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THE EFFECTS OF A MANDATORY BODY-WORN CAMERA POLICY
ON OFFICER PERCEPTIONS OF ACCOUNTABILITY,
OVERSIGHT, AND DEPARTMENTAL CULTURE

JORDAN M. HYATT,* RENÉE J. MITCHELL,** & BARAK ARIEL***

INTRODUCTION

THE discourse surrounding the role of body-worn cameras (BWCs) in policing has become increasingly visible in a relatively short period of time. Advances in digital recording, cameras, big-data technologies, and machine learning algorithms have collectively allowed for the development of BWCs that can be integrated into law enforcement activities and by implication digitize a system that is otherwise analog. The role of video and audio recording of crime has been fairly well-examined for some time and across several domains. These include considerations of the role of closed-circuit television,¹ the recording of police interrogations,² and traffic violations.³ Citizens themselves are increasingly recording interactions with law enforcement—which has left the police as one of the parties to systematically and actively record its interactions with the public.⁴ Taken together, and regardless of the source of the video, the existence of these records has the potential to profoundly influence the intrapersonal dynamics of police-citizen encounters.⁵ While some law enforcement ac-

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1. See generally Clive Norris et al., *The Growth of CCTV: A Global Perspective on the International Diffusion of Video Surveillance in Publicly Accessible Space*, 2 SURVEILLANCE & SOC. 110 (2002); Brandon C. Welsh & David P. Farrington, *Public Area CCTV and Crime Prevention: An Updated Systematic Review and Meta-Analysis*, 26 JUST. Q. 716 (2009).

2. See generally Steven A. Drizin & Marissa J. Reich, *Heeding the Lessons of History: The Need for Mandatory Recording of Police Interrogations to Accurately Assess the Reliability and Voluntariness of Confessions*, 52 DRAKE L. REV. 619 (2003); Eric S. Jeffers et al., *The Effect of a Videotaped Arrest on Public Perceptions of Police Use of Force*, 25 J. CRIM. JUST. 382 (1997); Mike McConville, *Videotaping Interrogations: Police Behaviour on and off Camera*, CRIM. L. REV., 1992 at 532; Thomas P. Sullivan, *Electronic Recording of Custodial Interrogations: Everybody Wins*, 95 J. CRIM. L. & CRIMINOLOGY 1127 (2005).

3. See generally Alena Erke, *Red Light for Red-Light Cameras?: A Meta-Analysis of the Effects of Red-Light Cameras on Crashes*, 41 ACCIDENT ANALYSIS & PREVENTION 897 (2009); Paul Pilkington & Sanjay Kinra, *Effectiveness of Speed Cameras in Preventing Road Traffic Collisions and Related Casualties: Systematic Review*, 330 BMJ 331 (2005).

4. See generally Dina Mishra, Comment, *Undermining Excessive Privacy for Police: Citizen Tape Recording to Check Police Officers' Power*, 117 YALE L.J. 1549 (2008); Michael Potere, Comment, *Who Will Watch the Watchmen?: Citizens Recording Police Conduct*, 106 NW. U. L. REV. 273 (2012).

5. See Nikki Jones & Geoffrey Raymond, "The Camera Rolls": *Using Third-Party Video in Field Research*, 642 ANNALS AM. ACAD. POL. & SOC. SCI. 109, 111 (2012).

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tions have traditionally been recorded on public and private surveillance cameras, BWCs represent a turning point in the amount of time officers are recorded, including in the legal obligation in creating these videos.

Although BWCs and car-mounted recording devices have been around for at least two decades, research on this topic has only begun to emerge. The first large-scale study on the impact of BWCs was published in 2015.⁶ In that study, Barak Ariel and colleagues conducted a randomized controlled field trial in Rialto, California, and found that on shifts when officers were assigned to wear a BWC unit, the rate of use of force incidents by officers and the number of citizen complaints was significantly reduced.⁷ By providing causal evidence on key outcomes related to the police/citizen-interactions of BWCs, the study contributed to the expansion of BWC policies across the nation and the world. Many tests of the efficacy of BWCs soon followed, as we briefly review here.

Notably, the rise of BWCs in American policing did not happen independent of other reforms in policing. Driven by a shift in public scrutiny and media attention, policing practices rose to the front of the public debate in about 2010. In the United States, the discourse surrounding policing underscored by a belief—however factually erroneous—that the rate of police killing was both increasing and at the peak levels observed in the modern era.⁸ This public outcry rose to new heights shortly after George Zimmerman was acquitted of fatally shooting Trayvon Martin.⁹ The heightened awareness of police practices and challenges to their acceptability in light of perceived—and actual—racial disparities intersected with the BWCs after several additional, high-profile police-involved shootings took place. The discourse surrounding law enforcement was further strained after the shooting of Mr. Michael Brown in Ferguson, Missouri, an incident which was not recorded and where the facts and conduct of both the actors remained in dispute.¹⁰ BWCs have the potential to influ-

6. See generally Barak Ariel et al., *The Effect of Police Body-Worn Cameras on Use of Force and Citizens' Complaints Against the Police: A Randomized Controlled Trial*, 31 J. QUANTITATIVE CRIMINOLOGY 509 (2015).

7. See *id.* at 518.

8. See, e.g., Kevin Johnson, *Police Killings Highest in Two Decades*, USA TODAY (Nov. 11, 2014, 04:17 PM), <http://usat.ly/1ujU6de> [<https://perma.cc/ZV9V-X4U6>].

9. See Channing Joseph & Ravi Somaiya, *Demonstrations Across the Country Commemorate Trayvon Martin*, N.Y. TIMES (July 20, 2013), <http://www.nytimes.com/2013/07/21/us/demonstrations-across-the-country-commemorate-trayvon-martin.html?mcubz=1> [<https://perma.cc/78Q5-ZBUG>]; Matt Williams, *Trayvon Martin Protests Being Held in More Than 100 US Cities*, GUARDIAN (July 20, 2013 10:35 PM), <https://www.theguardian.com/world/2013/jul/20/trayvon-martin-protests-us-cities> [<https://perma.cc/CUE3-JHWT>].

10. See TAMMY R. KOCHER, ASSESSING THE INITIAL IMPACT OF THE MICHAEL BROWN SHOOTING AND POLICE AND PUBLIC RESPONSES TO IT ON ST. LOUIS COUNTY RESIDENTS' VIEWS ABOUT POLICE, S. ILL. UNIV. CARBONDALE DEP'T OF CRIMINOLOGY & CRIM. JUST., 2015, at 10–11, http://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?article=1001&context=ccj_reports [<https://perma.cc/P7MZ-TSNN>]; Laurie Frankel et al., *A Year After Michael Brown, the Body Cam Business is Booming*, CNN (2015),

ence these situations and their outcomes. A recording could have been either incriminating or exculpatory. At that time, the public appeared to embrace BWC recordings as an opportunity to monitor—and potentially check—police use of power, while law enforcement perceived the adoption of BWCs as an opportunity to bolster transparency and accountability.¹¹ Generally speaking, the key parties—including law enforcement advocacy groups and activists—have embraced BWCs. However, the need to protect the privacy and security of police, victims, and the public is also recognized and has been the focus of empirical and policy research.¹² In order to fully understand the impact of BWCs, implications for police, both within their own departments and in their interactions with the public, must be better understood.

BWCs can influence policing in several key ways. Most apparently, BWC-derived video footage can offer an objectively created version of events that have transpired. Crucially, these videos provide an account from the officer's perspective *before* the application of force begins, perceived incivility takes place, or any aggression begins to characterize the police-public encounter. BWCs can provide elements of a visual “story,” thus contextualizing factual antecedents as well as potential reasons why officers may apply force in these volatile engagements. The following aspect is critical: when citizens video-record an aggressive police-public interaction, it is nearly always after-the-fact or as the parties have already entered into a combative stage. The potential abuse, the perceived sense of danger or the presence of a concealed firearm, the “tunnel vision” officers experience as a result of the flight-or-fight dilemma, or the suspect's demeanor are rarely captured on film when the encounter is not recorded from their own perspective. Mandatory BWC use policies are also more likely to capture all of an event, regardless if the encounter begins as benign or confrontational and irrespective of the presence of third parties or passive surveillance cameras. Once collected, video evidence overcomes many of the limitations of human memory, which can be especially fallible

<http://money.cnn.com/video/news/2015/08/07/ferguson-michael-brown-police-body-cameras-taser-digital-ally-viewu.cnnmoney/index.html> [https://perma.cc/TM4S-LSLU].

11. See, e.g., E. Fieldstadt, *Should Every Police Officer be Outfitted with a Body Camera?*, NBC NEWS (Nov. 26, 2014, 03:30 PM), <http://www.nbcnews.com/storyline/michael-brown-shooting/should-every-police-officer-be-outfitted-body-camera-n256881> [https://perma.cc/9SHH-5ZNJ]; Robert King & Jill Disis, *Push for IMPD Body Cams Follows Police Shooting of Teen*, INDYSTAR (Aug. 11, 2015, 04:28 PM), <http://www.indystar.com/story/news/2015/08/11/push-impd-body-cams-follows-police-shooting-teen/31482109/> [https://perma.cc/M6Y3-GT7C]; Jay Stanley, *Police Body-Mounted Cameras: With Right Policies in Place, a Win for All*, ACLU (2013), https://www.aclu.org/sites/default/files/assets/police_body-mounted_cameras-v2.pdf [https://perma.cc/W8V8-H5YR].

