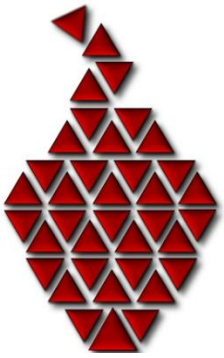

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Citizens' Support for and Reactions to Police Body-Worn Cameras

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August, 2020

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The Finn Institute was established in 2007, building on a set of collaborative projects and relationships with criminal justice agencies dating to 1998. The first of those projects, for which we partnered with the Albany Police Department (APD), was initiated by John Finn, who was at that time the sergeant who commanded the APD's Juvenile Unit. Later promoted to lieutenant and assigned to the department's Administrative Services Bureau, he spearheaded efforts to implement problem-oriented policing, and to develop an institutional capability for analysis that would support problem-solving. The APD's capacity for applying social science methods and results thereupon expanded exponentially, based on Lt. Finn's appreciation for the value of research, his keen aptitude for analysis, and his vision of policing, which entailed the formulation of proactive, data-driven, and – as needed – unconventional strategies to address problems of public safety. Lt. Finn was fatally shot in the line of duty in 2003. The Institute that bears his name honors his life and career by fostering the more effective use of research and analysis within criminal justice agencies, just as Lt. Finn did in the APD.

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Introduction

The proliferation of body-worn cameras (BWCs) among police agencies across the nation emerged largely in response to sweeping demands for increased police accountability and transparency: heightened tensions between the police and the public in the aftermath of several high-profile in-custody deaths spurred attention to this technological innovation, and its benefits were expected to accrue to both law enforcement and community. Early media accounts' praise for BWC technology heralded its potential to rebuild police-community relationships, reinforce accountability mechanisms for police, improve the quality of evidence in police investigations, and reduce the number of frivolous civilian complaints. Emblematic of its widespread appeal, in the aftermath of Michael Brown's shooting, the Brown family urged the public to unite behind a platform that promotes the police use of body-worn cameras (Sink, 2014). The President's Task Force on 21st Century Policing (2015) endorsed the dissemination and implementation of policing technologies such as BWCs, and it noted the urgent need for expanded research on the efficacy and practicability of BWCs.

The Task Force also called for inquiry into the potential impacts of BWCs on the communities in which they are deployed. To wit, the report (2015: 32) quoted Ronald L. Davis, then the director of the Office of Community Oriented Policing Services (COPS Office), who wrote (in Miller and Toliver, 2014: vii):

> Although body-worn cameras can offer many benefits, they also raise serious questions about how technology is changing the relationship between police and the community. Body-worn cameras not only create concerns about the public's privacy rights but also can affect how officers relate to people in the community, the community's perception of the police, and expectations about how police agencies should share information with the public.

The public's embedded significance and relevance to the implementation of BWCs is underrepresented by the body of research on the subject, most of which spotlights police perceptions, and police and citizen behavior. In their review of BWC research, Lum and colleagues (2019) found that the number of studies examining officer behavior and attitudes were double those in which citizen or community attitudes were examined as outcomes. BWC technology emerged in part as a response to public demands; a fundamental question underlying the use of BWCs is what the public thinks about BWCs, and why. But evidence on how the public views this technology, and the correlates of

public sentiment is slim. Expanding this research could be crucial to understanding the potential impacts of current and future reforms, and that is the purpose of our study.

Previous Research

Citizen Support

Extant research has found nearly ubiquitous and overwhelming public support for police use of BWCs across populations that are both served by agencies equipped with BWC technology, and those to whom questions about BWCs are a hypothetical proposition. A number of surveys administered in 2015 established an evidentiary basis for this approval. Sousa and colleagues' national survey of citizens' attitudes towards BWCs found that 85% of respondents expressed support for police officers wearing BWCs. Another national survey conducted by YouGov America, Inc., an online market research and opinion polling company, found that public perception of body-worn cameras is overwhelmingly supportive, with only 7% of respondents opposing the technology. This same year, Crow and colleagues administered a BWC attitudes survey in two Florida counties, prior to the local agencies' adoption of a BWC program. The majority of survey responses were supportive, with 87.1% of respondents agreeing that BWCs would improve officer behavior.

Public perceptions of the potential for BWCs to affect officer behavior lend some insight to individual foundation of their BWC support, though still leave us with an incomplete picture of the bases upon which respondents form their opinions. Over the course of two survey waves, the Toronto Policing Services (2016) queried respondents' perceptions of BWCs before and after the department adopted the technology. The surveys revealed that respondents' awareness of the department's BWC deployment ranged from 52% (in wave 1) to 66% (in wave 2), among whom the vast majority (92% to 94%) believed BWCs would make police more accountable. In 2017, White, Todak, and Gaub surveyed BWC perceptions in Spokane, WA, sampling residents who recently had an encounter with the police, finding that over 90% of respondents expressed support for BWCs. The following year, the same authors conducted research on BWC perceptions in Tempe, AZ, in which over 90% of respondents agreed that all Tempe officers should wear BWCs, noting that this would increase the level of professionalism and respect between citizens and officers. In a Public Attitude Survey administered to London residents during a body-worn video (BWV) trial by the Metropolitan Police Services in 2014, respondents expressed high levels of support for the technology. Though only a slight majority were aware of BWV deployment, lopsided majorities agreed that it would increase accountability (92%), push police to 'do the right thing'

(87%), increase fair treatment of citizens (87%), ensure officers 'act within the law' (90%) and follow procedure (90%) (Grossmith, et al. 2015). Sousa and colleagues' 2015 research showed that a large percentage of survey respondents thought BWCs would make police act more respectfully (86%) towards victims and suspects, and would reduce police use of force (80%) and misconduct (82%). Ninety-one percent of respondents agreed that BWCs would increase police transparency.

Citizen Perceptions of BWC Effect on Police-Community Relations

While public attitudes toward the use of BWC technology in policing are almost uniformly positive, optimism concerning the downstream impacts of BWCs on community-police relationships is less prevalent. In Sousa and colleagues' (2015) research, 61% of respondents expressed that BWCs would result in greater trust from the community, and only 36% believed that racial tensions would be reduced as a result of BWC implementation. Performing more extensive analysis of this survey data, Sousa et al. further reported that while 66% of citizens agreed that BWCs would improve police-community relations, agreement differed across demographic groups. Those who were younger and identified as Black were less likely to believe that BWCs had the potential to improve such relations, and likewise had less positive outlooks regarding BWCs' potential to affect community trust or to alleviate racial tensions. Concerning these lower levels of agreement, the authors posited: "This may be because these notions – trust, police-citizen relationships, tensions between police and citizens – are likely less tangible to most citizens" (2017: 106).

Indirectly addressing the issue of police-community relations, Crow and colleagues (2017) queried respondents' views about the potential for BWCs to increase police legitimacy. Approximately 78% of survey participants agreed that legitimacy would increase with BWC use. Analysis of the Toronto Policing Services (2016) BWC survey revealed that across two survey waves, pre- and post-BWC deployment, 82-85% of respondents believed that BWCs would improve public trust in the police. The Police Executive Research Forum's analysis of citizen BWC perceptions in Arlington, TX, also found that perceptions of BWCs' potential to affect police-community relationships was tempered by the type of contact (involuntary or voluntary) that citizens had had with police and their race, concluding that "BWCs are most likely not a stand-alone remedy for improving police-community relations" (PERF, 2017: 34).

Privacy Concerns

One concern for police use of BWC is the threat the technology may pose to citizens' privacy. Potentially undercutting some of the rationale for its deployment,

recording the public without their explicit permission may present further barriers to improving perceptions of police legitimacy. As the report of the 21st Century Policing Task Force notes, "…when the public does not believe its privacy is being protected by law enforcement, a breakdown in community trust can occur" (2015: 32). However, the data do not reflect strong evidence of this concern. Crow and colleagues (2017) found that only 11% of respondents agreed that BWCs invaded resident privacy, demonstrating that most respondents were fairly indifferent about this potential threat. In the Metropolitan Police Services' BWV Public Attitude Survey, 62% of respondents disagreed that police-worn cameras would invade citizens' privacy (Grossmith, et al. 2015). Across the two waves of the Toronto Policing Service's study, 29%-30% of citizens expressed concern about their privacy. This survey included several items that could serve to tease out respondents' rationale for this apprehension, and early reported privacy concerns in Toronto included the notion that "the body-worn cameras would make people hesitant to report or reach out to the police" (2016: 56)

Extant research has yet to address the possible correlates to this hesitation as it relates to BWC, and there is mixed evidence regarding perceptions of the camera's effect on an individual's provision of information to the police. During the rollout of BWC by the Edmonton Police Services (2015) in Canada, a 2013 public survey asked for respondents' opinions of the potential effects of BWC on a citizen's willingness to provide information about an incident. Of the 58% of respondents who estimated that there would be some kind of effect, 67% believed the camera would encourage more cooperation. In an analysis of the BWC rollout at the Metropolitan Police Services in London (Grossmith, et al. 2015), researchers used the case closure reasons of "Victim Unwilling to Prosecute" and "Insufficient Evidence to Proceed" as proxy measures of victim cooperation. Comparing cases worked by both treatment officers (those wearing a BWV) and control officers (those not wearing a BWV), researchers found no significant effect of the camera on the provision of information by a victim, though the limitations of these measures underscore the tentative nature of the findings.

