodycams. A constructed questionnaire in the form of closed questions addresses various topics such as effectiveness, legitimacy, and overall satisfaction with NFC smartphones and bodycams. The questionnaire was conducted through Qualtrics software. A descriptive analysis of the given responses is provided. This quantitative analysis intends to provide data on using NFC smartphones and bodycams in Dutch police operations and their effects on police legitimacy and students' trust.

The gathered quantitative data aims to provide a broader understanding of the relationship between police and students. Based on a quantitative approach, this study analyzes the detailed use of technologies, describing the prospects for use and the level of student satisfaction. This approach provides reliable data to answer posed research questions. The conducted quantitative analysis offers statistical facts and variables that influence the effectiveness and perceptions of the use of new technologies. Thus, the quantitative approach allows for an in-depth examination concerning the use of NFC smartphones and bodycams and their influence on students. The results of this investigation could assist law enforcement agencies and scholars in understanding how to optimize technology in contemporary police practices.

3.2 Respondents' selection

Selecting respondents is an essential step in obtaining data for analysis. Establishing the correct selection criteria is crucial to ensuring the validity and reliability of variables.

3.2.1 Respondents' Selection Criteria

The objective informs the selection of respondents by gathering data from students affected by integrating of NFC smartphones and bodycams into law enforcement activities. The following criteria for selecting respondents are outlined:

- Students from the University of Twente who have interacted with the police, observed interactions with the police, or seen police patrols on the streets, regardless of their gender, age, or membership in specific organizations, are invited to share their personal experiences. This includes interactions or experiences with police officers using NFC smartphones and bodycams, through direct or indirect contact, such as information gathered from social media or conversations with their friends. The aim is to gather diverse perspectives on their attitudes towards these technologies.

The criteria for selecting respondents show a dedication to gathering opinions from University of Twente students who have interacted with NFC smartphones and bodycams in law enforcement settings. The research aims to collect diverse experiences and perspectives through a systematic selection method.

The defined selection criteria for respondents play a critical role in ensuring the durability and effectiveness of the research initiative. By adhering strictly to these criteria, the study aims to achieve both validity and reliability in collecting and analyzing data.

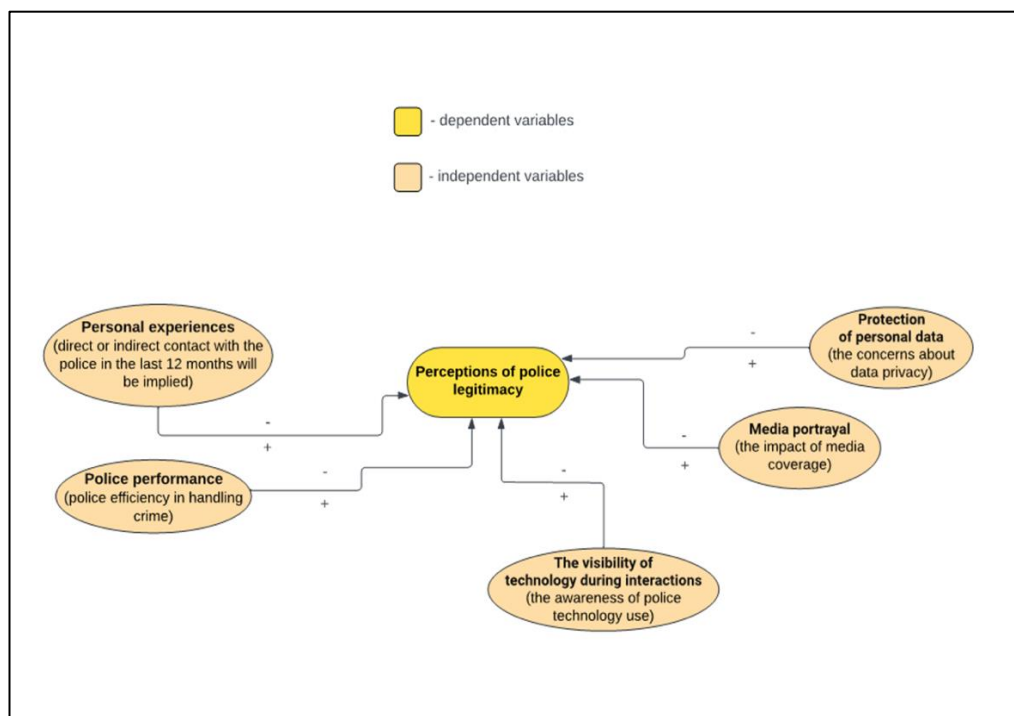
3.3 Data collection

Data collection using the quantitative method involves a structured questionnaire in the form of closed questions with 15 questions. Table 3 presents the first three questions. The original version of the questionnaire is shown in Appendix 1. The questionnaire is distributed online via Qualtrics software, with permission from the faculty of Behavioural, Management, and Social Sciences. Based on the respondents' criteria, the questionnaire is available for all University of Twente students. A nonprobability sampling method, such as purposive

sampling, will be implemented to select students who have experience with NFC smartphones and bodycams (Kalton, 2023). In contrast to probability sampling, nonprobability sampling includes participants based on subjective judgment rather than random selection (Kalton, 2023). Purposive sampling selects individuals with specific characteristics or backgrounds that apply to the main research objectives (Kalton, 2023). Therefore, students will be purposively selected based on the respondent's criteria. For increased accuracy in data collection, it is important to include a minimum of 100 participants in the sample (de Veaus et al., 2016). With at least 50 participants, purposive sampling allows for investigating different respondent criteria, increasing the validity of the analyzed variables.

Table 2 illustrates the dependent and independent variables that were identified during the process of the research.

Table 2.



Source: Author's own work.

