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Police Body Cameras: Go Big or Go Home?

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ABSTRACT

*Police body-worn cameras have proliferated since the deaths of Michael Brown and Eric Garner, and the recent George Floyd-related protests seem set to continue or even accelerate that trend. Indeed, in her recent *Nieves v. Bartlett* dissent, Justice Sotomayor took time to note that many departments equip their police officers with body cameras. Body camera advocates have touted the cameras' benefits, such as decreasing misconduct, reducing complaints, and improving accountability. At the same time, serious concerns have been raised regarding the impact of these cameras on privacy, public resources, and fairness. Despite the increased interest in body cameras, important empirical questions regarding resources and benefits remain insufficiently answered. This Article seeks to help fill that gap by analyzing a large, recently released dataset. The Article's primary finding is that a more fulsome commitment to the body camera program—or what this Article refers to as “going big”—is associated with more favorable perceptions of the resources required for, and benefits of, body cameras.*

I. INTRODUCTION

It is May 25, 2020, and police in Minneapolis arrest a forty-six-year-old African American man.¹ A convenience store employee supposedly called 911 and reported that the man purchased cigarettes using a counterfeit twenty-dollar bill.² Less than twenty minutes after the first squad car's arrival, the man is apparently pinned down, unconscious, and not showing signs of life.³ Video footage appears to reflect an officer's knee on the man's neck for almost nine minutes while the man begs the officer to stop.⁴ The man is George Floyd, and the wave of outrage and protests set off by his and other recent killings recalls similar reactions following the deaths of Michael Brown and Eric Garner in 2014.⁵ Video footage has been central to several of these

1. Paul Butler, *Filing Charges in George Floyd's Death Was the Easy Part. Now Comes the Hard Part*, WASH. POST (May 31, 2020, 2:16 PM), <https://www.washingtonpost.com/opinions/2020/05/31/filing-charges-george-floyds-death-was-easy-part/>; *George Floyd: What Happened in the Final Moments of His Life*, BBC NEWS (last updated July 16, 2020), <https://www.bbc.com/news/world-us-canada-52861726>; Evan Hill et al., *8 Minutes and 46 Seconds: How George Floyd Was Killed in Police Custody*, N.Y. TIMES (last updated Aug. 13, 2020), <https://www.nytimes.com/2020/05/31/us/george-floyd-investigation.html>.

2. See sources cited *supra* note 1.

3. See sources cited *supra* note 1.

4. Blake Ellis and Melanie Hicken, *Officer Charged with Killing George Floyd Still Eligible for Pension Worth More Than \$1 Million*, CNN (June 12, 2020, 7:11 AM), <https://www.cnn.com/2020/06/12/us/chauvin-minneapolis-police-pension-invs/index.html>; see sources cited *supra* note 1.

5. See, e.g., Poppy Noor, *What the George Floyd Protests Have Achieved in Just Two Weeks*, THE GUARDIAN (June 8, 2020, 2:40 PM), <https://www.theguardian.com/us-news/2020/jun/08/what-have-protests-achieved-george-floyd-death-police-funding-statues>; Brandon Tensley, *Ahmaud Arbery and the Resilience of Black Protest*, CNN (last updated May 12, 2020, 8:54 PM), <https://www.cnn.com/2020/05/12/politics/ahmaud-arbery-black-protest-pandemic/index.html>; Josh Marcus, *'She Was scared': New Bodycam Video Raises Questions in Breonna Taylor Case*, THE INDEP. (Oct. 8, 2020, 12:18 AM), <https://www.independent.co.uk/news/world/americas/new-body-camera-footage-police-breonna-taylor-b870319.html>; Joan E. Greve et al., *Rayshard Brooks Shooting: Atlanta Officer Charged with Felony Murder*, THE GUARDIAN (June 17, 2020, 5:32 PM), <https://www.theguardian.com/tv-and-radio/2020/jun/17/>

events.⁶

In the years since the deaths of Michael Brown and Eric Garner, use of police body-worn cameras (“BWCs”) has proliferated, and the George Floyd-related protests may continue or even accelerate that trend.⁷ Indeed, in her recent *Nieves v. Bartlett* dissent, Justice Sotomayor even took time to note that many departments equip their police officers with body cameras.⁸ BWC advocates have touted the cameras’ benefits, including their potential to decrease police misconduct and citizen complaints, as well as increase legitimacy and accountability.⁹ At the same time, serious concerns have been raised regarding the impact of BWCs on privacy, public resources, and fairness.¹⁰ The last five-plus years has also seen a rise in the quantum of BWC research, as stakeholders seek to better understand the true implications of BWC use.¹¹

rayshard-brooks-charges-atlanta-police-officer-garrett-rolfe; Miranda Bryant, *Anger at Police Role in Mental Health Crises After Walter Wallace Jr Killing*, THE GUARDIAN (Oct. 28, 2020, 3:41 PM), <https://www.theguardian.com/us-news/2020/oct/28/walter-wallace-jr-hundreds-protest-philadelphia-second-night-police-killing>; Julian Cummings et al., *Philadelphia Police Bodycam Video Shows Officers Trying to Get Walter Wallace Jr. to Drop Knife Before They Shoot Him*, CNN (last updated Nov. 4, 2020, 10:56 PM), <https://www.cnn.com/2020/11/04/us/philadelphia-police-walter-wallace-video/index.html>; *infra* Part II.A.

6. See *Ahmaud Arbery: What Do We Know About the Case?*, BBC NEWS (June 5, 2020), <https://www.bbc.com/news/world-us-canada-52623151>; sources cited *supra* notes 1, 4–5; *infra* Part II.A.

7. See, e.g., Justin Sondel & Hannah Knowles, *George Floyd Died After Officers Didn’t Step In. These Police Say They Did – and Paid a Price*, WASH. POST (June 10, 2020, 11:01 AM), <https://www.washingtonpost.com/nation/2020/06/10/police-culture-duty-to-intervene/>; *infra* Part II.A.

8. *Nieves v. Bartlett*, 139 S. Ct. 1715, 1739 (2019) (Sotomayor, J., dissenting).

9. See *infra* Part II.B.

10. See *infra* Part II.B.

11. See Mary D. Fan, *Democratizing Proof: Pooling Public and Police Body-Camera Videos*, 96 N.C. L. REV. 1639, 1656–57 (2018) [hereinafter *Democratizing Proof*]; Cynthia Lum et al., *Research on Body-Worn Cameras: What We Know, What We Need to Know*, 18 CRIMINOLOGY & PUB. POL’Y 93, 94, 110 (2019) (examining past empirical studies); Scott W. Phillips et al., *The Impact of General Police Officer Outlooks on Their Attitudes Toward Body-Worn Cameras*, 43

Notwithstanding the existing studies and normative debates on BWCs, important empirical questions remain insufficiently answered. For instance, are law enforcement agencies prepared for the resource allocations necessary to implement BWC programs? How satisfied are agencies with the benefits of BWCs after adoption? And, would any factor increase such preparedness or satisfaction? The purpose of this Article is to help fill a gap in the BWC literature on resources and benefits using a large, recently released dataset.

The Article's primary finding is that a more fulsome commitment to the body camera program—or what this Article refers to as “going big”—is associated with more favorable perceptions of the resources required for, and benefits of, BWC programs. Remaining parts of this Article proceed as follows. Part II provides relevant background on BWCs, including a discussion of the ascendancy of BWCs and the risks and benefits advanced regarding their use. Part III sets out the data, variables, and methodology employed in the Article's empirical analysis. Part IV presents findings of the empirical analysis, including a discussion of limitations and robustness. Finally, Part V concludes and suggests areas for future research.

POLICING: AN INT'L J. 451, 451–52 (2020); Jordan C. Pickering, *Officers' Perceptions Regarding the Unexpected Effects of Body-Worn Cameras*, 43 POLICING: AN INT'L J. 390, 390–92 (2020); Howard M. Wasserman, *Recording of and by Police: The Good, the Bad, and the Ugly*, 20 J. GENDER RACE & JUST. 543, 548–50 (2017); Mitch Zamoff, *Assessing the Impact of Police Body Camera Evidence on the Litigation of Excessive Force Cases*, 54 GA. L. REV. 1, 5–7 (2019).

II. BACKGROUND ON POLICE BODY-WORN CAMERAS

BWCs are small recording devices positioned on an officer's person.¹² They record what an officer "sees and hears," potentially capturing the officer's actions or interactions with others.¹³ Footage from such cameras might, for instance, provide clarity on a disputed incident involving an officer and member of the community.¹⁴

BWCs are made by companies such as Axon Enterprise, Inc. (formerly TASER International, Inc.), and they vary in price and configuration.¹⁵ Many offer cloud-based data

12. Jeffrey Bellin & Shevarma Pemberton, *Policing the Admissibility of Body Camera Evidence*, 87 FORDHAM L. REV. 1425, 1429–30 (2019); Danielle Evans, *Police Body Cameras: Mending Fences and How Pittsburgh Is a Leading Example*, 16 U. PITT. J. TECH. L. & POL'Y 76, 76 (2015); Mary D. Fan, *Privacy, Public Disclosure, Police Body Cameras: Policy Splits*, 68 ALA. L. REV. 395, 398 (2016) [hereinafter *Public Disclosure*]; Mindy Lawrence, *Lights, Camera, Action: The Age of Body Cameras in Law Enforcement and the Effects of Implementing Body Camera Programs in Rural Communities*, 91 N.D. L. REV. 611, 615 (2015); Dru S. Letourneau, *Police Body Cameras: Implementation with Caution, Forethought, and Policy*, 50 U. RICH. L. REV. 439, 442 (2015); Zamoff, *supra* note 11, at 8 ("Bodycams are small cameras that can be clipped onto a police officer's uniform or worn as a headset to record video and audio of law enforcement encounters with the public.").

13. Connie Felix Chen, *Freeze, You're on Camera: Can Body Cameras Improve American Policing on the Streets and at the Borders?*, 48 U. MIAMI INTER-AM. L. REV. 141, 155–56 (2017) ("[T]he cameras capture both video and audio recordings of interactions from the officer's perspective."); Evans, *supra* note 12, at 76 ("These . . . cameras . . . are used to capture interactions between police and civilians."); *Public Disclosure*, *supra* note 12, at 398 ("Body cameras . . . are capable of going everywhere police can go to record what the officer sees and does."); Lawrence, *supra* note 12, at 615 ("Body cameras . . . record the officer's actions and conversations with members of the public."); Letourneau, *supra* note 12, at 442–43 ("Police body cameras are compact devices that can create both audio and visual records of police officer actions, observations, and interactions with the public. . . . Irrespective of differences among available devices, they all provide the same basic function: recording what the officer sees and hears."); Zamoff, *supra* note 11, at 8.

14. See, e.g., Evans, *supra* note 12, at 76 ("[T]he captured video may be used after an interaction to provide clarity on what exactly occurred during such an interaction."); *supra* note 13.