Influences on Support

Evidence on the underlying factors that contribute to perceptions of BWCs is meager. The 2015 survey conducted by YouGov Inc. concluded that "support [for BWC] is very high regardless of demographic group." Despite its wide support, citizen perceptions of BWCs may vary by individual characteristics, as do broader attitudes about policing and criminal justice. It should be noted, however, that support for BWCs does not reflect a monolithic perspective on why that technology is beneficial. BWC approval might spring from a viewpoint that the cameras serve as a check on police

misconduct; alternatively, this support might be motivated by an expectation that BWCs serve as a vindication of police performance.

Within evidence of broad support for BWCs, findings on the effects of demographic characteristics on BWC attitudes are mixed. In a 2017 follow-up analysis of their 2015 national survey, Sousa and colleagues examined the effects of race, income, city residency, education, and gender on citizens' BWC perceptions. The data revealed that Black and White respondents differed in the degree to which they perceived BWC benefits: while 68% of White respondents estimated that BWCs would improve police relations with the community, only 51% of Black respondents agreed. Similarly, 63% of White respondents believed the BWCs would increase public trust in police, compared to 45% agreement among Black respondents. Sousa and colleagues' deeper analysis of BWC attitudes and demographic characteristics led the authors to conclude "…that citizen's general demographic characteristics have little direct or indirect effect on support for BWCs. Instead, public support for police use of BWCs is more directly tied to their beliefs about the perceived benefits of this technology in terms of improving transparency, police–citizen relations, and citizen's trust" (2017: 105).

Crow and colleagues' analysis also determined that the primary correlates to BWC attitudes were not only race-related, rather that: "perceptions of procedural fairness, race, age, and crime concern all had indirect effects on the perceived benefit of BWCs" (2017: 601). Though the authors found less support among younger and non-white respondents, they noted that procedural justice and crime concern served as mediators to race and age effects. With regards to the antecedents of these views, the authors hypothesized: "Most people hold generally positive views of the police. This support for the police may translate into positive perceptions of BWCs, not because of the hope that the technology will correct bad police behavior, but because the public believes videos of the police doing their jobs well will exemplify and reinforce positive perceptions of police legitimacy" (2017: 605).

To more narrowly analyze the correlates of BWC attitudes, Graham and colleagues (2019) used the YouGov survey platform to construct a nationally representative survey of African American-only respondents, a small portion of whom were police officers. The researchers found that within this sample, support for BWC use was very high, as was support for broader reform efforts such as diversity training, citizen review boards, hiring more black officers, and community policing. Officers included in the study expressed support for BWCs, but less intensely than the broader public: while 86% of the public expressed support, 67% of police officers expressed

support. Further, 67% of the non-officer respondents strongly supported BWCs, compared to only 11% of the officer respondents.

Qualitative research on public attitudes toward BWC is thin, though one account presents a compelling glimpse into deeper individual perspectives. In a qualitative study by Kerrison, Cobbina, and Bender (2018), conducted in Baltimore just months after the death of Freddie Gray, in-depth interviews with Baltimore residents and people who had been active in protests revealed that there was some doubt among respondents concerning the perceived benefits of BWCs. The researchers found that: "While the overwhelming majority of Black respondents advocated for more video footage of police-civilian encounters … some were suspicious of the credibility of material produced by police" (2018: 281). Concerns about video manipulation or other narrative construction purposes were common; further, respondents voiced concerns that "BWCs may simply serve as another mechanism memorializing Black victimhood and subordination, and they are consequently hesitant to endorse their use" (2018: 285). Though the heightened emotional context in which these interviews were conducted should be noted, the depth of reflection and insight with which respondents delivered their perspectives illustrates the complexity that characterizes the formation of BWC opinions.

Procedural Justice and BWC Awareness

Studies of the effects of BWC on citizens' judgments about procedural justice are experimental or quasi-experimental trials that include a survey component, collecting data on citizens' perceptions of procedural justice as an outcome. The findings are mixed.

Two studies randomized the deployment of BWC by shift among officers conducting traffic enforcement. Saulnier, et al. (2020) assessed the effects of BWC on drivers stopped and released at sobriety checkpoints by a Canadian police agency. They found positive effects of BWC, though the effects were of a fairly small magnitude (Cohen's d = 0.28 by our calculation). Demir, Apel, et al. (2020) randomized the deployment of BWC by shift among traffic enforcement units working highways in the Eskisehir province of Turkey (also see Demir, 2019; Demir, Braga, and Apel, 2020; Demir and Kule, 2020). They too found positive effects, with a reported effect size of 1.04.

White, Todak, and Gaub (2017) capitalized on the experiment in Spokane to survey a random sample of 298 people who had interacted with officers wearing BWC. Only 28.5% reported that they were aware of the camera (2017: 694). (In their Tempe study, the same researchers found that only 23.6% of respondents said they were aware

of the camera; White, et al. 2018: 670.) The researchers compared the procedural justice judgments of Spokane respondents who were reportedly aware of the BWC during their encounter to those who were unaware. On each of nine survey items, the perceptions of the two groups differed in the expected direction, but reached statistical significance on only one item; the difference in the procedural justice summary scale was statistically significant, but substantively small to moderate in magnitude (Cohen's d = 0.35 by our calculation). Moreover, since awareness was obviously not randomized, the correlation between awareness and perceived procedural justice could be spurious, driven by a common third factor.

PERF (2017) conducted an experiment with the Arlington (TX) Police Department, randomizing the deployment of BWC by shift among 84 volunteer officers. They sampled citizens involved in documented contacts with the participating officers, including both voluntary (crime victims, witnesses, and people who contacted police for service) and involuntary (criminal suspects, arrestees, and traffic stops) contacts. The survey tapped elements of procedural justice (termed legitimacy) and professionalism, as well as satisfaction. Across all of the measures, PERF detected no differences attributable to the BWC "treatment" either among those with voluntary contacts with police or among those with involuntary contacts

McClure et al. (2017) executed an RCT in an unnamed city in the southwestern U.S., randomizing BWC among 60 officers (not shifts) to form three groups: a control group with no BWC; a treatment group with BWC and a script to notify citizens that their interaction was being recorded; and a second treatment group with BWC but no script. They surveyed 384 people who had documented contacts with the 60 officers, measuring perceptions of various elements of procedural justice and overall satisfaction with the encounter. Many respondents did not correctly remember whether the officer was wearing a BWC: 40% to 50% of respondents in each group did not recall; about one-quarter of those in a BWC group correctly remembered the BWC (though notification did not produce a meaningful increase); and 14% of the control group incorrectly recalled that the officer had a BWC. Nevertheless, satisfaction was higher with BWC, though the report of findings does not include enough detail to estimate the magnitude of the difference. Procedural justice was treated as a predictor rather than an outcome, even though procedural justice was not experimentally manipulated, and on that basis, the authors claimed that procedural justice had a stronger effect on satisfaction than BWC did. We might infer that, as a correlated outcome, procedural justice likely increased with satisfaction.

The strongest effects were found among traffic stops on Turkish highways, with much smaller effects in sobriety checkpoints. Traffic encounters are a distinct subset of police-citizen encounters, which tend to be routine and scripted (Mastrofski, et al. 2016). The Spokane and Arlington studies both examined a much wider and presumptively representative range of police-citizen encounters; Arlington purposely included and reported separately on involuntary contacts. Survey administration also differed: the studies of traffic enforcement provided for an immediate survey follow-up, as research assistants either administered surveys roadside or explained the survey and directed drivers to a web link; the other studies contacted potential respondents at a later time.

The highest level of awareness was surely found among those stopped by Turkish traffic enforcement units, as only 3 of 299 treatment group respondents indicated that they had not been notified of a BWC (and none of the 325 control group respondents said that they had been notified). It should be noted that BWCs used in this experiment were a front-facing model that reflected the citizen's own image during the interaction, likely enhancing the citizen's self-awareness and possibly introducing other psychological effects. Awareness was also high among drivers at the Canadian sobriety checkpoint, as 82.7% of the treatment group indicated that they had been notified about the BWC. Far lower levels of awareness were found in the other studies, even among those who interacted with officers who were given a script as part of their assignment to a treatment group partially defined by the notification feature. (Notification was not required in Spokane, and in Arlington was expected "when safe to do so.")

Where effects of BWC on perceived procedural justice were found, they could be attributable to either (or both) of two causal mechanisms: the hypothesized effect of BWC on officers' behaviors, and/or the "symbolic gesture" that BWC represent to the public. Saulnier et al. address these possibilities directly, and appear to favor the symbolic value of the BWC. The symbolism of BWC requires that citizens recognize that officers are wearing BWC and recording. BWC could affect officers' behavior, which we consider momentarily, but the second link in the causal chain is citizens' perceptions and judgments about officers' behavior, and there is reason to be skeptical that this link is a strong one (Worden and McLean, 2017; also see Nagin and Telep, 2020; Pina-Sanchez and Brunton-Smith, 2020).

