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POLICE OFFICER PERCEPTIONS OF ORGANIZATIONAL JUSTICE
AND BODY-WORN CAMERAS: A CIVILIZING EFFECT?

A dissertation submitted in partial fulfillment of the requirements of the degree Doctor of
Philosophy at Virginia Commonwealth University

by

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Dedication

For David.
King of my heart, guardian of my soul.

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"The beauty you see in me is a reflection of you, thank you for your part in my journey."

-Rumi

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Abstract

Title of Dissertation: POLICE OFFICER PERCEPTIONS OF ORGANIZATIONAL JUSTICE AND BODY-WORN CAMERAS: A CIVILIZING EFFECT?

By Carolyn Naoroz

A dissertation submitted in partial fulfillment of the requirements of the degree Doctor of Philosophy at Virginia Commonwealth University

Virginia Commonwealth University, 2018

Dissertation Chair: Hayley Cleary, Ph.D.

This research sought to understand the potential association between officer perceptions of *organizational justice* and officer perceptions of body-worn cameras (BWCs). A questionnaire was administered to a convenience sample of 362 officers from the 750 sworn personnel from the Richmond Police Department in Richmond, VA, yielding a response rate of 91% and representing 44% of the Richmond Police Department's sworn employees. This study extends prior work by partially replicating a previous BWC survey conducted by leading body-worn camera scholars, utilizing a large sample from an urban mid-Atlantic police department. This study also extends prior work on officer perceptions of *organizational justice* by examining officer perceptions of personal behavior modifications motivated by BWCs. Findings indicate that officers had positive general perceptions of BWCs but did not perceive that their own behavior would change due to wearing a BWC. Officers reported high perceptions of *self-legitimacy* and mixed perceptions of *organizational justice*; for example, although three quarters of respondents (74.6%) felt that command staff generally treats employees with respect, less than a third felt command staff explained the reasons for their decisions (29.1%) and that employees had a voice in agency decisions (29.7%), indicating areas for improvement in agency communication. Exploratory factor analysis yielded three separate *organizational justice*

factors: *procedural justice*, *distributive justice*, and *interactional justice*. Regression analyses indicated that only *procedural justice* had a significant association with officers' general perceptions of BWCs after controlling for officer demographics and perceptions of self-legitimacy ($\beta = .20, p < .001$), and there were no significant correlations between officer perceptions of *organizational justice* constructs and their perceptions of personal behavior modification motivated by BWCs. Policy recommendations include quarterly command staff attendance at precinct roll calls to improve internal department communication and an evaluation of the promotion process to improve officer perceptions of *organizational justice*. Practitioner/researcher partnerships are recommended to realize the full potential of BWC video data in improving department training and policies.

Keywords: police, body-worn cameras, organizational justice, officer perceptions

Chapter 1: Introduction

In February 2016, after a year-long policy development process, the Richmond Police Department (RPD) proactively implemented a body-worn camera (BWC) program that outfitted 200 of their 750 officers with BWCs. Currently, the department has assigned a further 275 cameras, bringing their total number of BWCs to 475. RPD is one of many police departments nationwide to implement a BWC program over the last few years in response to federal best practices recommendations and growing social unrest over lethal police use of force incidents. Although BWC technology is recommended by both the federal government (O'Donnell, 2015; White, 2014) and social advocacy groups (Campaign Zero, 2016) with the aim of increasing police accountability through departmental transparency and creating a behavior modification or “civilizing effect” in officers and citizens, conclusive empirical evidence in support of BWC benefits is still lacking (White, 2014). The lack of empirical evidence to support BWC benefits is concerning when the financial and human resources cost, and down-stream criminal justice system effects are considered in implementing a BWC program. Although the research surrounding BWCs has grown exponentially in the last few years, researchers across the country are challenged to produce empirical evidence that provides clarity on whether or not BWCs are actually creating departmental accountability and transparency, reducing use of force incidents, or causing a change in officer behavior. Yet, even without this evidence, police departments across the United States are moving to implement BWC programs. Very recently, the U.S. Department of Justice, Office of Justice Programs announced that 47% the 15,328 state and local law enforcement agencies have implemented BWC programs (Office of Justice Programs, 2018).

One key aspect of implementing a BWC program in a department is officer acceptance of the technology, or officer “buy-in”. In the few existing BWC officer perception studies that have

been conducted, officers have raised concerns about BWC footage being used against them in both internal departmental procedures and externally in the public view, something that makes officer buy-in difficult to achieve (Gaub, Choate, Todak, Katz, & White, 2016; Jennings, Fridell, & Lynch, 2014; Katz, Choate, Ready, & Nuño, 2014; Kyle & White, 2016; Pelfrey & Keener, 2016; Young & Ready, 2015). Kyle and White (2016) identified that officers' positive perceptions of *organizational justice* within the officers' department are linked to positive perceptions of BWCs. *Organizational justice* can be understood as employee perceptions of fairness in procedural and distributive matters within an agency and is typically broken down into three or four main constructs: *distributive justice*, *procedural justice*, and *interactional justice* that can be separated into *interpersonal* and *informational justice* (Colquitt, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001). *Distributive justice*, or fairness, is defined by perceptions of organizational outcomes such as promotions and salary raises, while *procedural justice* is understood as procedurally just processes that create a structure for unbiased decisions (Bobocel & Holmvall, 2001; Colquitt, 2001). *Interactional justice* is concerned with employees being treated with respect and politeness by supervisors, as well the explanation or justification of decisions made (Colquitt, et al., 2001; Nix & Wolfe, 2016). Kyle and White (2016) hypothesize that if officers hold positive perceptions of *organizational justice* within their department, then officer adoption, or buy-in, of BWC technology during program implementation could be improved. As Nix and Wolfe (2016) state, "internal fairness within a police agency may ultimately impact public safety by creating better street cops" (Nix & Wolfe, 2016, pg. 13), emphasizing the importance of continuing to utilize the *organizational justice* framework in police related research. Thus, *organizational justice* theory can provide a useful framework for collecting empirical data on the importance of policy structures that engender

equity in the decision-making process, and whether officers perceive that their police supervisors and command staff clearly explain their decision-making process and engage in fair, objective, honest, and respectful behavior toward subordinates. Attempting to understand whether these internal *organizational justice* constructs have a relationship with officer perceptions of BWC adoption/use in general, and officer behavior modification motivated by BWC use more specifically, will be an important addition to the growing BWC related scholarship.

BWC scholars and supporters theorize that putting officers under the observation of a camera will result in improved behavior with citizens (Ariel, Farrar, & Sutherland, 2014; President's Task Force on 21st Century Policing, 2015; White, 2014), such as being more respectful and considerate toward members of the public. Given that one of the perceived benefits of BWCs is behavior modification, or a "civilizing effect" on officers (White, 2014), the research presented here adds to the growing BWC scholarship by providing empirical data on whether officers perceive a personal behavior modification motivated by wearing a BWC. This study attempted to refine previous scholarship by Kyle and White (2016) on the association between officer perceptions of *organizational justice* and officer perceptions of BWCs. The officer survey used in this study partially replicates officer perception research previously conducted (Gaub et al., 2016; Kyle & White, 2016; Nix & Wolfe, 2016; Wolfe & Nix, 2016a), and also sought to address the limitations outlined by Kyle and White (2016) in their recent officer survey conducted on the same topic. Kyle and White (2016) noted that their officer survey on perceptions of *organizational justice* did not include questions intended to measure *distributive justice*, and used a summed score for perceptions of BWCs, suggesting that future research should attempt to measure officer perceptions of behavioral changes caused by BWCs. By addressing these limitations, research on officer perceptions of *organizational justice* and

perceptions of personal behavior modification attributed to BWC use is expanded and strengthened.

Police Politicized

Several catalysts have led to the current social and political climate of police/community tensions that have caused the public, the federal government, and police organizations to turn to BWC technology as a solution. BWCs first entered the national spotlight in 2013 in a United States District Court for the Southern District of New York ruling written by Judge Shira A. Scheindlin for *Floyd et al. v. City of New York et al.* 08-cv-1034 (SAS), (2013). Judge Scheindlin found the New York Police Department (NYPD) policy on stop-and-frisk disproportionately focused on black and Hispanic males, making the practice unconstitutional and racially discriminatory. A BWC pilot program was ordered by Judge Scheindlin to curb such racially biased practices as well as hold officers accountable (*Floyd v. City of New York*, 2013). In her remedy opinion, Judge Scheindlin stated,

Video recordings will serve a variety of useful functions. First, they will provide a contemporaneous, objective record of stops and frisks, allowing for the review of officer conduct by supervisors and the courts. The recordings may either confirm or refute the belief of some minorities that they have been stopped simply as a result of their race, or based on the clothes they wore, such as baggy pants or a hoodie. Second, the knowledge that an exchange is being recorded will encourage lawful and respectful interactions on the part of both parties. Third, the recordings will diminish the sense on the part of those who file complaints that it is their word against the police, and that the authorities are more likely to believe the police. Thus, the recordings should also alleviate some of the mistrust that has developed between the police and the black and Hispanic communities,

based on the belief that stops and frisks are overwhelmingly and unjustifiably directed at members of these communities. Video recordings will be equally helpful to members of the NYPD who are wrongly accused of inappropriate behavior. (*Floyd v. City of New York*, 2013, pg. 26-27).

In stating this opinion of BWCs, Judge Scheindlin enumerated and defined the expected benefits of BWC technology that has inevitably directed police and BWC related research. White (2014) listed similar “perceived benefits” in his report on BWCs for the Office of Justice Programs: 1) BWCs increase transparency and citizen views of police legitimacy; 2) BWCs have a civilizing effect that result in improved behavior in both police officers and citizens; 3) BWCs have evidentiary value in expediting citizen complaints or lawsuits and improving police evidence for arrest and prosecution; and 4) BWCs provide opportunities for police training (White, 2014).

The research reported here sought to address the second perceived benefit listed by both Judge Scheindlin (*Floyd v. City of New York*, 2013) and White (2014), that BWCs create a “civilizing effect”, or behavior modification, by putting both officers and citizens under the observation of a camera lens.

Following the ruling of *Floyd v. City of New York* (2013), incidents of lethal police use of force resulted in the highly-publicized deaths of several black men between the summer of 2014 and the summer of 2016. Many scholars and social activists would note that this type of police involved violence is not new but is cyclical and the result of systemic racial inequalities rooted in slavery (Alexander, 2011; Skolnick & Fyfe, 1993). Much like the high-profile beating of Rodney King by the Los Angeles Police Department (LAPD) nearly 30 years ago, the deaths of Michael Brown in Ferguson, MO, Freddie Gray in Baltimore, MD, and Walter Scott in North Charleston, SC received national media attention with difficult images and video frequently

replayed in the news. Each of these incidents has had unique circumstances and different legal outcomes when processed through the American court system (i.e. Officer Darren Wilson was not indicted for the shooting of Michael Brown as it was determined by grand jury and the U.S. Department of Justice that Officer Wilson shot Brown in self-defense, whereas Officer Michael Slager was charged with murder for shooting Walter Scott from behind while Scott was fleeing), but public reaction has commonly been protests and social advocacy movements. Public concern has caused police organizations and the federal government to increasingly turn to BWC technology as an answer to a complex social issue that encompasses race, class, gender, as well as law enforcement training and organizational culture (President's Task Force on 21st Century Policing, 2015).

In response to the protests following the death of Michael Brown in Ferguson, MO, President Barack Obama signed an Executive Order in December 2014 to establish the Task Force of 21st Century Policing with the focus of examining how to improve police/community relations, and BWCs were a primary recommendation for police departments in the final report (President's Task Force on 21st Century Policing, 2015). In May 2015, the Department of Justice answered President Obama's request for federal funding for BWCs by allocating \$20 million dollars to fund the outfitting of BWC technology for police departments nationwide, despite a clear lack of empirical evidence in support of the technology (United States Department of Justice, 2015). Although President Obama called for federal funding to aid police departments in implementing BWC programs, he was also keenly aware that police/community tension is a multi-faceted social issue that cannot be solved by technology alone. In his March 2nd, 2015 meeting with the Task Force on 21st Century Policing, President Obama stated,

There is a role for technology to play in building additional trust and accountability, but it's not a panacea. It has to be embedded in a broader change in culture and a legal framework that ensures people's privacy is respected. (Bureau of Justice Assistance, 2015, pg. 3)

President Obama's statement identified the legal concerns that arise from filming police/citizen encounters, especially as technology moves rapidly beyond the speed of policy making. On the one hand BWC technology is expected to increase police department transparency through video evidence made available to the public, while on the other hand the technology presents a major policy concern regarding the intersection of BWC video as public evidence under the 1967 Freedom of Information Act (FOIA) and citizen Fourth Amendment privacy rights.

As stated above, law enforcement officials hope to decrease use of force incidents and citizen complaints by recording police/citizen encounters through improved officer behavior by putting these interactions under the microscope of a camera lens (Ariel et al., 2014). Ariel and colleagues (2014) discuss the concept of a positive Hawthorne Effect: a behavior modification due to an awareness of being watched by the camera that finds its roots in deterrence theory first explored by classical criminologist Cesare Beccaria (1764, trans. 2009). Ariel and colleagues (2014) hypothesize that, "If we become aware that a video-camera is recording our actions, we may become more conscious that unacceptable behaviors will be captured on film, and that detection is perceived as certain" (Ariel, et al., 2014, p. 516). It is this potential self-awareness and behavior modification caused by the knowledge of being filmed that White (2014) termed a "civilizing effect" as an unproven benefit of BWCs in his 2014 report on BWCs for the Office of Justice Programs out of the United States Department of Justice. The theoretical "civilizing effect", or behavior modification, finds its roots in psychological, anthropological, and

criminological literature that hypothesizes and demonstrates that people behave differently when they are aware of being observed or recorded (Farrar, 2013; Munger & Harris, 1989; Priks, 2014), creating a deterrent effect for socially unacceptable behavior (Beccaria, 1764, trans. 2009).

If any of the potential BWC benefits are to be reaped, police departments must first and foremost achieve program implementation that seeks to garner officer “buy-in”. Positive officer perceptions of BWCs are integral to the successful adoption of the technology and implementation of any BWC program (Gaub, et al., 2016; Kyle & White, 2016; Young & Ready, 2015) and someday may prove to have an effect on delivery of policing services to the public (Nix & Wolfe, 2016). Yet, as police departments across the nation race for private, public, and federal funding to outfit their officers with BWCs, many questions about the effectiveness of the technology to address police/community tensions have yet to be answered, particularly regarding the potential “civilizing effect” of being recorded by a camera.

Research Site

The Richmond Police Department in Richmond, Virginia served as the research site for this study. RPD has roughly 750 sworn officers serving 217,938 Richmond City residents (Richmond Police Department, 2016; Greater Richmond Partnership, 2016). RPD proactively implemented a BWC program in 2016, indicating that the decision to acquire the technology and implement a program stemmed not from a consent decree or civilian oversight recommendation to a troubled police department, but from the Chief of Police, the Mayor of Richmond, and community stakeholders. At the February 2nd, 2016 press conference announcing RPD’s BWC program implementation, Police Chief Alfred Durham stated the following:

Ultimately, we know these cameras will be an invaluable tool. They *change behavior and provide increased accountability* [emphasis added] for everyone involved. In other cities that have deployed the cameras, the initial impact appears to be a significant reduction in citizen complaints, violent interactions, and incidents leading to possible use of force. We have a great relationship with the community we serve. The body-worn cameras will only help us to build on that relationship – by increasing trust, improving services, and enhancing public safety in the City of Richmond. (Durham, 2016, p. 2-3)

Chief Durham sought to be proactive in RPD’s adoption of BWCs in an effort to foster a positive police/community relationship. From inception to implementation, RPD took nearly a year to develop the department’s BWC policy with community stakeholders to ensure citizen privacy, and funding was provided through the city budget for the initial purchase of 200 TASER Axon Flex and Axon Body 2 cameras (Durham, 2016).