The questionnaire is administered to participants who have consented to participate and agreed to share their data for academic research anonymously. The data collected through this questionnaire aims to analyze how NFC smartphones and bodycams have shaped police legitimacy and students' trust in law enforcement. The question, such as "Do you feel that police officers equipped with smartphones and bodycams treat you fairly during interactions?" is aimed at determining the level of students' fairness in the police equipped with smartphones

and bodycams, directly correlated with trust in the law enforcement. The questions “Do you think that police officers equipped with smartphones and bodycams are better at crime prevention?” or “Do you think police using smartphones and bodycams respects your data privacy?” indicate which factors influence the perceptions of legitimacy towards the police officers and how the implementation of smartphones and bodycams affects the policy legitimacy.

The data collection method employed in this research reflects an accurate approach to guarantee the reliability and validity of the analyzed variables. Through the application of research design, purposive sampling, and respondent selection criteria, this study seeks to generate results that will be valid and reliable to the target audience. As mentioned in the introduction, this study's findings assist law enforcement agents and scholars investigating the dynamics of police-student interactions and contributing to the extended discussion regarding improving police-community relations.

Table 3.

<p>1. Have you heard or seen any contact with the police officer equipped with a smartphone or bodycam this year?</p> <p>Yes/No</p>
<p>2. If yes, how would you describe your experience with the police officer implementing these devices?</p> <p>Very positive Somewhat positive Neutral Somewhat negative Very negative</p>
<p>3. Would you be more likely to obey a police officer equipped with a smartphone or bodycam compared to one without?</p> <p>Yes/No</p>

Source: Author's own work.

3.4 Ethical considerations

The BMS Ethics Committee reviewed and approved the research proposal before data collection commenced. Following approval, data collection procedures were initiated. Any

changes or modifications to the data collection process were made only after approval by the Ethics Committee. Participation in the research was voluntary, and participants were free to join or withdraw at any time. No personally identifiable information, such as names or IDs, was requested during the survey. The informed consent form was presented, indicating research objectives. After participation, data were anonymized to ensure confidentiality.

4. Results

This chapter will present the results of a survey conducted among students to determine how NFC smartphones and bodycams influence students' perceptions of police legitimacy. In total, 87 responses were collected, each representing their opinion on implementing technologies and their impact on police legitimacy. The chapter will provide a summary of the survey results, concentrating on the presence of each variable: personal experiences, police performance, technological visibility, media portrayal, and data privacy.

Below, the results of the survey annotated with the questions can be seen.

Table 5	Yes	No
1. Have you heard or seen any contact with the police officer equipped with a smartphone or bodycam this year? This includes personal encounters, news articles, or social media posts about the police.	51	36
3. Would you be more likely to obey a police officer equipped with a smartphone or bodycam compared to one without?	67	20
4. Do you think that police officers equipped with smartphones and bodycams are better at crime prevention?	68	19
5. Do you feel that police officers equipped with smartphones and bodycams treat you fairly during interactions?	79	8
6. Do you think that police officers equipped with smartphones and bodycams are less likely to violate the law?	74	13
8. During the interactions with the police, do you aware of police using smartphones and bodycams?	44	43
9. Do you believe that the visible use of smartphone or bodycam by police officer improve the legitimacy?	79	8
10. Are you more likely to report an incident to a police officer if their use of smartphones and bodycams was clearly visible during interactions?	64	23
12. Do you think police using smartphones and bodycams respects your data privacy?	56	31
13. Do you think that stories from the media involving data breaches by police officers will affect your perception of police legitimacy?	68	19
14. Do you think that the police officer using a smartphone or bodycam improve the transparency during interactions?	73	14

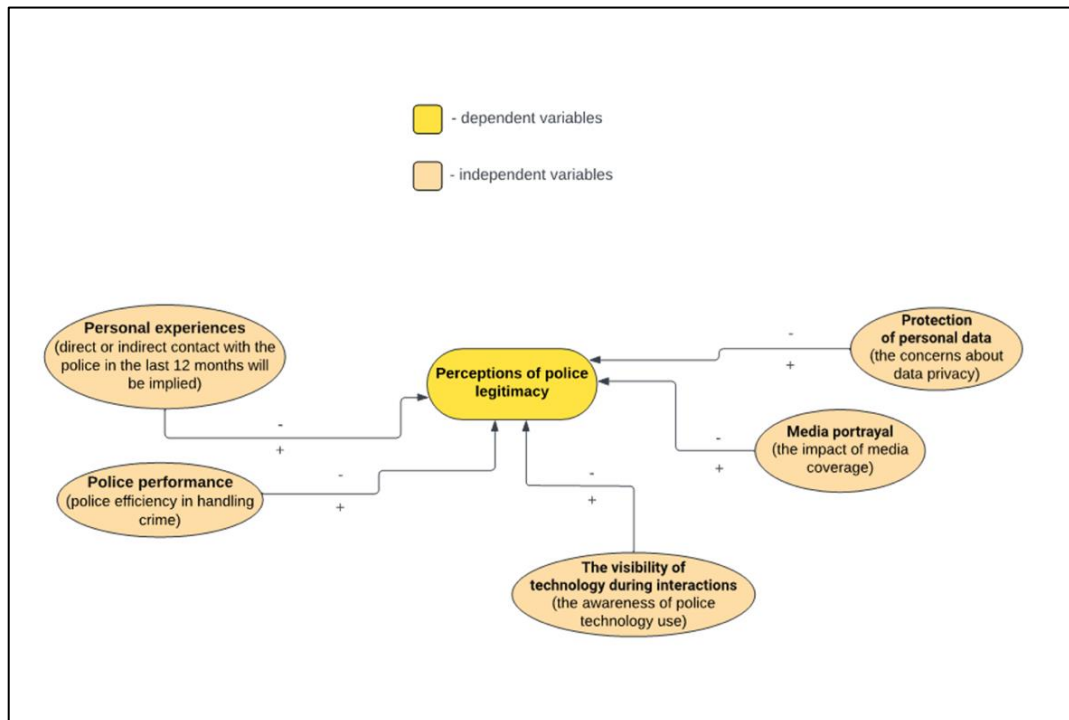
Table 6	Very negative/Strongly disagree	Somewhat negative/disagree	Neutral	Somewhat positive/agree	Very positive/Strongly agree
2. If yes, how would you describe your experience with the police officer implementing these devices?	3	6	36	24	18
7. Do you agree that media coverage of police using bodycams and smartphones has improved your view of police performance?	5	6	33	34	9
11. Do you agree that the positive media portrayal of police using smartphones and bodycams increase your perception of police legitimacy?	3	5	29	41	9
15. Do you agree that the police legitimacy has improved with bodycams and smartphones?	3	3	26	42	13

Tables created using Qualtrics.