The only study of which we are aware that examined the effect of BWC on officers' behavior was a systematic social observation study of Los Angeles Police Department (LAPD) officers, pre- and post-BWC deployment in two divisions. McCluskey, et al. (2019) conducted observations of 71 patrol shifts in 2015, pre-BWC, in

the Mission and Newton divisions of LAPD, and returned to conduct observations of 53 patrol shifts in 2016, post-BWC. They observed the same officers both pre- and post-BWC, to the extent feasible. Building on prior SSO research, their observation instrument enabled them to form measures of the four elements of procedural justice and, on that basis, a summary measure. Even though the pre-BWC level of procedural justice was, in their estimation, high, the level of procedural justice was still higher post-BWC. They infer that the deployment of BWC affected the level of procedurally just behavior in which officers engaged.

This study is quasi-experimental in nature, and so it is vulnerable to several threats to internal validity. History is one threat. For example, changes in management or supervision in either division could affect patterns of patrol officers' performance; that the effects of BWC were not uniform across divisions lends credence to this possibility. (On the four dimensions of procedural justice, statistically significant change was detected in three, in two of which the change was observed in one or the other but not both divisions.) Maturation in the form of the development of officers' skills is also conceivable: 22 officers were observed pre- and post-BWC, and they accounted for 34.4% of the citizens with whom the entire sample of officers interacted. Further, the Parole Compliance unit was disbanded between the pre- and post-BWC observations, such that officers in that unit – whose encounters with citizens are likely of the adversarial variety – were not observed post-BWC.

Be all that as it may, the evidence suggests that the deployment of BWC in LAPD led to improved procedural justice in officers' behavior, even controlling for the characteristics of their encounters with citizens, including the behavior of citizens to which officers needed to respond. Such changes may not be detectable to citizens, whose interpretations of their interactions with police are susceptible to the influence of their prior attitudes toward the police. The features of officers' behavior that may be the most detectable to citizens – i.e., procedural *in*justice – were quite infrequent in LAPD: officers were dismissive of or inattentive to citizens' viewpoints in 3.4%; officers were disrespectful toward citizens in 7.6%; officers indicated that personal characteristics influenced their decisions in 1.6%.

The evidence is fragmentary, to be sure, but the weight of the existing evidence suggests that BWC improve citizens' perceptions of procedural justice under some circumstances. Citizens' awareness that officers are using BWC is likely a necessary but insufficient condition, making the perceptual benefits of BWC technology limited by the numbers of citizens who recognize the presence of a camera during their encounter. In McClure and colleagues' survey, 43% of respondents said they did not recall either way

if the officer they encountered was wearing a camera. By comparing respondents' reported self-awareness of BWCs to the treatment group to which the officer was assigned (BWC or non-BWC), researchers were able to determine that of the respondents who said they did remember, "the same number were incorrect as were correct (28%, 91 people)" (2017: 4). In the Metropolitan Police Services' Public Attitude Survey, researchers found that though very few respondents (5%) reported noticing a BWV during their encounter, there was "no difference between levels of confidence (police are doing a good job in this area) whether respondents were aware of BWV or not" (Grossmith et al, 2015: 25). Awareness made no more than a small difference among citizens in Spokane, and seemingly no detectable difference in Arlington. However, research that has examined BWC awareness has, by and large, neglected to investigate correlates of BWC awareness, and what these possible relationships might tell us about BWC perceptions more generally. It may be that in ordinary traffic stops, police-citizen interactions are so routinized that the BWC are a notable component against the less-noisy background. In other, less predictable encounters, BWC compete with other cues for citizens' attention.

BWC Effects on Citizen Behavior

Citizen conduct can be defined by a multitude of behaviors, attitudes, verbal communications, and physical actions. As this question applies to BWCs, research tends to dwell on citizen compliance in an encounter, whether that be verbal or physical. Most of this research keys off of experimental or quasi-experimental designs, measuring citizen behaviors through administrative data on citizens resisting arrest, officer injuries, or assaults on officers. There is far less research on citizen's perceptions of BWC effects on their own behaviors, though evidence from extant work is mixed. It is important to note that this evidence is generally characterized by either subjective self-reported accounts of citizens' behavior in an interaction, or of responses of a hypothetical nature. In 2017, Crow and colleagues found that 79.4% of respondents agreed that the presence of a BWC would improve resident's behavior. In Sousa et al.'s 2015 research, 49% of respondents agreed that citizens would behave with more respect towards the police if officers were wearing BWCs. White and colleagues' survey of citizen attitudes about BWCs queried respondents if "Citizens would be more cooperative when they become aware than an officer is wearing a video camera," to which 70.2% agreed. However, when respondents who had been aware of a BWC in their own interaction were asked if that camera caused them to be more cooperative or cautious about what they said, only 10% agreed. White et al. express some pessimism about the likelihood of a civilizing effect of cameras on citizens. The authors point out that, lacking a complete account of

the contextual factors that may influence a citizen's (1) awareness of the camera, or (2) ability to consider the potential significance of their actions being recorded, researchers are forced to reckon with "the challenges with achieving the pre-conditions necessary for a BWC-generated civilizing effect on citizens" (2017; 698).

Citizen Support and Reactions in Albany

We formulate and test hypotheses about citizens' support for and reactions to BWC against data collected through a contact survey in Albany, NY. Located in upstate New York, Albany is the capital of the state, with a population of nearly 100,000. Unlike many other rust belt cities, Albany has not experienced large population declines. But Albany tends to have high violent and property crime rates relative to cities of comparable size, even as it has seen decreases in both that mirror the nationwide crime drop over the past 25 years.

The APD has an authorized strength of approximately 345 sworn officers, though at the time of our research, its actual strength was declining and stood at 316 in the fall of 2018. Uniformed patrol is organized in two divisions, each overseen by a commander, and within each division, three squads of 20 officers each commanded by a lieutenant. The city's 22 square miles are divided into 19 patrol zones. In addition, the Neighborhood Engagement Unit (NEU) deploys officers to one of 33 narrowly circumscribed beats (which overlap with the larger patrol zones), in which NEU officers practice problem-solving and community policing. The Special Operations division includes a specialized traffic unit.

As the recipient of a grant from the Bureau of Justice Assistance (BJA), the APD followed the BJA prescriptions for the development of its BWC policy and procedures. A committee was formed in the fall of 2015 and, to elicit input from both sworn personnel and the community, four subcommittees were established, concerned with: internal and external concerns/analysis; policy development and training; privacy; and IT/procurement. BWC were rolled out to the patrol divisions between December and April of 2018. By policy (Albany Police Department, 2017), APD officers are required to "activate their BWC without unnecessary delay upon being dispatched on a call" and "prior to citizen engagement during a self-initiated stop." Exceptions include: (1) circumstances "when an immediate threat to the officer's life or safety makes activating the BWC impossible or dangerous," whereupon the BWC is to be activated "at the first reasonable opportunity to do so"; (2) "when interviewing sexual assault victims or obvious juvenile victims"; and (3) "when entering personal residences for routine calls and requested not to record by occupants, unless enforcement action is necessary."

Officers are required to inform citizens that they are being recorded only if they are asked. APD policy also requires that supervisors review two body-worn camera recordings of each of their officers each month.

Sampling

The larger project from which this study is derived was designed to examine police supervision and police performance. The project provided for the collection of survey and/or observational data on police-citizen encounters by sampling from each of three populations:

- *Calls*. From among computer-aided dispatch (CAD) records of incidents that were not officer-initiated, we sampled from among call types that are likely to involve an interaction with a citizen, thereby excluding events that involved only property (e.g., a downed tree) or equipment malfunctions (traffic lights). Incidents that involved walk-ins to either patrol station were also excluded. Some types of calls were oversampled because, based on the code entered by a dispatcher, they involved types of incidents that were likely to pose greater challenges for police intervention, in which the skills of the officers would be more likely to manifest themselves. Specific call types were doubly-weighted for sampling, and still others were triply-weighted. See the appendix for sampling weights.
- *Stops*. We identified incidents that presumptively were stops from among CAD records of officer-initiated events. Only those for which the recorded call type was one indicating a potential for enforcement were treated as eligible stops. In general, stops concerned criminal acts that were in progress (e.g., a robbery, assault, or burglary), disorderly conditions (loud music, people acting annoyingly), and suspicious activity. Events with a recorded disposition of arrest were excluded on the assumption that they were eligible for sampling from among arrests.
- *Arrests*. Arrests were randomly selected, excluding those that recorded the offense location as the police station at which arrestees are booked (as we concentrated on police-citizen interactions in the field).