The initial purchase of 200 Axon Body 2 and Axon Flex cameras for RPD was coupled with the Axon www.evidence.com data storage plan, as in-house data storage would be prohibitively expensive in human resources and capital outlay, as well as with their Taser conducting electrical weapon (CEW) program. The first year of the BWC program of 200 cameras was run by three sworn personnel. A second round of 275 cameras was purchased, bringing current numbers of BWCs up to 475 for RPD. As BWCs are assigned to new officers, a TASER conducting electrical weapon (CEW) is being assigned in tandem.

Research Questions

This study advances both BWC and *organizational justice* literatures in three ways. First, this study replicated the general officer perception survey on BWCs utilized by the leading BWC scholars (Gaub, et al., 2016; Katz, et al., 2014; Uchida, et al., 2016). Replication of this

existing BWC officer perception survey enables comparisons to other departments and studies, albeit only for post BWC implementation officer perceptions as RPD officers are already equipped with BWCs. Second, this study provides empirical data on officer perceptions of their own behavior modification that might be attributed to BWCs and is the first study to attempt to explore this personal officer perception. As one of the perceived benefits of BWCs is behavior modification, or a “civilizing effect” on officers (White, 2014), the findings from this research will substantially add to the growing BWC scholarship by providing empirical data on how officers perceive BWCs may or may not cause them to modify their behavior. The addition of these questions also enabled comparison between the general officer perceptions of the replicated survey to the additional questions on officer perceptions of their own personal behavior. Third, this study provides empirical data on the potential association between officer perceptions of *organizational justice* within their agency and general officer perceptions of BWCs, as well as whether there is an association between officer perceptions of *organizational justice* and officer perceptions of personal behavior change motivated by BWCs. This portion of the research attempted to refine and expand previous scholarship by Kyle and White (2016) on the association between officer perceptions of *organizational justice* and officer perceptions of BWCs through the replication of the *organizational justice* officer perception survey developed by Wolfe and Nix (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b), and will add to the growing body of *organizational justice* literature that focuses on law enforcement agencies.

Based on the above explanation, the research questions for this study are:

- RQ1: Are officer perceptions of organizational justice within their department associated with officers’ general perceptions of body-worn cameras?

- RQ2: Do officers perceive a personal behavior modification motivated by wearing a body-worn camera?
- RQ3: Are officer perceptions of organizational justice within their department associated with officer perceptions of personal behavior modification motivated by wearing a body-worn camera?

Methods

The design for this research was quantitative and deductive in nature and utilized a non-experimental cross-sectional design. Because RPD already implemented their BWC program, a pre/post-test design was not available. A convenience sample of 364 officers from RPD's 750 sworn personnel were asked to participate in a confidential pen and paper survey administered at roll calls in all four RPD precincts and several specialty units, yielding a response rate of 91% and representing 44% of the department's sworn employees. This research design was based on the existing *organizational justice* and BWC literature that employed similar methods (Colquitt, 2001; Gaub et al., 2016; Kyle & White, 2016; Nix & Wolfe, 2016; Wolfe & Nix, 2016a, 2016b). Chapter 3 will describe the study methods in detail.

Chapters

The following chapters provide an overview of the existing scholarly literature on police BWCs, with an emphasis placed on existing officer perception studies. Following the first two sections on the existing BWC research literature, BWC use will be placed within the *organizational justice* framework that forms the foundation of the officer perception survey in this study, and officer *self-legitimacy* is briefly discussed. Chapter 3 will describe the study design, including research questions, hypotheses, independent and dependent variable conceptualization and operationalization, as well as the sampling method and data collection.

Chapter 4 will report the findings from the data analysis and Chapter 5 will present a discussion of the findings, policy implications, limitations, and recommendations. The two appendices include the participant consent form and the full survey, and a letter of research approval from RPD signed by Chief Durham.

Chapter 2: Literature Review

The scholarly literature on police body worn cameras (BWCs) is slowly emerging. Unfortunately, the pace of peer-reviewed knowledge is much slower than the pace of BWC implementation by law enforcement agencies. This creates a substantial difference between knowledge and practice. The following sections provide an overview of the existing scholarly literature on police BWCs, as well as the existing police scholarship on *organizational justice* that provides the theoretical foundation for this study. There are several existing deficits of knowledge noted throughout the following sections. Working within the highly dynamic environment of a police department creates unique challenges for researchers, especially when attempting to gather empirically sound data on a high-profile issue such as BWCs and police use of force, and these challenges are evident in the research presented in this section as well as in the research gaps they create.

U.K. and Canadian Studies

Although BWCs are relatively new in the United States, BWC technology has been utilized in the United Kingdom since the mid- to- late 2000s (Ellis, Jenkins, & Smith, 2015; Goodall, 2007; OSD Consulting, 2011). There have also been two pilot test studies conducted in Canada, one in 2009 in Victoria, British Columbia and one more recently in 2015 in Edmonton, Alberta. Findings varied from study to study, making conclusive evidence difficult to assert. In Plymouth, UK, results showed that officers found a decrease in the time it took them to complete writing their reports when including BWC evidence and an increase in charges, but the program was found to be too expensive to expand (Goodall, 2007). In Victoria, BC, there was an increase in the time it took officers to complete reports when including BWC evidence (Laur, LeBlanc, Stephen, Lane, & Taylor, 2010). The Renfrewshire, Scotland study found a decrease in overall

crime rates and an increase in the speed of court proceedings, and in Aberdeen there was a decline in assaults against officers and an increase in guilty pleas (OSD, 2011). Both the Isle of Wight and Edmonton studies included a survey of the community, through which public support for BWC technology was found (Edmonton, 2015; Ellis, et al., 2015). Interestingly, the Isle of Wight conducted a comprehensive media campaign extolling the virtues of BWC technology. After a year of BWC use, the Isle of Wight found a decrease in most crime types but researchers expressed disappointment that the study was mainly limited to data collection on domestic violence cases due to departmental constraints (Ellis, et al., 2015). The Edmonton Police Service final report cautioned that before implementing a full BWC program, the viability of such a program should be considered (Edmonton Police Service, 2015).

More recent international studies have tested the effect of BWCs on use of force and citizen complaints. Henstock and Ariel (2017) conducted a randomized-control trial on the effect of BWCs on use of force within a British policing context. Compared to control conditions, Henstock and Ariel (2017) found a 50% reduction in the odds of use of force being used when BWCs were present, although it is important to note that the effects were concentrated in open-hand tactics such as physical restraint and non-compliant handcuffing. The researchers concluded that BWCs deter officers and offenders from non-compliant behavior, and they state that the concentrated effect can be contextualized as enhanced accountability and transparency of police due to greater reporting of uses of force that would otherwise be hidden (Henstock & Ariel, 2017). Ariel and colleagues (2017) also recently published an article on a global, multi-site, randomized-control trial on the effect of BWCs on citizen complaints, finding a 93% before-after citizen complaint reduction in treatment areas. The researchers proposed that this effect is due to the assumption that BWCs improve officer and citizen behavior (Ariel,

Sutherland, Henstock, Young, Drover, Sykes, Megicks, & Henderson, 2017), although this does not take into account the effect BWC video as evidence may have on citizen willingness to file an official complaint.

The most notable difference between the UK and Canadian studies and the studies conducted with U.S. police departments are that BWCs were made available for voluntary use, leaving it to officer discretion to determine whether they wanted to wear a BWC while on duty, unlike the U.S. studies where cameras were assigned and wearing them was mandated with program implementation. Also, the UK and Canadian studies focus on crime reduction where U.S. studies focus on police/citizen behavioral changes, indicating that BWC use has vastly different intentions between policing cultures. This indicates that there is an emphasis on BWCs creating a behavior change in American police/citizen interactions (Ariel et al., 2014; *Floyd, v. City of New York*, 2013; White, 2014) that is not present in British or Canadian use of the technology, an important cultural difference between British, Canadian, and American policing that must be noted when comparing BWC studies from the three countries. Although the UK and Canadian studies are useful sources of information, their findings cannot be made generalizable either among each other or to BWC program implementation in the U.S. The policing cultures in the UK and Canada are entirely different than it is in the U.S., with officers in the UK not wearing firearms while on patrol, unlike their American counterparts, indicating that U.S. concerns over use of force incidents has an entirely different context than in the U.K. The research methodologies varied greatly between the studies, also invalidating any generalizability and making conclusive data difficult to correlate.

Use of Force and Citizen Complaint Studies

Research on BWCs within American police departments has only been conducted since 2012, and therefore this field of research is in its infancy. Several studies have focused on whether BWCs can be linked to a reduction in use of force incidents and citizen complaints (Ariel et al., 2014, 2016, 2017; Katz et al., 2014; MPD, 2013; Jennings, Lynch, & Fridell, 2015; Jennings, Fridell, Lynch, Jetelina, & Reingle Gonzalez, 2016). While the majority of the foundational American BWC studies showed a reduction in use of force incidents and citizen complaints (Ariel et al., 2014; Katz et al., 2014; MPD, 2013; Jennings et al., 2015, 2016), findings from a more recent multi-site randomized controlled trial study indicate that, on average, BWCs had no effect on recorded incidents of police use of force (Ariel et al., 2016). Findings have varied due individual police department culture, and this must be taken into consideration when comparing existing studies. Departments who have issues with high numbers of use of force incidents may see a reduction in these incidents through the implementation of BWCs, while other departments who do not have high rates of use of force may see little to no change in their use of force numbers when a BWC program is implemented. It is important to note that findings also vary from based on methodological differences, small sample size, and difficulty controlling for variables in dynamic and active police settings. As BWC research moves forward, comparative studies employing the same research techniques will be necessary to verify findings from these initial studies.

In a randomized control trial in Rialto, CA, Ariel and colleagues (2014) found a decline in use of force incidents as compared to a baseline of data up to three years prior to the 12-month experiment. The control shift was twice as likely as the experimental BWC shift to use force, and there was a decline in citizen complaints over a 12-month period, with complaints declining

from .7 per 1,000 contacts to .07 per 1,000 contacts, representing a 90% decrease in citizen complaints (Ariel, et al., 2014). The Mesa, AZ trial (MPD, 2013) was a longitudinal yearlong evaluation that compared 50 officers outfitted with BWCs to a control group that was demographically matched. This study found a decrease in both citizen complaints and use-of-force incidents, but also found a major change in BWC use due to a mid-study policy change (MPD, 2013). Halfway through the study, the departmental policy regarding BWC recording went from mandatory recording when practical to recording at the officer's discretion when deemed appropriate. The policy shift to BWC use at officer discretion resulted in a 42% decrease in BWC use as compared to the first six months of the evaluation under the mandatory recording policy (MPD, 2013). This finding has important policy implications that indicate police departments need explicit policies for mandatory BWC recording with exceptions for victim interviews and specific areas where privacy is expected to ensure consistent application of the technology in police/citizen encounters. Echoing the findings of Rialto, CA and Mesa, AZ, the randomized control study conducted in Orlando, FL found a significant decrease in the frequency of serious external complaints (65.4%), and a reduction in prevalence of use of force incidents (53.4%) (Jennings, et al., 2015). Jennings and colleagues (2016) also conducted a quasi-experimental study with a large metropolitan police department that compared numbers of use of force incidents 12 months prior to BWC implementation to 12 months post-implementation and found an 8.4% reduction in use of force incidents as compared to the 3.4% increase in use of force incidents in the control group of non-BWC wearing officers. More recently, in a multi-site randomized control trial, researchers explored findings that BWCs had, on average, no effect on recorded incidents of police use of force as some sites showed an increase in use of force and other sites saw a decrease (Ariel et al., 2016). Ariel and colleagues

(2016) concluded that BWCs have the ability to reduce use of force incidents when officer discretion to record is reduced, echoing recommendations for mandatory recording policies from other BWC and policy experts (MPD, 2013; Stanley, 2013).

In Phoenix, AZ, Katz and colleagues (2014) conducted a quasi-experimental study in the Maryvale Precinct deploying BWCs with one squad while using another squad from the same precinct as a nonequivalent control group. The study found a 17% increase in the target group arrests as compared to 9% increase in the control group, and the number of citizen complaints declined by 23% for the target group as compared to a 10.6% increase for the control group and a 45.1% increase in other precincts not being utilized in the BWC study (Katz et al., 2014). Major issues with this study include the transference of information from the test group to the control group through workplace socialization, and a high turnover rate (about 39%) of patrol officers during the pre-deployment period (Katz et al., 2014). In a 6-month study conducted in Denver, CO Ariel (2016) explored whether BWCs have the ability to change crime reporting behavior of citizens. Stratified street segments of low-crime and “hotspot” high-crime areas were compared, with treatment officers wearing BWCs informing citizens incidents and citizen contacts were being recorded. While little to no evidence was found to support BWCs as a deterrent effect on general crime patterns, an overall increase in citizens’ willingness to report crime in low-crime target areas where officers were wearing BWCs was found. BWCs had no impact on crime reporting in hotspot crime areas, which led Ariel (2016) to suggest future research collecting “local legitimacy” and “local self-efficacy” scores to explore police legitimacy within communities that would have implications beyond the effect of BWCs on levels of crime reporting.

In general, the existing BWC studies face issues of generalizability due to the unique policing culture of each individual police department. As the BWC literature continues to grow, comparison studies will be possible. Currently, conclusive empirical findings cannot be asserted for BWCs due not only to differences in police organizational cultures and department size, but also differences in BWC technology used by police departments as well as the variety research methodologies employed by policing scholars to study the effects of BWCs. Research methods differ in quasi-experimental and non-experimental design, survey questionnaires, use of a comparable control group, access to departmental reports, as well length of the studies and academic involvement from universities. These methodological and organizational cultural differences are the main reason why collectively the studies cannot produce conclusive empirical results that would support or negate the perceived benefits of BWC implementation. While comparison between results is not conclusive, there does seem to be common findings emerging; a reduction in use of force incidents found in the Rialto, CA, Mesa, AZ, and Orlando, FL studies, and a reduction in citizen complaints found in four U.S. studies (Ariel, et al. 2014; Jennings, et al., 2015; Katz, et al., 2015; MPD, 2013).

Officer Perception Studies

One of the largest hurdles facing police departments who are in the process of implementing BWC programs, and those departments that are looking into implementing one, is officer resistance to wearing the technology. The police occupational culture and the unique divisions found within the policing subculture have been shown to have an effect on how officers within a department will either accept or resist BWC technology, with line officers being most prone to feeling BWC videos will be used against officers by their superiors (Kyle & White, 2016; Pelfrey & Keener, 2016; Young & Ready, 2015). Therefore, it is important to understand

that there is a schism between front-line officers and police administrators. Many policing scholars have written extensively on the isolated, highly-vigilant, and secretive culture of police (Kappeler, Sluder, & Alpert 1998, 2006; Ruess-Ianni, 1993; Van Mannen, 1997), cultural factors that would naturally make officers resistant to the presence of a camera within their midst. Due to the inherent danger in police work, the occupational culture of policing is one of isolationism from regular civilian life that increases co-worker solidarity through shared experiences, most often creating paranoia for front-line officers in regards to being observed and negatively viewed by command staff within the department who no longer participate in street-level work (Corisanos, 2012; Kappeler, et al., 1998, 2006; McLaughlin, 2007). Police hiring and training practices seek out authoritative individuals who are socialized into the police occupational culture through the shared experience of academy training and front-of-line duties that require a large amount of autonomous discretion (Kappeler, et al., 2006). Departmental policies that are enacted top-down from police administrators who might be receiving outside pressure from local government officials and the citizenry to address certain issues are often at odds with what front-line officers perceive they are experiencing on the street as they go about their daily duties. As Kappeler and colleagues (2006) state, “Any attempt to limit the autonomy of police is viewed as an attempt to undermine the police authority to control “real” street crime and not as an attempt on the part of the citizens to curb police abuses of authority” (Kappeler, et al., 2006, pg. 290).