12. See, e.g., Kami Chavis Simmons, *Body-Mounted Police Cameras: A Primer on Police Accountability vs. Privacy*, 58 HOWARD L.J. 881, 885 (2014); Kelly Freund, Note, *When Cameras are Rolling: Privacy Implications of Body-Mounted Cameras on Police*, 49 COLUM. J.L. & SOC. PROBS. 91, 96 (2015); Stanley, *supra* note 11.

in the type of high-stress situations in which law enforcement takes place.¹³ In many cases, such as the Ferguson shooting, even a limited record could have provided context to a tragic event and shaped the subsequent responses, and certainly, a body-cam could have created a dramatic episode in America's relationship with its police. Unsurprisingly, video evidence can be considered, under the right circumstances, more reliable than officers' own accounts, and therefore to have greater evidentiary value.¹⁴ Having video supporting the officer's—or citizen's—depiction of events, therefore, can lead to increased perceptions of police accountability when official reports and testimony can be corroborated with additional data.¹⁵

Research on BWCs has only recently begun to expand outside of the potential impact on complaints and use of force.¹⁶ Researchers are now exploring both the advantages of BWCs (e.g., increasingly available evidence, perceptions of legitimacy, public disclosure, and transparency) but also the potential disadvantages (e.g., fiscal costs, privacy concerns, and increased aggression against officers) in a number of contexts. As part of this stage of analysis, the inquiry must also shift inward and examine how implementing a mandatory BWC policy can change the subjective experience of policing. When officers are required to record all their interactions with the public, it may change how they perceive their relationship with the citizenry and with their own department. In extreme circumstances, the BWCs may spawn a range of counterproductive reactions from dissatisfied officers including de-policing or inertia, both of which undermine the goals of law enforcement and public safety.¹⁷ A balanced BWC policy can encourage officers to engage in a recorded interaction with the

13. See, e.g., Kathy Pezdek, *Fallible Eyewitness Memory and Identification*, in AMERICAN PSYCHOLOGICAL ASSOCIATION, *CONVICTION OF THE INNOCENT: LESSONS FROM PSYCHOLOGICAL RESEARCH* 105, 113–20 (Brian L. Cutler ed., 2012); Brian L. Cutler et al., *Improving the Reliability of Eyewitness Identification: Putting Context into Context*, 72 J. APPL. PSYCHOL. 629, 629–30 (1987); Michael R Leippe, *Effects of Integrative Memorial and Cognitive Processes on the Correspondence of Eyewitness Accuracy and Confidence*, 4 L. & HUMAN BEHAV. 261, 264–67 (1980); Ahmed M. Megreya & A. Mike Burton, *Matching Faces to Photographs: Poor Performance in Eyewitness Memory (Without the Memory)*, 14 J. EXP. PSYCHOL. APPLIED 364, 364–65 (2008).

14. See, e.g., CHARLES M. KATZ ET AL., CTR. FOR VIOLENCE PREVENTION & CMTY. SAFETY, AZ. STATE UNIV., *EVALUATING THE IMPACT OF OFFICER WORN BODY CAMERAS IN THE PHOENIX POLICE DEPARTMENT* 5 (2014); ALEXANDRA MATEESCU ET AL., *DATA & SOC'Y RESEARCH INST., POLICE BODY-WORN CAMERAS* 6 (2015).

15. See TOM R. TYLER, *WHY PEOPLE OBEY THE LAW* 71 (2006); Ariel et al., *The Effects of Body-Worn cameras (BWCs) on Police and Citizen Outcomes: A State-of-the-Art Review*, POLICING: INT'L J. POLICE STRATEGIES & MGMT. (forthcoming 2017); Timothy IC Cubitt, et al., *Body-Worn Video: A Systematic Review of Literature*, 50 AUSTRAL. & N.Z. J. CRIMINOLOGY 379, 379–81 (2016).

16. Cynthia M. Lum et al., CTR. FOR EVIDENCE BASED CRIME POL'Y, GEORGE MASON UNIV., *EXISTING AND ONGOING BODY WORN CAMERA RESEARCH: KNOWLEDGE GAPS AND OPPORTUNITIES* 3–4, 7–10 (2015).

17. See Barak Ariel et al., *The Deterrence Spectrum: Explaining Why Police Body-Worn Cameras "Work" or "Backfire" in Aggressive Police–Public Encounters*, POLICING: J. POL. & PRAC., 2017, at 1 (2017) [hereinafter Ariel et al., *The Deterrence Spectrum*].

understanding that the resulting video could be reviewed to either support them, for example as a defense against claim of excessive force, or to contradict them, perhaps as evidence of failing to follow departmental policy in a disciplinary hearing.

Research in this line of inquiry—that is, the potential influence of using BWCs on officers' perceptions of accountability, oversight, and departmental culture—is scant. Some evidence suggests that officers hold generally positive views regarding the implementation of BWCs, while other studies show cynicism and concerns about the prospects of BWCs.¹⁸ Yet collectively, the body of research remains largely selective and descriptive. This Article reports the results of a survey of law enforcement officers designed to examine how their beliefs about departmental culture and internal accountability are influenced by BWCs. Administered in two stages, one before and one after the start of mandatory BWC usage, this survey inquired about several aspects of law enforcement culture not previously explored from an officer's perspective: departmental identity, decision-making, accountability, and managerial oversight related to BWCs. After providing a brief overview of the relevant literature, we present our methodology and analytical approach followed by the results of this analysis and a discussion of the implications for policy and practice.

I. BACKGROUND

BWCs are designed with a specific goal: to record with as much detail as possible the actions and conduct of law enforcement officers, members of the public that interact with these officers, and the situations in which they are involved. In many ways, the resulting record is the primary advantage offered by the camera. The utility of these videos has been the focal point of much of the empirical research on BWCs. Just like the NFL's referees will use an instant replay to confirm a decision made on the field or the outcome of a play, a post-interaction review can provide management and departmental leadership with the opportunity to review an officer's decision. This opens the officer's decision and their actions—much of which are made in the heat of a moment and over a matter of mere seconds—up to additional levels of scrutiny. This potential for critique is true even when the subject of the recording is not as dramatic as a police-involved shooting, such as determination of whether an officer was following departmental regulations regarding conduct, dress, location, or other non-law-enforcement-related duties. In some cases, this secondary review can go beyond the parameters of the incident itself, possibly including the conduct of the officer well before or after the event took place. These factors are likely to influence the nature and tone of the culture within the law enforcement organization, as well as contribute to a shift in the dy-

18. See e.g., Janne E. Gaub et al., *Officer Perceptions of Body-Worn Cameras Before and After Deployment: A Study of Three Departments*, 19 *POLICE Q.* 275, 278 (2016).

namic between managers and officers.¹⁹ Accordingly, while the use of BWCs offers discrete and tangible benefits, as we outline here, mandatory recording policies while in the field may also fundamentally alter the experience of being a police officer, especially regarding how officers perceive their role within the agency.

Several lines of research across multiple disciplines of science suggest that people alter their behavior once they are made aware that they are being observed.²⁰ A rich body of evidence on perceived social-surveillance, self-awareness,²¹ and socially-desirable-responding²² proposes that people adhere to social norms and change their conduct simply due to their cognizance that someone else is—or could be—watching.²³ It seems that knowing with sufficient certainty that behavior is being observed or judged affects various social-cognitive processes: an individual experiences self-awareness,²⁴ they become more prone to socially-acceptable-behavior,²⁵ and they sense a heightened need to cooperate with rules.²⁶ Within the BWC context, when behavior, attitudes, or demeanor are recorded, and an individual is subsequently made aware that they can be penalized because of the implicating footage, the subject's behavior may change. In this case, deterrence is said to have taken place.

For both officers and offenders, getting caught doing something illegal, morally wrong, or simply socially unacceptable can potentially lead to

19. See, e.g., Ronald J. Deluga & Joanne Souza, *The Effects of Transformational and Transactional Leadership Styles on the Influencing Behaviour of Subordinate Police Officers*, 64 J. OCCUPATIONAL & ORGANIZATIONAL PSYCHOL. 49, 51 (1991); Bethan Loftus, *Police Occupational Culture: Classic Themes, Altered Times*, 20 POLICING & SOC. 1, 1 (2010); Eugene A. Paoline III, *Taking Stock: Toward a Richer Understanding of Police Culture*, 31 J. CRIM. JUST. 199, 200–01 (2003).

20. See, e.g., EDWARD ELLSWORTH JONES & RICHARD E. NISBETT, *THE ACTOR AND THE OBSERVER: DIVERGENT PERCEPTIONS OF THE CAUSES OF BEHAVIOR* 80, 85–88 (1971).

21. See generally Robert A. Wicklund, *Objective Self-Awareness*, 8 ADVANCES EXPERIMENTAL SOC. PSYCHOL. 233 (1975).

22. See, e.g., Delroy L. Paulhus, *Balanced Inventory of Desirable Responding (BIDR)*, 2 MEASUREMENT & CONTROL RESPONSE BIAS 37, 38 (1988).

23. See, e.g., Barak Ariel et al., *The Effects of Police Body-Worn Cameras on Use of Force and Citizens' Complaints Against the Police: A Randomized Control Trial*, 31 J. QUANTITATIVE CRIMINOLOGY 509, 511 (2014) [hereinafter Ariel et al., *The Effects of Police Body-Worn Cameras*].

24. See generally Shelley Duval & Robert A. Wicklund, *Effects of Objective Self-Awareness on Attribution of Causality*, 9 J. EXPERIMENTAL SOC. PSYCHOL. 17 (1973); Will M. Gervais & Ara Norenzayan, *Analytic Thinking Promotes Religious Disbelief*, 336 SCIENCE 493 (2012).