The sampling plan provided for rolling semi-monthly samples for 10 months among officers assigned to the A (midnight to 8 a.m.) and C (4 p.m. to midnight) shifts, with oversampling of stops and arrests relative to citizen calls for service. Because the survey was administered by phone, the samples were further restricted to identifiable individuals for whom a phone number was included in the administrative record. Calls for which the CAD record included the name – even if only a first name – of the caller

were eligible. Calls for which the name field on the CAD record included only the name of a security firm or another commercial establishment (e.g., CVS) were excluded, as were those for which the name field included only, e.g., 'ANON,' 'NURSE,' or 'CUSTOMER.' Only one record of an individual whose name appears on more than one CAD record in a sampling period was included as eligible. Stops were sampled for the contact survey when the officer prepared a field interview card, which includes the name of the individual and, sometimes, the individual's phone number. Due to time lags in the data entry process for field interview cards, however, only small numbers of stops could be linked to field interview information at the time of the sampling. Furthermore, many stops eventuate in a uniform traffic ticket (UTT), but UTTs do not capture the recipient's phone number. Other stops have no paper trail, and hence no record of the individuals who are contacted. Arrests were sampled so long as the arrest record included the arrestee's name (some records are sealed by the court) and a phone number. Response rates were acceptable by contemporary standards (see Table 1).

Table 1. Albany Contact Survey Response Rates

Disposition	N	% of contacted	% of total	Calls	Stops	Arrests
Completed	1,470	57.0	11.1	1,393	26	51
Incomplete	198	7.7	1.5	187	5	6
Refused	779	30.2	5.9	727	18	34
Language barrier*	65	2.5	0.5	63	0	2
Screened out	65	2.5	0.5	59	1	5
Total contacted	2,577	100	19.5	2,429	50	98
Not contacted - respondent unavailable	1,425	-	10.8	1,303	39	83
Not contacted – no answer, answering machine, other	7,457	-	56.4	6,707	224	526
Wrong number/disconnected	1,763	-	13.3	1,409	99	255
Total	13,222	-	100	11,848	412	962

* 25 Spanish language; 40 other language

Measures

BWC Support

The survey included eight items that queried respondents' views about BWCs and their potential effects on police. Among these items, two gauged general support regarding police use of BWCs. The first, shown in Table 2, captured the broader positive or negative perceptions among individuals as represented on a Likert-scale, which ranged from 1 (very unsupportive) to 4 (very supportive). Nearly 97% of respondents

indicated that they were either very or somewhat supportive of a requirement for police to wear BWCs. The second item concerning general support asked respondents to indicate their levels of agreement or disagreement with the phrase: "police should always have the body-worn camera on when interacting with a citizen," to which 95.5% of respondents agreed somewhat or strongly. From these two items, we formed a scale of general BWC support, which had a Cronbach's alpha of .722, and which ranged from 2 (strongly negative) to 8 (strongly positive).

BWC Effectiveness

Four BWC-related items asked respondents to estimate the potential for BWCs to influence officer behavior, specifically whether it would influence their decision to use force, or if the technology would make them more respectful, cautious, or professional (see Table 2). Responses to these items were also captured on a Likert-scale ranging from "disagree strongly" to "agree strongly."

Respondents tended to agree with statements regarding BWC effects on officer behaviors, albeit with less unanimity than responses to more general BWC items. Respondents agreed strongly or somewhat that BWCs would make officers more cautious and more professional (88.9% and 86.0%, respectively), while 80.0% agreed that BWCs would make officers more respectful, and 78.8% believed that BWCs would affect decisions to use force. From these four items, we constructed a scale for perceptions of BWC effectiveness (Cronbach's alpha= .848), which ranged from 4 (no effect) to 16 (strong effects).

Privacy Concerns

Concerns about privacy breeches that BWCs may introduce to the public warranted the inclusion of items regarding whether citizens should be notified of the presence of BWCs and exercise some control over their use. Two items were included to gauge this concern: "Police should notify citizens whenever a body-worn camera is recording" and "Police should comply with victim/witness requests to turn off body-worn cameras." The majority (81%) of respondents agreed strongly or somewhat with the former question, a small majority (61%) disagreed somewhat or strongly with the latter. Though conceptually cohesive, these items only weakly correlated (r = .16).

BWC Awareness

Respondents' awareness of the officers' BWC was measured with an item that asked "Were one or more of the officers you interacted with wearing a body-worn camera?" Only 14.1% (N = 220) answered affirmatively, while 17.6% indicated that the

officer was not equipped with a camera. The remainder – about two-thirds of all respondents – said that they did not know.

Table 2. Measures of BWC Attitudes and Perceptions

	Frequency	Percent	Mean	SD
In general, do you support requiring police to wear body-worn cameras?			3.79	.546
-very supportive (4)	1226	84.0		
-somewhat supportive (3)	186	12.7		
-somewhat unsupportive (2)	24	1.6		
-very unsupportive (1)	24	1.6		
Police should always have the body worn camera on when interacting with a citizen.			3.79	.588
-strongly agree (4)	1252	85.8		
-somewhat agree (3)	141	9.7		
-somewhat disagree (2)	35	2.4		
-strongly disagree (1)	32	2.2		
BWC Support scale			7.58	100.
Body-worn cameras will affect an officer's decision to use force.			3.17	1.00
-strongly agree (4)	697	49.0		
-somewhat agree (3)	422	29.7		
-somewhat disagree (2)	148	10.4		
-strongly disagree (1)	154	10.8		
Body-worn cameras will make officers more respectful.			3.21	.951
-strongly agree (4)	700	49.1		
-somewhat agree (3)	451	31.6		
-somewhat disagree (2)	149	10.4		
-strongly disagree (1)	126	8.8		
Body-worn cameras will make officers more cautious in making decisions.			3.45	.812
-strongly agree (4)	865	60.5		
-somewhat agree (3)	405	28.4		
-somewhat disagree (2)	91	6.4		
-strongly disagree (1)	68	4.7		
Body-worn cameras will make officers behave more professionally.			3.36	.892
-strongly agree (4)	814	57.1		
-somewhat agree (3)	412	28.9		
-somewhat disagree (2)	97	6.8		
-strongly disagree (1)	102	7.1		
BWC Effectiveness scale			13.19	3.039

Table 2 (cont.)

	Frequency	Percent	Mean	SD
Police should notify citizens whenever a body worn camera is recording			3.34	1.016
-strongly agree (4)	916	64.0		
-somewhat agree (3)	248	17.3		
-somewhat disagree (2)	114	8.0		
-strongly disagree (1)	154	10.8		
Police should comply with victim/witness requests to turn off body worn cameras			2.05	1.188
-strongly agree (4)	267	19.7		
-somewhat agree (3)	192	14.2		
-somewhat disagree (2)	242	17.8		
-strongly disagree (1)	655	48.3		
Were one or more of the officers you interacted with wearing a body worn camera?			NA	
– yes	220	15.0		
-no	258	17.6		
-don't know	988	67.4		
… I will/would be less likely to call for assistance or report a crime			1.62	1.036
-strongly agree (4)	152	10.9		
-somewhat agree (3)	127	9.1		
-somewhat disagree (2)	159	11.4		
-strongly disagree (1)	954	68.5		
The body worn camera made me careful in what I said			1.97	1.27
-strongly agree (4)	45	20.7		
-somewhat agree (3)	23	10.6		
-somewhat disagree (2)	30	14.0		
-strongly disagree (1)	118	54.7		
The body worn camera made me careful about how I acted toward the police			2.03	1.24
-strongly agree (4)	48	22.4		
-somewhat agree (3)	24	11.0		
-somewhat disagree (2)	29	13.6		
-strongly disagree (1)	115	53.1		
Citizen Effectiveness Scale			3.99	2.30

Likelihood of Calling Police

Respondents who recognized that the officer with whom they interacted was wearing a BWC were asked whether, knowing that that the Albany police have body worn cameras, they would be less likely to call for assistance or report a crime. Those who were unaware of the camera were asked the hypothetical: "If Albany police had body worn cameras I would be less likely to call for assistance/to report a crime." We formed a single measure from these branched items. One-fifth of the respondents agreed, somewhat or strongly, that they would be less likely to call for police service, given that the police have BWC.

Citizen Effectiveness

Two items asked respondents to estimate the effect that the BWCs had on their own behavior: "The body worn camera made me careful in what I said" and "The body worn camera made me careful about how I acted toward the police." Most respondents – about two-thirds – disagreed. The additive index formed by these items to measure "BWC citizen effectiveness" has a Cronbach's Alpha of .866, and ranges from 2 (no effects) to 8 (strong effects).

Trust and Confidence

Five survey items queried respondents' general trust and confidence in the police. These items are designed to capture individual perceptions of APD's trustworthiness as well as the degree to which individuals identify with local police. From these items we constructed a 5-item additive index, the Cronbach's alpha of which is .908, and which ranges from 5 (very low) to 20 (very high); see Table 3. Roughly 68% of respondents indicated very to somewhat high levels of trust and confidence in the police.[1]

Procedural Justice

We also surveyed respondents' perceptions of the procedural justice displayed by the officer during the interaction, using items that are well-established to gauge judgments about the officer's neutrality, quality of treatment, voice, and motives. From these items we formed a 10-item additive index, which has a Cronbach's alpha of .945, and which ranges from 10 (very low) to 30 (very high) (see Table 3). The mean of the

[1] For respondents whose answer to one and only one of these items was 'don't know' or 'refused,' we imputed the value based on the weighted sum of the other four items, with weights derived from regression analyses.

scale was 24.22; the responses of approximately 70% of respondents scored the procedural justice displayed by the officer as moderately to very high.[2]

Respondent Demographics

The demographic characteristics of survey respondents can be seen in Table 3. Among the entire surveyed population, males slightly outnumbered females (52.6% to 47.4%, respectively), and a small plurality were White (44.8 %), followed by Black (37%), Hispanic (8.3%), Asian (3.8%), and other race (5.2%). The mean age of respondents was 39.88 (the median was 37). Total household income was captured in categories: (1) under $10,000; (2) $10,000-20,000; (3) $20,000-40,000; (4) $40,000-60,000; (5) $60,000-100,000; (6) over $100,000. The mean on this (ordinal) measure was 3.23, with 59.1% of respondents reporting a household income of $40,000 or under. The highest level of education was reported as (1) elementary school, (2) high school, (3) some college, (4) associate's degree, (5) bachelor's degree, (6) advanced degree. The mean on this (ordinal) measure was 3.46 (the median was 3), with 30.9% having completed high school, followed by some college (19.5%).