4.1 Descriptive analysis

The study showed positive perceptions among students of police officers who were equipped with NFC smartphones and bodycams and the perception of their legitimacy. Most students trust the officers equipped with gadgets more than those without them. They are also sure that gadgets improve crime prevention and contribute to the openness of operations and police legitimacy.

Table 4.



Source: Author's own work.

Referring to the theoretical model (Table 4) and main research expectations from chapter three regarding the personal experiences, police performance, visibility of technology during interactions, media portrayal, and concerns regarding data privacy, the following can be observed:

4.1.1 Personal experiences

According to procedural justice theory, personal experience influences perceptions of police legitimacy. Positive contacts are anticipated to improve perceptions of police legitimacy as they are consistent with professional behavior of police officers. Conversely, negative experiences are expected to reduce considered legitimacy. In the context of this research, personal experience is operationalized as positive or negative encounter with the police which influence legitimacy perceptions. On the other hand, legitimacy is operationalized by the willingness to obey the police (Q3), indicating confidence in law enforcement agents.

In Q1, out of the total respondents 51 answered that they had a contact with the police, while 36 did not have a contact with the police. This question can show how personal experience, an independent variable mentioned above, can influence how people view the legitimacy of police.

Q3 helps to determine the extent to which external variables (independent variables from the theoretical model) influence perceptions of legitimacy (dependent variable from the theoretical model). In Q1, out of the total number of respondents, 67 responded that they would be more likely to obey a police officer armed with a smartphone or body camera, while 20 respondents responded negatively.

Q2 clarifies that of these 51 responses from Q1, 24 answered somewhat positive, 18 very positive, 3 very negative and 6 somewhat negative. Thus, 42 respondents described their experience as "positive", and 9 respondents described their experience as "negative". In order to investigate connection between external factor such as personal experiences, the investigation of relationship between Q1 and Q3 must be made, which will be done in the following chapter.

4.1.2 Police performance

Based on the procedural justice theory, effective police performance, which can be fined by reliability, adherence to conduct norms, and effectiveness in crime prevention, is a key factor for boosting legitimacy. In this paper, police performance is operationalized as positive when the officer can handle crimes, adhere to legal norms, does not extend the law, and acts in accordance with it. The performance is operationalized as negative otherwise. Also, legitimacy is operationalized by the willingness to obey the police (Q3), indicating confidence in police departments.

In Q4, 68 respondents answered positively that police equipped with smartphones and bodycams are better at crime prevention, while 19 respondents answered negatively. To investigate to what extent an external factor such as police performance will influence legitimacy, the comparison of two groups from Q4 in chapter 5 will be made, and how they answered Q3.

4.1.3 Visibility of technologies during interactions

Based on the discussed theoretical model, the presence of smartphones and bodycams is expected to promote legitimacy perceptions since visible technology increases transparency in police actions. In this research, the visibility of technologies is operationalized as positive when the police use technologies in an open manner, without concealing or turning off any of the gadgets that they may need for an interaction. If the officer happens to do so, it is operationalized as a negative influence on legitimacy and use of technology. As it is said above,

legitimacy is operationalized by the willingness to obey the police (Q3), indicating confidence in policing bodies. In Q9, 79 respondents answered that they believe that the visible use of a smartphone or bodycam improves legitimacy, while 8 stated "No." To investigate to what extent external factors, such as the visibility of technologies during interactions, will influence legitimacy, we will compare two groups from Q9 and how they answered Q3, in the following chapter.

4.1.4 Media Portrayal

According to the theoretical model, positive media portrayal of police is an independent variable that is anticipated to increase legitimacy by demonstrating successful and fair practices. According to this paper, media portrayal is operationalized as positive when the officers are represented in positive light in mass media and other sources of information, and it is considered negative if students see a police officer with bodycams and smartphones in media with negative opinions covered on them. That influences legitimacy that is operationalized by the willingness to obey the police (Q3).

In Q7, 43 respondents answered that they agree that positive media coverage improves the view of police performance and then legitimacy, while 33 expressed the answers as neutral, and 11 disagreed. To investigate how external factors, such as media portrayal, influence legitimacy, we will compare two groups in chapter 5 from Q7 and how they answered Q3.

4.1.5 Data privacy

When looking at the next variable which is data privacy concerns, these are thought to have a negative impact on legitimacy since privacy infractions could be viewed as excessive and eroding confidence. The variable is operationalized as negative if the student sees the police use technologies with interference with regulations or laws, or if they know about data leaks or police giving out the data to other organizations. It is operationalized as positive when there are little to no privacy concerns, and students know that technologies are going to be used in accordance with the regulations. That influences legitimacy which is operationalized as the willingness to obey the police.

In Q12, 56 respondents answered that they agree that data privacy is respected by the police, while 31 expressed the opposite.

To investigate how external factors, such as data privacy, influence legitimacy, we will compare two groups from Q12 and how their responses for Q3, in the following chapter.