25. See, e.g., Lee Sproull et al., *When the Interface Is a Face*, 11 HUM.-COMPUTER INTERACTION 97, 101 (1996).

26. See, e.g., Pat Barclay & Robb Willer, *Partner Choice Creates Competitive Altruism in Humans*, 274 PROCEEDINGS ROYAL SOC'Y OF LONDON B: BIOLOGICAL SCI. 749, 749 (2007); Manfred Milinski et al., *Reputation Helps Solve the "Tragedy of the Commons"*, 415 NATURE 424, 424 (2002); Claus Wedekind & Victoria A. Braithwaite, *The Long-Term Benefits of Human Generosity in Indirect Reciprocity*, 12 CURRENT BIOLOGY 1012, 1012 (2002).

negative consequences. This is an outcome rational individuals tend to avoid.²⁷ Of course, assuming rationality in decision-making processes has increasingly been found to be a rather weak assumption,²⁸ but the fact remains that experimental research in this area has uncovered a common propensity to avoid negative outcomes. The findings of these studies generally agree in that individuals become increasingly compliant when presented with even the slightest cues indicating that somebody *may* be watching. Priming and other contextual data signal to people how they ought to behave, and these signals can inculcate fear of reputational damage to feelings of shame and aversion to the consequences of noncompliance.²⁹

BWCs provide a venue and medium for the recording of law enforcement related interactions that cannot normal be preserved. Therefore, it is hypothesized that the self-awareness that arises from being watched or filmed drives individuals to comply with rules or norms primarily because of the perceived certainty of punishment. In the language of deterrence theory, cameras are viewed as “credible threats”³⁰ and individuals will change their behavior—often for the better—because of their presence. Several authors have demonstrated some of the necessary conditions in which deterrence exerts an effect on criminal decision-making.³¹ This framework, although developed to explain how potential victims and alleged offenders react in the presence of BWCs, applies to citizens and to

27. See, e.g., Steven Klepper & Daniel Nagin, *The Deterrent Effect of Perceived Certainty and Severity of Punishment Revisited*, 27 *CRIMINOLOGY* 721, 741 (1989); Daniel S. Nagin, *Deterrence in the Twenty-First Century*, 42 *CRIME & JUST.* 199, 243 (2013).

28. See, e.g., DANIEL KAHNEMAN, *THINKING, FAST AND SLOW* 129–37 (2011).

29. It is worth noting, however, that the theoretical basis for BWCs, set out in the previous paragraph, rests on citizen and officer awareness of being filmed. As Ariel et al. discusses, the intervention in the Rialto Experiment was not simply the presence of cameras. See Ariel et al., *supra* note 23, at 510. In addition, officers were tasked to verbally warn citizens that their encounter was being recorded. See *id.* at 520. In a different study Ariel et al. hypothesize that:

[t]his verbal warning could sensitize people leading them to modify their behavior. It could also serve to remind people of the rules that are in effect—politeness being the bare minimum—[sic]. Similarly, the verbal prompt may jolt individuals into thinking a little more before they act, becoming more deliberative and reflecting on future consequences. In short, there could be several mechanisms that may account for changes in behavior when camera and verbal warning are used together.

Barak Ariel et al., “Contagious Accountability”: A Global Multistate Controlled Trial on the Effect of Police-Body Worn Cameras on Citizens’ Complaints Against the Police, 44 *CRIM. JUST. & BEHAV.* 293, 298 (2017) [hereinafter Ariel et al., “Contagious Accountability”].

30. See Robert Jervis, *Rational Deterrence: Theory and Evidence*, 41 *WORLD POLS.* 183, 190 (1989); see also Steven N. Durlauf & Daniel S. Nagin, *Imprisonment and Crime: Can Both Be Reduced?*, 10 *AM. SOC. CRIMINOLOGY*, 13, 19 (2011) (“For criminal decisions, what matters is the subjective probability a potential criminal assigns to apprehension . . .”).

31. See generally Daniel S. Nagin et al., *Deterrence, Criminal Opportunities, and Police*, 53 *CRIMINOLOGY* 74 (2015); Thomas A. Loughran et al., *Re-Examining the Functional Form of the Certainty Effect in Deterrence Theory*, 29 *JUST. Q.* 712 (2012).

police equally. Officer compliance with police regulations would be affected in a similar way, as the certainty of officers being sanctioned for non-compliance with laws or rules is more likely to occur in the face of an actual violation when cameras are on.

A. *BWCs Impact Law Enforcement Outcomes*

There is a growing body of empirical support for the claims that BWCs are a tool for reducing use of force by officers and citizen complaints. In a randomized, controlled trial of body-worn cameras by Ariel et al., officers in the treatment group—those wearing a BWC—had one-half the number of use-of-force incidents compared to a control group of officers with no BWC.³² In a study conducted in Mesa, Arizona, researchers found that the rate of use-of-force by officers was reduced by 75% compared to the year before BWC adoption.³³ At the same time, there were 40% fewer formal citizen complaints filed against BWC-wearing officers than those with no BWCs in the comparison group.³⁴ While these reductions appear to be positive, fewer complaints and use of force could also be the direct consequence of a self-initiated reduction in officer's policing activity. In essence, BWCs might cause officers to refrain from engaging with the public in some situations due to concerns about what may appear on the BWC recordings. During one study, officers in Mesa, Arizona for example, completed fewer stop-and-frisk searches and arrests when wearing BWCs.³⁵ The reduction in stop-and-frisk events may be evidence of a reduction in officer engagement as these events are triggered by the officer's situational judgement; there is no obligation to act as there is when a crime is taking place. Stop-and-frisk activity is based on the holding in *Terry v. Ohio*,³⁶ which allows an officer to stop a person for questioning when they believe there is reasonable suspicion. Reasonable suspicion is determined *entirely* from the officer's point of view as *Terry* allows officers to use *their experience* as a factor when determining whether they believe criminal activity is taking place. BWCs could affect officers' discretionary stops as officers may feel a third person watching their BWC footage might not perceive the footage in the same way and complete fewer stops, as

32. See Ariel et al., *The Effects of Police Body-Worn Cameras*, *supra* note 23, at 512.

33. See *id.*; RYAN STOKES & LEE RANKIN, MESA, AZ. POLICE DEP'T, PROGRAM EVALUATIONS & RECOMMENDATIONS: ON-OFFICER BODY CAMERA SYSTEM (2013), <http://www.theiacp.org/Portals/0/documents/pdfs/LEIM/Operational%20Track%20Workshops/O2%20On%20Body%20Cameras.pdf> [<https://perma.cc/S697-L7W2>].

34. See STOKES & RANKIN, *supra* note 33; CMTY. ORIENTED POLICING SERVS., U.S. DEP'T OF JUSTICE, IMPLEMENTING A BODY-WORN CAMERA PROGRAM: RECOMMENDATIONS AND LESSONS LEARNED 6 (2014), <https://ric-zai-inc.com/Publications/cops-p296-pub.pdf> [<https://perma.cc/EL3N-2L8G>].

35. See Justin T. Ready & Jacob T.N. Young, *The Impact of On-Officer Video Cameras on Police-Citizen Contacts: Findings from a Controlled Experiment in Mesa, AZ*, 11 J. EXPERIMENTAL CRIMINOLOGY 445, 445 (2015).

36. 392 U.S. 1 (1968).

evidenced in the findings from the study conducted in Mesa. Quite simply, if fewer discretionary stops are conducted the rates of complaints will go down, even if the relative frequency of the negative behavior remains constant. However, evidence gathered during a study in the Isle of Wight in England demonstrated that the number of complaints specifically generated from searches in that context were lowered in parallel to arrests in the presence of BWCs.³⁷ Similarly, citizen complaints declined 65% when BWCs were introduced in Orlando, Florida, although it is unknown how many of those complaints stemmed from stop-and-frisk activity compared to other routine—or obligatory—law enforcement actions.³⁸ While these findings are concerning, they still cannot clearly specify the influence of BWCs on these outcomes. Disaggregating data to demonstrate the effects of stop-and-frisk complaints and other complaints should be completed in every BWC study, as it is unclear how officers may respond to BWCs. If they decrease the rate of proactive police activity, then crime may increase. Therefore, understanding officers' perceptions about BWCs is an important variable to study when considering the implementation and impact of BWCs.

Recently, Ariel et al.³⁹ have replicated the early BWCs experiments in a global, multisite, randomized controlled trial designed to dramatically increase the evidence available on BWCs and how they can impact policing. Of particular importance, these findings highlight the complicated interaction between officer beliefs, discretionary police action, and the effects of BWCs. Two major findings emerged. First, the study showed complaints by members of the public against officers fell dramatically over twelve months compared with the year before. The findings showed there were 113 complaints made against officers during the year trial period, compared with 1,539 in the twelve months before—a reduction of 93%. Secondly, the experiments overall concluded that BWCs had no effect on the police use of force. However, when the data were broken down in terms of officers' discretion—that is, if and when officers decided to switch

37. See TOM ELLIS ET AL., U. PORTSMOUTH INST. CRIM. JUST. STUD., EVALUATION OF THE INTRODUCTION OF PERSONAL ISSUE BODY WORN VIDEO CAMERAS (OPERATION HYPERION) ON THE ISLE OF WIGHT: FINAL REPORT TO HAMPSHIRE CONSTABULARY 37–43 (2015).

38. See Wesley G. Jennings et al., *Evaluating the Impact of Police Officer Body-Worn Cameras (BWCs) on Response-to-Resistance and Serious External Complaints: Evidence from the Orlando Police Department (OPD) Experience Utilizing a Randomized Controlled Experiment*, 43 J. CRIM. JUST. 480, 480 (2015) [hereinafter Jennings et al., *Evaluating the Impact*].

39. See generally Barak Ariel et al., “Contagious Accountability”, *supra* note 29; Barak Ariel et al., *Increases in Police Use of Force in the Presence of Body-Worn Cameras are Driven by Officer Discretion: A Protocol-Based Subgroup Analysis of Ten Randomized Experiments*, 12 J. EXPERIMENTAL CRIMINOLOGY 453 (2016) [hereinafter Ariel et al., *Driven by Officer Discretion*]; Barak Ariel et al., *Wearing Body Cameras Increases Assaults Against Officers and Does Not Reduce Police Use of Force: Results from a Global Multi-Site Experiment*, 13 EUR. J. CRIMINOLOGY 744 (2016) [hereinafter Ariel et al., *Wearing Body Cameras Increases Assaults Against Officers*].

on the cameras—the findings became more nuanced but telling. In experimental sites where officers followed the protocol, which dictated using BWCs during each encounter, without discretion, use of force rates dropped by nearly 40%. Darren Henstock and Barak Ariel have recently observed that the suppressing effect of BWCs on use of force concentrates in the lower end of the use of force spectrum—hand-to-hand combat—with unnoticeable effect on use of force involving batons, pepper sprays, K-9 units, Tasers, or lethal weapons.⁴⁰ On the other hand, in departments where officers were given the power to assess the value of the device on a case-by-case basis, use of force rates were about 70% higher compared to police shifts in which officers were not equipped with BWCs. These unintended consequences are largely a result of the way in which cameras were deployed and used. Put differently, these findings indicated that BWCs could reduce police use of force—with respect both to types of cases and to individual incidents—but when officers are granted the power to activate the cameras based on their views, BWCs can have a significant and negative effect; they can backfire. It follows that BWCs ought to be switched on, and the recording announced to suspects at the earliest stage of interaction between police and public—which we discuss more granularly below.