Table 3. Descriptive Statistics of Other Variables

	N	Minimum	Maximum	Mean	SD
Trust and Confidence scale	1377	5	20	14.95	4.429
Perceived Procedural Justice scale	1312	10	30	24.22	7.707
Gender (Male = 1)	1470	0	1	.53	0.499
Age	1127	18	100	39.88	15.38
Race/ethnicity: Black	1393	0	1	.37	0.483
Race/ethnicity: Hispanic	1393	0	1	.09	0.282
Household income	1251	1	6	3.23	1.651
Education	1432	1	6	3.46	1.515
Contact type: arrest	1470	0	1	.05	0.201
Contact type: stop	1470	0	1	.16	0.254
Citizen searched	1470	0	1	.13	0.259
Citizen consented to search	1470	0	1	.05	0.242

Police Contacts

As noted above, with respect to sampling, respondents were drawn from three categories of contacts: calls for service, stops, and arrests. We operationalize the type of contact based largely on respondents' reports of how the encounters began, and self-

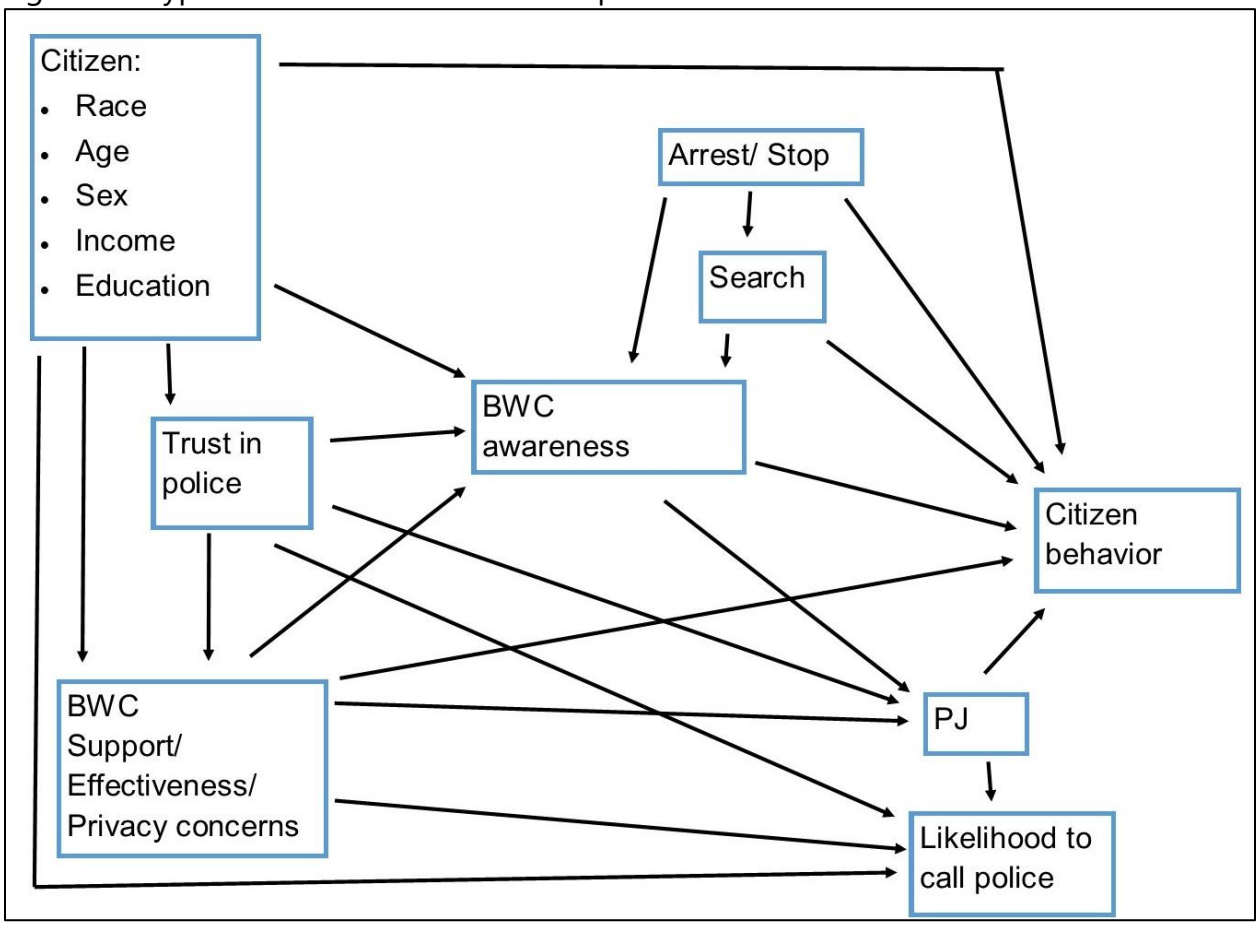
[2] As we did for the trust items, missing values for procedural justice items were imputed for respondents whose answer to one and only one of the items was 'don't know' or 'refused.'

reports of arrests supplemented by APD data on arrests. Of the respondents sampled from arrest records, 80% self-reported their arrest, and an additional 21 respondents sampled from calls reported their arrests; all told, the weighted representation of arrests is 5%. Of those sampled from stops, three-quarters (74.3%) were in a motor vehicle stopped by police; the remainder were stopped while out walking or in public. Among calls for service, 71% contacted police to report crime, and the remainder to request assistance or information. In 13%, the citizen (and/or his/her vehicle) was (as reported by respondents) searched, and in 38% of those, the citizen consented to the search.

Hypotheses

Mounting evidence of widespread support for BWCs is unmatched by evidence on the antecedents of, and correlates to, that support. Our current study aims to assess citizen attitudes towards BWCs, and to examine the underlying factors that might influence broader and more subtle BWC perspectives. Below, we discuss a number of hypotheses concerning these possible relationships. A pictorial summary of expected relationships is shown in Figure 1.

Figure 1. Hypothesized Causal Relationships



General BWC Support and Effectiveness

We posit that general BWC support and perceptions of BWC effectiveness are linked, as the latter influences the former. However, the influence of citizens' backgrounds and demographics on these outlooks, respectively, could well differ. If, for example, policing and police accountability are more salient issues for Blacks, then we might expect to find among Black respondents more nuanced judgments about BWC effectiveness, and thus more pronounced racial differences with respect to effectiveness than to general support. As noted above, extant research offers mixed findings on propositions about the effects of citizens' backgrounds and demographics on their support for BWCs. Given the limited variation in general support, however, we would expect to find only rather weak effects.

Similarly, trust in the police could have a more pronounced effect on perceptions of BWC effectiveness than on general support. We would expect an inverse effect of trust: that lower levels of trust in police would lead to greater support for BWC as a potential bulwark against police misconduct, and greater expectations for effects on officers' conduct. If in addition, however, those with high levels of trust see BWCs as a mechanism to demonstrate police judiciousness and rectitude, then trust would have little or no effect on general support for BWC.

Privacy concerns could be expected to influence support for BWC, of course. Those who are more concerned about privacy are likely to exhibit more tepid support for – or even oppose – the deployment of BWC.

Privacy Concerns

Concern about citizen privacy with regards to BWCs will likely be influenced by an individual's trust in the police: those with more trust in police would be less concerned about being recorded by an officer's BWC. Those who are less trusting could express polarized opinions: Individuals distrustful of police may be more wary of being videotaped out of concern for their privacy rights, or they may prefer the camera to be turned on out of desire for the greater police oversight that it promises.

Awareness of the BWC

We also explore factors that relate to an individual's awareness of a BWC. We hypothesize that those who enter the interaction with low levels of trust and confidence in the police would be more likely to become aware of the camera because they feel a greater motivation to determine whether police are so equipped. We also hypothesize that individuals who are stopped, arrested, or searched will be more aware of the BWC,

as a result of the more adversarial nature of the interaction and the more extended duration of such an encounter.