15. See Axon Products – Cameras, AXON, <https://www.axon.com/products/cameras> (last visited June 24, 2020); MICHAEL D. WHITE, POLICE OFFICER BODY-WORN CAMERAS: ASSESSING THE EVIDENCE 12 (2014) (discussing Axon system);

storage.¹⁶ BWCs can be small and lightweight such that they may be placed in a variety of areas, including on a uniform, headgear, or even sunglasses.¹⁷

A. *Ascendancy of BWCs*

Scholars have identified a number of events encouraging the adoption of police body cameras.¹⁸ Although it is not possible to itemize all such events in this Article, a treatment of certain key events will be helpful.

On August 12, 2013, Judge Shira A. Scheindlin of the U.S. District Court for the Southern District of New York issued an opinion relating to the New York City Police

Bellin & Pemberton, *supra* note 12, at 1431; Chen, *supra* note 13, at 155–56, 173 (discussing significant variation in prices between models and manufacturers); Matthew A. De Stasio, *A Municipal Speech Claim Against Body Camera Video Restrictions*, 166 U. PA. L. REV. 961, 962–63 (2018); Letourneau, *supra* note 12, at 442–43; Zamoff, *supra* note 11, at 9 (“Axon, formerly known as Taser International[,] . . . is the largest supplier of body cams in America today. Different bodycam models have different features—all of which may impact the quality of the videos they produce.”); *see also* Chauncey Alcorn, *Police Body Cam Maker Unveils New Features it Hopes Will Curb Officer Misconduct*, CNN (Oct. 28, 2020, 9:14 AM), <https://www.cnn.com/2020/10/28/tech/axon-body-cam-new-features/index.html> (discussing “new features intended to help law enforcement supervisors better monitor officers and curb problematic behavior”).

16. *See, e.g.*, Chen, *supra* note 13, at 155–56 (“The majority of systems also come with a cloud-based data storage service with built-in security features to protect against tampering or destruction of video evidence.”).

17. Bellin & Pemberton, *supra* note 12, at 1429–30 (“The cameras are small and versatile enough to be worn almost anywhere on a police officer’s person.”); Chen, *supra* note 13, at 155–56 (“The typical police body camera consists of a video camera, a microphone, a battery, and an onboard data storage system. The hardware is lightweight compared to other police equipment, thereby enabling officers to wear body cameras in a variety of positions. Most devices attach to the officer’s uniform or mount to headgear.”); Evans, *supra* note 12, at 76 (“Body cameras are small cameras, weighing approximately 108 grams, affixed to a police officer’s shirt pocket, hat, collar, shoulder, or even a pair of specially designed Oakley sunglasses.”); *Public Disclosure*, *supra* note 12, at 398 (“Body cameras are small enough to wear at an officer’s eye level, head level, or chest”); Letourneau, *supra* note 12, at 442 (“Officers wear them on their uniforms—just like badges and firearms.”).

18. *See, e.g.*, Kyle J. Maury, *Police Body-Worn Camera Policy: Balancing the Tension Between Privacy and Public Access in State Laws*, 92 NOTRE DAME L. REV. 479, 485–86; *see also infra* Part II.A.

Department's use of "stop and frisk."¹⁹ The court found, among other things, certain Fourth and Fourteenth Amendment violations and stated "the police are not permitted to target people for stops based on their race."²⁰ Judge Scheindlin declared that she was "relegated to finding facts based on the often conflicting testimony of eyewitnesses" since there was "no contemporaneous recording of the stop (such as could be achieved through the use of a body-worn camera)[.]"²¹ One of the remedies Judge Scheindlin ordered was "a trial program requiring the use of body-worn cameras in one precinct per borough"²²

Approximately one year later, two high-profile incidents perhaps further spurred body camera adoption.²³ On July 17, 2014, Eric Garner died in a confrontation with Officer Daniel Pantaleo.²⁴ News sources reported that video of the incident reflected Garner being placed in what appeared to be a "chokehold" and repeatedly saying "I can't breathe" before

19. See generally *Floyd v. City of New York*, 959 F. Supp. 2d 540 (S.D.N.Y. 2013). According to the opinion, the police department "made 4.4 million stops between January 2004 and June 2012" and "[o]ver 80% of these 4.4 million stops were of blacks or Hispanics." *Id.* at 556.

20. *Floyd*, 959 F. Supp. 2d at 563.

21. *Id.* at 562.

22. *Id.* at 563; see also Laurent Sacharoff & Sarah Lustbader, *Who Should Own Police Body Camera Videos?*, 95 WASH. U. L. REV. 269, 282 (2017) ("In New York, a federal court in 2013 found that the New York Police Department's stop and frisk program violated the federal constitution and ordered the police department to develop a pilot body camera program. . . . The court appointed a monitor to make sure this all happened. The pilot program began in April 2017."); Maury, *supra* note 18, at 485 ("The court recognized the reasons why body camera recordings can play a vital role in resolving the constitutionality of criminal procedures"); Seth W. Stoughton, *Police Body-Worn Cameras*, 96 N.C. L. REV. 1363, 1364 (2018).

23. See *infra* notes 24–27.

24. Deborah Bloom & Jareen Imam, *New York Man Dies After Chokehold by Police*, CNN (Dec. 8, 2014, 5:31 PM), <https://www.cnn.com/2014/07/20/justice/ny-chokehold-death/index.html>; Associated Press, *From Eric Garner's death to firing of NYPD officer: A timeline of key events*, USATODAY (Aug. 20, 2019, 10:32 AM), <https://www.usatoday.com/story/news/2019/08/20/eric-garner-timeline-chokehold-death-daniel-pantaleo-fired/2059708001/>.

dying.²⁵ Then, on August 9, 2014, Officer Darren Wilson fatally shot eighteen-year-old Michael Brown in Ferguson, Missouri.²⁶ Commenters have argued that the public outcry following these and similar incidents, along with the “Black Lives Matter” movement, helped further encourage adoption of BWCs.²⁷

25. See sources cited *supra* note 24.

26. Alberto R. Gonzales & Donald Q. Cochran, *Police-Worn Body Cameras: An Antidote to the “Ferguson Effect”?*, 82 MO. L. REV. 299, 299–300 (2017) (“Police officer Darren Wilson shot and killed Michael Brown on August 9, 2014, in Ferguson, Missouri.”); Iesha S. Nunes, *“Hands Up, Don’t Shoot”: Police Misconduct and the Need for Body Cameras*, 67 FLA. L. REV. 1811, 1813–14 (2015) (On August 9, 2014, a county police officer fatally shot an eighteen-year-old unarmed black man named Michael Brown. This incident led to the start of what many termed an ‘uprising’ in Ferguson, Missouri.”).

27. See David K. Bakardjiev, *Officer Body-Worn Cameras—Capturing Objective Evidence with Quality Technology and Focused Policies*, 56 JURIMETRICS J. 79, 79 (2015); Bellin & Pemberton, *supra* note 12, at 1430–31 (“The resulting public outcry [following the Michael Brown shooting], amplified by the rallying cry ‘Black Lives Matter,’ marked the starting point of the body camera revolution.”); Morgan A. Birck, *Do You See What I See? Problems with Juror Bias in Viewing Body-Camera Video Evidence*, 24 MICH. J. RACE & L. 153, 154–55 (2018); Evans, *supra* note 12, at 76 (“After the police brutality deaths of Michael Brown, Eric Garner, and Freddie Gray, amongst others, many call for increased accountability through police officer body-worn cameras”); Katie Farden, *Recording a New Frontier in Evidence-Gathering: Police Body-Worn Cameras and Privacy Doctrines in Washington State*, 40 SEATTLE U. L. REV. 271, 272–73 (2016); Ethan Thomas, *The Privacy Case for Body Cameras: The Need for a Privacy-Centric Approach to Body Camera Policymaking*, 50 COLUM. J.L. & SOC. PROBS. 191, 192 (2017); Karson Kampfe, *Police-Worn Body Cameras: Balancing Privacy and Accountability Through State and Police Department Action*, 76 OHIO ST. L.J. 1153, 1154–55 (2015); Lawrence, *supra* note 12, at 614–15 (“Both civilians and law enforcement agencies began discussing the need for body-worn cameras after two major events: the shooting of Michael Brown and the strangulation of Eric Garner.”); Maury, *supra* note 18, at 480 (“The wake of Brown’s shooting led to calls for policing reforms. At the forefront: the implementation of police body-worn cameras”); Roseanna Sommers, *Will Putting Cameras on Police Reduce Polarization?*, 125 YALE L.J. 1304, 1307–09 (2016) (“As the list of African American men and boys killed by police grows steadily longer, fueling the Black Lives Matter protest movement, advocates for reform have enthusiastically embraced the idea of putting cameras on police officers.”); Stoughton, *supra* note 22, at 1364–65; Zamoff, *supra* note 11, at 9; *Considering Police Body Cameras*, 128 HARV. L. REV. 1794, 1794–95 (2015). Even Michael Brown’s family apparently expressed support for body camera adoption. See, e.g., V. Noah Gimbel, *Body Cameras and Criminal Discovery*, 104 GEO. L.J. 1581, 1582–83 (2016) (“In November 2014, slain teenager Michael Brown’s family

In the wake of these incidents, President Barack Obama signed an order which established the “President’s Task Force on 21st Century Policing”—made up of practitioners, policymakers, and scholars—“that would examine ways to improve distrust between communities and police.”²⁸ President Obama proposed \$263 million in spending to increase body camera use, including \$75 million to help local governments with the cost of implementation.²⁹ As part of the allocation, the Department of Justice allotted \$20 million for body camera pilot programs.³⁰ Attorney General Loretta Lynch said “[b]ody-worn cameras hold tremendous promise for enhancing transparency, promoting accountability, and advancing public safety for law enforcement officers and the communities they serve.”³¹ The American Civil Liberties

issued a statement urging supporters to ‘ensure that every police officer working the streets in this country wears a body camera.’”); Chris Pagliarella, *Police Body-Worn Camera Footage: A Question of Access*, 34 YALE L. & POL’Y REV. 533, 533 (2016) (“Brown’s parents themselves vigorously campaigned to place body cameras on every law enforcement officer . . .”).

28. See Kami Chavis Simmons, *Body-Mounted Police Cameras: A Primer on Police Accountability vs. Privacy*, 58 HOW. L.J. 881, 882 (2015); see also Birck, *supra* note 27, at 154–55 (“After Ferguson, President Barack Obama and his administration proposed several law enforcement initiatives aimed at reducing police violence, including equipping police departments with body cameras. Commentators began to consider body cameras as a cure-all to the problem of police violence, and body-camera use was supported widely, including by ‘the public, the White House, federal legislators, police officials, police unions, and the American Civil Liberties Union.’”).

29. Bellin & Pemberton, *supra* note 12, at 1431; Sacharoff & Lustbader, *supra* note 22, at 283 (“[I]n December of 2014, then-President Obama promised \$75 million toward purchasing 50,000 body cameras . . .”); Sommers, *supra* note 27, at 1307; Zamoff, *supra* note 11, at 11 (“In 2014, President Obama proposed reimbursing communities half the cost of buying and storing bodycam video to promote widespread bodycam adoption . . .”).

30. Bellin & Pemberton, *supra* note 12, at 1431 (“In 2015, the DOJ announced the \$20 million Body-Worn Camera Pilot Partnership Program as part of a \$75 million investment in law enforcement agencies.”); Sacharoff & Lustbader, *supra* note 22, at 281.