B. *Officers Accept BWCs, with Qualifications*

An emerging body of research has sought to examine how officers perceive BWCs, often regarding their expectations for the efficacy of the program, the response of the public, as well as their peer officers. Multiple studies have sought to examine the levels of officer support for—or opposition to—BWC policies through surveys conducted in conjunction with larger, empirical evaluations. For example, one prospective survey found that sixty percent of officers in Orlando, Florida, believed the agency should adopt BWCs.⁴¹ Half of the command staff in Sunshine County, consisting of twenty-seven police agencies, supported adoption if they already had deployed BWCs in their agency and varied from strongly agree to disagree if implementation had not yet occurred.⁴² In Phoenix, Arizona, officers thought BWC footage would help in the prosecution of their cases.⁴³ Similarly, officers in England's Isle of Wight reported a strong belief that the BWCs would improve evidence gathering.⁴⁴ Some agencies found while officers believe that BWCs could improve police ac-

40. See Darren Henstock & Barak Ariel, *Testing the Effects of Police Body-Worn Cameras on Use of Force During Arrests: A Randomised Controlled Trial in a Large British Police Force*, EUR. J. CRIMINOLOGY, 2017, at 1.

41. See Wesley G. Jennings et al., *Cops and Cameras: Officer Perceptions of the Use of Body-Worn Cameras in Law Enforcement*, 42 J. CRIM. JUST. 549, 550 (2014).

42. See John Ortiz Smykla et al., *Police Body-Worn Cameras: Perceptions of Law Enforcement Leadership*, 41 AM. J. CRIM. JUST. 424, 434–39 (2016).

43. See KATZ ET AL., *supra* note 14, at 23, 25.

44. See ELLIS ET AL., *supra* note 37, at 11, 13.

countability, they do not believe that the cameras would have the ability to significantly improve public trust in law enforcement.⁴⁵

Surveys have generally covered officers and command staff perceptions surrounding the use of BWCs,⁴⁶ though there is a high degree of variation between departments. For example, officers from cities close to each other such as Tempe and Phoenix, Arizona, had different perceptions concerning the utility of BWC footage as evidence—ranging from very positive to very negative.⁴⁷

BWC-derived video does not pose only a challenge to the exercise of a police officer's duty, as they may perceive this obligation. These videos can also support the officer's testimony in court, boosting the officer's credibility and trustworthiness and validating the officer's version of events for internal affairs.⁴⁸ Having video evidence has been shown to lower the amount a that city pays out in a civil suit related to police actions and, in some cases, it can prevent the city from having to pay a plaintiff at all.⁴⁹ In Phoenix, Arizona, the majority of officers surveyed agreed that BWC video would improve the overall quality of evidence.⁵⁰ In Orlando, Florida, after a year of using BWC officers, 64.1% of the officers thought reviewing BWC video could help them improve police/citizen interactions, 79.5% thought it helped them reduce reporting errors, and 92.3% thought it would assist them with recollecting previous events.⁵¹ However, these benefits are linked to the outcomes of cases or incidents and are less influential on the type of conduct officers engage in daily basis, including *Terry* stops. Among those departments where there was a high degree of opposition of BWCs, in the officer's minds, quite simply, the benefits of BWCs might not outweigh the disadvantages.⁵²

An acceptance of the use of BWCs as a part of modern policing may have seemed inevitable in some departments. Media coverage has been relentless in some areas, with oversight agencies and the public seeking out video recordings on a wide range of police-citizen interaction. This does not mean, however, that patrol officers have fully embraced the no-

45. See Justice Tankebe & Barak Ariel, *Cynicism Towards Change: The Case of Body-Worn Cameras Among Police Officers*, 6, 12 (Hebrew University Jerusalem Legal Research Paper Series No. 16-42, 2016).

46. See generally Gaub et al., *supra* note 18; Tankebe & Ariel, *supra* note 45; Smykla et al., *supra* note 42.

47. See Gaub et al., *supra* note 18, at 292–93.

48. Cf. CHARLES M. KATZ ET AL., BUREAU OF JUSTICE ASSISTANCE, U.S. DEP'T OF JUSTICE, PHOENIX, ARIZONA, SMART POLICING INITIATIVE: EVALUATING THE IMPACT OF POLICE OFFICER BODY-WORN CAMERAS 6–10 (2015), <http://www.utility.com/perch/resources/phoenix-smart-policing-study-sept-2015.pdf> [<https://perma.cc/GM6J-7VBV>]; William H. Sousa et al., *Research on Body Worn Cameras: Meeting the Challenges of Police Operations, Program Implementation, and Randomized Controlled Trial Designs*, 19 POLICE Q. 363, 366, 372 (2016).

49. See, e.g., Mateescu et al., *supra* note 14, at 27.

50. See KATZ ET AL., *supra* note 43, at 4–5, 23.

51. See Jennings et al., *Evaluating the Impact*, *supra* note 38, at 484.

52. See Gaub et al., *supra* note 18, at 285.

tion of being recorded when provided the opportunity to push back against these policies. For example, in Essex, U.K., only 17% of the officers studied turned on their BWCs as required during domestic violence incidents.⁵³ Other studies have found that without strict oversight, officers often do not activate their BWCs as required or otherwise fail to generate usable recording of their interactions. For example, in the Isle of Wight BWC study, only 70 of the 80 officers who were assigned to the experimental group wore the cameras, and 44 of the 70 officers completed the survey.⁵⁴ In other experiments in England, the level of activation was undeterminable, as implementation rates were not captured.⁵⁵ This disconnect between official policy and officer actions evidence has two key points: First, officers may not be overly and universally enthusiastic about BWC usage, even when their presence is accepted, and secondly, management and street officers may view the BWCs, as well as the goals and results of mandatory use policies, quite differently.

The nature of any given BWC policy, as well as the decision to purchase BWCs in the first place, is usually determined by the executive command or leadership of a law enforcement agency. While in some cases these decisions are made due to recommendations by oversight committees or consent decrees, the imposition of a BWC program is a top-down decision.⁵⁶ Executive command in most police agencies rarely go out to patrol and handle calls for service; thus, the adoption of BWCs has little effect on their day-to-day jobs. However, the effect on the front-line officers is immense. If the adoption of BWCs reduce officer morale or sends a message of distrust between management and the officers, then BWCs could have many potential negative effects that have yet to be explored. This Article examines the attitudes of officers towards the department during the deployment of BWCs to determine how their perceptions shift over time, as they adopt this new technology.

C. *BWCs Are Likely to Influence Departmental Culture*

Technological innovation has long been regarded a significant factor in the development of new police practices and the shaping of law enforcement culture.⁵⁷ This is not a characteristic unique to policing; a change in essential technology can be stressful for an employee in a wide

53. See CATHERINE OWENS ET AL., COL. OF POLICING, THE ESSEX BODY WORN VIDEO TRIAL 10 (2014), http://www.bwvsg.com/wp-content/uploads/2013/07/BWV_ReportEssTrial.pdf [<https://perma.cc/M8QN-FMQW>].

54. See ELLIS ET AL., *supra* note 37, at 13.

55. See LYNNE GROSSMITH ET AL., COL. OF POLICING, POLICE, CAMERA, EVIDENCE: LONDON'S CLUSTER RANDOMISED CONTROLLED TRIAL OF BODY WORN VIDEO 11 (2015).

56. See, e.g., Gaub et al., *supra* note 18, at 281.

57. See generally James Byrne & Gary Marx, *Technological Innovations in Crime Prevention and Policing. A Review of the Research on Implementation and Impact*, 20 J. POLICE STUDS. 17 (2011); Neil Wain & Barak Ariel, *Tracking of Police Patrol*, 8 POLICING 274 (2014).

range of employment contexts.⁵⁸ However, the exceptional nature of the law enforcement environment can often complicate the adoption, implementation, and usage of new technologies, often resulting in unintended or antithetical results.⁵⁹ BWCs, with implications for technological innovation, officer privacy, and the decision-making strategies of police leadership, are certainly no exception.

BWC recordings and the devices that create them are, on their faces, relatively straightforward technologies. The implications of being “watched” or “Monday morning quarterbacked,” however, are not, especially for officer who must make decisions quickly and in stressful situations.⁶⁰ The thought of every action being examined for error after an incident, is far reaching. It has been recognized that people change behavior when they are being watched.⁶¹ and demonstrate different conduct when they are being unknowingly observed. For example, survey data does not match actual data on the prevalence of behavior when asking people about potentially embarrassing conduct such as infidelity, sex, pornography, or political opinions.⁶² Quite simply, people change behavior if they know others can watch their reactions, interactions, and activity. BWCs provide exactly this type of objective, constant observation.

Trust is an important component of employee satisfaction in policing, as it is in most jobs.⁶³ In this context, satisfaction is described as the difference between the expectations and reality of the job.⁶⁴ Research on BWCs has demonstrated that there is a potential for the imposition of a BWC policy to influence this dynamic. Studies have demonstrated that officer opinions on BWCs are more negative when agencies have yet to employ BWCs as compared to agencies that have already adopted the technology.⁶⁵ This differential highlights the differences between expectations and reality within the BWC paradigm. Without experience, employees do

58. See, e.g., Wanda J. Orlikowski & Debra C. Gash, *Technological Frames: Making Sense of Information Technology in Organizations*, 12 ACM TRANS. INF. SYST. 174 (1993).

59. See, e.g., Christopher S. Koper et al., *Optimizing the Use of Technology in Policing: Results and Implications from a Multi-Site Study of the Social, Organizational, and Behavioural Aspects of Implementing Police Technologies*, 8 POLICING 212, 213–14 (2014).