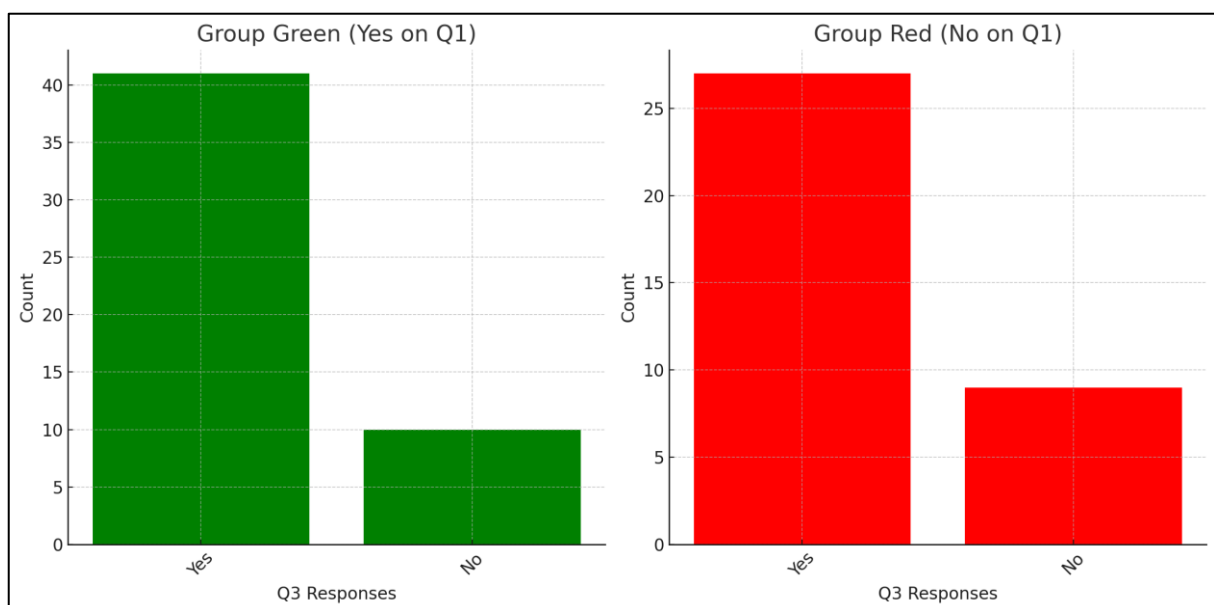
5. Investigating causal relationships

This chapter analyzes if survey data confirm the causal relationships suggested in the theoretical model. Each part focuses on what extent the survey data supports the impact of five independent variables on students' perceptions of police legitimacy. This research combines identified patterns to investigate the causal relationships between the independent variables (personal experiences, police performance, technology visibility, media portrayal, and data privacy) and the dependent variable (police legitimacy). Each relationship is assessed simply based on observed patterns, with no additional preconceptions.

5.1 Personal experiences and legitimacy

To analyze the results of Q1 and Q3 combined, we must split our respondents into two groups (Graph 3) based on how they have answered Q1. The green group have indicated that they have had an interaction with the police, and we can see that this part of respondents has chosen the positive option for Q3, that can suggest that people who have had interactions with the police have a higher chance of obeying if there is a visible use of smartphone or camera. However, the same can be said for the red group, since they have chosen the same answers, and two graphs are almost identical. We can conclude that people having or not having a recent interaction with the police does not have an effect on whether they are more likely to obey the police if the bodycam is visible.

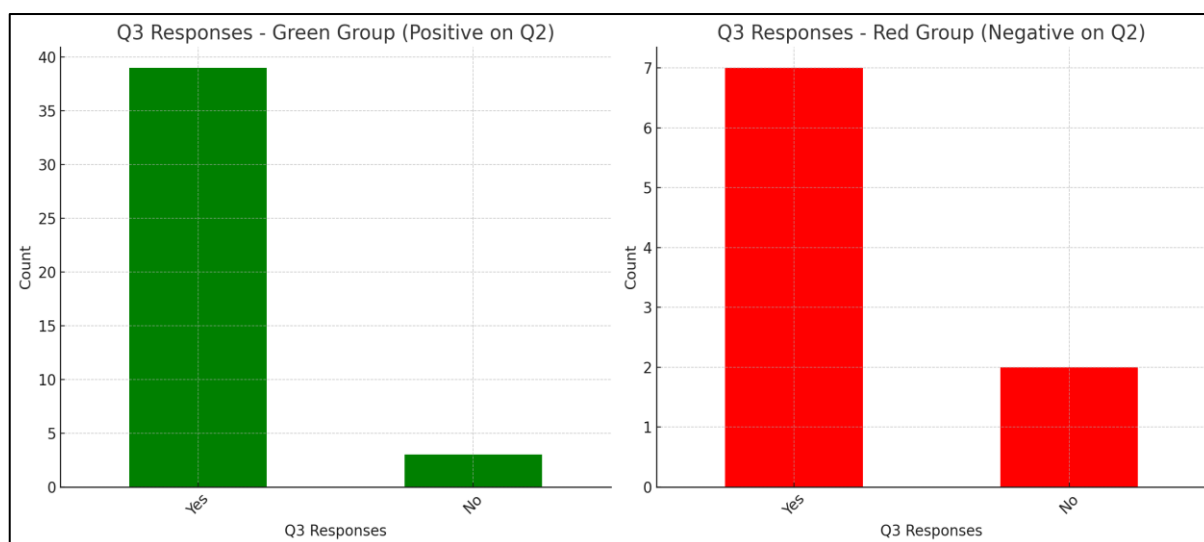
Graph 3.



Source: Author's own work.

Now, to analyze to how respondents, who had positive encounters with the police from Q2, responded to Q3 and if there are any trends, the analysis of relationship between Q2 and Q3 will be made.

Graph 4.



Source: Author's own work.

To evaluate the total outcomes of Q2 and Q3, we divided respondents into two groups based on how they responded Q2. The green group comprises respondents who provided somewhat positive or very positive comments about their interactions with police officers using smartphones or bodycams, whereas the red group includes those who responded somewhat negative or very negative.