31. Sacharoff & Lustbader, *supra* note 22, at 282; see also Gimbel, *supra* note 27, at 1584 (“[O]n September 21, 2015, Attorney General Loretta Lynch announced that the Justice Department has awarded grants totaling more than \$23.2 million to 73 local and tribal agencies in 32 states to expand the use of body-worn cameras and explore their impact.”).

Union, among other groups, also expressed some support for body cameras.³²

A number of initial empirical studies of BWCs had also appeared to offer certain tentatively encouraging findings.³³ One often cited study involved fifty-four police officers in Rialto, California, randomly assigned to wear, or not wear, cameras.³⁴ The results of the Rialto study suggested that, among other things, police officers who were not wearing BWCs used force two times as often as those wearing BWCs.³⁵ Subsequent studies also seemed to offer certain potentially promising results.³⁶

Whether or not spurred by these events and studies,

32. Sacharoff & Lustbader, *supra* note 22, at 279 (“In response to the killings and other abuses caught on video, a broad coalition of voices, from the American Civil Liberties Union (ACLU) to law enforcement, has called for police to wear body cameras—both to help prevent and deter future misconduct and to document it when it does occur.”); Simmons, *supra* note 28, at 883 (“The NAACP, the ACLU, and The Lawyers’ Committee for Civil Rights Under Law have supported initiatives requiring police to wear body cameras.”); Sommers, *supra* note 27, at 1310 (“Even the American Civil Liberties Union, normally an opponent of increased government surveillance, sees body cameras as a ‘win-win.’”).

33. See, e.g., Pagliarella, *supra* note 27, at 535–36; Wasserman, *supra* note 11, at 548–50 (discussing studies); Chen, *supra* note 13, at 161 (same).

34. See Chen, *supra* note 13, at 161; *Democratizing Proof*, *supra* note 11, at 1656 (discussing methodology and limitation of results); Pagliarella, *supra* note 27, at 535–36 (“Popular media often cite a study from Rialto, California”); Sommers, *supra* note 27, at 1311; Mark Tunick, *Regulating Public Access to Body Camera Footage: Response to Iesha S. Nunes, “Hands Up, Don’t Shoot”*, 67 FLA. L. REV. F. 143, 143–44, 144 n.10 (2016); Wasserman, *supra* note 11, at 548; *Considering Police Body Cameras*, *supra* note 27, at 1800 (discussing methodology and noting study ran from “February 2012 through July 2013 . . .”).

35. *Democratizing Proof*, *supra* note 11, at 1656; Pagliarella, *supra* note 27, at 535–36 (“[O]fficers wearing cameras were the objects of 88% fewer complaints and cut their total use of force by 50%. Asked if this indicated better behavior by police or by citizens, Rialto Chief William Farrar ventured that it was ‘probably a little bit of both.’”); *Considering Police Body Cameras*, *supra* note 27, at 1800; see Wasserman, *supra* note 11, at 548.

36. *Democratizing Proof*, *supra* note 11, at 1656–57 (stating that “[p]romising findings have been replicated in other police departments” but cautioning that “other findings are mixed and concerning.”); Pagliarella, *supra* note 27, at 535–36 (discussing use of force and complaints).

body camera use seemingly proliferated.³⁷ As one commenter put it: “The adoption of BWCs is both widespread and growing,” noting that officers, community leaders, activists, elected officials, and others have identified a wide array of possible benefits.³⁸ Another commenter has even declared a “body camera revolution.”³⁹ Increasing use of BWCs may implicate certain policy tradeoffs, however, and so consideration of the perceived benefits and risks of such cameras is also important.

B. *Benefits and Risks of BWCs*

A number of potential benefits and risks have been advanced regarding BWCs. It is not possible to discuss all such risks and benefits here, but some of the more common ones are treated.⁴⁰

1. Perceived Benefits of BWCs

The perceived benefits of BWCs include their potential to: (i) decrease the rate of police misconduct and reduce use of force, (ii) improve citizen behavior in interactions with officers, (iii) decrease citizen complaints and improve

37. See, e.g., Gimbel, *supra* note 27, at 1584 (“This swift rise to prominence has led many observers nationwide to predict that the universal use of BWCs by police is inevitable.”); Sacharoff & Lustbader, *supra* note 22, at 273 (“Over the past few years, scores of major cities, regional hubs, and smaller towns have begun to deploy body cameras on their police officers to provide fuller evidence of the interactions between officers and civilians. Nearly every large city plans eventually to use them—95% according to a recent survey.”); Sacharoff & Lustbader, *supra* note 22, at 282 (“[B]ody cameras have become perhaps the most widespread organized response to communities’ cries for accountability, reflecting the hope that they will bring about many improvements, including deterring police abuse, quickly resolving complaints against the police, and enhancing democracy and transparency more generally.”); sources cited *infra* notes 38–39.

38. Stoughton, *supra* note 22, at 1421.

39. See Mary D. Fan, *Justice Visualized: Courts and the Body Camera Revolution*, 50 U.C. DAVIS L. REV. 897, 901, 938–39 (2017); see also Stoughton, *supra* note 22, at 1366–67; *supra* note 27.

40. There are several ways to formulate these perceived risks and benefits, and the formulation adopted by this Article is just one way.

resolution of citizen complaints, (iv) increase legitimacy, transparency, and accountability, (v) aid in training, and (vi) provide evidence. Each of these perceived benefits is treated in turn.

First, decreasing the rate of police misconduct and reducing the use of force have been advanced as benefits of BWCs.⁴¹ As the theory goes, when an individual knows he or she is being recorded and that such recording could be used as evidence, it may deter misconduct and encourage the public and the police to behave better.⁴² Similarly, if officers are aware they are being filmed and understand they will be held to account, officers may be disinclined to use force unless necessary.⁴³

41. WHITE, *supra* note 15, at 20; Evans, *supra* note 12, at 77–81; Mary Anne Franks, *Democratic Surveillance*, 30 HARV. J.L. & TECH. 425, 475 (2017); Kampfe, *supra* note 27, at 1162 (“Police officers do not always conduct themselves in a professional manner, and officers themselves recognize the positive effect that the cameras have on their conduct while working.”); Letourneau, *supra* note 12, at 446 (“Proponents of police body cameras suggest that the mere existence of such devices will positively impact officers’ behavior during interactions with citizens.”); Maury, *supra* note 18, at 487–88; Simmons, *supra* note 28, at 885 (“There is a growing body of research that demonstrates that police body cameras can help deter police misconduct.”); Stoughton, *supra* note 22, at 1382 (“Activists who want to reduce the frequency of police uses of force, police executives who want to increase officer professionalism, and the officers who want civilians to resist less often have all championed body-worn cameras as a way to achieve the desired behavioral change.”); Howard M. Wasserman, *Moral Panics and Body Cameras*, 92 WASH. U. L. REV. 831, 837 (2015).

42. Evans, *supra* note 12, at 77–81 (“[B]y making officers more aware that their behavior is being observed, body cameras deter officers from engaging in inappropriate behavior.”); Letourneau, *supra* note 12, at 446 (“An officer equipped with a body camera inherently creates an observable record of his or her own behavior, a record potentially observable by others. Should the social science hold true, the creation and potential observation of that record will lead the equipped officer to more socially acceptable behavior.”); Maury, *supra* note 18, at 487–88.

43. Evans, *supra* note 12, at 77–78 (“Body cameras can potentially reduce the amount of force an officer uses when engaging with a civilian in tense situations.”); Kampfe, *supra* note 27, at 1162 (“[I]nstances of police use-of-force have been shown to decrease by as much as fifty-eight percent by employing PWBCs [police-worn body cameras].”); Stoughton, *supra* note 22, at 1383 (“[W]ith regard to reducing violence, the objective is to discourage resistance by civilians and gratuitously severe or frequent uses of force by officers, especially in the

Second, improving citizen behavior in interactions with officers has been suggested as a benefit of BWCs.⁴⁴ Similar to the argument that cameras deter officer misconduct, the theory is that when citizens know they are being filmed, their behavior may improve.⁴⁵ It might be expected that citizens in such situations would become “more respectful and compliant.”⁴⁶

Third, it has been suggested that BWCs will decrease citizen complaints and improve resolution of such complaints.⁴⁷ The theory is that having access to the camera

context of deadly force.”).

44. See Evans, *supra* note 12, at 82; Gonzales & Cochran, *supra* note 26, at 309–10; Kampfe, *supra* note 27, at 1164; Letourneau, *supra* note 12, at 448; Maury, *supra* note 18, at 487–89 (“Empirical research suggests body cameras do have a civilizing effect on relations between law enforcement and the community.”); Simmons, *supra* note 28, at 886 (“One police chief noted that his department encouraged officers to let people know that they are recording ‘[b]ecause we think it elevates behavior on both sides of the camera.’”); Stoughton, *supra* note 22, at 1383–84; Wasserman, *supra* note 41, at 837 (noting advanced benefits include prompting public to behave better).

45. Evans, *supra* note 12, at 82; Maury, *supra* note 18, at 487–89 (“As Lieutenant Harold Rankin of the Mesa Police Department observed, ‘[a]nytime you know you’re being recorded, it’s going to have an impact on your behavior.’ This is true for law enforcement and citizens alike . . . informing citizens a camera is running is ‘often enough to deescalate the situation.’”); Simmons, *supra* note 28, at 886 (“Just as officers behave differently when wearing the cameras, members of the public may also alter their behavior if they know the cameras are capturing their actions.”).

46. See WHITE, *supra* note 15, at 22–23; see also Letourneau, *supra* note 12, at 448; Stoughton, *supra* note 22, at 1383 (“Civilians, meanwhile, may be more likely to obey state laws as well as officers’ directives.”).

47. WHITE, *supra* note 15, at 23–24 (“Advocates of body-worn cameras have also argued that the technology will facilitate quick resolution of complaints and lawsuits against police officers.”); Evans, *supra* note 12, at 79 (“Several studies also illustrate body cameras can expedite case resolution and prevent complaints from even being filed.”); Franks, *supra* note 41, at 475; Gonzales & Cochran, *supra* note 26, at 308–10; Kampfe, *supra* note 27, at 1165 (“In fact, empirical studies have shown the number of complaints against officers reduced between fourteen and approximately 89%.”); Letourneau, *supra* note 12, at 449–50 (“Records produced by body cameras have the potential to . . . provid[e] evidence that can result in proper adjudication of complaints.”); Maury, *supra* note 18, at 487–88; Simmons, *supra* note 28, at 886; Wasserman, *supra* note 41, at 837; *Considering Police Body Cameras*, *supra* note 27, at 1801–02.

footage would facilitate efficient resolution of complaints that are filed.⁴⁸ Further, having a producible record of what took place may decrease the likelihood that citizens would file untruthful or frivolous complaints.⁴⁹

Fourth, increasing legitimacy, transparency, and accountability has been advanced as a benefit of BWCs.⁵⁰ In theory, when a department adopts a body camera program, it may signal to the public that the department is responsive and receptive to calls for accountability and transparency.⁵¹ When members of the public are given the ability to observe potential police misconduct, they are able to hold the

48. Letourneau, *supra* note 12, at 449–50 (“Advocates allege that body cameras can produce records of events that could expedite the resolution of complaints and lawsuits against officers.”); *Considering Police Body Cameras*, *supra* note 27, at 1801–02 (“Another benefit . . . is the ability of camera footage to facilitate efficient resolution of citizen complaints and lower the overall number of complaints filed in the first place.”).