60. Cf. MICHAEL D. WHITE, OFFICE OF JUSTICE PROGRAMS, U.S. DEP’T OF JUSTICE POLICE OFFICER BODY-WORN CAMERAS: ASSESSING THE EVIDENCE 6, 7, 18 (2014), <https://ric-zai-inc.com/Publications/cops-p289-pub.pdf> [<https://perma.cc/3B9C-VE8W>].

61. See, e.g., Kristen Munger & Shelby J Harris, *Effects of an Observer on Handwashing in a Public Restroom*, 69 PERCEPTUAL & MOTOR SKILLS 733, 733 (1989).

62. See, e.g., SETH STEPHENS-DAVIDOWITZ, EVERYBODY LIES: BIG DATA, NEW DATA AND WHAT THE INTERNET CAN TELL US ABOUT WHO WE REALLY ARE 105–65 (2017).

63. See, e.g., E. ALLAN LIND & TOM R. TYLER, THE SOCIAL PSYCHOLOGY OF PROCEDURAL JUSTICE 178 (1988).

64. See, e.g., Edwin A. Locke, *The Nature and Causes of Job Satisfaction*, in HANDBOOK OF INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY 1297, 1300, 1306 (M.D. Dunnette ed., 1976).

65. See, e.g., Smykla et al., *supra* note 42, at 426.

not know what to expect from the departmental leadership and this, in turn, may exacerbate concerns that BWC footage will be used to directly monitor their police work and compliance with a range of regulations. The fear of the unknown can create apprehension.⁶⁶ Engaging officers in the policy development process allows them to participate in the implementation process and can increase some positive perceptions, though there is significant variation between departments.⁶⁷ For example, in Tempe, Arizona, officers' opinions were taken into account when developing policing on the BWCs, and their survey responses were generally more positive when compared to agencies where officers were not consulted.⁶⁸ If employees are not involved in the adoption process, or when employees feel "spied" on, as BWCs can be used to do, it can make employees dissatisfied with their work environment because of the perceived lack of trust.⁶⁹ Additionally, officers involved in BWCs across seven police agencies in the U.K. believed the cameras would not increase trust between the police and the community, adding another component of trust.⁷⁰ Besides ambivalent feelings about executive management decisions and officer involvement in the process, there are also pre-existing beliefs about the new technology to examine.

Employees develop ideological frameworks concerning new technology based on prior experience, word of mouth, or similarity to previously used technology.⁷¹ These frameworks structure how employees react to new technology. In the case of BWC technology, officers often garner most of their information about policing from word-of-mouth, policing magazines, and other police agencies.⁷² In the case of policing, some officers can see the adoption of the technology as beneficial while others see it as a disadvantage, with perceptions varying with regard to the underlying focus (crime prevention, accountability, transparency) and the nature of the BWC program itself. Opinions are often formed prior to the imposition of BWC policies, as this technology is still emerging and few officers would have a significant amount of previous experience. For example, nearly 8 in 10 Mesa, Arizona Police Department officers thought BWCs would cause them to act more professional.⁷³ At the same time, others thought that department should not purchase BWCs, and less than half thought the other officers would welcome the technology.⁷⁴ Departmen-

66. See, e.g., Gaub et al., *supra* note 18, at 284–85.

67. See *id.*

68. See *id.*

69. See Jeffrey M. Stanton, *Traditional and Electronic Monitoring from an Organizational Justice Perspective*, 15 J. BUS. & PSYCHOL. 129, 130 (2000).

70. See Tankebe & Ariel, *supra* note 45, at 6, 16.

71. See, e.g., Orlikowski & Gash, *supra* note 48, at 19.

72. See, e.g., Cynthia Lum et al., *Receptivity to Research in Policing*, 14 JUST. RES. & POL'Y. 62, 71 (2012).

73. See WHITE, *supra* note 60, at 21.

74. See *id.* at 6.

tal leadership may hold slightly divergent views. For example, over half of the executive management in Sunshine County, Texas, believed officers would not engage in necessary uses of force, that upkeep and maintenance would interfere with officers' regular duties, and citizens would refuse to talk on camera.⁷⁵ Notably, the magnitude of the beliefs held by the executive management respondents in that jurisdiction varied based on whether the agency had already adopted BWCs, demonstrating that exposure to new technologies, like BWCs, can influence previously formed ideological frameworks.

The presence of a BWC during active policing has, as demonstrated here, the potential to influence law enforcement culture within an agency. The cameras—and the recordings they create—are only part of the dynamic changes that can be introduced. The nature of the policy guidelines surrounding the BWCs is also significant, with the mandatory or voluntary nature of the usage being of particular importance. Studies examining activation of the BWCs have found varying levels of compliance with required activation policies.⁷⁶ At the same time, ensuring that BWCs are used systematically has been shown to be paramount to the success of BWCs.⁷⁷ While not without qualifications, “successful” BWCs activation policies are characterized by reduced discretion, with only limited and predetermined instances, case types, or victim categories excluded from a mandatory activation policy; all other incidents must be recorded.⁷⁸ This is essential because BWCs cannot systemically record crucial evidence that may provide—or challenge—the justification for the use of force, or the decision to arrest if activation is not required ex-ante.⁷⁹ As BWCs become more commonplace in law enforcement and a wide range of polices are implemented to support their usage, one of the most debated issues surrounds the limitation they impose on officers' discretion and in which contexts this is warranted. For decades, officers have been trained to apply their discretion on the applicability of the use-of-force, conducting stop-and-frisk actions, the decision to arrest an individual, and more broadly, on how best to handle victims and suspects. However, available evidence suggests that when officers have the discretion to activate—or not to activate—the BWCs are not only ineffective but can even backfire.⁸⁰

75. See Smykla et al., *supra* note 42, at 432–33.

76. See, e.g., KATZ ET AL., *supra* note 48, at ii; Allyson Roy, *On-Officer Video Cameras: Examining the Effects of Police Department Policy and Assignment on Camera Use and Activation* (May 2014) (unpublished M.S. thesis, Arizona State University) (on file with Arizona State University), https://repository.asu.edu/attachments/134979/content/Roy_asu_0010N_13803.pdf [<https://perma.cc/F56V-5B47>].

77. See Ariel et al., *The Deterrence Spectrum*, *supra* note 17, at 17.

78. See Ariel et al., *Driven by Officer Discretion*, *supra* note 39, at 457.

79. See, e.g., Jacob T.N. Young & Justin T. Ready, *A Longitudinal Analysis of the Relationship Between Administrative Policy, Technological Preferences, and Body-Worn Camera Activation Among Police Officers*, *POLICING*, 2016, at 10–12.

80. See Ariel et al., *Driven by Officer Discretion*, *supra* note 39, at 454; Ariel et al., *Wearing Body Cameras Increases Assaults Against Officers*, *supra* note 39, at 750–52.

This sets up an environment in which BWCs may be perceived to be a tool for the global limitation of officer discretion imposed by leadership or management.

Shifts in beliefs about technology come about when first-order changes (the development of more effective and evidence-based practices) lead to second-order changes (subjective beliefs about these practice).⁸¹ Police technology is often adopted without employee input, or if it is, a small committee, may be convened to decide which brand will be purchased; rarely is officer buy-in garnered before a technology is advanced in policing. Police agencies often purchase technologies before they determine the effectiveness of the product.⁸² Both shifts in technological frameworks and second-order changes only come about after officers have gotten used to the technology and a chance to use it to their advantage. Opinions before or at the beginning of use are most likely to be more negative than after an employee establishes competency with the new technology.⁸³ These shifts in beliefs about the technology can also extend to shifts about the organization.⁸⁴ If employees understand the level of monitoring a new technology will bring beforehand, this can prevent negative opinions of the new technology.⁸⁵

II. METHODOLOGY AND DATA

A. Settings

This survey was administered to the members of a large transit police department (TPD) located in a major eastern American metropolitan city. With approximately 250 sworn officers, this TPD has jurisdiction over approximately 2,200 square miles, including several subways, light rail and bus lines, and the geographic areas around these mass transit systems. With authorities and responsibilities that parallel those of major municipal police departments, this TPD responded to approximately 57,624 incidents in calendar year 2016. Additionally, TPD officers work with federal and local state law enforcement agencies on matters relating to counterterrorism, natural disasters, and public safety.

Implementation of the BWC program was independent of the research program and the authors were brought in as an independent evalu-

81. See, e.g., Jean M. Bartunek & Michael K. Moch, *First-Order, Second-Order, and Third-Order Change and Organization Development Interventions: A Cognitive Approach*, 23 J. APPLIED BEHAV. SCI. 484, 486 (1987).

82. See, e.g., Barry Friedman, *We Spend \$100 Billion on Policing. We Have No Idea What Works*, WASH. POST (Mar. 10, 2017), https://www.washingtonpost.com/posteverything/wp/2017/03/10/we-spend-100-billion-on-policing-we-have-no-idea-what-works/?utm_term=.765e3462b932 [<https://perma.cc/NQ6E-QMTV>].

83. See, e.g., Gaub et al., *supra* note 18, at 282, 289–91.

84. See Tankebe & Ariel, *supra* note 45, at 9, 19–20.

85. See, e.g., Clay Posey et al., *When Computer Monitoring Backfires: Invasion of Privacy and Organizational Injustice as Precursors to Computer Abuse*, 7 J. INFO. SYS. SECURITY 24, 38 (2011).

ation team. This TPD had already decided to enact the department-wide BWC program after a brief, internally-managed pilot period. The BWC policy was developed by TPD management and leadership, with limited input from officers outside those that volunteered for the pilot program. In line with this policy, and beginning in January of 2016, all TPD officers were required to wear a BWC at all times while on duty. Compliance with this policy was mandatory at all times; failure to activate a BWC during an incident, contact, or response was a violation of TPD rules and could subject an officer to disciplinary proceedings.

The start of the TPD-wide, mandatory BWC program represented a significant change in the operational practices of this department. At the time of the pre-BWC survey administration, only 13.6% of responding officers ($n=17$) had any previous experience with a BWC. By the time of the post-BWC administration, all of the officers responding to the survey had worn a BWC in the field and been subject to the obligations, benefits, and sanctions for non-compliance of the BWC policy, as it had been in force for over six months at that time.