In states that have police unions, negative officer perceptions are more loudly voiced in the BWC implementation process. In Phoenix, AZ study, officers were given a say in what type of BWC technology was chosen for the study, and this is most likely because the State of Arizona has a police union (Katz, et al., 2015). When the Las Vegas Metropolitan Police Department announced its plans to implement a BWC program they were threatened with a law

suit by the Las Vegas Police Protective Association because the technology created a “clear change in working conditions” that would have to be negotiated through the police union (White, 2014, pg. 28). Without a culture of positive support, any BWC program implemented will find difficulty gaining legitimacy among front-line officers.

Researchers who have conducted BWC studies within police departments found regular occurrences of officer resistance to wearing BWCs due to concerns about how BWC footage might reflect on their behavior and be used against them as evidence of misconduct by administrative superiors (Ariel et al. 2014; Gaub, et al., 2016; Jennings et al., 2014; Katz et al., 2014; Kyle & White, 2016; Pelfrey & Keener, 2016; Smykla, Crow, Crichlow, & Snyder, 2015; Young & Ready, 2015). As Katz, and colleagues (2015) found when evaluating the BWC pilot program of the Phoenix Police Department:

...over the course of the study officers consistently stated that body cameras were not well received by coworkers and that they did not improve officer job satisfaction. They were also less likely to agree that BWC increase officer safety and improve officer training...majority of officers who wear BWC are dissatisfied with the fact that they wear them. (Katz et. al., 2015, pg. 24)

Similar reactions by officers were mentioned in the Rialto, CA (Ariel et al., 2014) and Mesa, AZ (MPD, 2013) studies. This is troubling as the success of BWC use depends heavily upon the officers wearing them, especially if the department’s policy of when to record is left mainly to officer discretion.

In contrast to the West Coast and Southwestern studies, researchers Jennings, Fridell, and Lynch (2014) surveyed 95 patrol officers in Orland, FL prior to BWC implementation. Officer perception findings were generally favorable towards BWCs, with 62.7% of officers agreeing or

strongly agreeing that their agency should implement BWCs for all officers. 40.7% believed that BWCs would improve citizen behavior, but only 19.8% thought the technology would improve their own behavior. The majority of officers did not perceive that BWCs would increase their safety, with only 18.7% agreeing or strongly agreeing they would feel safer wearing a BWC (Jennings et al., 2014). Findings also indicated gender differences in perceptions, with male officers having more positive perceptions of their own behavior changes as opposed to female officers, whereas female officers held more positive perceptions of BWCs in regards to complaint reductions (Jennings, et al., 2014). As this study was limited to one department it cannot be generalized to officer perceptions in other areas, but it does provide research areas that should be explored more fully, such as perception differences based on officer gender and potential correlates of perceived behavior modification. Most importantly, Jennings et al. (2014) does note that officer perceptions have an effect on the implementation of a BWC program, noting that officers with negative perceptions could subvert implementation efforts while officers with positive perceptions could enhance the benefits of BWCs.

In a study related to the Phoenix, AZ evaluation that employed both survey and field contact forms, researchers Young and Ready (2015) found that the shared concerns of officers regarding BWC footage being used against them by administrators represent an enormous barrier to BWC implementation success. Young and Ready (2015) state:

When new technology is introduced, some officers may perceive on-officer video policy implemented by superiors as a systematic attempt to limit discretion and sanction line officers for trivial violations...Thus, concerns among the rank and file represent a legitimacy problem for department managers who seek to have officers comply with their authority. (Young & Ready, 2015, pg. 246)

Without a culture of positive support that seeks to increase officer “buy-in” through proper training, explicit policy, and a clear communication that the purpose of BWCs is not officer discipline, any BWC program implemented will find difficulty gaining legitimacy among front-line officers. Young and Ready (2015) put forth two recommendations to combat the police subcultural barrier: 1) spread cameras amongst the entire department and do not assign BWCs only to designated units to avoid a barrage of transfer requests out of those units; and 2) identify officers who have a positive perception of the technology that can serve as innovators within the police subculture.

Gaub and colleagues (2016) attempted combat cross-comparative issues by conducting the same officer perception survey in several different police departments in the Pacific Northwest and Southwestern regions of the US. This study compared officer perceptions from the Phoenix (AZ) Police Department, Spokane (WA) Police Department, and the Tempe (AZ) Police Department. By administering a survey on officer perceptions pre- and post-BWC implementation in three different police departments, Gaub and colleagues (2016) found that officers see the evidentiary value of BWCs but many officers indicated they had concerns about the comfort and ease of BWCs. The Phoenix Police Department had an overall negative perception of the technology that increased post implementation, whereas the Tempe Police Department had a fairly consistent increase in positive perceptions of BWCs, with the Spokane Police Department falling between the two extremes (Gaub et al., 2016). The researchers hypothesized that this large perception difference between departments may be due to the timing of the two surveys, as Phoenix officers were surveyed in 2013 while Tempe officers were surveyed in 2015 (Gaub et al., 2016). Within this two-year time period several critical police involved deaths of black males had occurred, including the death of Michael Brown in Ferguson,

MO that can be viewed as a major catalyst in the call for officers to wear BWCs from advocacy groups and government officials alike (Gaub et al., 2016; Lum, Koper, Merola, Scherer, & Reioux, 2015). Coupled with government funding opportunities for BWCs, police perceptions towards the use of BWCs has changed from 2013 to 2015. The researchers also note that officer perceptions may be affected by whether BWC implementation is proactive for the department or on recommendation, as in the case of the Spokane Police Department (Gaub et al., 2016).

One officer perception study has been conducted with a university campus police department in Richmond, VA. Through pre-implementation surveys and focus group interviews, Pelfrey and Keener (2016) found officers had concerns with how BWC data would be used, and police administrators expected reductions in complaints and use of BWC footage for officer assessment. With a 92.3% survey response rate, findings included that officers generally felt BWCs had evidentiary value that would help prosecute offenders and disprove complaints against officers, although the officers did not believe BWCs enhanced their safety or would have much impact on officer or citizen behavior. Rank was the only significant factor in predicting perceptions, indicating that supervisors had higher expectations of the impact of BWCs as compared to patrol officers (Pelfrey & Keener, 2016). Command staff findings from focus groups revealed themes that were enthusiastic towards BWCs increasing departmental transparency, reducing use of force incidents, addressing complaints, and assisting officers in accurate report writing and identification of suspects. Compared to officer focus group themes that included concerns about privacy issues and performance assessments, command staff focus group themes support the survey findings that rank is significant in determining a positive perception of BWCs (Pelfrey & Keener, 2016). These findings are similar to those from the

survey study of four small and medium sized departments in the Midwest and Southern regions where rank was also a significant predictor (Kyle & White, 2016).

Given that rank has been an important predictor in numerous studies, it is important to discuss the one study examining perceptions of law enforcement leadership. Conducted in Sunshine County, FL, researchers surveyed command staff representatives from 36 agencies with a 67% response rate (Smykla et al., 2015). Findings showed that half of the respondents were supportive of BWCs, with those departments already employing BWCs showing strong support. 50% of the respondents felt BWCs would change officer behavior for the better, and 54% believe BWCs will reduce complaints against officers, while 50% also believed that the maintenance of the equipment will take away from normal duties and 40% do not think BWCs will make officers' jobs easier (Smykla, et al., 2015). In regard to BWC data being used by the media, 60% of the respondents agreed or strongly agreed that the media will use BWC footage for negative portrayals of police and that pressure for BWC implementation comes from the media. Almost 70% of respondents felt that the public supports BWCs because they lack trust in the police. Researchers also found that command staff respondents with less than 20 years' experience held generally negative perceptions of BWCs (Smykla, et al., 2015). These findings are quite different from previous command staff and ranking officer perception findings (Kyle & White, 2016; Pelfrey & Keener, 2016); this could be due to the limited sample size and differences in department cultures between regions.

Recently, Kyle and White (2016) administered a survey to explore the relationship between perceptions of *organizational justice* and officer attitudes towards BWCs to a sample of 201 law enforcement officers from four Midwestern and Southern agencies, as well as some officers who were attending continuing education courses. They found that officer perceptions

of *organizational justice* were a significant factor in their general attitudes towards BWCs, with three other independent variables also predicting general perceptions of BWCs: rank, gender, and whether the officer's agency had implemented a BWC program (Kyle & White, 2016). Higher ranking officers and female officers tended to have more positive attitudes towards BWCs, research areas that Kyle and White (2016) believe should be explored further. Given that my sample consists of officers from an agency that has had BWCs for over two years, Kyle and White's findings on the significance of BWC program implementation predicting general perceptions of BWCs are too pertinent to the research reported on here. Kyle and White (2016) noted two main limitations of their study: first, their officer survey on perceptions of *organizational justice* did not include questions intended to measure *distributive justice*, and second, that they used a compilation or summed score for perceptions of BWCs. They suggested future research seek to measure officer perceptions of behavioral changes caused by BWCs and to include *distributive justice* as an independent *organizational justice* variable to strengthen the research model. Kyle and White (2016) believe that officer perceptions of BWCs is multi-dimensional, something not accounted for in their survey, stating, "A more robust and comprehensive set of indicators needs to be developed to include items to gauge whether officers believe they have, or would alter how they perform their duties or the quantity of self-initiated activities as a result of being equipped with a BWC" (Kyle & White, 2016, p. 12). The present study attempted to quantify officer perceptions of BWC related behavior modification in effort to advance empirical evidence for one of the key perceived BWC benefits, that of a "civilizing effect" on officers (Ariel, et al., 2014; *Floyd, v. City of New York*, 2013; White, 2014).

Organizational Justice

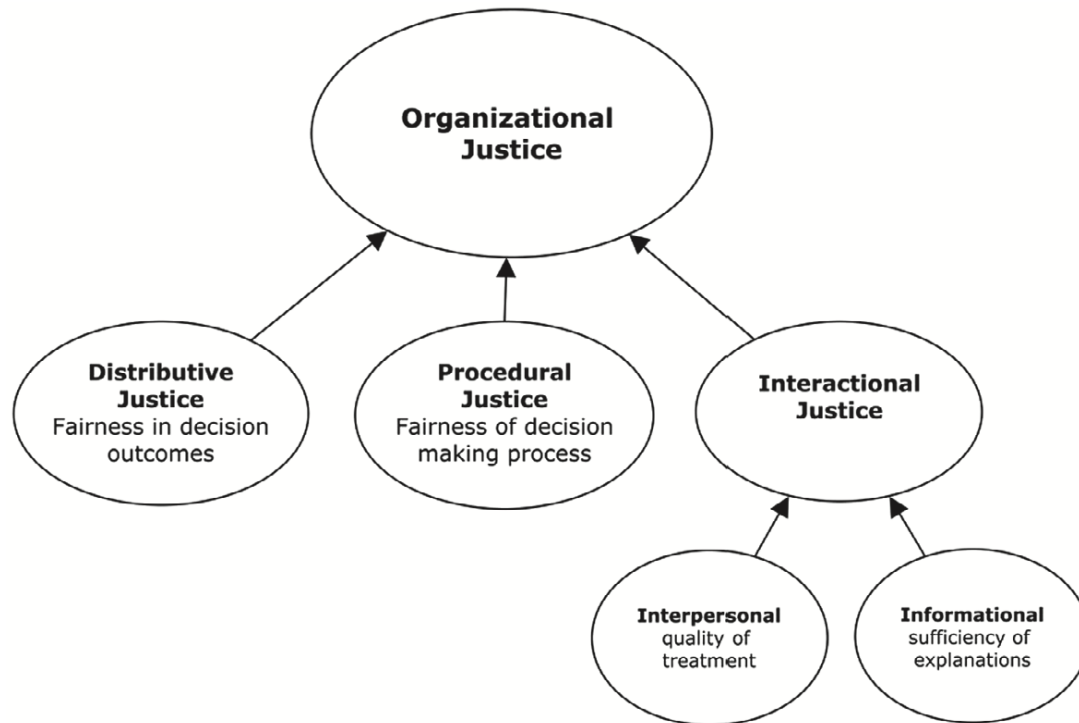
As noted in the section on officer perception studies, many officers have raised concerns about BWC video being used against them, something that makes officer buy-in difficult to achieve (Ariel et al. 2014; Gaub et al., 2016; Jennings et al., 2014; Katz et al., 2014; Kyle & White, 2016; Pelfrey & Keener, 2016; Young & Ready, 2015). Kyle and White (2016) found the theoretical framework of *organizational justice* is key to favorable perceptions of BWCs, and Nix and Wolfe (2016) have strongly suggested the *organizational justice* framework continue to be explored in relation to generating officer buy-in of new technologies, such as BWCs. While the application of the *organizational justice* theoretical framework to police scholarship is relatively new (Bradford, Quinton, Myhill, & Porter, 2014; Myhill, & Bradford, 2013; Nix & Wolfe, 2016; Patten, Caudill, Bor, Thomas, & Anderson, 2015; Wolfe, & Piquero, 2011; Wolfe & Nix, 2016a, 2016b), *procedural justice* scholarship has formed the basis of the Police Executive Research Forum's (PERF) police legitimacy tenants (PERF, 2014; Sunshine & Tyler, 2003, Tyler & Wakslak, 2004, Tyler & Fagan, 2008; Tyler & Jackson, 2014; Tyler 2004, 2009) and is therefore a useful theoretical framework to employ in attempting to produce empirically relevant research within a policing context. Generally, perceptions of *organizational justice* can be understood as an employee's perception of fairness in procedural and distributive matters and can be measured by variables such as job satisfaction, organizational commitment, perceptions of authority, employee performance, and organizational citizenship behavior, making this a theory that focuses on interpersonal interactions, structural procedures, and outcomes within an agency (Colquitt, et al., 2001). Colquitt and colleagues (2001) note that positive perceptions of *organizational justice* are associated with increased productivity and greater organizational commitment. Kyle and White (2016) state:

...factors such as organizational commitment and organizational citizenship behaviors can be contextualized by an employee's willingness to accept the introduction of a new technology and their willingness to comply with work-rules that may otherwise be seen as limiting their discretion. (Kyle & White, 2016, p. 4)

Thus, as Kyle and White (2016) suggest, if officers have favorable perceptions of *organizational justice* within their department, they may be more willing to accept the use of BWCs and comply with the policies surrounding the technology, echoing Young and Ready (2015) in their assertion that officer buy-in is predicated on a positive working environment.

Organizational justice as it is currently understood and utilized by social science researchers has been a journey from one measurable construct, *distributive justice*, to three, and in some cases four, measurable constructs: *distributive justice*, *procedural justice*, and *interactional justice* that has two sub-factors, *interpersonal justice* and *informational justice* (see Figure 1). *Organizational justice* is concerned with fairness and is socially constructed by what employees perceive as fair or just treatment in 1) the outcome distributions, such as promotions or employee placement, and 2) the procedures of decision making to reach the ultimate outcomes (Colquitt, et al., 2001).

Figure 1. Four-Factor Organizational Justice (Kyle & White, 2016)



The concept of *distributive justice* is defined as justice or fairness in outcome distributions, such as promotions or bonuses (Adams, 1965; Deutsch, 1985; Homans, 1961). Introduced as a separate *organizational justice* concept in the 1970s, *procedural justice* is defined as the fairness of the decision-making process (Leventhal, 1980; Thibaut & Walker, 1975). There is argument among theorists and researchers as to whether procedural justice should be split into two separate concepts, with *procedural justice* being narrowly defined as the fairness of the decision-making structure, such as organizational policies, and fairness in interpersonal and informational exchanges being defined as its own concept of *interactional justice* (Bobocel & Holmvall, 2001). The concept of *interactional justice* was introduced by Bies and Moag (1986) who identified four separate aspects of *interactional justice*: 1) justification or explanation of decisions by authority figures; 2) truthfulness or candidness of authority figures; 3) respect towards employees by authority figures; and 4) propriety of

authority figures to refrain from prejudicial remarks. More recently, Greenberg (1990, 1993a, 1993b) suggested that *interactional justice* should be broken into two components, *interpersonal justice* and *informational justice* as these two components have been shown to have independent effects (Bies, Shapiro, & Cummings, 1988; Greenberg, 1993c, 1994; Shapiro, Buttner, & Barry, 1994). Despite the more recent research that supports the use of the four-factor model of *organizational justice* with the separate concepts of *distributive*, *procedural*, *interpersonal*, and *interactional justice* (Colquitt, 2001), there is not a consensus among scholars as to the validity of the construct measurements utilized across various studies.