49. WHITE, *supra* note 15, at 23–24 (“Citizens may be less likely to file ‘frivolous’ or untruthful complaints against officers wearing cameras because citizens know that the video evidence can instantly refute their claims.”).

50. WHITE, *supra* note 15, at 19–20; Evans, *supra* note 12, at 82; *Democratizing Proof*, *supra* note 11, at 1664–65 (“The perception among the disillusioned is that police-worn body cameras were presented to communities as a tool for improved transparency and accountability to address longstanding controversies over opacity.”); Gonzales & Cochran, *supra* note 26, at 310–11; Kampfe, *supra* note 27, at 1163–64 (discussing legitimacy); Lawrence, *supra* note 12, at 616 (“One of the driving factors behind outfitting all law enforcement officers with body cameras is to increase each officer’s accountability.”); Letourneau, *supra* note 12, at 445–46; Maury, *supra* note 18, at 491–93; Simmons, *supra* note 28, at 887 (“[B]ody cameras offer increased transparency and accountability to the general public.”); Stoughton, *supra* note 22, at 1381–82, 1394 (“Police executives, politicians, and policing scholars have expressed their hope that body cams would increase public trust or explicitly asserted that the technology can or is doing so.”); *Considering Police Body Cameras*, *supra* note 27, at 1803 (“That so many Americans feel they would be safer if all police officers wore body cameras speaks to this technology’s potential to increase accountability and transparency.”).

51. Letourneau, *supra* note 12, at 445–46 (“Police body cameras can demonstrate to the public that the department using them intends to increase its transparency and willingness to be examined by outside actors.”); Stoughton, *supra* note 22, at 1381–82 (noting “adoption of a BWC system can serve as a signal to community members”).

misconduct to account using legal institutions.⁵² Increasing transparency may also demonstrate a desire for justice and fairness, which could lead to a perception of increased police legitimacy.⁵³

Fifth, proponents have suggested that BWCs are valuable for officer training.⁵⁴ Police training purportedly prizes real-world experience and camera footage can help reflect what to expect in the real world of policing.⁵⁵ Reviewing camera footage may be particularly useful in educating and monitoring new police officers.⁵⁶ The video

52. See Maury, *supra* note 18, at 491–93; see also Letourneau, *supra* note 12, at 445–50 (“The ability to accurately and more frequently place responsibility on an officer when it is due should directly translate into increased departmental transparency.”).

53. See Kampfe, *supra* note 27, at 1164 (“Increased transparency in these situations demonstrates fairness and justice, leading to a perception of greater legitimacy of police.”); see also Gonzales & Cochran, *supra* note 26, at 310 (“In a recent survey of more than sixty police departments, the DOJ concluded that cameras had the potential to promote ‘perceived legitimacy and sense of procedural justice’ in officer-citizen encounters.”); Maury, *supra* note 18, at 491 (“Perhaps the greatest benefit of body cameras is the ability to restore faith and confidence in law enforcement.”).

54. WHITE, *supra* note 15, at 25–26 (“Advocates of body-worn cameras have also suggested the technology can serve as an important training tool”); Chen, *supra* note 13, at 163 (“Body camera footage also assists departments in developing better officer training programs, which benefits both civilians and police.”); Lawrence, *supra* note 12, at 618 (“The possibility of departments being able to use footage to train officers regarding the proper response in a given situation is an additional benefit to issuing body cameras to officers.”); Simmons, *supra* note 28, at 887 (“A Police Executive Research Forum survey found that 94 percent of the respondents use footage gleaned from body cameras to train officers and to assist them in administrative reviews.”); *Considering Police Body Cameras*, *supra* note 27, at 1802 (“Police departments also perceive these cameras as helpful in the context of officer training”).

55. Stoughton, *supra* note 22, at 1397–98 (“As a number of scholars have noted, police training heavily prioritizes real world experience, and video offers a rare window into which would-be officers can see what the world is really like.”); *Considering Police Body Cameras*, *supra* note 27, at 1802 (“Footage can be incorporated into training programs to demonstrate what actual, on-the-ground civilian encounters should (and should not) look like”).

56. Johnathan M. Nixon, *Eye Spy Injustice: Delving into the Implications Police Body Cameras Will Have on Police Officers and Citizens*, 60 HOW. L.J. 719, 739 (2017) (“Police officers can use footage captured by body cameras to educate

might aid in debriefing officers following critical incidents (for instance, use of force), and in providing officers with any necessary remedial training.⁵⁷

Finally, provision of evidence has been noted as a benefit of BWCs.⁵⁸ Proponents suggest that objective footage from BWCs could aid both prosecutors and those on the defense side, for instance, by reflecting whether a search was justified or a confession voluntary.⁵⁹ Such video evidence

and train young and newly-admitted officers.”); *Considering Police Body Cameras*, *supra* note 27, at 1802.

57. WHITE, *supra* note 15, at 25–26 (“Post-hoc review of officer behavior could be especially useful when critical incidents, such as use of force, are recorded.”); Stoughton, *supra* note 22, at 1397–98 (“Videos are also used to debrief officers after critical incidents and to train them for high-risk situations such as active shooters, armed encounters, and so on.”); *Considering Police Body Cameras*, *supra* note 27, at 1802 (noting the ‘recordings [can] be used for remedial training or correcting the behavior of individual officers against whom misconduct allegations have been filed.’”).

58. Kampfe, *supra* note 27, at 1182 (“Underscoring these legal issues is the role that PWBC [police-worn body camera] footage will be able to play as evidence in trials.”); Letourneau, *supra* note 12, at 456–57; Stoughton, *supra* note 22, at 1393 (“In short, body-worn camera systems will not only provide comprehensive evidence, by providing *more* information than currently exists, they will also provide accurate and objective evidence.”); Nixon, *supra* note 56, at 738 (“Having video records of police encounters could significantly bolster the preservation of information, which could subsequently be used to review police conduct within a department or used as evidence at trial.”); Wasserman, *supra* note 41, at 837 (noting supporters insist body cameras “will produce objective, unambiguous evidence revealing what happened in future police-citizen encounters”); *Considering Police Body Cameras*, *supra* note 27, at 1803 (“In particular, video evidence has the advantage of ‘refresh[ing] the officer’s memory’ and ‘verify[ing] the accuracy of written reports and statements surrounding [an] incident.’”).

59. WHITE, *supra* note 15, at 24–25 (“Advocates of body-worn cameras state that the video evidence will facilitate the arrest and prosecution of offenders, as it offers a real-time, permanent record of the events that transpired.”); Letourneau, *supra* note 12, at 456–57 (“Many proponents of police body cameras suggest that video evidence from these devices ‘will facilitate the arrest and prosecution of offenders.’ . . . Recorded evidence also has the potential to positively assist defendants in court.”); Stoughton, *supra* note 22, at 1394 (“Video footage could also be used to support a police investigation or the ultimate prosecution of an individual civilian. . . . By recording victim or witness statements—particularly ‘good’ statements by confident, articulate witnesses or visibly emotionally distraught victims with whom a jury is likely to sympathize—officers can collect valuable evidence.”); *Considering Police Body Cameras*, *supra* note 27, at 1803.

could also confirm the accuracy of reports or refresh a police officer's recollection.⁶⁰ In turn, having access to BWC footage may assist in factual determinations at trial and lead to quicker and more just resolutions of certain disputes.⁶¹

Notwithstanding these purported benefits, certain concerns with use of BWCs have also been voiced. It is to these concerns that this Article will now turn.

2. Perceived Risks of BWCs

The perceived risks of BWCs include: (i) their potential to create or exacerbate unfairness, (ii) privacy considerations, and (iii) the resource costs associated with them. Each of these perceived concerns is considered here.

First, concerns have been raised regarding the risk of unfairness.⁶² Jurors could reach unjust conclusions based on the video or discount other forms of evidence.⁶³ It has been suggested that the perceived “objectivity” of body camera footage could lead to overreliance, even though, for instance, the footage may mislead or biases may impact viewers.⁶⁴

60. *Considering Police Body Cameras*, *supra* note 27, at 1803.

61. Maury, *supra* note 18, at 489–90 (“In criminal cases, a ‘permanent record of the events that transpired’ will resolve cases ‘through guilty pleas rather than criminal trials.’ . . . Body camera evidence can also lead to arguably more ‘just’ resolutions in legal proceedings.”).

62. *See* Franks, *supra* note 41, at 475; Gonzales & Cochran, *supra* note 26, at 319; Letourneau, *supra* note 12, at 460–63; Maury, *supra* note 18, at 491; Sacharoff & Lustbader, *supra* note 22, at 276; Daniel Bernard Trimble, *Body-Worn Cameras: The Implementation of Both the Police Department’s Rollout of Cameras and the State’s Attorney’s Office’s Processing of Data for Discovery*, 47 U. BALT. L. REV. 379, 381–82 (2018).

63. Letourneau, *supra* note 12, at 460–63 (“[T]he use of body-camera-produced evidence in trial creates a risk for a jury to come to improper conclusions, such as making a finding not supported by the record or being incapable of making a clear finding through just a recording.”); Maury, *supra* note 18, at 491 (“Indeed, jurors may discount other forms of evidence because visual evidence is so compelling.”); Trimble, *supra* note 62, at 381–82 (“Nor can body-worn camera data be the sole source of information to evaluate and make a fair and impartial judgment of police action.”).

64. *See* Birck, *supra* note 27, at 176 (“The body-camera footage may simply reinforce implicit biases that jurors hold, and thus do nothing to address the core

Some have also argued that police control of body cameras might permit officers to limit access to relevant footage or manipulate the technology.⁶⁵

Second, privacy-related concerns have been repeatedly raised with BWC use.⁶⁶ On the citizen side, privacy risks

problems the cameras were designed to address in the first place.”); *Democratizing Proof*, *supra* note 11, at 1662 (“The allure of video’s seeming transparency into truth heightens the risk that viewers will miss the persuasion effects and even potential distortion caused by angle, framing, perspective, and the filter of one’s own preconceived notions.”); Lawrence, *supra* note 12, at 624–25 (“Body cameras offer parties the chance to get an unbiased look into exactly what occurred during a given interaction. Or do they?”); Nixon, *supra* note 56, at 732 (“Since these cameras do not offer a 360-degree view, some elements of an encounter may be taken out of context or not properly captured at all.”); Stoughton, *supra* note 22, at 1408 (“Beyond our own general tendency to view (video) evidence in a way that confirms our preexisting worldview, there are specific biases that can limit our ability to draw accurate conclusions from video.”); Wasserman, *supra* note 41, at 840 (“[A]s any undergraduate film student knows, what video actually says depends on a number of different considerations—who and what is depicted, who created the images and how, and details of the images themselves (length, clarity, lighting, distance, angle, scope, steadiness, manner of shooting, quality); these affect the inferences that viewers draw from video, allowing for many different possible meanings and conclusions.”); Zamoff, *supra* note 11, at 18–19 (“Several observers have pointed out that the inferences that judges and juries will have to make about video evidence that is inherently ambiguous will reflect their implicit biases about race, gender, and other characteristics.”); *Considering Police Body Cameras*, *supra* note 27, at 1812–14.