Procedural Justice

Perceptions of procedural justice are likely subject to a number of influences. Individuals who have greater trust in the police would likely perceive higher levels of procedural justice. Those who are more supportive of BWCs or perceive BWCs to be effective may estimate levels of procedural justice to be higher. Our model also proposes that the nature of the contact likely influence an individuals' perception of procedural justice: those whose contact was initiated by an officer, and/or is subjected to the officer's authority in the form of an arrest or a non-consensual search, could be expected to experience lower levels of procedural justice. In keeping with extant research on citizen perceptions of BWC (White et al, 2017; McClure et al, 2017; Mastrofski et al, 2016; McCluskey et al., 2017), we hypothesize that individuals who are aware of the BWC would also report higher levels of procedural justice. This perception could be produced by a positive behavioral effect of the BWC on officers who are wearing them, or by individuals internalizing the technology as a mechanism for neutrality, therefore implicitly enhancing their overall estimation of procedural justice.

Likelihood of Calling Police

Citizens' assessments of their likelihood of calling for police assistance in the future, given that Albany police wear body-worn cameras, are likely influenced by their concerns about BWC implications for privacy, their beliefs about the effectiveness of BWC, and perhaps their overall support for BWC. A willingness to engage with police wearing BWC in the future could also turn on citizens' direct experience in the contact: the type of contact and the enforcement authority (if any) to which they were subjected, whether they recognized that the officer was wearing a camera, and their judgment about procedural justice.

Citizen Effectiveness

Our final set of hypotheses concerns citizens' behavioral reactions to the BWC, as they assess them. The nature of the contact could be expected to affect citizens' adaptations to officers' BWC. Trust in the police might be expected to mitigate citizens' behavioral reactions to BWC, while privacy concerns are likely to amplify them. Support for BWC and beliefs about their effectiveness in influencing officers' behavior might also shape citizens' behavioral reactions.

Findings

In line with extant research on public attitudes towards BWCs, our analysis shows that most respondents strongly support police use of the technology. As previously noted, 96.7% of respondents affirmatively answered the statement "In general, do you support requiring police to wear body-worn cameras?", and 95.5% of respondents agreed with the statement "Police should always have the body worn camera on when interacting with a citizen." In a value range from 1 (strong disagreement/unsupportive) to 4 (strong agreement/supportive), the weighted means of each individual item is 3.79, and the weighted mean of the additive scale formed from these items for the BWC Support scale, ranging from 2 to 8, is 7.58. Because of the nearly ubiquitous support for BWCs, we focus on variation in the intensity of that support.

Black, Hispanic, American Indian, and other race respondents express the highest intensity of support for BWCs respondents. Men and women are mirrored in their general support for BWCs. General support for BWCs is also shared among respondents with varying levels of trust, demonstrating that most individuals, regardless of their positive or negative perceptions about police, can find reasons to support this technology.

Attitudes become more heterogeneous as the BWC referents become more specific with regards for their potential to affect officer behavior. While agreement with these items remains prevalent, responses broadly display a more even dispersion in the moderate and strong agreement categories. Among these items, which relate to an officer's decision to use force and the potential of BWCs to make officers more respectful, professional, and/or cautious, agreement ranges from 78.7% to 88.9%. The lowest levels of agreement pertain to the items concerning use of force (78.7%) and whether BWCs would make officers more respectful (80.7%), and the highest levels of agreement were found in the items concerning BWCs causing officers to behave more professionally (85.9%) or cautiously (88.9%). Greater dispersion of attitude is reflected by the slightly lower weighted means, which range from 3.17 to 3.45. Among these items, responses to BWCs potential effect on use of force are most widely distributed: 21.2% of respondents disagreed that the camera would affect the officer's decision to use force, the majority of whom strongly disagreed. Respondents who identified as Black most agreed *strongly* with this item (43.4%), though a larger percentage of White respondents agreed somewhat or strongly. Further, those with very high levels of trust in the police expressed most disagreement that the camera would affect an officer decision to use force (24.7%).

To items that queried respondents' concerns about their own privacy with respect to BWCs, respondents showed support for an officer notifying someone that they are on camera (81.3% agreed somewhat or strongly), but less support for an officer turning the camera off at a citizen's request (33.8% agreed somewhat or strongly). Larger proportions of Blacks (70%) and Hispanics (78%) than Whites (54%) were strongly in favor of police notifying citizens that they are on camera. Agreement was also stronger among those with very low levels of trust: of those who reported very low levels of trust, 78.6% strongly agreed that police should notify citizens, compared to 59.4% of those with very high levels of trust; see Table 4.

Table 4. Privacy Concerns by Trust levels

Police should notify citizens whenever a BWC is recording	Trust levels	
	Very low	Very high
Strongly disagree	8.2% (13)	12.4% (25)
Somewhat disagree	3.1% (5)	8.1% (49)
Somewhat agree	10.1% (16)	20.0% (121)
Strongly agree	78.6% (125)	59.4% (359)
Total	100% (159)	100% (604)
Police comply with citizen requests to turn off BWC		
Strongly disagree	61.5% (91)	47.7% (277)
Somewhat disagree	10.8% (16)	17.2% (100)
Somewhat agree	5.4% (8)	17% (99)
Strongly agree	22.3% (33)	18.1% (105)
Total	100% (148)	100% (581)

On the item concerning the officer turning the BWC off at a citizen's request, those with very low trust were more polarized in their responses than other respondents: the majority strongly disagreed that the police should comply with the request (61.5%), but a substantial minority registered strong agreement (22.3%). Those with more positive reported trust levels tended to have more moderate views on this question. Similar proportions (about one-third) of Whites and Blacks agreed (somewhat or strongly) with this item, while more than 40% of Asians agreed.

Twenty percent of respondents agreed with the item "Knowing that the Albany police have body worn cameras I will be less likely to call for assistance/to report a crime," most of whom agreed strongly. Roughly 27% of Black respondents, 24% of Hispanic respondents, and 35% of Asian respondents agreed with this statement, compared to 12% of White respondents. Respondents who reported lower levels of

procedural justice tended to agree with the statement (31.3%) compared to those who reported higher levels of procedural justice (18.3%).

Fifteen percent of respondents reported that the officer with whom they interacted was wearing a BWC, 17.6% said the officer was not, and the majority of respondents did not know (67.8%) – proportions that did not differ appreciably between Whites and Blacks. Respondents whose support for BWC was less than very positive were less likely than others to recognize that police were wearing BWC.

The majority of respondents who were aware of the camera reported that the technology did not affect their behavior. Perceived behavioral effects were associated with trust in police and perceived procedural justice: respondents who had very low trust and procedural justice scores tended to perceive no little to no effect on their own behavior, compared with those whose scores were very high; see Table 5.

Table 5: Trust and Procedural Justice and BWC Effect on Citizen Behavior

Perceived effect on citizen behavior	Trust Scale		Procedural Justice Scale	
	Very Low	Very high	Very Low	Very high
Few/No effects	79.3% (13)	62% (62)	88.3% (30)	67.7% (90)
Some/strong effects	20.6%(6)	38% (38)	11.7% (4)	32.4% (43)

Roughly 85% of respondents who estimate that BWCs will have little to no effect on officers also believe that the cameras had little to no effect on themselves, as seen in Table 6. Almost 33% of those who estimated that BWCs would have more effects on officer behavior also reported that the camera had some effect on their own behavior.

Table 6: Perceived Effects on Officer and Citizen Behavior

Perceived effect on citizen behavior	Perceived effect on officer behavior	
	No/Little effects	Some/Strong effects
No/ little effects	85% (34)	67.2% (115)
Some/Strong effects	15% (6)	32.7% (56)

Perceived behavioral effects were also associated with respondents' race and sex. Roughly 18% of White respondents reported the camera to have strong effects on their own behavior, compared to 24.3% of Black respondents. A larger proportion of women than men perceived the camera to have some effects on their behavior (37.1% vs 23.9%).

In order to better demarcate concerns about privacy, we formed groups of respondents from the crosstabulation of the two privacy items, which together represent four distinct perspectives; see Table 7. The first perspective, "privacy indifference," describes those who disagree that police should notify citizens about the camera, and also disagree that the police should turn the camera off at the citizen's request. These respondents appear to be most unconcerned about the potentially invasive nature of BWCs. The second perspective is "privacy concern," which includes those who both agree that police should notify citizens about the presence of a camera, and also believe that the officer should turn the camera off at a citizen's request. These respondents appear most concerned about potential privacy threats BWCs pose to the public. A third perspective is "accountability concern," which describes those who believe that the officer should notify the citizen of the presence of the camera, but do not think that the officer should turn the camera off at the citizen's request. These respondents appear to be more concerned with the potential for police misconduct, even at the cost of a potential privacy violation. The final perspective, "ambivalent concern," describes those who disagree that police should notify citizens about the BWC, but agree that the police should turn the camera off at a citizen's request. These individuals appear conflicted about their privacy concerns, but are more concerned with the officer complying with a citizen's request.