For example, Lind and Tyler (1988) incorporate both aspects of *procedural* and *interactional justice* into their definition of *procedural justice*, and even Bies and Moag (1986) acknowledged that it might be better to include *interactional justice* as part of the concept of *procedural justice* because they are highly interrelated, with interpersonal interactions only occurring through the implementation of the decision-making procedural structure. Bies and Moag (1986) state:

...interactional fairness will generalize to the procedure only when a person attributes responsibility for the action to the organization, a systemic attribution, rather than the decision maker. On the other hand, if a person attributes the deception and rudeness solely to the decision maker and not the organization, then there would be less implications for the procedure itself. (Bies & Moag, 1986, p. 52)

Moorman (1991) found that employee perceptions of *interactional justice* were linked to supervisor interactions, whereas *procedural* and *distributive justice* were not. Consistent with Bies and Moag (1986), this makes the argument that perceptions of interactional treatment may be more strongly linked to individuals of the system, while perceptions of *procedural justice*

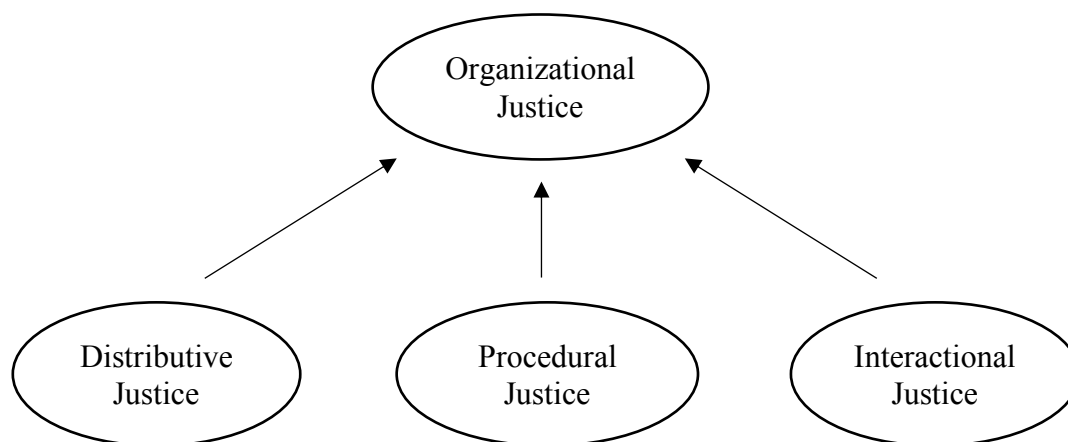
pertaining to the structure of the decision-making process have more to do with perceptions of the organization. Bobocel and Holmvall (2001) note the need for further theoretical research on *organizational justice*, as well as research that seeks to empirically rule out that the distinction between *procedural* and *interactional justice* relies solely on different source attributions (organization versus supervisor). According to Bobocel and Holmvall (2001), separate concepts of *procedural* and *interactional justice* can be argued against if perceptions are based purely on source attribution.

Colquitt and colleagues (2001) also note that the constructs of *organizational justice* are highly interrelated, particularly that some scholars assert *interactional justice* is a part of *procedural justice* due to the fact that Bies retracted his earlier assertion that *interactional justice* was a third type of *organizational justice* (Tyler & Bies, 1990). Yet, more recent studies have shown *procedural justice* and *interactional justice* have different independent effects (Blader & Tyler, 2003; Masterson, Lewis, Goldman, & Taylor, 2000), where research by Greenberg (1993b, 1993c) and Colquitt (2001) has shown that *interactional justice* should also be broken down as *interpersonal* and *informational justice* are logically distinct and have shown independent effects. Despite the lack of agreement among *organizational justice* scholars regarding the number of concepts that feed into the overall perceptions of *organizational justice*, Bobocel and Holmvall (2001) assert that *interactional justice* can be distinguished as a separate concept from *procedural justice* when *procedural justice* is narrowly defined as pertaining only to the structure of decision making, and Colquitt (2001) argues for a further breakdown of the organizational concept model from three-factor to four-factor.

Current police scholarship seeking to understand the effect of officer perceptions of *organizational justice* on a variety of dependent variables has opted to utilize the three-construct

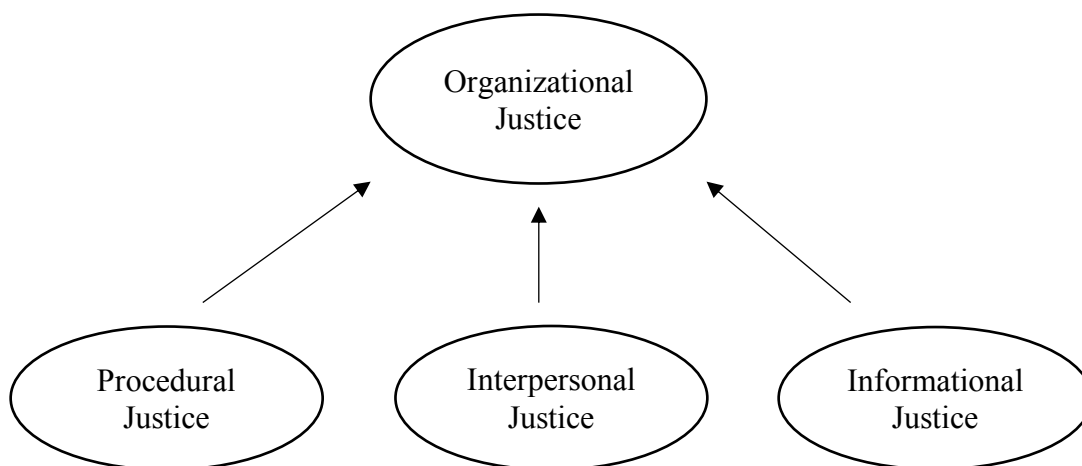
approach of *distributive*, *procedural*, and *interactional justice* (Nix & Wolfe, 2016, 2017; Patten, et al., 2015; Wolfe, & Piquero, 2011; Wolfe & Nix, 2016a), with Wolfe and Nix developing an *organizational justice* Likert scale survey questionnaire that they have employed across several studies (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b). Nix and Wolfe (2016) state that their three-construct *organizational justice* items (see Figure 2) are consistent with those employed in previous research (Cohen-Charash & Spector, 2001; Colquitt, et al. 2001), with *distributive justice* measured by statements such as “Landing a good assignment in my agency is dependent on whom you know (reverse coded)”, *interactional justice* measured by statements such as “Command staff treats employees with kindness and consideration, and *procedural justice* being measured by statements such as “My agency's policies are designed to allow employees to have a voice in agency decisions (e.g., assignment changes, discipline)” (Nix & Wolfe, 2016). Given the interrelated definitions of *organizational justice* variables explored in the section above, it is important to note that Wolfe and Nix define *interactional justice* as employees being treated with politeness and respect by supervisors and *procedural justice* as objective organizational processes where decisions are clearly explained and allow employees to have a voice in the process (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b).

Figure 2. Three-Factor Organizational Justice Model (Nix & Wolfe, 2016, 2017)



Kyle and White (2016) also employed a three-construct *organizational justice* framework for their independent variables in their BWC officer perception survey, although they opted to use *procedural justice* and break down *interactional justice* separately into *interpersonal* and *informational justice* (see Figure 3), choosing not to measure *distributive justice*. The choice to leave out *distributive justice* is something Kyle and White (2016) noted in their limitations section with recommendation for future studies to include *distributive justice* measurements, as this may enable more specific analysis within the *organizational justice* framework.

Figure 3. Three-Factor Organizational Justice Model (Kyle & White, 2016)



Clearly, even within the narrow field of police *organizational justice* scholarship, there are methodological differences in how the *organizational justice* framework is utilized. One of the key decisions of the research reported here was a choice between attempting to address all four constructs of *organizational justice* as operationalized by Colquitt (2001), or whether to use the existing three-construct police officer *organizational justice* perception survey utilized by Wolfe and Nix (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b) that still addresses the limitation of Kyle and White's (2016) BWC study by including *distributive justice* as an independent variable. Greenburg (1993a) addressed the lack of a standardized survey instrument

for *organizational justice*, stating, "A sure sign of the immaturity of the field of organizational justice is the lack of a standardized instrument with which to measure perceptions of distributive and procedural justice" (Greenberg, 1993a, p. 143). Therefore, the decision in this study was to employ the existing three-construct police officer *organizational justice* survey created and utilized by Wolfe and Nix (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b) in order to attempt some standardization through replication, while still addressing one of the limitations of Kyle and White's (2016) BWC officer perception study.

Officer Self-Legitimacy

Officer self-legitimacy is a component of the broader literature on police legitimacy. While much of the police legitimacy research has focused on public perceptions of police legitimacy (PERF, 2014; Sunshine & Tyler, 2003, Tyler & Wakslak, 2004, Tyler & Fagan, 2008; Tyler & Jackson, 2014; Tyler 2004, 2009), officers must first believe in their authority to claim legitimacy with the public (Bottoms & Tankebe, 2013; Weber, 1946, 1978). *Officer self-legitimacy* has been defined as officers' "confidence in their own individual entitlement to power" (Tankebe, 2014, p. 3), and Nix and Wolfe (2017) outline three sources of *officer self-legitimacy*: 1) *organizational justice*; 2) relationships with colleagues; and 3) public support. Bottoms and Tankebe (2012) note that while legal authority is important, officers might also need to be assured that their right to authority is in line with the morals and values of society. While research on *officer self-legitimacy* is currently limited, the existing studies have shown that higher levels of self-legitimacy are associated with officers having a greater commitment to treating citizens in a procedurally just manner (Bradford & Quinton, 2014), are more likely to issue verbal warnings as opposed to threatening to use force and show organizational commitment through a willingness to participate in non-required agency activities (Tankebe &

Meško, 2015).

For the purposes of this study, officer perceptions of *self-legitimacy* have been found to be a confounding variable to officer perceptions of *organizational justice* in previous research (Bradford & Quinton, 2014; Nix & Wolfe, 2015, 2016, 2017; Tankebe & Meško, 2015; Wolfe & Nix, 2016a, 2016b). Recent research has shown that officers with higher perceptions of *self-legitimacy* tend to have higher perceptions of *organizational justice* (Bradford & Quinton, 2014; Tankebe & Meško, 2015; Wolfe & Nix, 2016a, 2016b), thus, officer *self-legitimacy* was controlled for in this study. As *organizational justice* is considered one of the three sources of *officer self-legitimacy* (Nix & Wolfe, 2017) and research has shown an association between *officer self-legitimacy* and procedurally just citizen interactions (Bradford & Quinton, 2014; Tankebe & Meško, 2015), it was important to separate these two concepts from one another to determine whether officer perceptions of *organizational justice* could be associated with their perceptions of BWCs beyond their perceptions of *self-legitimacy*.

Chapter 3: Methods

Purpose of Study and Research Questions

This study sought to advance both BWC and *organizational justice* literature in several ways. First, this study replicated the general officer perception survey on BWCs utilized by leading BWC scholars (Gaub, et al., 2016; Katz, et al., 2014; Uchida, et al., 2016). This replication enabled me to compare post-BWC implementation officer perceptions (as RPD officers are already equipped with BWCs) from a midsized, urban police department to previous studies from other jurisdictions. Second, the study provides empirical data on whether officer perceptions of personal behavior modification can be attributed to BWCs—an area of officer perceptions on BWCs that has yet to be explored. As one of the perceived benefits of BWCs is behavior modification, or a “civilizing effect” on officers (White, 2014), the research presented here substantially adds to the growing BWC scholarship by providing empirical data on whether officers perceive a personal behavior modification motivated by BWCs. The addition of these questions also enabled comparison between the general officer perceptions of the replicated survey to the additional questions on officer perceptions of their own behavior. Third, this study provides empirical data on the association between officer perceptions of *organizational justice* within their agency and general officer perceptions of BWCs. This study also explores whether there is an association between officer perceptions of *organizational justice* and officer perceptions of personal behavior modification motivated by BWCs. This study’s research questions are as follows:

- RQ1: Are officer perceptions of organizational justice within their department associated with officers’ general perceptions of body-worn cameras?

- RQ2: Do officers perceive a personal behavior modification motivated by wearing a body-worn camera?
- RQ3: Are officer perceptions of organizational justice within their department associated with officer perceptions of personal behavior modification motivated by wearing a body-worn camera?

Hypotheses

- H₁: Positive officer perceptions of organizational justice within their department are associated with officers' general positive perceptions of body-worn cameras.
- H₂: Officers will perceive a personal behavior modification motivated by wearing a body-worn camera.
- H₃: Positive officer perceptions of organizational justice within their department are associated with positive officer perceptions of personal behavior modification motivated by wearing a body-worn camera.

Independent Variables

This study employed the three-construct model of *organizational justice* (see Figure 2) utilized by Wolfe and Nix in several of their officer perception surveys (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b). By replicating Wolfe and Nix's survey in this study, the goal was to address Greenberg's (1993a) concerns regarding valid measurements and standardization of *organizational justice* research. In this study, the independent variables (IVs) of *procedural justice*, *distributive justice*, *interactional justice* officer perceptions were operationalized using Wolfe and Nix's Likert scale survey items (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b) that were consistent with other organizational studies (Cohen-Charash & Spector, 2001; Colquitt, et al. 2001). Nix and Wolfe (2016) state that the survey

items “demonstrated strong internal consistency ($\alpha = 0.96$)” (Nix & Wolfe, 2016, pg. 16). Wolfe and Nix (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b) conducted a factor analysis that indicated that all the items loaded onto one factor and therefore opted for a summated scale as opposed to factor scores. Fourteen items were used from the Wolfe and Nix survey (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b), and I added two additional questions on promotions to further address distributive justice. Definitions of the IVs based on descriptions provided by Nix and Wolfe (2016) are provided below:

- *Procedural Justice* - objective organizational processes and policies that allow employees to have a voice in the process, and where decisions are clearly explained by command staff and supervisors.
- *Distributive Justice* – fairness in outcomes, such as salary and promotions being distributed evenhandedly across the organization.
- *Interactional Justice* – employees being treated with politeness and respect by command staff and supervisors.

Officers chose from four Likert- type options for each survey statement: *strongly disagree* (1); *disagree* (2); *agree* (3); *strongly agree* (4). The survey statements created by Wolfe and Nix (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b) that were used in this study are listed below and organized under the appropriate variable heading in keeping with the three-construct model of *organizational justice*.

Procedural Justice (7 items)

- My agency's policies are designed to generate standards so that decisions can be made with consistency.
- My agency's policies are designed to allow employees to have a voice in agency

decisions (e.g. assignment changes, discipline).

- My agency's performance evaluation system is fair.
- My agency's investigation of civilian complaints is fair.
- Command staff clearly explains the reasons for their decisions.
- Command staff clearly explains the reasons the agency makes policy changes.

Distributive Justice (2 items)

- Landing a good assignment in my agency is based on whom you know (reverse coded).
- If you work hard, you can get ahead at this agency.

Interactional Justice (6 items)

- Command staff considers employees' viewpoints.
- Command staff treats employees with kindness and consideration.
- Command staff treats employees the same regardless of their gender.
- Command staff treats employees the same regardless of their race or ethnicity.
- Command staff are candid in their communication with employees.
- Generally, command staff treats employees with respect.