The graph 4 shows distinct trends. In the green group, 39 respondents answered "Yes" to Q3, while only 3 said "No." This shows that those who have had a favorable experience with police are substantially more likely to obey the police equipped with smartphone or bodycam and will consider such a police officer legitimate. In comparison to the red group, 7 respondents answered "Yes" and 2 answered "No", showing that unpleasant experiences with police employing these devices caused most participants experiencing a positive impact on legitimacy. Unexpectedly, both groups have a high preference for positive impact of visible technology use by police, the red group, while smaller, still has a majority of "Yes" responses. There may be a possibility that the technology itself matters most in that case, since people tend to believe that police workers are less likely to violate the law. Both group variations from

Q1 and Q2 support that idea, which is highly positive for advocates of bodycams in police departments.

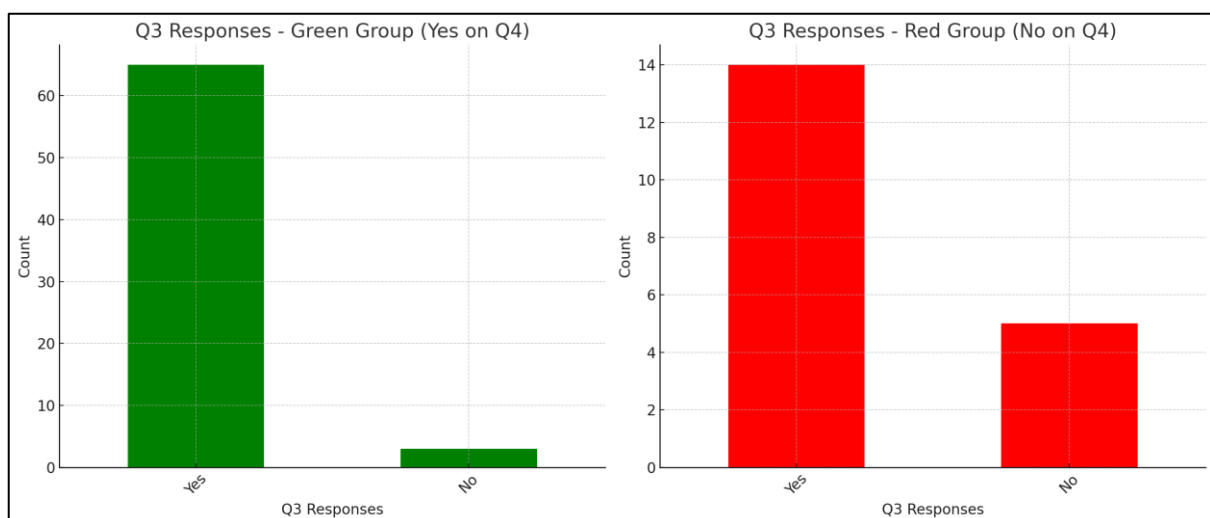
In addition, even if respondents did not have personal encounters with the police fitted with these devices, they would still obey the police officer equipped with a smartphone and bodycam and consider such a police officer legitimate. Such results can explain that students believe that implementing smartphones and bodycams into police practices will bring benefits such as increased transparency and fairness in police-citizen interactions.

These study results show that positive personal encounters with the police can positively influence perceptions of legitimacy, which is consistent with theoretical expectations. Furthermore, it can be concluded from the interview questions that students who have had negative encounters with the police will still obey police officers, which may indicate that they can still view the police as legitimate.

5.2 Police performance and legitimacy

Graph 5 shows that 66 respondents from Q4, who think that police officers equipped with smartphones and bodycams are better at crime prevention, will obey such a police officer and consider them legitimate. In comparison, 2 respondents said they would not obey such a police officer. Compared to the red group, 14 respondents from Q4 decline the idea that police officers equipped with smartphones or bodycams are not better at crime prevention but, those same participants are likely to still obey such a police officer despite their negative response. In addition, 5 respondents from the same red group answered that they would not obey such a police officer.

Graph 5.



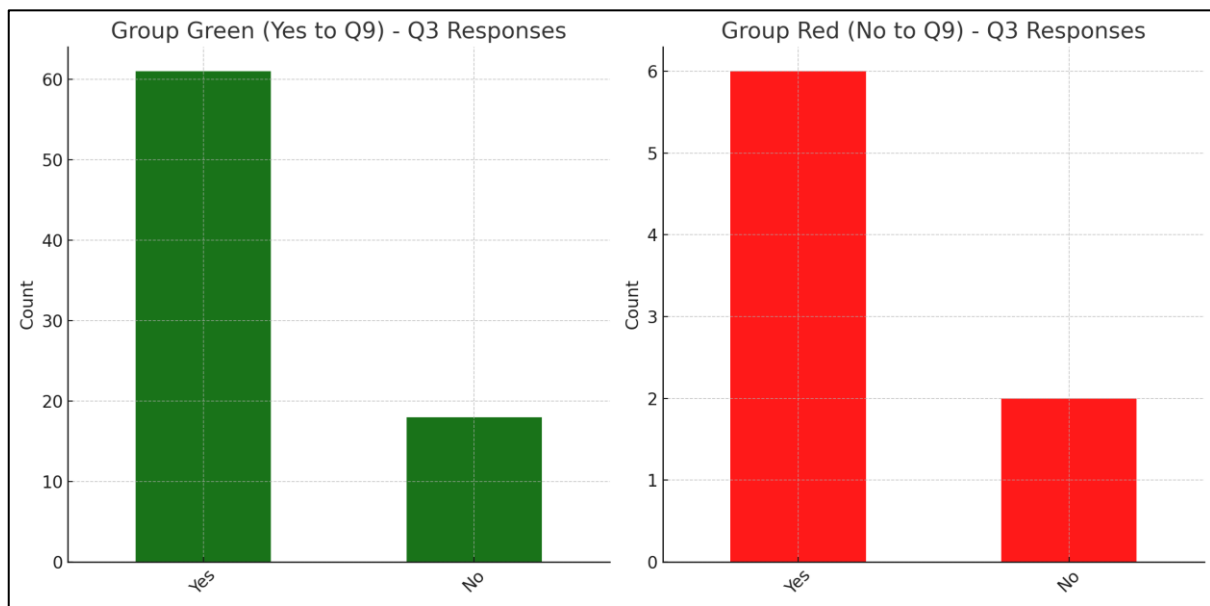
Source: Author's own work.