65. See *Democratizing Proof*, *supra* note 11, at 1664 (“A third set of emerging challenges with body-camera videos are controversies over refusals to disclose recordings to the public or delayed disclosure.”); Franks, *supra* note 41, at 475 (“There are questions about how police officers can manipulate the technology, from selectively turning cameras on and off to deceptively editing, mishandling, or losing the footage.”); Nixon, *supra* note 56, at 734 (noting concern that “police department or authoritative figures who may have something to lose, will use their influence or access to body cameras to edit, or simply not record, body camera footage for their own personal agenda.”); Sacharoff & Lustbader, *supra* note 22, at 274 (“Police and prosecutors leverage their control of body camera footage to pursue ordinary criminal cases. In these prosecutions, the government may withhold these videos from defendants until after a plea, after a suppression motion, and perhaps up to the eve of trial.”); *Considering Police Body Cameras*, *supra* note 27, at 1806 (“But once the locus of control shifts to the officers, the very organization meant to be held accountable will be able to prevent these videos from being created in the first instance or shared after the fact.”).

66. WHITE, *supra* note 15, at 27–28 (“Critics of body-worn cameras have cited numerous concerns over citizen privacy.”); Woodrow Hartzog, *Body Cameras and*

might include footage being released when those depicted (or bystanders) would not want it released.⁶⁷ Videos could, for instance, be shared for an illicit purpose, such as to embarrass a celebrity.⁶⁸ Citizens may also be concerned with impacts on their Fourth Amendment rights.⁶⁹ On the police

the Path to Redeem Privacy Law, 96 N.C. L. REV. 1257, 1258 (2018) (“Body-worn cameras on every police officer in America are understandably seen as a serious threat to privacy.”); Kampfe, *supra* note 27, at 1169–75; Letourneau, *supra* note 12, at 453 (“Increasingly sophisticated technology poses a potential threat to individual privacy, resulting in a tension between the benefit to the collective good of such technology and individual freedom.”); Maury, *supra* note 18, at 492–93 (“Placing an eye on what really happens to the public, though, presents the issue of adequately protecting the privacy of individuals captured in recordings.”); Simmons, *supra* note 28, at 889 (“By far, the fiercest opposition to body cameras has come from groups concerned about the implications these cameras have on privacy.”); Thomas, *supra* note 27, at 196 (“Body cameras undoubtedly present risks to civilians’ privacy.”).

67. WHITE, *supra* note 15, at 27–28 (“Moreover, the potential for body-worn cameras to be coupled with other technologies, such as facial recognition software, may present additional concerns for citizen privacy.”); Evans, *supra* note 12, at 83 (“While body cameras primarily allow the public to monitor the government, body cameras pose a potential privacy invasion, particularly when officers enter private homes and when officers encounter bystanders, suspects, and victims in stressful and extreme situations.”); Franks, *supra* note 41, at 477 (noting “serious privacy questions” regarding consent of recorded civilians and who may access footage); Gonzales & Cochran, *supra* note 26, at 314 (“A major point of contention involving police body cameras relates to the privacy rights of innocent bystanders captured on the video, such as family members.”); Maury, *supra* note 18, at 493 (“The more access provided to the public, media, and subjects of videos, the more opportunity for intrusion into the privacy interests of those persons and places recorded on video.”); Nixon, *supra* note 56, at 733 (“The accidental and incidental filming of individuals could raise concerns that, although [a] body camera[] provide[s] an account of an officer’s actions, it vicariously surveys those individuals who happen to fall within the range of the camera’s view.”); Thomas, *supra* note 27, at 197 (“Body camera usage affects the privacy interests of many more people than the direct subjects of investigation, however. Bystanders or passersby, whether involved with the subject of an encounter or not, will inevitably be captured on a large number of recordings in both public and private settings, perhaps unaware that the police are filming.”); *Considering Police Body Cameras*, *supra* note 27, at 1808.

68. Evans, *supra* note 12, at 83 (“Another privacy concern is with videos being released for no particular purpose other than to embarrass individuals, such as videos . . . with celebrity DUI stops or other similar situations.”).

69. Chen, *supra* note 13, at 164 (“Body cameras raise the age-old question of how the Fourth Amendment applies to new forms of government technology.”); Erik Nielsen, *Fourth Amendment Implications of Police-Worn Body Cameras*, 48

side, officers might, for instance, be concerned with their privacy and autonomy while at work.⁷⁰ Privacy issues for police officers and citizens are compounded by the possibility of long-term storage.⁷¹ For society at large, critics worry about the threat of increased government surveillance.⁷²

Finally, the resource costs associated with BWCs has been advanced as a risk.⁷³ In addition to the initial costs of

ST. MARY'S L.J. 115, 120 (2016) ("In an era of ever-advancing technology, the increased use of widespread video recording, although intended to prevent misconduct of police officers, creates concerns over the Fourth Amendment rights of individuals to be free from unreasonable searches."); Nixon, *supra* note 56, at 732 ("A primary concern that civilians have about the implementation of body cameras is that these cameras will affect their privacy, with specific emphasis on their Fourth Amendment rights.").

70. WHITE, *supra* note 15, at 28–29 ("Officers expressed concerns over the potential for supervisors to go on unsolicited 'fishing expeditions' in an effort to find behavior that will get an officer into trouble."); Nixon, *supra* note 56, at 733.

71. *Democratizing Proof*, *supra* note 11, at 1665 ("A related concern is that communities—especially the most heavily surveilled, disadvantaged minority communities—are paying the high privacy costs of more cameras without the promised benefits."); Franks, *supra* note 41, at 477 (noting "serious privacy questions" regarding how footage will be stored and used); Gonzales & Cochran, *supra* note 26, at 326 ("There are legitimate privacy concerns, both in terms of the initial recording, as well as questions relating to the storage and release of the recordings . . ."); *Considering Police Body Cameras*, *supra* note 27, at 1808. On the other hand, it has also been argued that body cameras may have certain privacy benefits. See Thomas, *supra* note 27, at 199–202 ("Framing body camera policy as merely a tradeoff between privacy harms on the one hand and accountability benefits on the other takes an overly narrow view that privacy interests can only be affected negatively by body camera proliferation. This view fails to properly assess the overall utility of body cameras or particular policies, because it excludes from the calculus the privacy benefits that may result from more recording.").

72. See Franks, *supra* note 41, at 476 ("Many well-meaning lawmakers, activists, and members of the general public do not seem particularly attentive to the fact that no matter how benign or socially useful, police cameras are a powerful form of surveillance that have the potential to jeopardize the privacy of individuals at their most vulnerable."); *Considering Police Body Cameras*, *supra* note 27, at 1808–10 ("In a post-9/11 world, the addition of yet another form of government surveillance should not go unexamined: recent technological advances have allowed the state to move beyond the use of traditional electronic surveillance devices—like wiretaps and bugs—toward more pervasive surveillance techniques.").

73. See WHITE, *supra* note 15, at 32–34 ("The resource and logistical issues surrounding adoption of body-worn camera technology are considerable and, in

implementing a BWC program, long-term usage requires substantial ongoing expenditures, in particular for data storage and manipulation, as well as for producing a “courtroom-ready” product.⁷⁴ The dollar cost of managing and storing data can be “staggering” and may run into the

many cases, difficult to anticipate.”); Evans, *supra* note 12, at 90 (“Other criticisms involve the cost of body cameras and the fact that many cities may not be able to afford either the upfront cost or the cost to maintain the cameras’ storage database.”); Gonzales & Cochran, *supra* note 26, at 318 (“Technology such as body cameras costs money, and many smaller or rural jurisdictions simply do not have the resources to equip their police departments with body cameras.”); Kampfe, *supra* note 27, at 1178 (“[D]epartments must find a substantial amount of money to purchase the PWBCs [police-worn body cameras] and ancillary gear to initially equip their officers.”); Lawrence, *supra* note 12, at 618 (“The average cost of a new, high-definition, body-worn camera is \$400–600.”); Letourneau, *supra* note 12, at 451 (“The cameras themselves are expensive gadgets, especially when multiplied by a department with a large number of officers.”); Nixon, *supra* note 56, at 730–31 (“Many police departments that wished to implement body cameras ran into issues with the cost of the equipment.”); Zamoff, *supra* note 11, at 13 (“[T]he start-up cost of outfitting a force with bodycams is daunting for cash-strapped departments.”).

74. WHITE, *supra* note 15, at 32–34 (“Regardless of the approach taken, the cost of data storage and management can be significant.”); Evans, *supra* note 12, at 90–91 (“In addition to the high cost of purchasing and maintaining storage data, criticism may also come from states and municipalities that cut funding with certain programs and departments in order to reallocate the funds to purchase body cameras.”); Gonzales & Cochran, *supra* note 26, at 318 (“The costs of deploying police body cameras will likely include not only the costs of the cameras, but also ancillary equipment, training in the use of the equipment, protection and storage of the video, administrative and legal costs—including responding to open records requests—and other costs related to data storage, management, and disclosure to the public”); Lawrence, *supra* note 12, at 618 (“At first glance, it may seem that the cost of outfitting law enforcement officers is simply the total of the equipment and training; however, the true cost lies in storing all of the collected data.”); Letourneau, *supra* note 12, at 451; Zamoff, *supra* note 11, at 14 (“Indeed, data storage costs often account for the majority of bodycam programs’ total cost and represent a formidable barrier to the implementation of bodycam programs—especially for small and medium-sized police departments.”); *Considering Police Body Cameras*, *supra* note 27, at 1809; Kampfe, *supra* note 27, at 1178 (“The most substantial cost of employing PWBCs [police-worn body cameras] lies in the fee for storing the footage on secure servers. This was a cost overlooked by many police departments who adopted PWBCs early on.”). For instance, the “cost of reviewing footage for the purposes of redaction and classification also poses a tremendous burden on police departments.” Kampfe, *supra* note 27, at 1179.

hundreds of thousands or millions.⁷⁵

Notwithstanding the existing debates on BWCs, important empirical questions on resources and benefits remain insufficiently answered. The next Part sets out this Article's data, variables, and methodology.