As there were only two items that measure *distributive justice* in the Wolfe and Nix survey (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b), and no questions in their survey regarding promotions specifically, I added two questions on perceptions of promotion outcomes that brought the total number of *distributive justice* items up to four. Promotion outcomes are stated to be one of the components of *distributive justice* in the *organizational justice* literature (Adams, 1965; Deutsch, 1985; Homans, 1961) and therefore it was appropriate that *distributive*

justice statements pertaining to promotion outcomes should be included in the officer survey.

For police departments that are quasi-militaristic in organizational structure (Bittner, 1970/2006), promotions are particularly important as all sworn personnel must serve at the basic level of recruit and then patrol officer for a prescribed amount of time before being eligible for promotion to the next rank. This quasi-military organizational structure that manages police departments through extensive internal standard operating procedures and codes of conduct (Bittner, 1970/2006) create increasingly rare opportunities for promotion as officers move up the ranks from supervising sergeant to lieutenant, captain, major, deputy-chief, and finally chief, of which there can only be one. Since fairness in promotion outcomes is a critical measure of *distributive justice*, I felt it highly important to capture officer perceptions of promotion outcomes, given that the opportunities for promotions are increasingly limited as officers are promoted in rank. The two additional survey statements I created to further operationalize *distributive justice* are listed below.

Distributive Justice (2 items)

- Promotions in my agency are fair.
- Promotions in my agency are based on merit.

The full survey is included in Appendix I.

Dependent Variables

There were two dependent variables (DVs) in this study: *general officer perceptions of BWCs* and *officer perceptions of personal behavior modifications motivated by BWCs*. Both DVs were composite measures. Conceptual definitions of the DVs are below:

- *General officer perceptions of BWCs* – officer opinions about general, or global, proposed BWC benefits, such as use in writing incident reports, general citizen behavior, general officer behavior, and overall perceptions of the technology.
- *Officer perceptions of personal behavior modifications motivated by wearing a BWC* – officer opinions about whether or not wearing a BWC causes them to make changes in their own personal behavior.

General officer perceptions of BWCs were operationalized by survey statements that have been used in previous research (Gaub, et al., 2016; Katz, et al., 2014; Uchida, et al., 2016). The Likert scale for all questions was coded as follows: *strongly disagree* (1); *disagree* (2); *agree* (3); *strongly agree* (4) and are listed below:

General Officer Perceptions (29 items)

Completing Incident Reports: When officers wear body cameras. . .

- They will spend less time filling out forms and other types of paperwork.
- They will have a more accurate account of what has transpired.
- It improves the quality of evidence they can submit.
- It makes their job easier.

Citizen/Resident Reactions

- Citizens will be more cooperative once they become aware that an officer is wearing a body camera.
- Citizens will be more respectful once they become aware that an officer is wearing a body camera.
- Suspects are less likely to resist arrest when they become aware that the officer is

wearing a body camera.

- Generally, people become less aggressive when they are aware that a body camera is being used.
- Having officers wear body cameras will hurt police-community relations.
- The use of body cameras increases the number of citizen complaints against officers.

Police Officer Behavior: When wearing a body camera, an officer. . .

- Is less likely to give warnings to citizens.
- Will have fewer contacts with citizens.
- Will feel like they have less discretion.
- Will be more cautious in making decisions.
- When wearing a body camera an officer will act more professional.
- Wearing a body camera affects an officer's decision to use force.

Familiarity, Comfort, and Ease of Use

- When an officer wears a body camera it is easy to locate and retrieve video for a specific incident if needed.
- When an officer wears a body camera, the equipment is easy to use.
- The body camera equipment is comfortable to wear.
- The battery life of the body camera is adequate.
- When an officer wears a body camera, it is easy to download data at the end of a shift.

General Perceptions

- The use of body camera equipment is well received by coworkers.

- The police benefit more from body cameras than citizens do.
- When an officer wears a body camera it improves their job satisfaction.
- Body cameras improve officer training.
- Body cameras improve the overall job performance of an officer.
- Body cameras tend to increase officer safety.

Overall Recommendations

- I think that the use of body cameras should be expanded to other departments.
- The advantages of police departments adopting body cameras outweigh the disadvantages.

I created ten additional survey statements specifically for this study that were intended to measure office perceptions of personal behavior modification motivated by wearing a BWC.

These ten questions are listed below and the complete survey including consent form is included in Appendix I.

Officer Perceptions of Personal Behavior Modifications (10 items)

- Wearing a body-worn camera makes me more cautious when making a decision.
- Wearing a body-worn camera makes me act more professionally.
- Wearing a body-worn camera affects my decision to use force.
- Wearing a body-worn camera makes me less likely to give a warning to citizens.
- Wearing a body-worn camera makes me have fewer contacts with citizens.
- Wearing a body-worn camera makes me more respectful when interacting with citizens.
- Wearing a body-worn camera makes me more considerate when dealing with the public.
- Wearing a body-worn camera makes me think through my actions more thoroughly.

- Wearing a body-worn camera makes me less likely to use force.
- Wearing a body-worn camera does not make me act differently in my duties (reverse coded).

Control Variables

Rank and *gender* have shown to relate to perceptions of BWCs (Jennings, et al., 2014; Kyle & White, 2016), and were therefore controlled for in this study. *Rank* was operationalized as *Patrol Officer* (1), *Detective* (2), *Sergeant* (3), *Lieutenant* (4), *Captain* (5), *Major* (6), *Deputy Chief* (7), *Chief* (8). *Gender* was operationalized as *male* (0) or *female* (1). Whether or not the respondent was assigned a BWC was controlled for (*yes* (1); *no* (0)). Controlling for BWC assignment was important because not all potential sworn officer respondents of RPD are assigned a BWC, and this was likely to have an effect on their perceptions of BWCs. Respondents were also asked how long they had been assigned a BWC (number of months and or years), and years of service.

In previous organizational studies, *officer self-legitimacy* was shown to confound officer perceptions of *organizational justice* (Bradford & Quinton, 2014; Nix & Wolfe, 2015, 2016, 2017; Tankebe & Meško, 2015; Wolfe & Nix, 2016a, 2016b), and therefore was controlled for in this study. Five Likert scale survey statements used by Wolfe and Nix (Nix & Wolfe, 2016) and originally developed by Tankebe (2014) were included to measure and control for *officer self-legitimacy*. In Nix and Wolfe's study (2016), Cronbach's alpha revealed adequate internal consistency ($\alpha = .71$). These items were summed, with higher scores reflecting a greater sense of self-legitimacy. The *self-legitimacy* statements are listed below.

Officer Self-Legitimacy (5 items)

- I have confidence in the authority vested in me as a law enforcement officer.

- As a law enforcement officer, I believe I occupy a position of special importance in society.
- I believe people should always do what I tell them as long as my orders are lawful.
- I am confident I have enough authority to do my job well.
- I believe law enforcement is capable of providing security for all citizens of this county.

See Appendix I for the complete questionnaire.

Sampling Method

Police officers were the target population of this study, and because the Chief of RPD approved my research request to study RPD's BWC program specifically (see Appendix II), convenience sampling was the most appropriate method to employ (Blair & Blair, 2015).

Department-wide participation was sought to allow for all sworn RPD personnel to have an equal opportunity to participate in the survey. RPD has approximately 750 sworn officers and had 475 BWCs deployed when this survey was administered.

Data Collection

The first step of data collection was to submit a research proposal to Virginia Commonwealth University's Institutional Review Board (IRB). This study was designed to be as minimally invasive as possible, and to protect the confidentiality of officers who would potentially fear occupational retaliation. Officer concerns regarding how participation in the study may have an effect on their employment were carefully addressed to reassure sworn officer participants of their confidentiality.

The data collection stage consisted of a pen and paper survey that I administered in person by attending roll calls in all four RPD precincts. The majority of the survey consisted of Likert scale statements with four response options (*strongly disagree, disagree, agree, and*

strongly agree), consistent with the recommendation of Dillman, Smyth, and Christian (2009) that there only be four or five Likert scale response options. The four-response option was also consistent with the existing general BWC officer perception survey that has been employed in several of the leading officer perception studies (Gaub, et al., 2016; Katz, et al., 2014; Uchida, et al., 2016). Following the Likert scale statements were ten demographic questions related to the control variables. Two versions of the survey were printed in equal number and distributed randomly to counterbalance measures and test for order effects. This enabled comparison after data entry to see if order of questions had an effect on responses. A pilot test with two officers helped me gauge the time it would take for officers to complete the survey and noted this in the confidentiality form. In addition to the survey, there was a separate consent form with a brief explanation of the survey that discussed participant confidentiality. In an effort to reach as many members of the target population as possible, I attended roll call in all four RPD precincts at every shift to describe the nature and intent of the research in person.

Data collection began May 29th, 2018 at Second Precinct. Six roll calls were attended at Second Precinct on May 29th and May 30th, 2018 (0600, 1500, and 2000 hrs) to provide the survey to both A/B and C/D platoons morning, evening, and midnight shifts. Following Second Precinct, Fourth Precinct was surveyed on June 4th and June 6th, 2018 at 0500, 0700, 1600, and 1800 hrs to reach A/C platoons (as their platoons and roll call schedule differed from Second Precinct at the time the survey was deployed). First Precinct was surveyed June 11th and 13th, 2018 at both A/B and C/D roll calls (0600, 1500, and 2000 hrs) and Third Precinct roll calls for A/B and C/D platoons were attended on June 19th and 20th, 2018 at 0600, 1500, and 2000 hrs. Specialty Units were surveyed as follows: K-9 patrol handlers were patrolled on June 11th, 2018; Motor Unit and Major Crimes were surveyed on June 13th, 2018; SWAT was surveyed on June

14th, 2018; Narcotics was surveyed on June 19th, 2018; and Mounted Unit was surveyed on June 20th, 2018. See Table 1 below for a timeline of roll call attendance. The Weapons Enforcement Blitz (WEB) Unit that runs June through August in partnership with the Virginia State Police was surveyed on June 28th and 29th.

Over five weeks of data collection I attended 33 individual roll calls resulting in a sample of 362 potential respondents representing 44% of sworn RPD personnel. Ultimately, I ended up with 330 completed surveys, yielding a 91% response rate. This high response rate was most likely due to using traditional survey methods of in person volunteer solicitation at roll calls with pen and paper surveys. While email surveys are convenient for the researcher, they often go ignored in populations that experience survey fatigue that would be compounded by the nature of police work that is mobile, in person, and on the street. Going in person to the officers at their roll calls provided the opportunity to give a full explanation of the research and address all questions and concerns of the participants.

Table 1. Timeline for Data Collection

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
May 28 th	May 29 th 0600 – 2 nd 1500 – 2 nd 2000 – 2 nd	May 30 th 0600 – 2 nd 1500 – 2 nd 2000 – 2 nd	May 31 st	June 1 st	June 2 nd	June 3 rd
June 4 th 0500 – 4 th 0700 – 4 th 1600 – 4 th 1800 – 4 th	June 5 th	June 6 th 0500 – 4 th 0700 – 4 th 1600 – 4 th 1800 – 4 th	June 7 th	June 8 th	June 9 th	June 10 th
June 11 th 0600 – 1 st 1200 - K9 1500 – 1 st 2000 – 1 st	June 12 th	June 13 th 0600 – 1 st 1200 – Major Crimes 1500 – 1 st 2000 – 1 st	June 14 th 1200 - SWAT	June 15 th	June 16 th	June 17 th
June 18 th	June 19 th 0600 – 3 rd 1000 - Narcotics 1500 – 3 rd 2000 – 3 rd	June 20 th 0600 – 3 rd 0900 - Mounted 1500 – 3 rd 2000 – 3 rd	June 21 st	June 22 nd	June 23 rd	June 24 th
June 25 th	June 26 th	June 27 th 1230-WEB	June 28 th 1500 - WEB	June 29 th	June 30 th	

Analysis Plan

Quantitative data from the survey responses for officers was organized using SPSS statistical software and analyzed with SPSS for the descriptive statistics. First, descriptive analysis explored the demographics of this convenience sample and responses to individual questions. Then, I performed exploratory factor analysis to assess whether the three *organizational justice* constructs (*procedural justice*, *distributive justice*, and *interactional justice*) items measured separate dimensions of *organizational justice*, or whether all survey items loaded onto one factor. This approach was appropriate as there is argument among *organizational justice* theorists (see Chapter 2) as to whether the constructs of *organizational*

justice are separate and measurable (Colquitt et al., 2001). According to Field (2013), where there is vigorous argument within a theory, exploratory factor analysis should be used to determine latent variables. While Wolfe and Nix (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b) conducted confirmatory factor analysis to test their hypotheses they found that all the items of their survey loaded onto one factor, leading them to use a summated score for *organizational justice* as a single IV. By conducting exploratory factor analysis, I was able to explore the structures and relationships of latent variables (Field, 2013), as well as determine whether my sample yielded different factor loadings than previous research, as was the case. The exploratory factor analysis stage was necessary to determine whether the constructs of *procedural*, *distributive*, and *interactional justice* can be used as separate IVs in the subsequent analyses, or if the items measure organizational justice equally and therefore only a summated score of *organizational justice* would be used as the single IV. To assess the internal consistency of the *organizational justice* items, I conducted a Cronbach's alpha test that determined the empirical criterion of the IVs that were used in further analyses. Regression analysis was run with a hierarchical entry model to establish a baseline model with demographic variables before running a full model with the primary study IVs.

Chapter 4: Results

This chapter will first cover the descriptive statistics of the demographic questions followed by an overview of the descriptive statistics of the individual survey questions. Next, exploratory factor analysis results for the *organizational justice* questions will be detailed, followed by the subscales created based on these results. Finally, the regression models performed will be reported and organized by each of the three research questions.

Before discussion of the basic and high-level analysis, it must be noted that a common challenge with survey research is the order in which survey items are presented to respondents, as some questions may have an effect on answers given to later questions, an issue known as order effects (Babbie, 2013; Nardi, 2014). For the purposes of this research, the concern was whether questions regarding an officer's perceptions of fairness in their agency would have an effect on their perceptions of BWCs. Potential order effects were taken into account in this study by creating two versions of the survey that counterbalanced the BWC items and the *organizational justice* items. The two versions of the survey were dispersed randomly to participants during data collection and the 330 completed surveys yielded exactly 165 of each version of the survey. An independent samples t-test was run to test for order effects of survey items. Summed scores for each subscale were nearly identical, including the general BWC perception subscale and the personal behavior perception subscale; group means ranging from 4.76 to 75.93 did not differ significantly according to survey order and significance ranged between .106 and .974.

Sample Demographic Characteristics

The convenience sample provided a fairly accurate portrayal of RPD's sworn personnel demographics. In particular, the racial/ethnic demographics captured by the convenience sample were similar to those reported in the 2017 Richmond Police Department Annual Report. The report states that RPD's officer demographics were 33.3% Black, 58.67% White, 2.57% Asian and 5.15% Hispanic (RPD Annual Report, 2017). As shown in Table 2, this study's sample was 24.8% Black, 57.9% White, 3.% Asian, and 4.5% Latinx which is relatively close to the 2017 sworn personnel RPD demographics reported by the Richmond Police Department (RPD Annual Report, 2017).

Table 2.		
<i>Sample Age/Gender/Race Demographics (N=330)</i>		
<u>Age</u>	<u>n</u>	<u>Percent</u>
21 – 29 years old	83	25.2
30 – 35 years old	50	15.2
36 – 39 years old	38	11.5
40 – 49 years old	117	35.5
50 and over	42	12.7
<u>Gender</u>		
Male	278	84.2
Female	52	15.8
<u>Race/Ethnicity</u>		
Black/African American	82	24.8
White	191	57.9
Asian	12	3.6
Latinx	15	4.5
Native/Pacific Islander	2	.6
Bi-racial/Multi-racial	12	3.6
Other	16	4.8

Consistent with typical police department structure, 75.5% of the sample held the rank of Officer, with increasingly smaller numbers for specialty and ranking status (9.4% for Detective; 12.1% for Sergeant; 2.1% for Lieutenant, 0.9% for Captain). No one above the rank of Captain was present at any of the roll calls to be included in the sample. Just over half of the sample were under the age of 40 (51.8%) and 43.3% had served 10 years or less as sworn law enforcement. Given that patrol officers are the largest grouping within police departments and this is the first stage of an officer's career, it was not surprising that nearly a third of the sample had served 5 years or less in law enforcement (31.2%). The convenience sample was relatively evenly distributed across all four of RPD's precincts and smaller specialty units (see Table 3).