B. Study Procedure

This survey was designed as a population-level survey, with all street officers and managers participating in the study.⁸⁶ Administration of the survey took place in two discrete stages: “pre-BWC,” delivered in the month *before* the BWC policy was fully implemented (January 2016), and “post-BWC,” administered after approximately seven months had passed (July 2016). Identical versions of the instrument were used in each stage, although the questions reflected either expectations about BWCs and BWC policy or ad hoc perceptions, *mutatis mutandis*.

The first administration (pre-BWC) took place during a period of increased staffing activity for the TPD. Prior to the administration, officers received an e-mail from the research team requesting that they report to a conference room in the same building as the TPD headquarters but outside of the station itself. Several sessions, corresponding with shift breaks, took place on the same day. Groups of officers who could not attend the large-group meetings were targeted for secondary sessions (e.g., night shift officers, strike team) over the subsequent week. In each case, participation and attendance were voluntary.

At the time of the pre-BWC administration, responding officers were aware of the incoming policy and had been trained on the appropriate use of the BWC units. Participating officers were not yet assigned their BWC units nor were the provisions of the BWC policy enacted (e.g., recording, storage, and review of recordings; disciplinary actions for failing to follow

86. Although the TPD leadership, including the chief, wear BWCs as a matter of policy and use them when in the field, individuals in these roles were not targeted in the survey administration, as the focus of this research is on the mean level of subjective beliefs held by TPD officers.

protocol). The second, post-BWC round of the survey focused on how officers perceived that their beliefs about BWCs might have changed, after approximately six months of regular usage. The survey instrument (including all individual items) substantively paralleled in this second round, and the administration procedures were fundamentally similar.

Response rates to this survey were well above commonly acceptable limits. There were 147 complete or partially-completed responses received to the pre-BWC survey. At that time, there were 155 eligible officers in the TPD, a response rate of 94.8%. One-hundred and fifty complete or partially complete responses were received to the post-BWC survey. At that time, there were 181 eligible officers in the TPD, returning a response rate of 82.9%. A high response rate is necessary to ensure that the general distribution of responses is representative of the overall department, as well as to limit the ability of biases to affect the results of the study. A response rate that exceeds 60% is generally considered sufficiently large to allow researchers to draw generalizable conclusions about a group of respondents. It should be noted that given the anonymous nature of the study, it is impossible to know which officers participated in the both, one, or neither round of the survey. Therefore, the overall design of this study is a repeated measure cross-sectional study.

C. Survey Instrument

The survey instrument used in this analysis was developed specifically for use in this study. Designed to expand the range of inquiry beyond direct perceptions of how BWCs may—or may not—impact crime rates and community relations, the survey specifically inquired about changes in departmental culture and leadership. Following Justice Tankebe and Barak Ariel's conceptualization of officer self-legitimacy in this context,⁸⁷ items relating to internal procedural justice at the transit police department were integrated into the survey. The survey can be found in Table 3, including vignettes on the nature of the moral and trust relationship between line officers and the transit police department administration.

Using a five-point Likert-style rating scale, respondents were asked to rate the extent to which statements about the BWC policy were in line with either their perceptions or the perceptions of their peer officers. A total of forty-five statements were provided. The response scale ranged from "strongly disagree" through "neutral" to "strongly agree" (values of 1, 3, and 5, respectively, and after, reverse coding responses as needed). All responses were completely anonymous; no identifying indications (e.g., badge number) were collected. Respondents were, however, also asked to self-report several demographic and history factors: age, race, gender, length of tenure with the department, and current rank. Respondents also indicated if they had within the last five years been subject to any disciplinary actions or had to use force in the line of duty.

87. See Tankebe & Ariel, *supra* note 45, at 23.

D. *Analytic Strategy*

Within each of the two stages, mean (average) scores were calculated on each of the sixteen items relevant to intradepartmental culture and accountability. Independent-samples t-tests were employed to examine significant differences in the overall responses to these items between the pre- and post-test administrations. We have also computed standardized mean differences for the treatment effect, presenting these in terms of Cohen's d ,⁸⁸ as measures of the magnitude of the differences between these two stages. As a rule of thumb, d values of 0.2 represent small effect sizes, 0.5 medium effect sizes, and any standardized mean difference of 0.8 or above is considered a large effect size.⁸⁹

These analyses highlight how officer attitudes in this TPD changed after the imposition of a new, mandatory BWC policy. While these data do not capture the baseline beliefs of the department (an administration of the survey prior to any knowledge of the BWC policy would have been required for this and was not possible), they do demonstrate how attitudes change from a policy in which activation of BWCs is left to the discretion of the individual officer, onto a departmental policy where officers have used the BWCs and worked under the rules and restrictions of the corresponding policy. In this way, they highlight how profoundly agencies can be changed, in unanticipated ways, with the imposition of a mandatory BWC policy.

III. RESULTS

The survey was administered in two stages, each time to the entire active TPD roster. As shown in Table 1, the demographic profile of the responding individuals did not differ meaningfully between administrations. No significant differences were observed in the race, gender, age, or average length of service between respondents in each stage. For example, and regarding race, 60.5% of the pre-BWC respondents ($n=109$) self-reported as "white" and 54.6% ($n=130$) reported the same on the post-BWC survey. The average age of all respondents was 41.3 years old and 40.4 years old in the pre- and post-BWC stages, respectively ($p=.553$). Although the anonymous nature of the data collection effort prevented the collection of additional, individual-level data, the lack of significant differences, as well as general congruence with the overall profile of the TPD at the time of both administrations, support assumptions of generalizability.

88. See JACOB COHEN, STATISTICAL POWER ANALYSIS FOR THE BEHAVIORAL SCIENCES § 2.2, at 20 (2d ed. 1988).

89. See *id.* at 21.

TABLE 1. SAMPLE DEMOGRAPHIC PROFILE, PRE- AND POST-BWC ADMINISTRATIONS

	Pre-BWC (<i>n</i> =147)	Post-BWC (<i>n</i> =150)	<i>p</i> -value
Race			
Black	30.3%	28.5%	0.760
White	60.6%	54.6%	0.358
Hispanic	0.9%	3.8%	0.151
Other	8.3%	13.1%	0.235
Gender			
Male	96.7%	95.6%	0.619
Age at Administration			
Age	41.3 (10.6)	40.4 (11.2)	0.553
Tenure at TPD			
Months	171.3 (119.0)	152.3 (114.2)	0.296

Substantively, variations in the officers' perceptions were detected when comparing the two stages on conceptual fronts. First, the TPD officers reported significant differences regarding the general culture within the department that are attributable to the imposition of the BWC policy. These results are shown in Table 2. Mean values for all responding officers are reported for the six survey items, as well as the corresponding standard deviations, with responses divided by stage. In each case, this value is the average score for all responses received to that item on the five-point Likert-style scale. A score closer to one indicated an overall high degree of disagreement with the statement, while values close to five result from strong levels of agreement.

TABLE 2. CHANGES IN OFFICER PERCEPTIONS OF TPD CULTURE ATTRIBUTABLE TO BWC POLICY

	Pre-BWC (n=147)	Post-BWC (n=150)		Cohen's d (95% Confidence Intervals)
	Mean scores (SD)	Mean scores (SD)	p-values	
BWCs & Departmental Culture				
<i>The BWC policy shows how little management trusts officers</i>	2.60 (1.14)	2.97 (1.13)	0.007	-0.326 [(-0.555), (-0.097)]
<i>BWCs will/has increase/d the morale of the department</i>	3.96 (0.94)	3.74 (0.96)	0.052	0.232 [(0.003), (0.460)]
<i>The department-wide deployment of BWCs will be/has been a positive change</i>	3.42 (.977)	3.09 (1.03)	0.006	0.329 [(0.100), (0.558)]
Overall TPD Identity				
<i>I feel a strong sense of belonging to my police department</i>	2.76 (1.27)	2.87 (1.17)	0.455	-0.09 [(-0.318), (0.137)]
<i>The department treats me with respect and dignity</i>	2.96 (1.17)	3.01 (1.16)	0.717	-0.043 [(-0.270), (0.185)]
<i>I am satisfied with my job</i>	2.29 (1.13)	2.52 (1.18)	0.113	-0.199 [(-0.427), (0.029)]

Significant differences were found between the pre- and post-BWC administration about how the officers perceived the influence of BWCs on the TPD culture, though their reported beliefs about the culture itself did not significantly vary between stages. As shown in Table 2, the TPD officers reported a significant change in how they believe BWCs influence departmental culture. In this case, the presence of the BWC program was initially perceived as a negative development (M=2.60) in the department. Over the course of the study period, overall perceptions became slightly more adverse (M=2.97, $p=.007$), though still well within the neutral range. Similarly, officers initially reported a fairly strong belief that the BWC program would damage the overall morale of the TPD (M=3.96) at the outset of the policy. By the time of the second survey stage, this belief had significantly intensified (M=3.74, $p=.052$). It is worth noting, however, that the average reported value remained fairly neutral and did not indicate an overwhelmingly negative response from the officers. Finally, experience

with BWCs appears to have had a significant effect on officer perceptions about the policy itself. Prior to the start of the policy, officers reported higher levels of disagreement with the notion that BWCs would be an overall positive development for the TPD ($M=3.42$), a fairly strong level of disagreement given the high number of neutral responses reported by officers overall. After using the BWCs for six months, this belief had changed significantly, with officers reported a more neutral average belief ($M=3.09$, $p=.006$). The magnitude of this difference is the largest for this set of questions ($d=.329$, 95% CI .100, .557). While hardly an overwhelming endorsement of the BWC policy during the early stage of the administration, the changes over time suggest that officer acceptance reduced with exposure to, and experience with, BWCs.

At the same time, the start of the BWC program, as well as six months of working under the conduct rules imposed by that policy, did not impact other measures of general TPD culture. Notably, reported levels of belonging within the TPD did not vary significantly ($p=.455$), with overall negligible effect sizes. With an average of 2.76 (pre-BWC) and 2.87 (post-BWC) officers consistently reported slight disagreement with statements regarding their engagement. Similarly, officers remained neutral and consistent about the level of respect and dignity they felt the TPD accorded them (pre: $M=2.96$, post: $M=3.01$, $p=.717$).