Table 7. Privacy and Accountability Concern Perspectives

	Police should notify citizens of the BWC	Police should turn off BWC at the citizen's request	BWC Awareness (N = 198)
Privacy indifference (N = 201)	No	No	13.1%
Privacy concern (N = 401)	Yes	Yes	30.8%
Accountability concern (N = 682)	Yes	No	48.5%
Ambivalent concern (N = 50)	No	Yes	7.6%

Of the respondents who were aware of the BWC (in the far right column of Table 7), a majority intuitively hold the "accountability concern" perspective (48.5%), followed by those exhibiting the "privacy concern" perspective (30.8%). Support for BWCs was most intense among those concerned with accountability (93.3%); the remaining perspectives were very supportive of BWCs in a range of 83%-88%. Roughly 25% of those in the "privacy indifference" category estimate that BWCs will have few or no effects on officer behavior, compared to the other categories whose comparable percentages range from 13.9% to 20%. Almost 34% of respondents adhering to the accountability concern represent the lowest levels of trust in the police, compared to the other perspectives, which comparatively range from 21.4% to 23%.

The bivariate analyses can of course mislead us about the independent effects of the hypothesized influences on support for and reactions to BWC, so we conducted a series of regression analyses. First, support for body-worn cameras is driven mainly and most proximately by beliefs about the effectiveness of BWC (see Table 8). It is not, however, a substantively large effect: no greater a difference than 0.9 on the 7-point support index. (When the constituent items of the effectiveness index are included separately, the effect of only the items about making officers more respectful and cautious achieve statistical significance at the conventional .05 level, and their magnitudes are nearly or more than double those of the other two items.) Support is also affected to a very small degree by levels of trust; the estimated difference on the support scale between someone with low trust (say, an 8 on the trust index) and someone with moderately high trust (a 22) is, other things equal, 0.18 lower on the 7-point scale. None of the demographic variables has an independent effect. Given the limited variation in support, these findings are not surprising.

Table 8. Regression Analyses of BWC Attitudes

	Support	Effective	Notify	Turn Off
Constant	6.932*	11.638*	2.958*	1.665*
Trust	-0.010	0.044*	-0.022*	0.008
BWC support	--	--	--	--
BWC effectiveness	0.080*	--	0.049*	0.025*
Notify	0.025	--	--	--
Turn off	-0.152*	--	--	--
Black	0.064	1.399*	0.212*	-0.020
Hispanic	-0.036	1.491*	0.304*	0.211
Male	-0.063	0.461*	-0.086	-0.120**
N	1167	1168	1167	1167

Note: unstandardized OLS regression coefficients
* p<.05
** p<.10

The higher support for BWC among Blacks appears to be mediated by their beliefs about effectiveness. Blacks and Hispanics are more optimistic than Whites about the effectiveness of BWC in promoting beneficial outcomes. (And the effects are comparable in magnitude across the constituent items of the index.) Additionally, men are more positive than women, on average. Trust in police has a positive but weak effect on the anticipated effectiveness of BWC.

We found effects of each hypothesized influence on one or both privacy questions. People who are more optimistic about BWC effectiveness express somewhat

higher levels of agreement with both privacy measures: notification and deactivation on request. Holding effectiveness judgments constant, BWC support is associated with *lower* level of agreement on deactivation. Blacks and Hispanics are more in favor of notification than Whites, and women more in favor than men. All else equal, those with greater trust in police are somewhat less supportive of requiring notification.

We analyzed BWC awareness including and excluding income and education due to patterns of missing data. Across both analyses (see Table 9), people who were more supportive of BWC were more likely to report being aware that the officer was wearing a BWC. So too were those who were either arrested or who consented to a search. Arrestees presumably had a more protracted interaction and thus greater opportunity (and perhaps greater motivation) to observe the camera. Some of those who consented to a search may have been more willing to do so because they recognized that the officer was equipped with a BWC – i.e., consent could be an effect rather than a cause of awareness. But those who consented to a search were overall less likely to indicate that they didn't know whether the officer was wearing a camera, suggesting that consent

Table 9. Multi-Nomial Analysis of BWC Awareness

	I		II	
Baseline = don't know	No	Yes	No	Yes
Constant	-0.496	-2.439*	-0.478	-1.116
Trust	-0.050*	-0.007	-0.057*	-0.012
BW support	-0.153*	0.214*	-0.137**	0.179**
BW effectiveness	0.075*	-0.022	0.082*	-0.010
Black	-0.076	-0.332**	-0.106	-0.579*
Hispanic	-0.102	0.129	-0.128	-0.207
Male	-0.053	0.572*	-0.015	0.667*
Income	--	--	-0.048	-0.161*
Education	--	--	0.001	-0.139*
Arrest	-0.083	0.748*	0.031	0.918*
Stop	-0.238	0.050	-0.140	0.131
Searched	0.094	0.206	0.206	0.003
Consented	1.296*	0.684**	1.199*	0.610
N	1240		1078	

Note: unstandardized maximum likelihood coefficients
* p<.05
** p<.10

was not merely (if at all) an effect. Other factors held constant, Blacks were less likely to become aware of the camera. When income and education are included in the model,

we find that people with higher levels of income and education are less likely to recognize the BWC, and with these factors controlled, the effect of trust is so attenuated that it is not statistically significant.

Perceived procedural justice appears to be largely unaffected by BWC attitudes or awareness, once the nature of the contact is controlled (see Table 10). Procedural justice, as it was assessed by the citizen, was lower in stops and arrests than in calls for service, and lower when the citizen was searched (and did not consent to the search). These patterns held regardless of the inclusion of trust, which had an independent and expectedly positive effect on procedural justice. Even when the analysis is confined to calls for service, the mean score on the procedural justice index is lower for those who were reportedly aware of the BWC than for those who were not (i.e., those who said that the officer was not wearing a camera, and those who did not know). The difference in means is of marginal statistical significance, and reflected in the negative (but statistically insignificant) regression coefficient for awareness. All else equal, Blacks' assessments of PJ were *higher* than those of Whites.

Table 10. Regression Analyses of Perceived Procedural Justice

	I	II	III
Constant	27.614*	9.676*	8.895*
Arrest	-7.461*	-3.104*	-2.796*
Stop	-4.105*	-1.861*	-1.166*
Trust	--	1.007*	1.054*
BWC support	-0.137	0.097	0.092
BWC effectiveness	-0.031	-0.016	-0.015
BWC awareness (0/1)	-3.426	-1.107	-1.413
BWC attitude X awareness	0.385	0.074	0.117
Searched	-10.342*	-6.759*	-7.059*
Consented	10.924*	5.588*	5.490*
Black	--	--	0.878*
Hispanic	--	--	0.131
Male	--	--	-0.498
N	1266	1203	1145

Note: unstandardized OLS regression coefficients
* p<.05
** p<.10

Citizens' sense that they would be less likely to call for police service because officers wear BWC is most strongly affected by their concerns about privacy, the nature of their contacts, and by other factors associated with their race/ethnicity (see Table 11).

Citizens who believe that police should be required both to notify citizens about BWC recording and to honor the requests of victims or witnesses to deactivate the BWC tend, relative to others, to agree that they would be less likely to call. Citizens who were stopped likewise tend to be less likely to call because of BWC. All else equal (even including income and education), Blacks and Hispanics are reportedly less likely to call for police service as a result of BWC; these groups presumably share other concerns or reservations about BWC that we did not measure. Other statistically significant effects, though they are smaller in magnitude, include judgments about BWC effectiveness, which curiously detract from the likelihood of calling police, and awareness of BWC in the sampled incident, which has the opposite effect. Household income and educational achievement are both inversely related to anticipated effects on calling police.

Table 11. Regression Analyses of Likelihood of Calling

[higher value = less likely]			
	I	II	III
Constant	1.050*	1.060*	1.823*
Arrest	0.354*	0.298**	0.258
Stop	0.261*	0.299*	0.429*
Trust	0.006	0.019**	0.012
BWC support	-0.042	-0.042	-0.068*
BWC effectiveness	0.034*	0.037*	0.038*
BWC awareness (0/1)	-0.104	-0.145**	-0.148**
Privacy concern	0.382*	0.406*	0.337*
Accountability concern	0.078	0.126	0.097
Ambivalent concern	0.352*	0.351*	-0.097
Perceived procedural justice	--	-0.012**	-0.006
Searched	0.239**	0.092	0.087
Consented	0.018	0.276	0.136
Black	0.243*	0.295*	0.217*
Hispanic	0.282*	0.313*	0.249*
Male	-0.003	0.009	0.010
Income	--	--	-0.057*
Education	--	--	-0.103*
N	1128	1030	907

Note: unstandardized OLS regression coefficients

* p<.05

** p<.10

Citizens' self-assessments of the effects of the BWC on their behavior exhibit largely parallel sets of influences (see Table 12). People who were stopped by police, people who believe that BWC will affect officers' behavior, and women are all more likely to say that the cameras made them more careful both about what they said and how they acted. Support for BWC is inversely related to (self-reported) effects on citizen behavior. People who were searched, people with higher levels of trust, and Blacks were all more likely to indicate that their speech was affected by the cameras; the sign but not the statistical significance of the effect of each of these factors on how citizens acted was the same.