These findings suggest a presence of correlation between better police performance and public perceptions of police legitimacy. Even students who do not believe police officers equipped with smartphones or bodycams are better at crime prevention have a chance of obeying them, implying that legitimacy may be based on criteria other than perceived technological ability. These could include the broader function of police power, cultural norms about law enforcement compliance, and the impact of police professionalism on interactions. However, it can be assumed that effective police performance will positively influence perceptions of police legitimacy. That clashes with the hypothesis made previously and adds to the idea that police may still have a good perception in the eyes of people even if they do not use bodycams or smartphones.

5.3 Visibility of technology and legitimacy

Graph 6 indicates that 61 respondents from Q9 (who believed that visible use of technologies improves legitimacy) indicated in Q3 that they would obey the police officer with a smartphone and bodycam and may consider such a police officer legitimate. 18 respondents from the same green group said they would not obey such a police officer. However, they believe that the visible use of technologies improves legitimacy. In comparison with the red group, 6 respondents answered that the visible use will not improve legitimacy, but they are likely to obey the police officer equipped with a smartphone or bodycam. 2 respondents indicated that the visible use will not improve legitimacy, and they will not obey such a police officer. Thus, the correlation between the visible use of technologies and legitimacy can be seen positively. More respondents answered that the visible use will improve legitimacy, and they will obey such a police officer. In addition, some respondents indicated that even if they do not believe that the visible use of a smartphone or bodycam improves legitimacy, they will still obey such a police officer.

Graph 6.



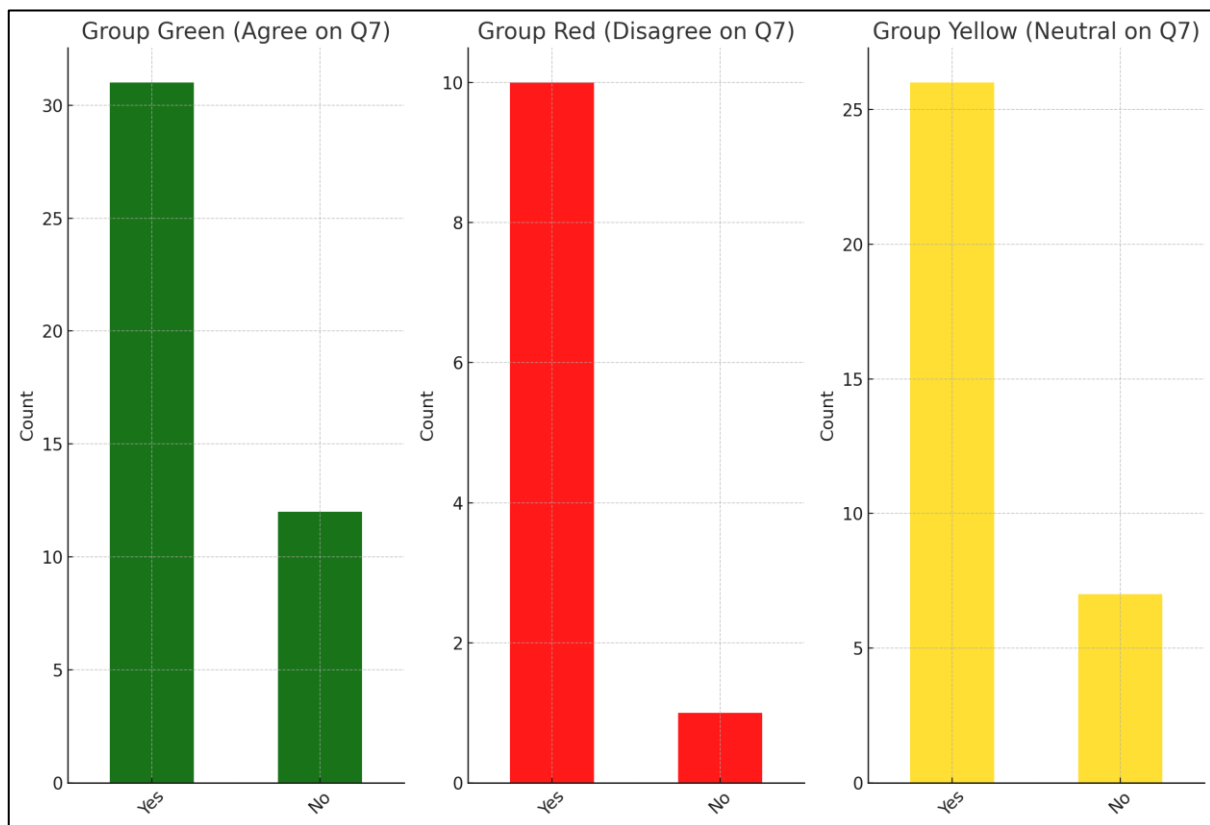
Source: Author's own work.

Thus, results can explain that the overall perception of technologies can be viewed as a beneficial tool for student police practices, enhancing transparent and effective operations. The visible use still remains a good factor that can have a chance of benefitting police operations and helping in public perception.