75. See, e.g., *Considering Police Body Cameras*, *supra* note 27, at 1809. Proponents, of course, would likely counter that BWCs also have monetary benefits. See Evans, *supra* note 12, at 80–81 (“While body cameras are expensive, the Rialto study projected that the police department saved \$4 in litigation costs for every \$1 spent on the cameras.”); Gonzales & Cochran, *supra* note 26, at 319 (“While the overall costs of body cameras are not insubstantial, particularly to small, rural police departments, advocates of body cameras insist that over time much of the additional expense will be offset by fewer civil suits against police for misconduct, less administrative time for a department investigating a police shooting, and fewer man-hours taken off the streets and dedicated to desk duty or participating in a trial following accusations of a bad shooting.”); Lawrence, *supra* note 12, at 620 (“Although it appears that body cameras are nothing but bottomless money pits, they do have some monetary benefits, specifically in terms of lawsuits against law enforcement agencies.”); Letourneau, *supra* note 12, at 456 (“The existence of a real-time, permanent record of the events of an arrest in some cases can provide almost irrefutable confirmation of guilt. Such evidence has the tendency to produce more guilty pleas and may preclude trials in many cases, which would significantly reduce costs in police and court resources and time.”); Nixon, *supra* note 56, at 738 (“When individuals do not file unfounded complaints on police, police officers do not have to spend resources and manpower to prove why these complaints are groundless.”); Zamoff, *supra* note 11, at 17 (“In theory, this evidential ‘trump card’ could save the parties in excessive force lawsuits significant time and money in the discovery phase of the lawsuit, as the need for depositions and document discovery would be greatly reduced by the existence of a video record of the event.”).

III. DATA, VARIABLES, AND METHODOLOGY

This Article analyzes data from the 2016 Law Enforcement Management and Administrative Statistics Body-Worn Camera Supplement (“LEMAS-BWCS”), which was produced by the Inter-university Consortium for Political and Social Research and authored by the U.S. Department of Justice, Bureau of Justice Statistics.⁷⁶ In this Part, the dataset, variables, and methodology utilized in this Article are described.

A. *Data*

The LEMAS-BWCS sample was drawn from a law enforcement database consisting of 15,810 law enforcement agencies: 49 primary state police departments, 12,695 county and local police departments, and 3,066 sheriffs’ offices.⁷⁷ Sheriffs’ offices and local police departments were chosen utilizing a stratified sample design, and the “sample was designed to be representative of all general purpose state and local law enforcement agencies”⁷⁸ The ultimate LEMAS-BWCS sample size was 4,976 agencies, and data was collected through the web, a mail-in survey, and phone interviews.⁷⁹ The response rate was 79%, with 3,928 agencies completing the survey.⁸⁰ This Article focuses on the 1,915 agencies that reported they had acquired BWCs as of the

76. See U.S. DEPT OF JUSTICE, OFFICE OF JUSTICE PROGRAMS, BUREAU OF JUSTICE STATISTICS, LAW ENFORCEMENT MANAGEMENT AND ADMINISTRATIVE STATISTICS BODY-WORN CAMERA SUPPLEMENT (LEMAS-BWCS), 2016, 1, 4-5 (2016) [hereinafter 2016 LEMAS-BWCS]. In the summary data description, the time period is reflected as 2015-2016. *Id.* Although citations in this Article are to the pages in the study codebook, the data is primarily drawn directly from the associated Stata dataset.

77. *Id.* at 5.

78. *Id.* The base weights are set out in the codebook. *Id.* at 6.

79. *Id.* at 5.

80. *Id.* at 5–6. For more information on the LEMAS-BWCS sample, study design, and limitations, see generally *id.*

date of the survey.⁸¹ Such agencies included 13 primary state police departments, 1,460 county and local police departments, and 442 sheriffs' offices.⁸²

B. Variables

The outcomes of interest are the agencies' perceptions regarding the level of expense and staff time required to implement BWCs and the agencies' perceptions regarding the benefits associated with BWCs.⁸³ These variables were drawn from the agency's reported level of agreement with specific statements utilizing the following answer choices: "Strongly disagree", "Disagree", "Agree", and "Strongly agree".⁸⁴

The independent variables included in the model fall into three basic categories. First, variables relating to motivations for BWC adoption. These variables were included to explore the extent to which perceived motivations for adopting a BWC program were associated with perceptions of resources required and associated benefits. Such variables were drawn from agency responses as to their "most important reason for acquiring" BWCs.⁸⁵ Second, variables relating to the strength of BWC adoption. Inclusion of these variables was important to analyze whether

81. The number of agencies who had acquired BWCs was determined from results of question 10a in the LEMAS-BWCS survey. *Id.* at 16.

82. *See generally id.*

83. These variables are based on responses to question 52 in the survey. *See id.* at 87–92. A sample of the full survey is also available in the back of the codebook. *See generally id.*

84. *Id.* at 87–92. These four choices are basically analogous to a four-point Likert-type scale. *See* Phillips et al., *supra* note 11, at 456; Natalie Todak & Janne E. Gaub, *Predictors of Police Body-Worn Camera Acceptance: Digging Deeper into Officers' Perceptions*, 43 POLICING: AN INT'L J. 299, 303 (2019). The answer choices "Don't know" and "Too soon to know" are ignored for purposes of the model. 2016 LEMAS-BWCS, *supra* note 76, at 87–92.

85. These variables are based on responses to question 17 in the survey. *See* 2016 LEMAS-BWCS, *supra* note 76, at 45. Only those motivations with over 100 unweighted observations are included. *Id.*

perceived satisfaction was associated with how long agencies used cameras, how fully they deployed cameras, and the relative number of cameras they utilized. Third, a variable relating to agency type was included in the model. To control for the possibility that the position of the primary state agencies differed from that of the more local agencies, the model included a state agency variable.

The dependent and independent variables included in the model are summarized in Table 1.

Table 1: Variables Included in Model

Variable	Description
Dependent Variables	
More Expensive	Agency reported level of agreement with the following statement: “Body-worn camera implementation was more expensive than anticipated” ⁸⁶
More Staff Time	Agency reported level of agreement with the following statement: “Body-worn camera implementation required more staff time than anticipated” ⁸⁷
Reliable Evidence	Agency reported level of agreement with the following statement: “Body-worn cameras provide reliable evidence of officer-citizen interactions” ⁸⁸
Protect from Complaints	Agency reported level of agreement with the following statement: “Body-worn cameras have been useful in protecting officers from unwarranted complaints” ⁸⁹
Supervise Officers	Agency reported level of agreement with the following statement: “Body-worn cameras have been a useful tool for supervising officers” ⁹⁰

86. *Id.* at 87–88.

87. *Id.* at 88.

88. *Id.* at 88–89.

89. *Id.* at 89–90.

90. *Id.* at 90.

Improve Professionalism	Agency reported level of agreement with the following statement: "Body-worn cameras have improved professionalism of officers" ⁹¹
Identify Misconduct	Agency reported level of agreement with the following statement: "Body-worn cameras have helped identify instances of officer misconduct that might not have been identified without them" ⁹²
Improve Agency-Community Relationships	Agency reported level of agreement with the following statement: "Body-worn cameras have improved relationships between the agency and the community" ⁹³
Independent Variables	
Motivation	
Improve Safety	Agency selected "Improve officer safety" as "the most important reason for acquiring" BWCs ⁹⁴
Improve Accountability	Agency selected "Improve officer/agency accountability" as "the most important reason for acquiring" BWCs ⁹⁵
Improve Evidence	Agency selected "Improve evidence quality" as "the most important reason for acquiring" BWCs ⁹⁶
Improve Community Perceptions	Agency selected "Improve community perceptions of the agency" as "the most important reason for acquiring" BWCs ⁹⁷
Reduce Liability	Agency selected "Reduce agency liability" as "the most important reason for acquiring" BWCs ⁹⁸

91. *Id.* at 90–91.

92. *Id.* at 91.

93. *Id.* at 91–92.

94. *Id.* at 45.

95. *Id.*

96. *Id.*

97. *Id.*

98. *Id.*

Reduce/Resolve Complaints	Agency selected “Reduce or more quickly resolve citizen complaints” as “the most important reason for acquiring” ⁹⁹ BWCs
More Prosecutable	Agency selected “Make cases more prosecutable” as “the most important reason for acquiring” BWCs ¹⁰⁰
Strength	
Months of Adoption	Number of months the agency had BWCs at the time of the survey ¹⁰¹
Full Deployment	Agency selected “Full deployment to all intended personnel” when asked how it would describe the “current state” of BWC deployment in its agency ¹⁰²
Cameras/Officers	Approximate number of BWCs “currently in service” per approximate number of “full-time sworn officers with general arrest powers” ¹⁰³
Agency Type	
State Agency	Agency was identified as a “State agency” ¹⁰⁴

C. Methodology

This Article employs multivariate regression analysis to study the relationship between the variables presented in Part III.B. The model selected is an ordered logit.¹⁰⁵ It is

99. *Id.*

100. *Id.*

101. *Id.* at 21–23. This variable was derived from answers to question 11 in the survey. *Id.*

102. *Id.* at 25. This variable was based on answers to question 13 in the survey. *Id.* Those agencies who answered “Exploratory/pilot deployment”, “Partial deployment”, or “Complete deployment for some assignments/partial deployment in others” were not considered to have fully deployed cameras for purposes of this variable. *Id.*

103. This variable was derived from answers to questions 8 and 12 in the survey. *Id.* at 14–15, 23–25.

104. *Id.* at 12–13.

105. Ordered logit regression has been previously employed in examining data in the legal and law enforcement contexts. See generally Christopher L. Griffin, Jr. et al., *Corrections for Racial Disparities in Law Enforcement*, 55 WM. & MARY L. REV. 1365 (2014) (analyzing criminal dispositions in DWI cases); Chris Guthrie

appropriate to use such model with ordinal variables when it is unclear that the distance between responses is constant.¹⁰⁶ The model estimated is:

$$Y_i^* = \beta \text{Motivation}_i + \lambda \text{Strength}_i + \delta \text{Agency_Type}_i + \varepsilon_i$$

where Y_i^* is the unobserved latent variable underlying agency i 's measurement of the outcome of interest, Motivation_i are agency i 's ratings of each of the seven motivation variables described above, Strength_i are the three indicators of strength for agency i , Agency_Type_i is one if agency i is a state agency and zero otherwise, and ε_i is the residual error.¹⁰⁷

In the interpretation of the results, the focus will be on

et al., *The "Hidden Judiciary": An Empirical Examination of Executive Branch Justice*, 58 DUKE L.J. 1477 (2009) (analyzing judges); Milan Markovic & Gabriele Plickert, *The Paradox of Minority Attorney Satisfaction*, 60 INT'L REV. L. & ECON. 1 (2019) (analyzing minority attorney satisfaction).

106. See, e.g., Courtney Megan Cahill & Geoffrey Christopher Rapp, *Does the Public Care How the Supreme Court Reasons? Empirical Evidence from a National Experiment and Normative Concerns in the Case of Same-Sex Marriage*, 93 N.C. L. REV. 303, 336–37 (2015); see also Reeve T. Bull & Jerry Ellig, *Statutory Rulemaking Considerations and Judicial Review of Regulatory Impact Analysis*, 70 ADMIN. L. REV. 873, 931 (2018) ("The dependent score variables are ordinal. An analysis of the systemic problem that receives a score of two points, for example, is not necessarily twice as good as an analysis that receives a score of one point. Since the dependent variable is ordinal, the most appropriate econometric method is ordered logit."). In the context of this Article, ordered logit is employed because, for instance, it would not be clear that the difference between "Agree" and "Disagree" would be the same as the difference between "Agree" and "Strongly Agree". See Cahill & Rapp, *supra* note 106, at 337.