Most importantly for this study, 79.7% of the sample were assigned BWCs. This was also expected as at the time the survey was administered, RPD had implemented their BWC program over 2 years prior. The sample was consistent with the two waves of BWC deployment (200 BWCs deployed in 2016 and 200 more deployed in 2017) as 26.7% of the sample had been assigned a BWC over 2 years prior to the survey and 35.5% had been assigned BWCs 6 months to 1 year prior (see Table 4).

Table 3.		
<i>Sample Law Enforcement Years Served/Rank/Precinct Demographics (N = 330)</i>		
<u>Years Served as LEO</u>	<u>n</u>	<u>Percent</u>
0 – 5 years	103	31.2
6 – 10 years	40	12.2
11 – 15 years	76	23
16 – 20 years	45	13.6
21 – 25 years	45	13.6
26 – 30 years	16	4.8
31 – 40 years	5	1.5
<u>Rank</u>		
Officer	249	75.5
Detective	31	9.4
Sergeant	40	12.1
Lieutenant	7	2.1
Captain	3	.9
<u>Precinct</u>		
First	66	20
Second	71	21.5
Third	61	18.5
Fourth	74	22.4
Other	58	17.6

Table 4.		
<i>Sample BWC Equipped Demographics (N=330)</i>		
<u>BWC Equipped</u>	<u>n</u>	<u>Percent</u>
Yes	263	79.7
No	67	20.3
<u>Time Equipped</u>		
Not Assigned	67	20.3
0 – 5 months	30	9.1
6 months – 1 year	117	35.5
1 – 2 years	28	8.5
More than 2 years	88	26.7

Descriptive Statistics for BWC and Organizational Justice Survey Items

Officer perceptions of the general, or global, BWC statements were overall quite positive (see Table 5). Nearly 90% of officers agreed or strongly agreed with the statement that BWCs create a more accurate account of incidents (89.7%), and 94.2% of officers agreed or strongly agreed that BWCs improve the quality of evidence submitted. Just over half of the respondents (52.5%) agreed or strongly agreed that citizens would be more cooperative when officers are wearing a BWC, with lower numbers for perceptions of citizens being more respectful (33.3%) and less aggressive (38.2%) due to BWCs. Familiarity, comfort, and ease of using BWC technology statements all received high levels of agreement, with ease of locating and retrieving a video being the highest statement agreed at 90%, followed by equipment being easy to use at 87.6% (see Table 5). Other notable statement responses shown in Table 3 include 83.9% of the sample agreeing or strongly agreeing that police benefit more from BWCs than citizens do, 72.1% agree or strongly agree that BWCs improve officer training, 83.3% agree or strongly

agree that BWCs should be expanded to other departments, and 88.5% agree or strongly agree that the advantages of BWC technology outweigh the disadvantages.

As this study is also concerned with officer perceptions of behavior modification attributed to BWCs, it is important to note the responses for questions related to general, or global, perceptions officer behavior (see Table 5). A relatively high percentage of respondents agreed or strongly agreed that wearing a BWC would make officers act more professional (73%), with 69.7% of the respondents agreeing or strongly agreeing with the statement that officers will be more cautious in making decisions, and 58.1% of respondents agreed or strongly agreed that officers will feel they have less discretion. Just under half of the sample agreed or strongly agreed with the statement that wearing a BWC would affect an officer's decision to use force (46.4%), while only 20.9% of respondents agreed or strongly agreed that officers would have fewer contacts with citizens and 17.2% agreed or strongly agreed that officers would be less likely to give warnings to citizens due to wearing a BWC (see Table 5).

Table 5.

Percent of 'Agree' or 'Strongly Agree' Responses to General BWC Perception Questions (N=330)

<u>Completing Incident Reports</u>	<i>n</i>	<u>Percent</u>
When officers wear body-worn cameras it improves the quality of evidence they can submit.	312	94.2
When officers wear body-worn cameras they will have a more accurate account of what has transpired.	296	89.7
When officers wear body-worn cameras it makes their job easier.	214	64.8
When officers wear body-worn cameras they will spend less time filling out forms and other types of paperwork.	60	18.2
<u>Citizen/Resident Reactions</u>		
Citizens will be more cooperative once they are aware an officer is wearing a body-worn camera.	173	52.5
Generally, people become less aggressive when they are aware that a body-worn camera is being used.	126	38.2
Citizens will be more respectful once they are aware an officer is wearing a body-worn camera.	110	33.3
Suspects are less likely to resist once they are aware an officer is wearing a body-worn camera.	55	16.7
The use of body cameras increases the number of citizen complaints against officers	40	12.1
Having officers wear body cameras will hurt police-community relations.	21	6.4
<u>Police Officer Behavior</u>		
When wearing a body camera an officer will act more professional.	239	73
When wearing a body-worn camera, an officer will be more cautious in making decisions.	230	69.7
When wearing a body-worn camera, an officer will feel like they have less discretion.	192	58.1

Wearing a body camera affects an officer's decision to use force.	153	46.4
When wearing a body-worn camera, an officer will have fewer contacts with citizens.	69	20.9
When wearing a body-worn camera, an officer is less likely to give warnings to citizens.	57	17.2
<u>Familiarity, Comfort, Ease</u>		
When an officer wears a body-worn camera it is easy to locate and retrieve video for a specific incident if needed.	297	90
When an officer wears a body-worn camera, the equipment is easy to use.	289	87.6
When an officer wears a body-worn camera, it is easy to download data at the end of a shift.	270	81.9
The body camera equipment is comfortable to wear.	250	76.3
The battery life of the body camera is adequate.	219	66.4
<u>General Perceptions</u>		
The advantages of adopting body cameras outweigh the disadvantages.	292	88.5
The police benefit more from body cameras than citizens do.	277	83.9
Body-worn cameras improve officer training.	238	72.1
The use of body camera equipment is well received by coworkers.	226	68.4
Body-worn cameras improve the overall job performance of an officer.	169	51.2
When an officer wears a body camera it improves their job satisfaction.	130	39.4
Body-worn cameras tend to increase officer safety.	129	39.1
<u>Overall Recommendations</u>		
I think that the use of body cameras should be expanded to other departments.	275	83.3

Table 6 shows the responses to the 10 additional questions designed for this survey in an attempt to measure officer perceptions of their individual behavior in relation to BWCs. Questions on officer perceptions of their own behavior motivated by wearing BWCs had never been asked before this study. Key findings displayed in Table 6 show that nearly three-quarters of the sample felt that BWCs did not make them act differently in their duties (71%) and less than half (43%) felt that wearing a BWC made them think through their actions more thoroughly. Less than half of the officers felt that BWCs make them more respectful and considerate with the public (40.3% and 41.5% respectively) and only a third felt that BWCs affected their decision to use force (34.2%, see Table 6). Importantly, only 20.9% of respondents agreed or strongly agreed that BWCs make them less likely to use force (34.2%, see Table 6), a question that officers had never been asked before this study in any previous BWC perception surveys. Thus, these initial descriptive statistics show that officer perceptions of their own behavior motivated by BWCs is quite mixed and that less half of officers feel that their behavior with the public is improved due to wearing a BWC. Overwhelmingly, most officers felt that wearing a BWC did not make them act differently when going about their duties.

Table 7 provides a side-by-side comparison of important comparative survey items from both the general BWC perception survey items and personal behavior modification survey items. While nearly three quarters of respondents agreed or strongly agreed with the general statement that wearing a BWC would make officers act more professional (73%), less than half agreed or strongly agreed that wearing a body-worn camera would personally make them act more professionally (45.5%, see Table 7). Over two thirds of the respondents agreed or strongly agreed with the general statement that officers will be more cautious in making decisions (69.7%) but only half of respondents agreed or strongly agreed that wearing a BWC would

personally make them more cautious when making a decision (51.3%, see Table 7). In regards to use of force, just under half of the sample had agreed or strongly agreed with the general statement that wearing a BWC would affect an officer's decision to use force (46.4%) but only a third agreed or strongly agreed that BWCs affected their personal decision to use force (34.2%) and only 20.9% of respondents agreed or strongly agreed that BWCs make them less likely to use force (see Table 7).

Table 6.		
<i>Percent of 'Agree' or 'Strongly Agree' Responses to Personal Behavior Modification BWC Perception Questions (N=330)</i>		
<u>Personal Behavior</u>	<u>n</u>	<u>Percent</u>
Wearing a body-worn camera does not make me act differently in my duties. (r)	233	70.6
Wearing a body-worn camera makes me more cautious when making a decision.	169	51.3
Wearing a body-worn camera makes me act more professionally.	149	45.5
Wearing a body-worn camera makes me think through my actions more thoroughly.	141	43
Wearing a body-worn camera makes me more considerate when dealing with the public.	137	41.5
Wearing a body-worn camera makes me more respectful when interacting with citizens.	131	40.3
Wearing a body-worn camera affects my decision to use force.	113	34.2
Wearing a body-worn camera makes me less likely to give a warning to citizens.	75	22.7
Wearing a body-worn camera makes me have fewer contacts with citizens.	69	20.9
Wearing a body-worn camera makes me less likely to use force.	69	20.9

Note. (r) indicates item was reverse scored.

Table 7.

Comparison of General BWC Perception Survey Items and Personal Behavior Motivated by BWC Survey Items with Percentage of “Agree” or “Strongly Agree” (N=330)

<u>General BWC Perceptions</u>	<u>Personal Behavior BWC Perceptions</u>
When wearing a body-worn camera, an officer will act more professional (n = 239, 73%)	Wearing a body-worn camera makes me act more professionally. (n = 149, 45.5%)
When wearing a body-worn camera, an officer will be more cautious in making decisions. (n = 230, 69.7%)	Wearing a body-worn camera makes me more cautious when making a decision. (n = 169, 51.3%)
Wearing a body camera affects an officer’s decision to use force. (n = 153, 46.4%)	Wearing a body-worn camera affects my decision to use force. (n = 113, 34.2%)

Perceptions of *self-legitimacy* did not vary widely among respondents. Table 8 shows that this sample of RPD officers reported high levels of self-legitimacy, with endorsements of *self-legitimacy* statements ranging from 72.8% to 94.5% (see Table 8)

Table 8.		
<i>Percent of 'Agree' or 'Strongly Agree' Responses to Self-Legitimacy Perception Questions (N=330)</i>		
<u>Self-Legitimacy</u>	<u>n</u>	<u>Percent</u>
As a law enforcement officer, I believe I occupy a position of special importance in society.	312	94.5
I have confidence in the authority vested in me as a law enforcement officer.	309	93.6
I believe people should always do what I tell them as long as my orders are lawful.	306	92.7
I am confident I have enough authority to do my job well.	296	89.7
I believe law enforcement is capable of providing security for all citizens of this county.	240	72.8

Officer perceptions of *organizational justice* components at RPD were mixed (see Table 9). While 74.6% of respondents felt that command staff generally treats employees with respect and 66.6% of felt that policies were designed to generate standards so decisions can be made with consistency, 78.8% of respondents perceived that landing a good assignment is based on whom you know (reverse coded), indicating that perceptions of *distributive justice* (outcomes such as promotions and assignments) were quite negative. Negative perceptions of *distributive justice* were consistent across the other survey items geared toward understanding officer perceptions of promotions and assignments, with just over a third (38.1%) of respondents feeling that promotions are fair and only a third (33%) feeling that promotions were based on merit (see Table 9). This would indicate that although sworn employees feel that command staff generally treat employees with respect, only a third of employees perceive promotions as fair and nearly

80% of employees believe being placed in a good assignment is based on who you know. Only half of the respondents agreed or strongly agreed that command staff treats employees that same regardless of race (50.3%) or gender (49.4%), and ultimately this may play into officer perceptions of fairness in promotions. Under a third of respondents agreed or strongly agreed that command staff clearly explains the reasons for their decisions (29.1%) and just over a third of respondents agreed or strongly agreed that command staff clearly explains their reasons for making policy changes (35.4%). Findings also showed that there were negative perceptions of policies being designed to allow employees a voice in agency decisions (29.7% agree or strongly agree) and negative perceptions that command staff considers employee viewpoints (34.2% agree or strongly agree). These findings regarding command staff communication and employee voice indicate there are perceived communication issues within the department from an officer's standpoint.

Table 9.
Mean Ratings and Percent of 'Agree' or 'Strongly Agree' Responses to Organizational Justice Perception Questions (N=330)

<u>Procedural Justice</u>	<u>M</u>	<u>SD</u>	<u>Percent</u>
My agency's policies are designed to generate standards so that decisions can be made with consistency.	2.75	.79	66.6
My agency's investigation of civilian complaints is fair.	2.48	.80	56.7
My agency's performance evaluation system is fair.	2.25	.82	41.8
Command staff clearly explains the reasons the agency makes policy changes.	2.20	.80	35.4
My agency's policies are designed to allow employees to have a voice in agency decisions (e.g. assignment changes, discipline).	2.09	.80	29.7
Command staff clearly explains the reasons for their decisions.	2.08	.81	29.1
<u>Distributive Justice</u>			
Landing a good assignment in my agency is based on whom you know. (r)	1.92	.77	78.8
If you work hard, you can get ahead at this agency.	2.47	.83	54.6
Promotions in my agency are fair.	2.23	.80	38.1
Promotions in my agency are based on merit.	2.16	.76	33
<u>Interactional Justice</u>			
Generally, command staff treats employees with respect	2.73	.75	74.6
Command staff treats employees with kindness and consideration.	2.56	.73	61.5
Command staff treats employees the same regardless of their race or ethnicity.	2.37	.89	50.3
Command staff treats employees the same regardless of their gender.	2.39	.86	49.4

Command staff are candid in their communication with employees.	2.30	.96	43.9
Command staff considers employees' viewpoints.	2.17	.82	34.2

Note: scale items ranged from 1 – 4; “strongly disagree” (1), “disagree” (2), “agree” (3), “strongly agree” (4)

Exploratory Factor Analysis

To determine whether the *organizational justice* survey questions measured three separate constructs (*procedural justice*, *distributive justice*, and *interactional justice*), I conducted an exploratory factor analysis. Factor analysis is a statistical technique used to determine whether a set of variables can be broken down into subsets that are relatively independent of one another. Groupings of variables are called factors that are thought to reflect underlying processes, otherwise known as latent variables (Field, 2013; Tabachnick & Fidell, 2001). For this study, factor analysis was useful in understanding the structure within the *organizational justice* survey items and to reduce the data set to a more manageable size for regression analysis (Field, 2013; Tabachnick & Fidell, 2001). I conducted principal axis factor analysis on the 16 *organizational justice* items with oblique rotation (direct oblimin). Oblique rotation was chosen as the *organizational justice* literature suggests that the *organizational justice* factors were interrelated and not discrete factors (Colquitt et al., 2001). According to Field (2013), oblique rotation allows for correlations between factors. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, $KMO = .93$, and all KMO values for individual items were greater than .89, all of which are well above the acceptable limit of .5 (Field, 2013). An initial analysis was run to obtain eigenvalues for each factor. Two factors had eigenvalues over Kaiser's criterion of 1 and in combination explained 60.5% of the variance, and a third did appear, although its eigenvalue was .89. The scree plot showed an inflexion that could be argued to show two or three factors (see Figure 4). The results were the same when exploratory factor analysis was run and the number of factors to extract was restricted at 3. All correlations among *organizational justice* items were less than .9 and ranged between .23 and .86, indicating no issues with multicollinearity.