5.4 Media portrayal and legitimacy

Graph 7 shows three groups who answered Q7 and their relation to Q3. From the green group who agreed on Q7, 31 respondents answered that they would obey the police officer equipped with a smartphone or bodycam and may consider such a police officer legitimate. In comparison, 12 respondents said they would not obey such a police officer. Considering the red group, who did not agree with Q7, 10 respondents will obey a police officer equipped with a smartphone or bodycam, and 1 will not. In the yellow group, where respondents expressed their neutral view, 26 respondents answered that they would obey police officers equipped with a smartphone or bodycam, and 7 said that they would not.

Graph 7.



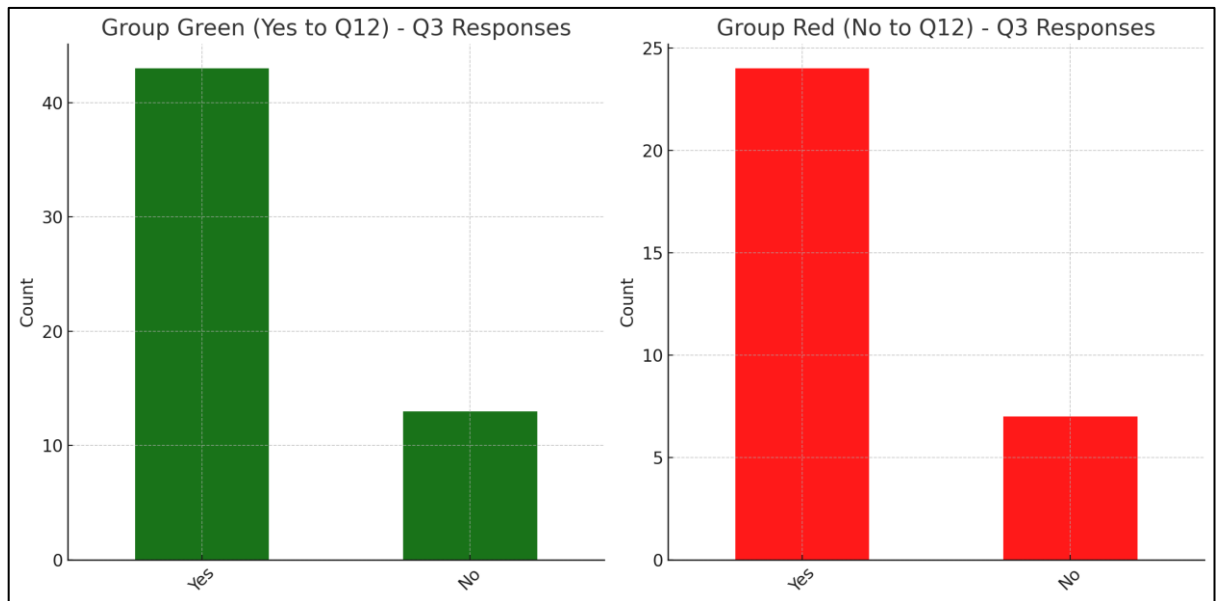
Source: Author's own work.

Overall, positive media coverage may be a viable method to improve trust in police legitimacy since there is a clear correlation when comparing the questions together. The correlation of people obeying the police, with more respondents having a good view of the police due to media coverage. The green group is substantially bigger than the red group, adding to the idea and supporting media coverage as a method of influence of police legitimacy.

Media representation tends to possess a moderate impact on legitimacy, with respondents declaring that positive media coverage may reinforce good impressions. On the other hand, the impartiality rate indicates a complicated connection, which may be influenced by the many news reports surrounding police activities.

5.5 Data privacy concerns and legitimacy

Graph 8.



Source: Author's own work.

When splitting the groups into green group who tend to think that data privacy is respected and red group who are more likely to not trust the police in that matter, we can see that there is almost no distinction in both groups. Both of them are more likely to obey the police, with more than 40 respondents of the green group and 24 respondents from the red group choosing “Yes”. That can suggest that students are less likely to worry about data breaches when interacting with the police due to the harshness of the situation or other factors that may be a bigger problem in the moment of the interaction. The only interesting aspect of both graphs that we can see is that even though the green group is larger, they have as much negative answers as the red group, suggesting that if students worry about data breaches, then there is still a higher chance of them not following the orders from the police officer, but that may be due to sampling size or individual answers that are not really viable to build ideas on. Overall, we have the same distribution of the answers, suggesting that data privacy might not matter as much as other factors when considering police legitimacy, meaning that there may be little to no correlation between data breaches and police legitimacy in the eyes of respondents.

Using all the data above, we can conclude that having a smartphone and bodycam equipped helps students view policing bodies as more trustful and legitimate. There are big skews in all the questions towards the use of bodycams, and even the respondents who have had a negative experience with the police have also concluded that they are more likely to

follow the officer if he or she has a bodycam, or a smartphone equipped. That might suggest that even though some students have had an unpleasant experience with the police, they are more likely to obey it in the future if they see a gadget equipped, making them a tool that has lots of benefits to both the policing body and the counterparty as well. Other concerns like data privacy may not be that important, but even though some students believe in the inability of the police to protect the data, they still prefer to give it out and be treated fairly, as the research shows.

Now, the sub-questions can be finally addressed with the information and supporting ideas from the research made and answers of the respondents.

1. What impact on the behavior of the police do students expect from them wearing body cameras?

According to the survey, the usage of bodycams is highly positive in the eyes of students. Most of the questions regarding the legitimacy of the police with bodycams were answered with high skews towards the use of technology, and the comparisons have shown that even the respondents who have had a negative experience with the police have a positive view towards the use of new technologies. Students expect a more legitimate behavior of the police when they are using bodycams, especially in high-stress situations, since even the students who have had a bad interaction with the police tend to think that their rights are better protected with use of bodycams. Overall, we have a very positive view of the technology in all groups and sets of students that were participating in a survey. They believe that the use of bodycams will make a police officer more legitimate and will not allow their rights to be exceeded.