107. 2016 LEMAS-BWCS, *supra* note 76, at 87–92; Hosein Mohammadi et al., *Application of Ordered Logit Model in Investigating the Factors Affecting People's Income (A Case Study in Tehran City)*, 5 INT'L J. ACAD. RESEARCH ECON. & MGMT. SCI., 166, 169–70 (2015). The relationship between the observable variable (Y_i) and the latent variable (Y_i^*) is obtained as follows: $Y_i^* = 1$ (Strongly Disagree) if $-\infty < Y_i^* < \mu_1$, $Y_i^* = 2$ (Disagree) if $\mu_1 \leq Y_i^* < \mu_2$, $Y_i^* = 3$ (Agree) if $\mu_2 \leq Y_i^* < \mu_3$, and $Y_i^* = 4$ (Strongly Agree) if $\mu_3 \leq Y_i^* < \infty$, $i = 1, \dots, n$. See Mohammadi et al., *supra*, at 169–70. Here, n is the number of observations and the μ terms denote cutoffs. See *id.* Although the descriptive statistics in this Article use weights, the regression analysis does not. See generally Gary Solon et al., *What Are We Weighting For?*, 50 J. HUMAN RESOURCES 301 (2015); Jin Young Lee & Gary Solon, *The Fragility of Estimated Effects of Unilateral Divorce Laws on Divorce Rates*, 11 B.E. J. ECON. ANALYSIS & POL'Y 49 (2011).

the coefficients' statistical significance, rather than their magnitudes, since coefficients in ordered logit regression lack the same straightforward interpretation as those in ordinary least squares regression.¹⁰⁸ The next Part will discuss this Article's empirical findings.

108. Bull & Ellig, *supra* note 106, at 931.

IV. EMPIRICAL FINDINGS

This Part presents the Article's findings based on descriptive statistics and regression analysis. A discussion of study limitations and robustness is also included.

A. *Descriptive Statistics*

As a preliminary matter, a number of descriptive statistics from the LEMAS-BWCS study provide insights into motivations, implementation, and outcomes.¹⁰⁹ First, the data suggests that in and around 2016 approximately half of agencies (47%) had adopted BWCs.¹¹⁰

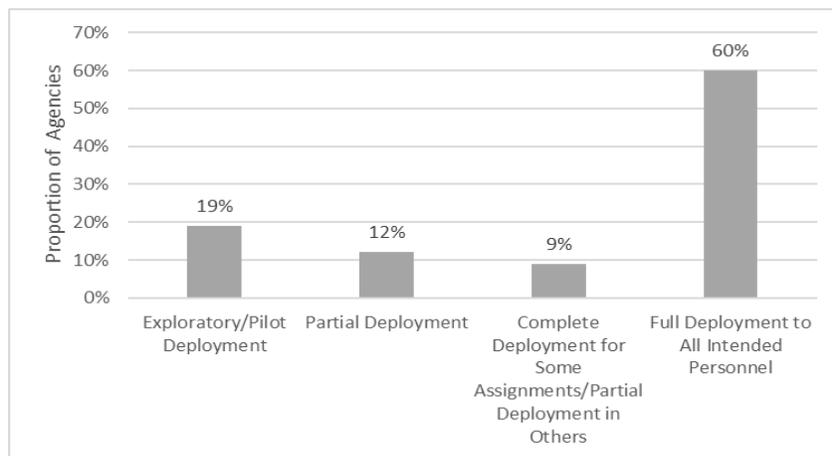
Second, approximately 60% of adopting agencies had fully deployed BWCs to all intended personnel.¹¹¹ Approximately 40% of agencies had only made exploratory/pilot deployment, partial deployment, or full deployment for some assignments and partial deployment for others.¹¹² Figure 1 reflects this BWC deployment status.

109. For purposes of these descriptive statistics, weights are used.

110. 2016 LEMAS-BWCS, *supra* note 76, at 16 (question 10a).

111. *Id.* at 25. It should be noted that missing values and observations not providing helpful data for purposes of this Article's focus—such as “Unsure/don't know” or “Don't know”—are generally excluded in reaching and reporting the Article's findings. *See generally id.*

112. *Id.* at 25.

Figure 1: Agency Degree of BWC Deployment¹¹³

Third, Figure 2 reflects which rationales are the perceived primary drivers of BWC adoption at the agencies.¹¹⁴ Responses receiving less than 100 observations—including “Improve training”, “Improve officer professionalism”, “Reduce use of force incidents”, and “Simplify incident review”—are aggregated into the “Other Reasons” category. As can be seen, 66% of adopting agencies selected “Improve officer safety”, “Improve officer/agency accountability”, “Reduce or more quickly resolve citizen complaints”, or “Reduce agency liability”.¹¹⁵ The data suggests that while officer training and reducing use of force, for instance, may be raised as normative benefits of BWCs, they are comparatively less likely to be the primary rationale for agencies to adopt BWCs.¹¹⁶

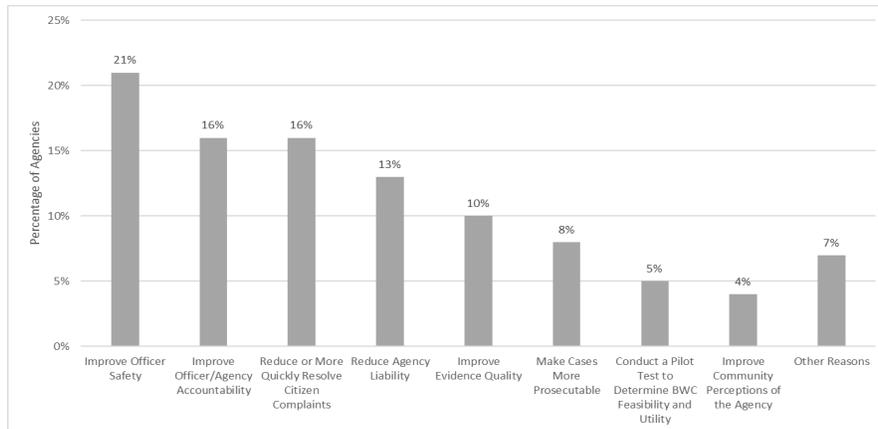
113. *Id.* Of the agencies who reported that they adopted BWCs, approximately 69 agencies (or 4%) either failed to answer this question or answered “Unsure/don’t know”. *Id.*

114. *Id.* at 45.

115. *Id.*

116. *See id.* This does not mean that the rationales receiving fewer observations are necessarily less important generally, only that they are less relevant as the *most important* driver of adoption.

Figure 2: Agencies' Most Important Reasons for Acquiring BWCs¹¹⁷



Finally, Figure 3 reflects the agencies' levels of agreement with statements relating to perceptions of expense, staff time, and benefits associated with BWCs.¹¹⁸ Figure 3 shows that over half of agencies agreed or strongly agreed with the statements "Body-worn camera implementation was more expensive than anticipated" and "Body-worn camera implementation required more staff time than anticipated".¹¹⁹ This suggests that many agencies were not prepared for the costs and staff resource allocations required to implement their BWC programs.¹²⁰ If policy-

117. *Id.* at 45–46. Of the agencies who reported that they adopted BWCs, approximately 160 agencies (or 8%) either failed to answer this question or answered "Unsure/don't know". *Id.* Although this table uses weights, it only itemizes motivations receiving at least 100 unweighted observations. *Id.* Those motivations receiving under 100 unweighted observations are aggregated into "Other Reasons". *Id.* Motivations within "Other Reasons" include: "Response to external pressures (e.g. legislative, judicial or executive mandate from outside of the police agency)", "To receive funding that required purchase of body-worn cameras", "Strengthen police leadership", "Simplify incident review", "Reduce use of force incidents", "Improve officer professionalism", "Improve training", and "Other (please specify)". *Id.*

118. *See id.* at 87–92. These questions seek only the perceptions of the agencies, which does not necessarily reveal an accurate picture of the agencies' actual experience with BWCs.

119. *Id.* at 87–88.

120. *See id.* Moreover, although not apparent from the data, commenters have

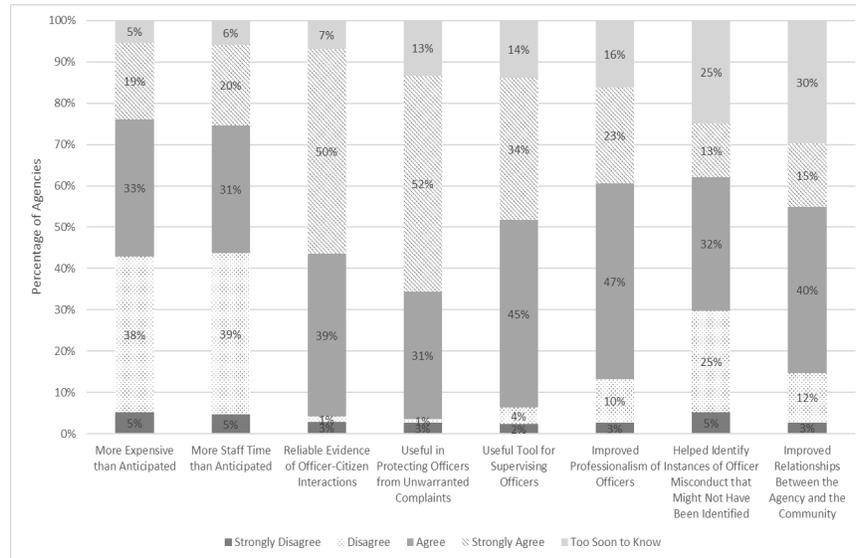
makers wanted to better prepare agencies for the resources required for BWC implementation, one option could be to encourage information sharing on effective costs between agencies who have already adopted BWCs and those who plan to adopt them. Figure 3 also shows that over 80% of agencies agreed or strongly agreed with the statements “Body-worn cameras provide reliable evidence of officer-citizen interactions” and “Body-worn cameras have been useful in protecting officers from unwarranted complaints”, while less than half of agencies agreed or strongly agreed that “Body-worn cameras have helped identify instances of officer misconduct that might not have been identified without them”.¹²¹ This might suggest that, for instance, if an agency’s goal is to improve identification of officer misconduct following the George Floyd-related protests, different or additional strategic actions might be required.¹²²

suggested that a substantial cost of BWCs also comes after implementation, such as for ongoing data storage. *See supra* Part II.B.2. This could even increase the need for agencies to be prepared to spend greater resources than anticipated.

121. *See* 2016 LEMAS-BWCS, *supra* note 76, at 88–91.

122. It could also mean other things, including that the perceptions of respondents do not reflect reality.

Figure 3: Agencies' Levels of Agreement with Resource and Benefits Statements¹²³



B. Regression Analysis

Table 2 presents the estimates of the ordered logit regression for the eight outcomes of interest. What emerges from these results is that a greater commitment to a BWC program—what this Article terms “going big”—is correlated with more favorable perceptions of the resources required for, and benefits of, BWC programs.