The BWC policy required that officers record a wide variety of interactions, including those with the public, other officers, and potential victims and offenders. The existence of these videos could have influenced officer perceptions of managerial oversight, accountability, and the decision-making processes within the TPD. The results of this analysis are presented in Table 3.

TABLE 3. CHANGES IN OFFICER PERCEPTIONS OF ACCOUNTABILITY, OVERSIGHT, AND DECISION-MAKING ATTRIBUTABLE TO BWC POLICY

	Pre-BWC (n=147)	Post-BWC (n=150)	<i>p</i> -values	Cohen's <i>d</i> (95% Confidence Intervals)
	Mean Scores (SD)	Mean Scores (SD)		
BWCs Influence on Accountability				
<i>BWCs will/have ensure/d greater accountability in police work</i>	2.88 (1.15)	2.60 (1.05)	0.034	0.254 [(0.026), (0.483)]
<i>BWCs will/have improve/d transparency in police work</i>	3.01 (1.12)	2.83 (1.00)	0.160	0.170 [(-0.058), (0.398)]
<i>When using a BWC, officers will be/have become more likely to follow departmental regulations</i>	2.69 (0.99)	2.59 (0.90)	0.370	0.106 [(-0.122), (0.333)]
<i>BWCs will/are protecting officers against false allegations of misconduct</i>	2.17 (1.08)	2.06 (1.00)	0.369	0.106 [(-0.122), (0.333)]
BWCs and Managerial Oversight				
<i>BWCs are a tool for management to track officers</i>	2.24 (1.06)	2.59 (1.17)	0.009	-0.313 [(-0.542), (-0.085)]
<i>BWCs will/have decrease/d the number of internal sanctions for violating [TPD] policies</i>	3.52 (1.20)	3.32 (1.12)	0.133	0.172 [(-0.056), (0.400)]
TPD Decision-Making Processes				
<i>Decisions by my supervisor are always based on facts, not personal biases</i>	3.02 (1.16)	3.13 (1.17)	0.413	-0.094 [(-0.322), (0.133)]
<i>My supervisor takes account of my needs when making decisions that affect me</i>	2.88 (1.20)	3.01 (1.13)	0.348	-0.112 [(-0.339), (0.116)]
<i>The department gives me an explanation for the decisions that affect me</i>	3.72 (1.09)	3.43 (1.10)	0.024	0.265 [(0.036), (0.493)]
<i>The decisions of my supervisor are equally fair to every officer</i>	2.97 (1.25)	3.09 (1.17)	0.418	-0.099 [(-0.327), (0.128)]

The imposition of the BWC policy appears to have meaningfully influenced officer perceptions of some limited elements of internal accountability and managerial oversight within the TPD, though this differential was not reflected universally across all of the items addressing these factors. In this study, officers reported a significant change in their beliefs about accountability attributable to the BWC program. During the pre-BWC stage, respondents indicated a fairly neutral response to the survey item that directly inquired about accountability ($M=2.88$). By the post-BWC administration, the average response had become significantly more negative ($M=2.60$; $p=.034$), indicating that officer felt that the BWC policy has decreased their general levels of accountability. At the same time, responses to the item referencing transparency in police work did not significantly differ between the pre- ($M=3.01$) and post-BWC stages ($M=2.83$, $p=.160$). Officers did not indicate a significant change in their perceptions of the role of BWCs in increasing compliance with TPD regulations either ($p=.370$), nor the ability of a BWC recording to insulate officers from allegations of misconduct ($p=.369$).

Experience with the BWC program did not debunk some officer concerns about the use of BWC recordings in managerial oversight and in fact intensified these perceptions, though not to the level of statistical significance. Between the pre- ($M=2.24$) and post-BWC stages ($M=2.59$), officers reported a significantly higher agreement with the item indicating that BWCs were a tool to track officers ($p=.009$). However, officers consistently disagreed with the idea that BWC video could decrease the number of internal sanctions for violating TPD policies ($p=.133$). This suggests that, while experience with policing while wearing a BWC demonstrated to the officers that the TPD leadership was using the recordings as an oversight mechanism (at least perceived to be doing so), they did not see any value, at least about supporting claims of innocence during internal disciplinary processes, of having those videos available for subsequent review.

Finally, it appears that the experience with BWCs had only a limited impact on officer perceptions of their agency regarding the broader, internal decision-making process. At the pre-BWC administration, officers indicated to a fairly high degree that they did not get explanations for decisions that affect them ($M=3.72$). After six months of policing under the BWC policy, officers indicated a significantly lower level of disagreement ($M=3.43$), though the overall sentiment remained negative ($p=0.024$). Officer resistance to the BWC policy may be evidenced in the responses to the remaining items. Though failing to reach statistical significance, changes in officer perceptions of fairness (M diff.=0.116, $p=.418$), fact-based decision-making (M diff.=0.112, $p=.413$), and supervisor accounting for individual needs (M diff.=0.129, $p=.348$), each became more negative.

IV. DISCUSSION

The results of this study show how the imposition of a mandatory usage BWC policy can influence the culture of a law enforcement agency regarding perceptions of officer accountability and fairness. Here, the differences in average scores captured immediately before and six months after such a policy began demonstrate that BWCs can have a significant but potentially limited effect on important aspects of policing and the internal dynamics of a law enforcement agency. Interestingly, these effects were mixed, with differing results for views of the BWC policy itself and those regarding the TPD's broader culture.

The most striking results center on the impact of BWCs on departmental culture. In this area, all three of the items changed significantly between the pre- and post-BWC administrations. After six months of working under the BWC protocol, officers report a significantly higher measure of disagreement with the idea that imposition of the BWC was a function of managerial oversight of officers. Similarly, officers report a significantly more positive perception of the influence of BWCs on overall officer morale and significantly less disagreement with the idea that BWCs represent a positive change. Taken together, these findings suggest that officers may have held a number of concerns about BWCs that, after working under the policy, were proven to be unfounded.

Measure of TPD identity, as reported by the responding officers, did not significantly vary. While we cannot attribute the changes to the BWC policy, it is worth noting that the differences in average values on all three of these items did not indicate a positive trend. Reported levels of belonging, respectful treatment and just satisfaction appeared to decrease during the study. We must conclude, however and based on these results, that the changes in values cannot be attributed to the BWC policy—nor that these differences are nothing more than noise or natural variation in these data.

When comparing the average scores on the items relating to accountability, officers reported significantly stronger agreement with the idea that BWCs can increase the levels of overall accountability in police work. While not reaching statistical significance, officers indicated that they perceived increased levels of transparency, increased conformity with TPD regulations and an increased in the idea that BWC video can protect officers against false allegations. It is worth noting, however, that all of these mean values indicate a relatively tepid endorsement of the changes, with small mean differences and with most averages falling fairly close to the “neutral” value.

Experience with the BWC appear to have had a fairly negative impact on officer perception of managerial oversight with regard to the policy. Significant increases, apparently related to the imposition of the mandatory policy, were found in the average response to the item reflecting the use of BWCs as a tool to track officers during the study. At the

same time, officers reported a non-significant increase in their agreement with the idea that BWC video could be used to decrease the number of internal sanctions for violating TPD policy. Taken together, the change in this factor suggests that officers believe that TPD management is using the BWCs to monitor their conduct, but that the outcome of this oversight are not completely negative.

Lastly, officer beliefs about the overall decision-making processes in the TPD—not limited to the BWCs themselves—are impacted in a limited way by the imposition of the BWC policy. In this study, the officers reported a significantly lower agreement with the item stating that they are provided explanations for the decisions that affect them. This suggests that the mandatory nature of the BWC policy, in addition to the manner in which it was administered, may have impacted the officers' overall perception of how issues are resolved within the TPD.

A. *Implications for Research and Policy*

Overall, officers seem to have accepted the potential value of BWCs after using them for some period. This suggests that initial resistance to mandatory BWC policies can be overcome, especially after the real-world benefits of BWC video have been demonstrated in practice. These benefits, however, come at a cost. It appears officer's opinions of the TPD have become more negative since the imposition of the BWC policy. Whereas other agencies experienced an increase in the willingness to use BWCs,⁹⁰ our TPD survey illustrated that the use of BWCs decreased rather than enhanced the officer's belief in departmental accountability and its transparency. Though failing to reach levels of statistical significance, BWCs appear to have also reduced overall morale and contaminated the TPD's satisfaction with the explanations granted to them by management for the decisions that are made within the agency and the justifications provided for those decisions. The officers shared with us that, compared to the first stage, they think that the department does not trust its officers. BWCs were once believed to be used as a tracking tool for the officers, and with the mandatory policy, this concern has been substantiated and negative emotions have been exacerbated.

We argue that the reason for these unique results of this mandatory BWC policy is the nature of the policy itself. As demonstrated here, there is a strong theoretical underpinning for this argument: police culture focuses on the appropriate use of judgement, and when officers perceive this individual discretion has been limited, there may be adverse effects for culture, regardless of the benefits for public safety.

Officer buy-in can strongly influence perception of BWCs. In Phoenix, Arizona, for example, officers were not included in the discussion about BWCs. In Tempe, Arizona, however, officers were asked their opinions about key BWC policies—including use of footage by supervisors,

90. See, e.g., Jennings et al., *Evaluating the Impact*, *supra* note 38, at 482–84.

when to turn on cameras, and the use of video when writing reports—prior to the imposition of the policy. Perhaps unsurprisingly in light of these findings, the Tempe officers were much more receptive to the resulting policy when asked.⁹¹ Theories of organizational justice suggest that the manner in which police agencies are perceived to treat their officers can have beneficial outcomes when implementing controversial technology, including BWCs.⁹² In this case, officers appear to demonstrate a series of opinions that represent a perspective divergent from that of the departmental leadership. Similar to the officers in Phoenix, the TPD respondents in this study may not believe that they had a proper voice in the decision to adopt a BWCs policy (an important component of procedural justice), or in the ways in which these devices ought to be deployed. The resulting impact in Phoenix was a more negative perception of the BWCs themselves, the focus of that study.⁹³ Here, we show that this process may also impact cultures of perceived accountability and transparency within the agency.