2. Do students perceive the use of smartphones and body cameras by the police?

The survey data shows that students clearly perceive the use of bodycams as a positive tool for the police. The data from various questions adds to the idea by providing the trend of people indicating that they will follow a police officer with a bodycam, even if the same students have had problems with the police in the past. The same goes for the ideas of legitimacy, and we can conclude that this trend is a clear indication of students caring about bodycam technologies when encountering a police officer.

3. Does perceiving police officers' using smartphones and body cameras influence the attribution of legitimacy by students?

As shown above, when students see a police officer with a bodycam, they tend to think better of the situation and the officer as well, since the data splits that were done in the survey show that even students who have a bad view on the media coverage of the police, have a problem with trusting the police, or consider whether they should report a crime will have a skew in their answers towards the use of bodycams and police legitimacy is a direct result of the same groups answering positively to the questions regarding police legitimacy directly. Considering that, it can be concluded that police legitimacy perception is highly correlated with the use of bodycams as one of the factors.

6. Conclusion

This study addressed the central question: How does police use of NFC smartphones and bodycams affect police legitimacy? The research revealed that the addition of bodycam and smartphone technologies has many positive effects in the view of police legitimacy perception among students in Enschede. The study showed that students who have had a police interaction in the near past, prefer an officer to have those technologies available, as that improves transparency, openness, and accountability. What is more interesting, is that students who have had a bad interaction with an unpleasant outcome still highly prefer an officer to be equipped with a bodycam and smartphone technologies, leading to a conclusion that the majority of students prefer to have an officer with these technologies at hand. These results indicate that accessibility of these digital tools could overcome trust gaps and promote a more positive interaction between the public and the police. The survey data has analyzed these key variables as the main aspects of perception of legitimacy: personal experiences, police performance, the visibility of technology, media portrayal and privacy concerns. Among these factors, the visibility of the tech had one of the strongest influences since other factors have seen a tremendous skew in the results towards the use of bodycams. The same can be seen in other reports and research, particularly in the main framework that was used in the current paper. According to that framework, of Tyler's procedural justice, the visible recording of interactions indicates that the counterparty is treated fairly, and that their voice is heard. Students also believe that bodycams prevent misconduct and violation of laws from the policing bodies, which also aligns with the literature presented. Trust in those devices contributes to better police performance, particularly in evidence documentation and cooperation with the officer when needed. These ideas are aligned with the goals of community policing, where trust and belief in police is essential to cooperation and prevention of misconducts.

Another interesting point was revealed during the analysis of the data privacy and media portrayal and how those factors influence legitimacy. While some literature suggests that bodycams and NFC smartphones will immediately raise questions regarding data privacy concerns, which might be crucial to the citizens, the study has shown that most people are indifferent to privacy violation and still prefer a bodycam to be used. When it comes to media portrayal, the students have chosen opposing sides, with some students agreeing with the importance of media portrayal and others disregarding it as a positive factor for the perception of police legitimacy. That shows that media portrayal can vary highly, with some people seeing positive work of the officers, and others taking a peek into the bad side of police interrogations

and interactions. However, both factors did not have enough weight to overthrow the positive view towards the use of bodycam technologies and NFC smartphones by the police. To maximize those factors, policing bodies should improve the media coverage and protect bodycam footage data in the best way they can, while also looking at other, more influential factors.

However, the subgroup that was chosen is students, meaning that most of them have an understanding on how the technology works, which is a limitation of the paper, and future research of the topic can analyze broader demographics and see if their opinions change when it comes to the use of new technologies, especially for the elderly, as they may be unfamiliar with bodycams and NFC smartphones. When it comes to the key findings of the research, the author can highlight the following:

1. Visibility of technologies drastically improves perception of legitimacy.
2. Personal past experiences do not influence the use of bodycams, and the majority still sees them as a positive.
3. Media portrayal and data privacy does not influence the perception of legitimacy as much as other factors of the research.

To conclude, the use of NFC smartphones and bodycams shows how new technologies can help police officers and citizens to improve legitimacy and perception of such, especially in the new era of technology, that can not only improve the openness and legitimacy, but also improve the safety of humanity.

Appendix 1

Questionnaire survey questions

1. Have you heard or seen any contact with the police officer equipped with a smartphone or bodycam this year? This includes personal encounters, news articles, or social media posts about the police.

Yes/No

2. If yes, how would you describe your experience with the police officer implementing these devices?

- Very positive
- Somewhat positive
- Neutral
- Somewhat negative
- Very negative

3. Would you be more likely to obey a police officer equipped with a smartphone or bodycam compared to one without?

Yes/no

4. Do you think that police officers equipped with smartphones and bodycams are better at crime prevention?

Yes/No

5. Do you feel that police officers equipped with smartphones and bodycams treat you fairly during interactions?

Yes/No

6. Do you think that police officers equipped with smartphones and bodycams are less likely to violate the law?

Yes/No

7. Do you agree that positive media coverage of police using bodycams and smartphones has improved your view of police performance?

- Strongly disagree
- Somewhat disagree
- Neutral
- Somewhat agree
- Strongly agree

8. During the interactions with the police, do you aware of police using smartphones and bodycams?

9. Do you believe that the visible use of smartphone or bodycam by police officer improve the legitimacy?

Yes/No

10. Are you more likely to report an incident to a police officer if their use of smartphones and bodycam was clearly visible during interactions?

Yes/No

11. Do you agree that the positive media portrayal of police using smartphones and bodycams increase your perception of police legitimacy?

Strongly disagree
Somewhat disagree
Neutral
Somewhat agree
Strongly agree

12. Do you think police using smartphones and bodycams respects your data privacy?
Yes/No

13. Do you think that stories from the media involving data breaches by police officers will affect your perception of police legitimacy?

Yes/No

14. Do you think that the police officer using a smartphone or bodycam improve the transparency during interactions?

Yes/No

15. Do you agree that the police legitimacy has improved with bodycams and smartphones?

Strongly disagree
Somewhat disagree
Neutral
Somewhat agree
Strongly agree

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