I decided to retain 3 factors, and although this is not consistent with the previous findings of Wolfe and Nix (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b), it was consistent with some of the previous *organizational justice* literature that indicated *procedural justice*, *distributive justice*, and *interactional justice* could be measured as separate but interrelated constructs (Colquitt et al., 2001). According to Tabachnick and Fidell (2001), interpreting and naming factors depends on the observed combinations and their particular meaning in relation to the existing literature; in other words, a good factor analysis is one where factor loadings “make sense”, as was the case with this study. As shown in Table 10, all of six of survey items intended to measure perceptions of *procedural justice* loaded onto the first factor, along with four of the survey items that were intended to measure *interactional justice*. All four questions intended to measure *distributive justice* loaded onto the second factor. Finally, two of the survey items intended to measure *interactional justice* loaded onto the third factor. While the eigenvalue for factor 3 was .89, I have retained this factor because the two survey items that loaded onto this factor had to do with treatment of employees based on race and gender. These two items can be strongly argued to reflect the definition of *interactional justice* for this research project, “employees being treated with politeness and respect by command staff and supervisors” (see Chapter 3).

The factor loading inconsistency with previous research findings that employed nearly the same survey (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b) could be due to two reasons. First, I used a 4 response Likert scale option while Wolfe and Nix utilized a 5 response Likert scale allowing for a “neutral” response. Second, my sample was from an urban police department whereas the Wolfe and Nix (Nix & Wolfe, 2016, 2017; Wolfe & Nix, 2016a, 2016b) samples were sheriff’s deputies and there is most likely a difference in department cultures.

Despite this inconsistency, replication is critical to strengthening research and differing results provide avenues for comparison and areas of improvement for future research.

Table 10.*Exploratory Factor Analysis Factor Loadings for Organizational Justice Items (N=330)*

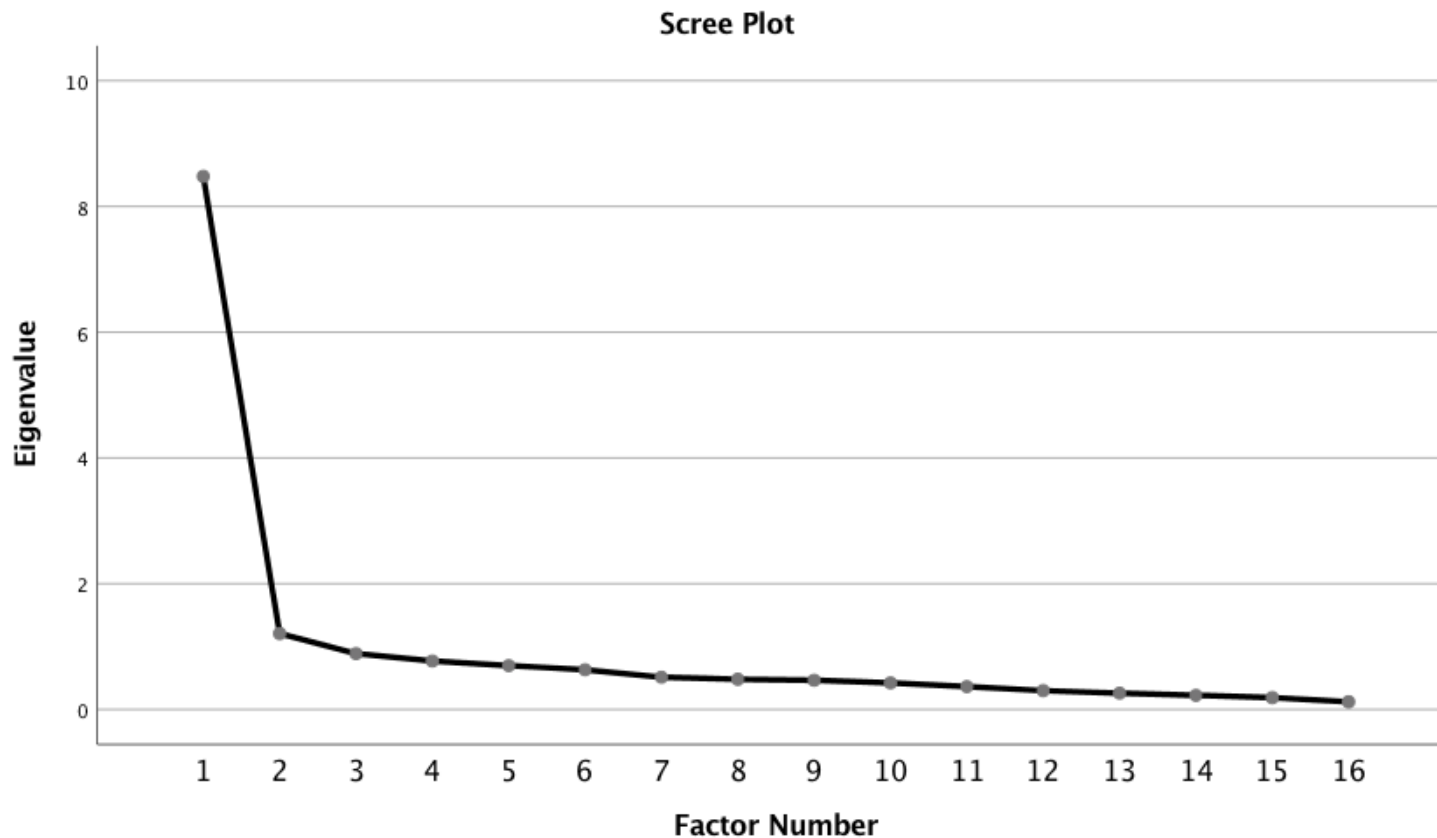
Rotated Factor Loadings

<u>Item</u>	<u>Procedural</u>	<u>Distributive</u>	<u>Interactional</u>
	<u>Justice</u>	<u>Justice</u>	<u>Justice</u>
Command staff clearly explains the reasons the agency makes policy changes.	.89	-.11	.03
Command staff clearly explains the reasons for their decisions.	.80	-.03	-.07
Generally, command staff treats employees with respect.	.69	-.04	-.20
Command staff are candid in their communication with employees.	.69	-.04	-.03
My agency's policies are designed to allow employees to have a voice in agency decisions (e.g. assignment changes, discipline).	.66	.18	.12
Command staff considers employees' viewpoints.	.66	.12	-.12
Command staff treats employees with kindness and consideration.	.60	.00	-.29
My agency's policies are designed to generate standards so that decisions can be made with consistency.	.60	.06	.07
My agency's performance evaluation system is fair.	.55	.29	.06
My agency's investigation of civilian complaints is fair.	.51	.12	-.04
Promotions in my agency are fair.	-.01	.88	-.02
If you work hard, you can get ahead at this agency.	.06	.72	.03
Promotions in my agency are based on merit.	.17	.65	.04
Landing a good assignment is based on whom you know. (r)	-.04	.48	-.15

Command staff treats employees the same regardless of their gender.	.22	.16	-.71
Command staff treats employees the same regardless of their race or ethnicity.	.22	.23	-.62
Eigenvalues	8.49	1.2	.89
% of variance	52.99	7.54	5.55

Note: Factor loadings over .40 appear in bold; Extraction Method: Principal Axis Factoring using Oblimin rotation with Kaiser Normalization, (r) indicates item was reverse scored.

Figure 4. Organizational Justice Factor Loading Scree Plot



Subscales

Following the exploratory factor analysis, I created subscales for the three factors. I chose to transform the data using mean scores as this method is noted to be appropriate when the scales used to collect the original data are “untested and exploratory, with little or no evidence of reliability or validity” (Hair et al, 2006, p. 140) as is the case with the *organizational justice* survey created by Wolfe and Nix. Also, Tabachnick and Fidell (2001) note that while sum scores can be adequate for creating subscales, using a mean score standardizes scores to alleviate issues with some variables having larger standard deviations that would contribute more heavily to the factor score. Wolfe and Nix employed a summed score, albeit for their single *organizational justice* factor loading.

Internal reliability of the subscales was adequate to high, with Cronbach’s alphas ranging from .76 to .93. Field (2013) notes that a value of .7 to .8 is acceptable for Cronbach’s alpha. It is important to note that the alpha is impacted by the number of items on the scale, i.e. a larger number of items can contribute a higher alpha (Field, 2013), although in the case of this study, the *organizational justice* subscale with only two items, *interactional justice*, has the highest internal reliability ($\alpha = .93$). The subscales and their attendant survey items are listed below:

Table 11.			
<i>Independent Variable Subscales (N = 330)</i>			
	<u>M</u>	<u>SD</u>	<u>α</u>
<u>Procedural Justice</u>	2.36	.62	.92
Command staff clearly explains the reasons the agency makes policy changes.	2.20	.80	
Command staff clearly explains the reasons for their decisions.	2.08	.81	
Generally, command staff treats employees with respect.	2.73	.75	
Command staff are candid in their communication with employees.	2.30	.96	
My agency's policies are designed to allow employees to have a voice in agency decisions (e.g. assignment changes, discipline).	2.09	.80	
Command staff considers employees' viewpoints.	2.17	.82	
Command staff treats employees with kindness and consideration.	2.56	.73	
My agency's policies are designed to generate standards so that decisions can be made with consistency.	2.75	.79	
My agency's performance evaluation system is fair.	2.25	.82	
My agency's investigation of civilian complaints is fair.	2.48	.80	
<u>Distributive Justice</u>	2.20	.63	.82

Promotions in my agency are fair.	2.23	.80	
If you work hard, you can get ahead at this agency.	2.47	.83	
Promotions in my agency are based on merit.	2.16	.76	
Landing a good assignment is based on whom you know. (r)	1.92	.77	
<u>Interactional Justice</u>	2.38	.85	.93
Command staff treats employees the same regardless of their gender.	2.39	.86	
Command staff treats employees the same regardless of their race or ethnicity.	2.37	.89	

Note. (r) indicates item was reverse scored.

Table 12.			
<i>Dependent Variable Subscales</i>			
	<i>M</i>	<i>SD</i>	<i>α</i>
<u>General BWC Perceptions</u>	2.59	.27	.81
When officers wear a body-worn camera they will spend less time filling out forms and other types of paperwork.	1.95	.72	
When officers wear a body-worn camera they will have a more accurate account of what has transpired.	3.20	.66	
When officers wear a body-worn camera it improves the quality of evidence they can submit.	3.38	.60	
When officers wear a body-worn camera it makes their job easier.	2.73	.74	
Citizens will be more cooperative once they become aware that an officer is wearing a body camera.	2.51	.74	

Citizens will be more respectful once they become aware that an officer is wearing a body camera.	2.26	.71
Suspects are less likely to resist arrest when they become aware that the officer is wearing a body camera.	2.02	.61
Generally, people become less aggressive when they are aware that a body camera is being used.	2.30	.67
Having officers wear body cameras will hurt police-community relations.	1.77	.58
The use of body cameras increases the number of citizen complaints against officers.	1.95	.64
When wearing a body-worn camera, an officer is less likely to give warnings to citizens.	2.02	.67
When wearing a body-worn camera, an officer will have fewer contacts with citizens.	2.08	.71
When wearing a body-worn camera, an officer will feel like they have less discretion.	2.66	.80
When wearing a body-worn camera, an officer will be more cautious in making decisions.	2.74	.71
When wearing a body camera an officer will act more professional.	2.79	.64
When an officer wears a body camera it is easy to locate and retrieve video for a specific incident if needed.	2.45	.77
When an officer wears a body camera, the equipment is easy to use.	3.10	.61
The body camera equipment is comfortable to wear.	3.02	.62
The battery life of the body camera is adequate.	2.85	.71
When an officer wears a body camera, it is easy to download data at the end of a shift.	2.65	.74
The use of body camera equipment is well received by coworkers.	2.93	.70
The police benefit more from body cameras than citizens do.	2.69	.58
When an officer wears a body camera it improves their job satisfaction.	3.05	.64
Body cameras improve officer training.	2.37	.70

Body cameras improve the overall job performance of an officer.	2.79	.65	
Body cameras tend to increase officer safety.	2.51	.66	
I think that the use of body cameras should be expanded to other departments.	2.32	.65	
<u>Perceptions on Personal Behavior Motivated by BWCs</u>	2.28	.483	.82
Wearing a body-worn camera makes me more cautious when making a decision.	2.52	.66	
Wearing a body-worn camera makes me act more professionally.	2.44	.70	
Wearing a body-worn camera affects my decision to use force.	2.27	.73	
Wearing a body-worn camera makes me less likely to give a warning to citizens.	2.14	.68	
Wearing a body-worn camera makes me have fewer contacts with citizens.	2.11	.67	
Wearing a body-worn camera makes me more respectful when interacting with citizens.	2.34	.71	
Wearing a body-worn camera makes me more considerate when dealing with the public.	2.41	1.30	
Wearing a body-worn camera makes me think through my actions more thoroughly.	2.38	.70	
Wearing a body-worn camera makes me less likely to use force.	2.12	.66	
Wearing a body-worn camera does not make me act differently in my duties. (r)	2.04	.85	

Note. (r) indicates item was reverse scored.

Table 13.*Self-Legitimacy Subscale (N = 330)*

	<u>M</u>	<u>SD</u>	<u>α</u>
<u>Self-Legitimacy</u>	3.29	.50	.76
I have confidence in the authority vested in me as a law enforcement officer.	3.46	.67	
As a law enforcement officer, I believe I occupy a position of special importance in society.	3.43	.65	
I believe people should always do what I tell them as long as my orders are lawful.	3.32	.65	
I am confident I have enough authority to do my job well.	3.28	.68	
I believe law enforcement is capable of providing security for all citizens of this county.	2.94	.83	

Prior to regression analysis, the dependent variable subscales were examined for accuracy of data entry, missing values, and fit between distributions. There were very few missing values and these were transformed by creating mean scores for the subscales. The tables below show a histogram with a normal curve for general BWC perceptions (see Figure 5) and a histogram skewed slightly left for the personal perceptions of behavior motivated by BWCs subscale (see Figure 6). Given that this is a larger data set ($N = 330$) and there were very few missing data, histograms are appropriate for determining normality within the data set.