Table 12. Regression Analyses of Behavioral Effects

	The BWC made me careful	
	… in what I said	… about how I acted
Constant	1.094	1.284
Arrest	-0.394	0.234
Stop	-0.378**	-0.402**
Trust	0.057*	0.045
BWC support	-0.210*	-0.197**
BWC effectiveness	0.105*	0.125*
Searched	0.710*	0.227
Consented	-0.009	0.208
Perceived procedural justice	0.014	0.003
Black	0.527*	0.293
Hispanic	0.323	0.045
Male	-0.478*	-0.358**
N	195	195

Note: unstandardized OLS regression coefficients
* p<.05
** p<.10

Discussion

The findings of previous research and those of our study suggest that BWCs are seen as a means to widely supported ends of police transparency and accountability. These are "valence issues" – i.e., issues "upon which there is a strong consensus on policy goals" (Clarke, et al., 2011). Support for BWC, by all but about 5% of the contact population in Albany, cuts across demographic categories, many of which are normally associated with ideological and partisan cleavages. Support is strong among those who have high levels of trust and confidence in police and among those who are more skeptical about the trustworthiness of police.

Expectations about the specific benefits of BWC are also fairly widely shared. Most people believe that BWC will have positive effects on police performance, raising the level of professionalism and respectfulness, prompting officers to be more cautious (presumably perceived in favorable terms by citizens), and affecting their propensity to use force. The consensus that we see in general support for BWC breaks down somewhat with respect to these anticipated effects, about which 10% to as many as 20% are skeptical. The consensus breaks down further when procedural and operational matters are considered. There, the values of accountability and professionalism pose potential conflicts with values of privacy.

Most people, it seems, can find a logical pathway to support for BWCs. A perceived inadequacy of oversight for police could spur an individual to embrace BWCs if they judge that technology to be effective in curbing police misconduct. At the same time, an individual with high levels of trust in the police might support BWCs in hopes that the technology may help police solve crimes or prevent false allegations of misconduct. Perhaps someone trusting of the police might support the technology, even if they did not think the cameras would be effective, to symbolically affirm the equity with which they perceive the police to perform their duties. The invariably positive perceptions of BWCs are likely founded on a constellation of attitudes, many of which are logically consistent with an expression of support for the technology.

However, the composition of attitudes expressed by many respondents in our survey are seemingly illogical and contradictory.

- 4.3% of respondents (N = 64) who reported low levels of trust in the police and estimated that the BWCs would have few or no effects, still expressed high levels of support for BWCs
- 17.5% of respondents (N = 258) expressed high levels of support for BWCs, but also stated that if the police were wearing a camera, they would be less likely to report a crime. A majority of these respondents, and 12.5% (N = 184) of those surveyed, also estimated that BWCs would have significant effects on officer behavior.
- 9.7% of respondents (N = 142), who called the police for assistance or to report a crime, expressed high levels of support for BWCs, but also stated that they would be less likely to call the police if they were wearing a BWC.
- 2.9% of respondents (N=43) were highly *unsupportive* of BWCs, and also believed that the technology would have strong effects on officer behavior.

Seemingly illogical responses were likewise found in research by Sousa et al.:

> The data also reveal other information about public opinion of BWCs that is seemingly contradictory. For example, most of the sample reported that BWCs will help to improve the transparency of police practice, but many are concerned about allowing the media or members of the public access to video recordings. Also, respondents reported that BWCs are very necessary for certain police activities that are relatively rare (such as high risk operations), but for some police activities that are much more common (such as assisting with medical emergencies), BWCs are considered to be much less necessary" (2015: 5)

Such patterns of attitudes towards police and BWC technology could stem from a number of causes. One possible explanation is that BWCs are a relatively new technology, and as such, public opinion is still at the beginning stages of formulating the bases for their opinions. Another such explanation might be that individuals' ambivalence to the more nuanced aspects of BWC proliferation cause them to possess conflicting attitudes. As described by John Zaller, discussing his theory behind mass opinion, this dubiety might be accomplished by a process called Ambivalence Deduction: "… in an environment that carries roughly evenly balanced communications on both sides of issues, people are likely to internalize many contradictory arguments, which is to say, they are likely to form considerations that induce them to both favor and oppose the same issues" (1992; 59). A final possible explanation lies in the increasingly politicized nature of policing issues and their rising prominence in the conscience of the broader public. Individuals may be aware of the broader attitudes they are meant to have based on societal, peer, or cultural urging, but are less aware of the logical reasoning for that position. With regards to individuals' sometimes self-contradictory views about the need for increased police transparency and the simultaneous concern about the media's access to BWC video, Sousa et al noted "It may be that the public has yet to come to fully realize that the potential benefits of BWCs also come with a cost." (2017; 107).

Previous research has attributed lower levels of police use of force by officers wearing BWC to the effects of self-awareness:

> A rich body of evidence on perceived social-surveillance—self-awareness and socially-desirable-responding—proposes that people adhere to social norms and change their conduct because of that cognizance that someone else is watching. It seems that knowing with sufficient certainty that our behavior is being observed (or judged) affects various social cognitive processes: We experience public self-awareness, become more prone to socially-acceptable behavior and feel a heightened need to comply with rules (Ariel, et al. 2015: 516)

Consequently, "Cameras are thus likely to have a 'self-awareness effect' that would both deter the police officer from reacting with excessive or unnecessary force, and cool down the 'aggressive demeanor' of the suspect (or deter the police from interpreting demeanor in this way)" (Ariel, et al. 2015: 517).

A self-awareness effect could hold among only the citizens who recognized that the officers with whom they interacted were equipped with BWC, and we found in the Albany contact population a fairly low level of BWC awareness. APD policy did not require officers to notify citizens, and only 15% recognized (and remembered) that officers wore BWC. Awareness was patterned somewhat by citizens' characteristics and outlooks – men and those more supportive of BWC were more likely to become aware of police cameras, and Blacks less likely – and it was affected by the nature of the contact.

Further, our findings suggest that some citizens may be less susceptible to the self-awareness effect than others. Among those who were aware that the officer wore a BWC, 16% reported that the camera did not affect their own behavior in the incident *and* projected that, in general, BWC would have little or no effect on officers' behavior. It might be that these respondents underestimated (or misrepresented) the effect that cameras had on their actions; that these respondents were skeptical about the effect of cameras on the behavior of officers is a hint that they simply might be more resistant to the influence of social norms. Many others – 55% of those who were aware of the BWC – reported that it had little or no effect on their behavior, even though they believed that BWC have at least some effect on officers' behavior.

Citizens' judgments about procedural justice were, surprisingly, unaffected by their attitudes toward BWC and by their awareness of BWC in their contacts. Contrary to the hypothesis, procedural justice was lower, on average, among those who were aware of BWC than among others, though the estimated independent effect of awareness did not achieve statistical significance.

The anticipated reluctance to seek the assistance of police who wear BWC is surely a matter of concern, for it is not confined to a small proportion of the population of people who had a contact with police, nor is it confined to those whose contacts were involuntary. It is inspired at least partly by concerns about privacy. In addition, Black and Hispanic persons, more than Whites, reported that BWC would reduce their likelihood of calling for assistance. Our measures did not capture a full range of privacy issues, and if they had, they might account for at least some of the residual variation that, in our analysis, was explained by citizens' race and ethnicity. Insofar as people act

on these stated predispositions, then the services that they forego would represent an unintended and detrimental effect of BWC.

When we scratch the surface of the nearly consensual support for police BWC, we find a more complex – even tangled – set of attitudes toward and reactions to BWC among members of the public who have had contact with police equipped with BWC. Beneficial effects in terms of procedural justice did not materialize. A substantial fraction are concerned about the implications of BWC for their privacy. And for many of those and others, BWC are reportedly a reason to hesitate to call police for assistance. As more is learned about public responses to BWC, public officials and police executives should stand ready to modify the procedures that govern the deployment and use of BWC in order to minimize the adverse effects that they might unintentionally have on those they serve.

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Appendix

Sample Weighting of Call Types

Stratum 1		Stratum 2 (weight = 2)		Stratum 3 (weight = 3)
Abandoned vehicle		Check a subject		Assault
Animal control complaint		Get a complaint		Boy/girlfriend trouble
Assist a person/agency		Get a report		Custodial interference
Auto acc prop damage		Person acting suspicious		Domestic call
Auto accident personal injury		Person attempting suicide		Drug complaint
Auto accident unknown		Person down		Drunk annoying
Bomb threat (pd)		Shoplifter		Emotionally disturbed person
Burglar alarm		Shots fired		Fight
Burglary in progress				Group annoying
Car blocking				Juvenile incident
Court order				Landlord/tenant trouble
Domestic panic alarm				Loud music
EMS (juvenile) call				Loud party
EMS call				Neighbor trouble
Eviction				Person annoying
Executing a warrant				Person exposing self
Fireworks				Person with a weapon
Follow up on prev. call				Robbery
Found property				Trouble with a customer
Haz package				
Hold-up alarm				
Hold-up/panic alarm				
Larceny just occurred				
Lock out				
Noise complaint				
Notification				
Officer(s) needs assistance				
Open window/door				
Other				
Pocketbook snatch				
Police wanted unknown				
Prowler				
Road hazard				
School crossing				
Shooting				
Snow bird				

Stratum 1		Stratum 2 (weight = 2)		Stratum 3 (weight = 3)
Someone in building				
Suspicious vehicle				
Vehicle annoying				
Vehicle in violation				
Warrant				
Water break				
Welfare check				