123. *Id.* at 87–92. Of the agencies who reported that they adopted BWCs, the approximate number of agencies who failed to answer these questions or answered “Don’t know” is as follows: (a) More Expensive than Anticipated (153 agencies or 8%), (b) More Staff Time than Anticipated (137 agencies or 7%), (c) Reliable Evidence of Officer-Citizen Interactions (99 agencies or 5%), (d) Useful in Protecting Officers from Unwarranted Complaints (127 agencies or 7%), (e) Useful Tool for Supervising Officers (152 agencies or 8%), (f) Improved Professionalism of Officers (204 agencies or 11%), (g) Helped Identify Instances of Officer Misconduct that Might Not Have Been Identified (238 or 12%), and (h) Improved Relationships Between the Agency and the Community (381 agencies or 20%). *Id.* Please note, a greater number of missing values may increase bias.

Table 2: Ordered Logit Regression Results¹²⁴

	More Expensive	More Staff Time	Reliable Evidence	Protect from Complaints	Supervise Officers	Improve Professionalism	Identify Misconduct	Improve Agency- Community Relationships
	Coeff. (s.e.)	Coeff. (s.e.)	Coeff. (s.e.)	Coeff. (s.e.)	Coeff. (s.e.)	Coeff. (s.e.)	Coeff. (s.e.)	Coeff. (s.e.)
Months of Adoption	0.002 (0.002)	-0.001 (0.002)	0.002 (0.002)	0.007*** (0.002)	0.003 (0.002)	0.004* (0.002)	0.006*** (0.002)	0.007** (0.003)
Full Deployment	-0.868*** (0.115)	-0.981*** (0.116)	0.409*** (0.119)	0.436*** (0.128)	0.476*** (0.126)	0.431*** (0.130)	0.182 (0.129)	0.602*** (0.155)
Cameras/Officers	-0.175* (0.103)	-0.280*** (0.102)	0.000 (0.101)	-0.012 (0.109)	0.130 (0.107)	0.067 (0.108)	0.081 (0.115)	0.017 (0.143)
State Agency	-0.259 (0.727)	0.355 (0.676)	-1.158 (0.732)	-2.209*** (0.796)	-2.257*** (0.709)	-1.864* (0.959)	-1.247 (0.871)	-1.336 (1.217)
Improve Safety	-0.144 (0.174)	-0.176 (0.174)	0.122 (0.186)	0.133 (0.201)	0.039 (0.202)	-0.029 (0.211)	-0.028 (0.212)	0.356 (0.252)
Improve Accountability	-0.228 (0.178)	-0.097 (0.177)	0.372* (0.191)	0.251 (0.204)	0.293 (0.203)	0.243 (0.214)	0.212 (0.215)	0.655** (0.255)
Improve Evidence	-0.266 (0.208)	-0.423** (0.207)	0.080 (0.218)	0.293 (0.240)	-0.169 (0.234)	-0.462* (0.247)	-0.581** (0.249)	-0.288 (0.293)
Improve Community Perceptions	-0.170 (0.242)	0.472* (0.240)	0.239 (0.256)	0.342 (0.287)	-0.273 (0.282)	-0.396 (0.295)	0.058 (0.299)	1.007*** (0.341)
Reduce Liability	-0.469** (0.200)	-0.430** (0.197)	-0.007 (0.209)	0.152 (0.230)	-0.106 (0.227)	-0.396* (0.238)	-0.272 (0.232)	-0.158 (0.280)
Reduce/Resolve Complaints	-0.428** (0.190)	-0.398** (0.190)	-0.073 (0.201)	0.189 (0.216)	-0.197 (0.218)	-0.228 (0.229)	-0.205 (0.227)	-0.286 (0.276)
More Prosecutable	-0.091 (0.227)	-0.203 (0.224)	0.274 (0.240)	0.453* (0.265)	-0.059 (0.254)	-0.289 (0.270)	-0.413 (0.272)	-0.499 (0.316)
Number of Observations	1,492	1,500	1,498	1,366	1,333	1,238	1,091	909
χ^2	116.28	184.85	29.10	40.03	48.96	41.07	28.56	63.85
Prob > χ^2	0.000	0.000	0.002	0.000	0.000	0.000	0.003	0.000
Pseudo R ²	0.032	0.051	0.011	0.018	0.020	0.016	0.011	0.034

Note: *p < 0.1, **p < 0.05, ***p < 0.01 (two-tailed tests)

The coefficient of Full Deployment is statistically significant at the 1% level in all but one regression. This coefficient is negative in the regressions of More Expensive and More Staff Time, suggesting that agencies describing the current state of their BWC program as “[f]ull deployment to all intended personnel” are less likely to find that BWC implementation was “more expensive” or “required more staff time” than was anticipated.¹²⁵ On the other hand, the coefficient of Full Employment is positive in the regressions

124. See generally *id.*

125. *Id.* at 25, 87–88.

of the perceived benefits Reliable Evidence, Protect from Complaints, Supervise Officers, Improve Professionalism, and Improve Agency-Community Relationships. This means that agencies who have fully deployed BWCs are more likely to agree that BWCs “provide reliable evidence of officer-citizen interactions”, “have been useful in protecting officers from unwarranted complaints”, “have been a useful tool for supervising officers”, “have improved professionalism of officers”, and “have improved relationships between the agency and the community”.¹²⁶

The coefficient of Months of Adoption is positive and statistically significant in the regressions of Protect from Complaints, Improve Professionalism, Identify Misconduct, and Improve Agency-Community Relationships. This suggests that the longer time an agency has had BWCs, the more likely it is to perceive benefits.¹²⁷ It is possible that certain benefits of BWCs might not be immediately visible, and that agencies may need to commit to BWC programs for a longer period of time to fully enjoy these benefits.

The coefficient of Cameras/Officers is negative and statistically significant in the regressions of More Expensive and More Staff Time. This suggests that agencies with more BWCs per full-time sworn officers are more likely to be prepared for the cost and staff resources required for implementing BWC programs.

Taken together, these results suggest that agencies who “go big” might be more prepared for the resources required for implementing their BWC programs and more likely to perceive benefits of such programs. “Going big” might entail agencies committing to fully deploying their cameras, deploying more cameras per sworn officers, and employing their camera programs for a longer period of time.

126. *See id.* at 88–92.

127. *See id.* at 89–92.

C. *Limitations & Robustness*

The findings of this Article are subject to a number of limitations, and several of the most noteworthy are worth specifically emphasizing. First, there are data limitations, as certain data was not available in the LEMAS-BWCS dataset. For instance, the dataset only included information on a subset of possible benefits.¹²⁸ Similarly, it was not possible to sufficiently control for an agency's available resources using the data. Second, there are issues of measurement. In particular, reliance on agency respondent perceptions limits the findings.¹²⁹ For instance, it is possible that the results reflect the perceptions of individuals completing the survey rather than those of the agencies themselves.¹³⁰ Perceptions are also innately subjective and may change over time.¹³¹ Further, in relying solely on perceptions of agency respondents, the results do not speak to perceptions of other relevant stakeholders, such as community members, jurors, or prosecutors.¹³² Third, although based on a national survey, the findings might not be generalizable to all U.S. law-enforcement agencies.¹³³ Finally, this Article only makes

128. *Id.* at 45, 87–92. Importantly, this is in no way a criticism of the data collection, as there may be good reason to limit the number of questions posed, so as to avoid a burdensome and lengthy survey. *See, e.g.*, Phillips et al., *supra* note 11, at 462.

129. *See* Pickering, *supra* note 11, at 400. Perceptions are different from objective metrics of outcomes.

130. Although this may be an issue for many surveys, it would seem to be a greater issue in the present context. For instance, in a household survey, the respondent may be speaking for only several other people. In the context of the LEMAS-BWCS survey, respondents could be speaking on behalf of a full agency.

131. For instance, an individual who is optimistic might be more likely to see positive outcomes or an individual who had a positive experience with BWCs directly prior to the survey may be more likely to reflect positive perceptions than they would have days before.

132. *See* Pickering, *supra* note 11, at 400.

133. *See* Phillips et al., *supra* note 11, at 462; Pickering, *supra* note 11, at 400; Todak & Gaub, *supra* note 84, at 310.

claims in terms of correlation. As no causal claims are advanced, concerns of endogeneity are diminished.¹³⁴

Three checks were also performed to check robustness of the findings. First, the regression was run using weights. The results were qualitatively similar.¹³⁵ Second, the regression was run using ordinary least squares rather than ordered logit. The results were also qualitatively similar.¹³⁶ Finally, to ensure they were not improperly influencing the findings, the regression was run without the motivation and agency-type independent variables. Again, the results were qualitatively similar.¹³⁷

134. One particular endogeneity concern is the impact of agency resources. Agency resources could theoretically affect both the independent and the dependent variables in the model, and there was no way to adequately control for it using the LEMAS-BWCS data.

135. The only difference important for the “going big” narrative is that the relationship between the Cameras/Officers independent variable and the More Expensive dependent variable is no longer statistically significant.

136. The only difference important for the “going big” narrative is that the relationship between the Months of Adoption independent variable and the Improve Professionalism dependent variable is no longer statistically significant.

137. The only difference important for the “going big” narrative is that the relationship between the Months of Adoption independent variable and the Improve Professionalism dependent variable is no longer statistically significant.

V. CONCLUSION

This Article seeks to help fill a gap in the BWC literature regarding resources and benefits. Important study limitations notwithstanding, the Article makes the primary finding that a greater commitment to a BWC program—or “going big”—is correlated with more favorable perceptions regarding the resources required for, and benefits of, BWC programs. The Article’s results suggest that agencies could consider “going big” when adopting BWC programs if governmental priorities and resources allow.¹³⁸

There are a number of avenues for future research, several of which are suggested here. First, as part of future large-N datasets, it would be helpful to have objective metrics on multiple outcomes in addition to data on an agency’s perceived outcomes.¹³⁹ Objective metrics would help alleviate some of the limitations posed by relying on respondent perceptions as a proxy. Second, it would be helpful if such future datasets include perceptions of multiple stakeholders rather than relying solely on agency perceptions. Having perceptions of others—such as community members, prosecutors, defense attorneys, and jurors—might help reduce bias and present a broader perspective.¹⁴⁰ Third, it would be helpful to have additional data which is more easily decomposable by subgroups, such as by race, gender, or disability status. Analysis of this data might provide insights into whether results vary across subgroups. Fourth, it would be helpful to build additional panel data on outcomes, based on parallel questions posed

138. There may, of course, be other good reasons not to implement a large BWC program, such as the privacy or fairness considerations mentioned in Part II.B.2. A department may also prefer to take an incremental approach.

139. For instance, future large-N datasets might help illuminate the average number of days for resolution of citizen complaints in agencies with BWCs as opposed to those without BWCs.

140. See *supra* Part IV.C.

before and after BWC adoption.¹⁴¹ This type of data would permit analysis of changes over time, control for possible effects of time-invariant differences between agencies on the relationships studied, and potentially suggest further relationships between motivations and outcomes. Additional experimental data would be even more helpful to identify causality. The hope is that this Article will encourage future analysis into these and related areas, such that a more fulsome, data-driven picture of BWC programs might ultimately be revealed.

141. For instance, respondents could be asked about their level of satisfaction with each of the primary motivations for acquiring cameras.