The first point above may seem obvious, and indeed some officers will be “early adopters” of the technology,⁹⁴ however, agencies considering the introduction of BWCs will inevitably have some officers who are reluctant to wear intrusive surveillance devices. Aside from the common tendency to favor the status quo above change of any kind,⁹⁵ new technology is not always embraced within organizations, and acceptance by the workforce often relies on their perception of its usefulness⁹⁶ and is linked to what policies govern its use.⁹⁷

However, while a mandatory activation policy was in place for the Phoenix BWC trial, only 32% of encounters resulted in activation,⁹⁸ indicating that policy alone is not sufficient for compliance, and other mechanisms are required to “institutionalize” the use of BWCs and thereby increase activation levels. The alternative, a discretionary policy, may result in rates of activation that are so low the investment in the technology would be unviable. In examining the effects of a discretionary policy in a large United States police agency, Jacob T.N. Young and Justin T. Ready noted that activations reduced by an average 31% when the policy was

91. See Gaub et al., *supra* note 18, at 289–91.

92. See, e.g., Justin Nix & Scott E. Wolfe, *Sensitivity to the Ferguson Effect: The Role of Managerial Organizational Justice*, 47 J. CRIM. JUST. 12, 13, 16–17 (2016).

93. See Gaub et al., *supra* note 18, at 289–91.

94. See, e.g., Young & Ready, *supra* note 79, at 5, 14.

95. See, e.g., KAHNEMAN, *supra* note 28, at 119–29.

96. See, e.g., Viswanath Venkatesh & Fred D. Davis, *A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies*, 46 MANAG. SCI. 186, 186–87 (2000).

97. See, e.g., Susan A. Brown et al., *Do I Really Have to? User Acceptance of Mandated Technology*, 11 EUR. J. INFO. SYS. 283, 283–84, 286 (2002).

98. See E.C. Hedberg et al., *Body-Worn Cameras and Citizen Interactions with Police Officers: Estimating Plausible Effects Given Varying Compliance Levels*, 34 JUSTICE Q. 627, 640 (2017).

changed from mandatory to discretionary, and among non-volunteers, activation rates dropped by half, compared to only a 15% reduction among officers who had volunteered to wear the cameras.⁹⁹ As a result, they recommended a mandatory activation policy if the wearing of BWCs was to be compulsory.¹⁰⁰

Activating during every encounter is desirable for maximizing the potential for a deterrence effect, as well as for avoiding the suspicion that could arise around selective recording. A U.S. Department of Justice¹⁰¹ report noted the American Civil Liberties Union advocated for mandatory recording other than for very clear and limited circumstances to avoid allegations of selective recording or tampering. These advocates believe the activation of cameras should be a “reflexive decision, and not something officers have to evaluate in every new situation.”¹⁰² Indeed, if cameras are available and not worn, or worse, worn and not activated during a contentious encounter, it could cause suspicion as to the justification. This undermines assumptions of transparency and the effect on public confidence and hence legitimacy deficits may be more severe than if the cameras were not available at all. At the same time, while recording every encounter would be ideal, it is not always possible for reasons of privacy—including an officer’s needs at certain times, as well as for reasons of legality and practicality. Consequently, policy and guidance are required around when officers should or should not record. Some agencies opt for a mandatory recording policy where every encounter must be recorded with certain exemptions, such as meeting informants or interviewing victims of sexual assault. This was the policy adopted for the Rialto trial¹⁰³ where other than for the above exemptions, the camera was to be worn for the entire shift and every encounter recorded.

The U.S. Department of Justice Report into BWCs identified that very few agencies had adopted a policy of recording every encounter but instead commonly required all “calls for service, and law enforcement related encounters” to be recorded, with certain exemptions.¹⁰⁴ The report recommended that agencies provide clear guidance to officers about when to record and when not to, because the introduction of administrative policy has been demonstrated to affect officer actions in matters like domestic violence, attendance, and police pursuits.¹⁰⁵ The U.K. Home

99. See Young & Ready, *supra* note 79, at 10–12.

100. See *id.* at 14.

101. See generally CMTY. ORIENTED POLICING SERVS., *supra* note 34.

102. See *id.* at 12.

103. See Ariel et al., *The Effect of Police Body-Worn Cameras*, *supra* note 23, at 510.

104. See CMTY. ORIENTED POLICING SERVS., *supra* note 34, at 12.

105. See generally GEOFFREY P. ALPERT & ROGER G. DUNHAM, THE FORCE FACTOR: MEASURING POLICE USE OF FORCE RELATIVE TO SUSPECT RESISTANCE (Police Executive Research Forum Washington, D.C., 1997); Lawrence W. Sherman & Richard A. Berk, *The Specific Deterrent Effects of Arrest for Domestic Assault*, 49 AM. SOCIOLOGICAL REV. 261, 262–63 (1984).

Office Guidelines on the use of BWCs runs to 113 pages.¹⁰⁶ The point being that activation and non-activation are not as simple and clear-cut as members of the community might think if not aware of the many legal and practical implications. It is a balancing act between discretion—a cornerstone in American policing—and the benefits that might arise from using BWCs in the field. While a mandatory policy would seem to be the solution, it is not a panacea and—based on our results—can backfire in terms of officers' perceptions.

B. *Methodological Limitations*

One difficulty in interpreting before-after studies is the lack of control over rival hypotheses. Short of random assignment into treatment and control conditions—or random assignment of departments with and without BWCs policies—all conclusions on the effect of a mandatory BWCs policy on officer perceptions of accountability, oversight, and departmental culture remain associative only. One cannot randomly assign different activation policies within the same department, regulate the behavior of individual officers differently, and compare these to comparison groups without expecting violent spill-over effects. These violations make it close to impossible to validly test discrete policies, as “control officers” are contaminated by having “treatment officers” work side-by-side with them. Therefore, we are limited to pre-post assessments, such as the present study and similar approaches employed in this research space.

We cannot completely rule out alternative explanations to these results that took place at or around the time of the BWC policy implementation. Similarly, it is not known—and cannot systemically be uncovered—whether there was an incident that occurred during the rollout of BWCs that led to a collective negative experience or perception by these officers. For example, the TPD management may have used footage to discipline an officer.¹⁰⁷ If the officers as a whole believed the discipline to be unwarranted, excessive, or related to the presence of the BWC, negative ideals could begin to take hold. In a similar vein, and outside the scope of this inquiry, if TPD staff unions were vocally opposed to the new policy, it is likely that they would affect the extent to which officers eventually accepted the BWCs. Finally, it may also be the case that while other agencies who adopted BWCs experienced improved prosecutions of domestic vio-

106. See generally U.K. HOME OFFICE, GUIDANCE FOR THE USE OF BODY WORN DEVICES (2007), <http://library.college.police.uk/docs/homeoffice/guidance-body-worn-devices.pdf> [<https://perma.cc/7Q5J-GR9Z>].

107. See, e.g., Cleve Wootson R. Jr., *Video Shows an Officer Slamming, Then Pummeling a Black Man Accused of Jaywalking*, WASH. POST (Apr. 12, 2017), https://www.washingtonpost.com/news/post-nation/wp/2017/04/12/video-shows-an-officer-slamming-then-pummeling-a-black-man-accused-of-jaywalking/?utm_term=.dcb3f0f82a41 [<https://perma.cc/NC26-952J>].

lence incidents,¹⁰⁸ evidence collection,¹⁰⁹ and reduced complaints,¹¹⁰ the TPD may have yet to see such positive externalities, or have communicated these benefits during the course of the study cycle. Arguably, more exposure to the benefits of BWCs could have made a difference in the anticipated direction. Additional research over a longer period of time is warranted to explore this potentiality.

Finally, it should be noted that the nature of this particular TPD department may limit the direct generalizability of these results. TPD officers are responsible for policing a network of transportation options that is distant from the jurisdiction of most municipal policing departments. This divergence extends to the nature and rate of criminal incidents, as well as the geographic concentration of crimes and offenders. The nature and environment of the transit system patrolled by this TPD may also have contributed to the relatively unique findings here. For example, the vast majority of the transit system—including stations, subway cars and most busses—are under constant video surveillance. The addition of the core elements of the BWCs—the digital recordings—may not have been as stark a divergence from the pre-implementation experience for these officers as for those in departments where dashboard cameras and private security cameras comprise the extent of their time being recorded at work. These distinctions—and in particular the latter one—should be explored more deeply to parse out their influence on these findings.

V. CONCLUSION

BWCs offer law enforcement agencies the opportunity to systematically record officer interactions with the general public. This provides an opportunity to increase perceptions—both within the law enforcement community and the general public—regarding accountability and transparency in modern policing. A growing body of literature suggests that these devices can have a meaningful and positive effect on some law enforcement and public safety outcomes. The relevant sub-literature on officer perceptions of BWCs is similarly encouraging, with some departments reporting a greater level of interest, acceptance, and utilization of BWCs and the usage policies surrounding them than others. The majority of these studies have limited their inquiry to common public safety outcomes and beliefs regarding efficacy and impact of the BWCs. In this Article, we find that the implementation of a mandatory BWC usage policy in a large transit police department was associated with significant and overall negative changes in officer perceptions regarding accountability, oversight, and departmental culture. Based on these results, and

108. See KATZ ET AL., *supra* note 48, at 6.

109. See Wesley G. Jennings et al., *Evaluating the Impact*, *supra* note 38, at 484.

110. See Nick Wang, *Study Shows Less Violence, Fewer Complaints When Cops Wear Body Cameras*, HUFFINGTON POST (Oct. 13, 2015, 03:14 PM), https://www.huffingtonpost.com/entry/police-body-camera-study_us_561d2ea1e4b028dd7ea53a56 [<https://perma.cc/6MRU-JZEC>].

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driven by theories of law enforcement culture and research surrounding the adoption of new technologies, we suggest that the limited backfiring of this mandatory BWCs policy observed when compared to the pre-test stage may be the nature of the policy itself. We hypothesize that the mandatory nature of the policy limits perceived discretion within the officer population. Additional empirical research is necessary to further parse out these effects.