Figure 5. *Histogram Showing Normal Curve of Mean Score for General BWC Perception Items*

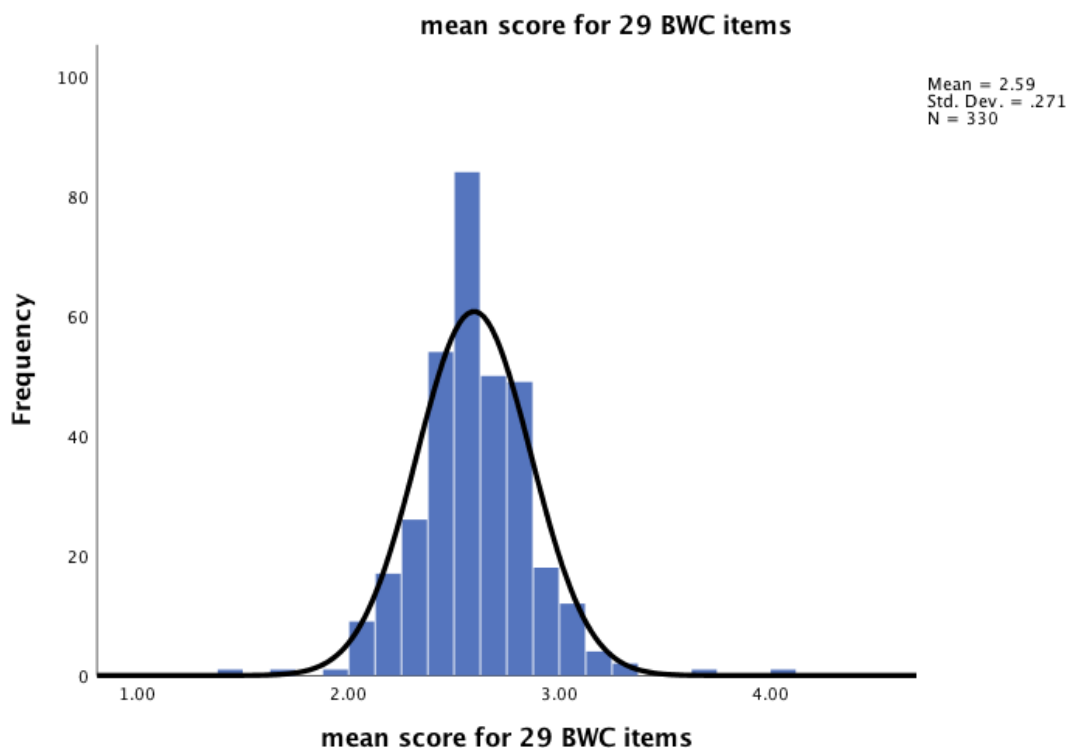
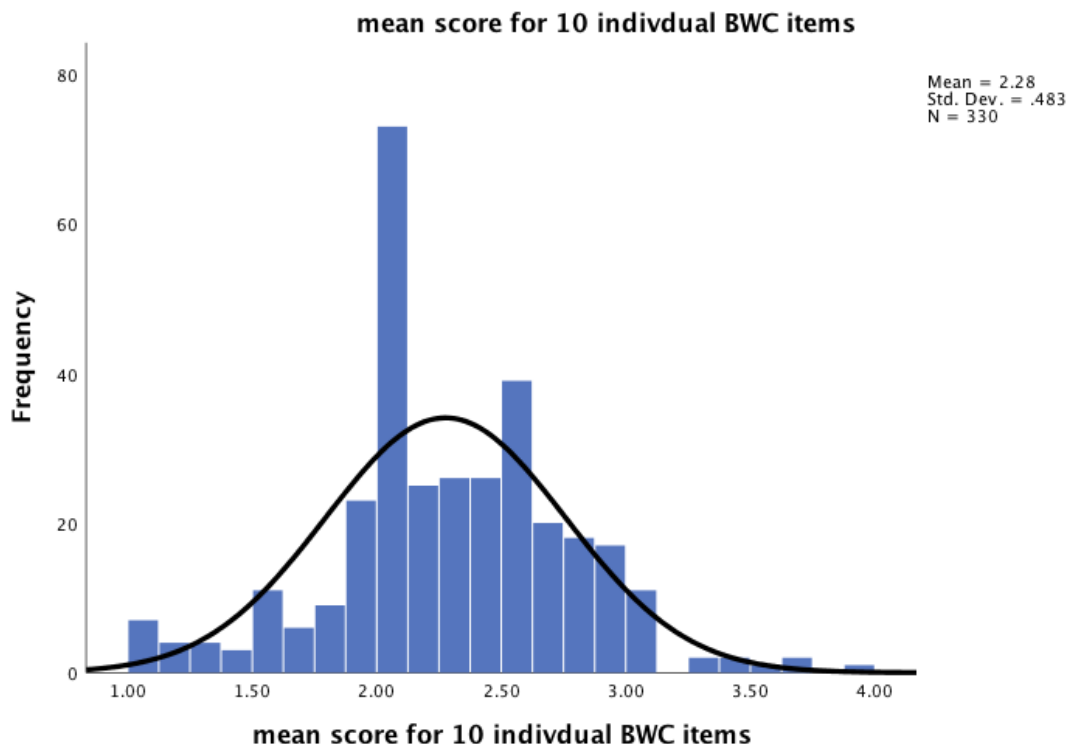


Figure 6. Histogram Showing Distribution for Personal Behavior Perception Items



Regression Analysis

Linear regression was run with hierarchical entry as recommended by Field (2013) due to the fact that previous research had shown correlations between gender and rank with perceptions of BWCs and would therefore need to be controlled for in this model to determine the relationship of the DV beyond these demographic controls. Given the fact that gender and rank are nominal level variables, several dummy variables were created to include these variables in the regression models as dichotomous representations (Healey, 2010). For gender, males were computed as 0 and females given a value of 1, making males the reference group. This same process was repeated for rank, with line officers being omitted from the model as a reference group, years served as law enforcement that had two dummy variables (one omitted 0-5 years

and one omitted 0-20 years, making both of these reference groups), and time assigned a BWC omitted those assigned a BWC one year or less, making this the reference group for the models.

Correlation and linear regression analyses were conducted to examine the relationship between officers' general perceptions of BWCs (DV) and the three *organizational variables*, *procedural justice*, *distributive justice*, and *interactional justice* (IVs) as potential predictors. The overall regression model was significant, $F(11,318) = 8.69, p < .001, R^2 = .23$, indicating that the model can account for 23% of the variance in general perceptions of BWCs (see Table 14). In the baseline model, *self-legitimacy* is shown to be a significant predictor of officers' general perceptions of BWCs ($\beta = .26, p < .001$). In the full model, *self-legitimacy* and *procedural justice* have significant positive regression coefficients, indicating that *procedural justice* was a significant predictor of officers' general perceptions of BWCs after controlling for the other variables in the model ($\beta = .20, p < .001$). Age and race were not included in these models as they had not been significant predictors in past research, and when included in the regression models for this study, they were not significant.

Correlation and linear regression analyses were also conducted to examine the relationship between officers' perceptions of individual behavior modification motivated by BWCs (DV) and the three *organizational variables*, *procedural justice*, *distributive justice*, and *interactional justice* (IVs) as predictors. For this model, the subscale for perceptions on personal behavior motivated by BWC was used as the DV, with the control variables and IVs entered using forced entry to determine their relationship with the DV. The overall regression model was not significant, $F(11,318) = 2.05, p < .05, R^2 = .07$, indicating that the model could only account for 7% of the variance in perceptions of personal behavior modification motivated by BWCs (see Table 14). In the baseline model, being assigned a BWC for over one year appeared

to initially be significant ($\beta = .21, p < .05$) but this significance did not hold in the full model that included the *organizational justice* subscales. As seen in Table 15, there appears to be no significant relationship between officer perceptions of their individual behavior motivated by BWCs and *organizational justice*. As a sensitivity test, both baseline and full regression models were run using the factor scores instead of the computed mean score for the *organizational justice* subscales. Results were nearly identical, with the full regression model for general BWC perceptions being significant ($F(10,319) = 9.39, p < .001, R^2 = .22$, indicating that the model can account for 22% of the variance in general perceptions of BWCs, and the full regression model for personal behavior motivated by BWCs was not significant, $F(10,319) = 2.15, p < .05, R^2 = .07$, indicating that the model could only account for 7% of the variance in perceptions of personal behavior modification motivated by BWCs.

Table 14.						
<i>Regression Model for Relationship Between General BWC Officer Perceptions and Organizational Justice Variables</i>						
	Model 1			Model 2		
	<i>b</i>	<i>SE B</i>	β	<i>b</i>	<i>SE B</i>	β
Constant	2.00 (1.78, 2.23)	.11		1.90 (1.69, 2.12)	.11	
Female	-.04 (-.13, .04)	.04	-.06	-.05 (-.12, .03)	.04	-.06
Rank						
Non-Officer	.04 (-.05, .13)	.05	.06	.08 (.00, .17)	.04	.13
Years as LEO						
6 – 20 years	.06 (-.01, .13)	.04	.11	-.01 (-.08, .06)	.04	-.02
21 plus years	.09 (-.01, .18)	.05	.13	.03 (-.06, .12)	.05	.04
BWC Assigned						
Over one year	.04 (-.06, .14)	.05	.07	-.03 (-.13, .06)	.05	-.06
Self-Legitimacy	.14** (.08, .20)	.03	.26	.10* (.04, .15)	.03	.17
Procedural Justice				.20** (.13, .27)	.04	.45
Distributive Justice				-.05 (-.11, .01)	.03	-.12
Interactional Justice				.01 (-.04, .06)	.02	.04

*Note: Values with significance of $p < .05$ are noted with *; values with significance of $p < .001$ are noted with **, 95% bias corrected and accelerated confidence intervals reported in parentheses. Confidence intervals and standard errors based on 1000 bootstrap sample.*

Table 15.						
<i>Regression Model for Relationship Between Officer Perceptions of Personal Behavior Modification Motivated by BWC and Organizational Justice Variables</i>						
	Model 1			Model 2		
	<i>b</i>	<i>SE B</i>	β	<i>b</i>	<i>SE B</i>	β
Constant	2.07 (1.65, 2.48)	.21		.98 (1.57, 2.40)	.21	
Female	-.07 (-.22, .08)	.08	-.06	-.08 (-.23, .07)	.08	-.06
Rank						
Non-Officer	-.02 (-.18, .15)	.08	-.02	.02 (-.15, .18)	.08	.02
Years as LEO						
6 – 20 years	-.04 (-.17, .09)	.07	-.04	-.09 (-.23, .05)	.07	-.09
21 plus years	-.08 (-.25, .09)	.09	-.06	-.11 (-.28, .06)	.09	-.09
BWC Assigned						
Over one year	.21* (.02, .40)	.09	.21	.15 (-.04, .34)	.95	.15
Self-Legitimacy	.04 (-.07, .14)	.06	.04	.00 (-.11, .11)	.06	.00
Procedural Justice				.09 (-.05, .24)	.07	.12
Distributive Justice				-.06 (-.17, .06)	.06	-.07
Interactional Justice				.08 (-.01, .18)	.05	.14

*Note: Values with significance of $p < .05$ are noted with *; values with significance of $p < .001$ are noted with **, 95% bias corrected and accelerated confidence intervals reported in parentheses. Confidence intervals and standard errors based on 1000 bootstrap sample.*

Chapter 5: Discussion, Policy Implications and Recommendations

This research significantly advances the scholarly literature on both BWCs and the understanding of organizational justice within the context of a police department, as well as further explores the intersection of this new policing technology with a theoretical framework focused on internal agency fairness and justice. A new set of questions on officer perceptions of their own personal behavior in relation to wearing BWCs offers insight into a previously unexplored area of officer perceptions of BWCs. Two questions on fairness of promotions were also added to the existing organizational justice survey, and given the decreasing chances of promotion as officers move up the ranks (Bittner, 1970/2006), this is a critical area in which to gain an understanding of officer perceptions of fairness for both the research community and the police practitioner community. Most importantly, this research provides empirical knowledge of officer perceptions of BWCs and organizational justice within the Richmond Police Department enabling practical policy recommendations for areas of improvement. While these policy recommendations are Richmond specific, they could be utilized by other departments with similar agency and community demographics and culture. Before turning to the discussion on policy recommendations, I will first return to the original research questions that guided this study.

Research Question 1

This first question posed by this study was, “Are officer perceptions of organizational justice within their department associated with officers’ general perceptions of body-worn cameras?” This question was answered by the first regression model that provided a baseline and full model (see Table 14). The baseline model run in the hierarchical regression showed the relationships between the demographic variables and the general BWC perception subscale and

only *self-legitimacy* had a significant relationship with officers' general BWC perceptions. Officer perceptions of *self-legitimacy* were very high in this study (see Table 8). Previous research found that officer perceptions of *self-legitimacy* was a confounding variable to perceptions of *organizational justice* (Bradford & Quinton, 2014; Nix & Wolfe, 2015, 2016, 2017; Tankebe & Meško, 2015; Wolfe & Nix, 2016a, 2016b), which was why it was controlled for in this study.

The full model shows that besides officer *self-legitimacy*, only *procedural justice* has a significant relationship with officers' general perceptions of BWCs. In this study, *procedural justice* has been defined as the objective organizational processes and policies that allow employees to have a voice in the process, and where decisions are clearly explained by command staff and supervisors (Nix & Wolfe, 2016). Taking this definition into account, the results indicate that fairness in processes and quality of communication between employees and command staff have a relationship with general perceptions of BWCs. Thus, it would stand to reason that as officer perceptions of *procedural justice* improve their general perceptions of BWCs would strengthen as well. Results from the full regression model seem to confirm, at least partially, my hypothesis that positive officer perceptions of *organizational justice* would be associated with officers' positive general perceptions of BWCs.

While perceptions were positive for fairness perceived in agency processes and treatment of employees by command staff, other *procedural justice* items were negative, particularly in regards to command staff communication of decisions and consideration of employee viewpoints. The findings from this study indicate that officers perceive a lack of voice in departmental processes and explanation of decisions from command staff, highlighting communication as an area in need of evaluation and improvement within the police department.

While this is an important *organizational justice* finding upon which the department can take action to improve, the use of BWCs and officer perceptions of BWCs must be carefully considered within the crosshairs of internal communication and employee voice.

As noted previously, one of the largest hurdles facing police departments who have a BWC program has been officer resistance to wearing and using the technology. Research has shown that line officers are prone to believing BWC videos will be used against them by their superiors (Kyle & White, 2016; Pelfrey & Keener, 2016; Young & Ready, 2015), highlighting the schism between front-line officers and police administrators who are removed from doing street-level police work (Corisanos, 2012; Kappeler, et al., 1998, 2006; McLaughlin, 2007). Unlike other new policing tactics, such as hot-spot policing or gun-shot detection, BWCs can potentially get an officer in trouble for a low-level infraction that would have otherwise gone unseen or unheard by supervisors. Departmental policies, such as implementing a BWC program, are enacted top-down from police administrators who might be receiving outside pressure from local government officials and the citizenry to address officer behavior. These policies are often at odds with what front-line officers perceive they are experiencing on the street as they go about their daily duties. If police administrators use BWC footage against officers during internal processes without allowing officers a voice in the process or a clear explanation of command decisions, perceptions of *procedural justice* and general perceptions of BWCs will most likely be affected. Therefore, it is important for police leadership to consider the use of BWC footage in internal investigations, performance reviews, and employee warnings/reprimands. This is not to say that BWC footage should not be included in these processes but that police administrators must allow employees the opportunity to be included in a

discussion where employees have a say and the ultimate decision made by leadership and supervisors is explained.

In a broader sense within the department, large policy decisions enacted by command staff that will inevitably have an effect on the working conditions of line-officers must be clearly explained through a holistic communication strategy that prioritizes internal agency communication equally with external communication with the public. Respect should be shown to front-line officers by making them aware of leadership and policy changes before the community and media are made aware. Beyond clear and consistent communication from command staff, perceptions of *procedural justice* could be improved by Command staff engaging in two-way communication with line-staff, and more importantly improve officer productivity through greater organizational commitment that Colquitt and colleagues (2001) note are associated with positive perceptions of *organizational justice*. Allowing officers a voice in agency decisions could create a feeling of ownership over agency goals while also improving their perceptions of fairness within the agency. As both police departments and citizens seek to improve policing through the oversight tool of BWCs, it is critical to consider that policing at the street level might actually be improved more through *organizational justice* than through the use of BWCs that can potentially be detrimental to officers both internally within the department and externally with the community. If officers feel their agency is fair in processes, interactions, and promotion/assignment outcomes the internal standards of fairness might trickle down to the street level through the actions of officers who trust their agency to allow them some autonomy in working toward agency goals and that the agency will reward this work. In an agency that has fostered employee commitment through *organizational justice*, officers may be more likely to view BWCs as evidence gathering technology than oversight tools.

Research Question 2

The second question posed by this research was, “Do officers perceive a personal behavior modification motivated by wearing a body-worn camera?” This question was posed because Kyle and White (2016) believe that officer perceptions of BWCs is multi-dimensional, and this aspect was something not accounted for in their survey, or in any previous BWC surveys used by other scholars. Kyle and White stated, “A more robust and comprehensive set of indicators needs to be developed to include items to gauge whether officers believe they have or would alter how they perform their duties or the quantity of self-initiated activities as a result of being equipped with a BWC” (Kyle & White, 2016, p. 12), which was what my set of ten questions on officer perceptions of their own personal behavior attempted to measure. My hypothesis was that officers will perceive a personal behavior modification motivated by wearing a BWC but the descriptive statistics indicate that overall, officers do not feel that they change their behavior when wearing a BWC. Nearly three-quarters of respondents felt that wearing a BWC does not make them act differently in their duties (70.6%), indicating that officers do not perceive a personal behavior modification motivated by BWCs. Survey items regarding use of force were also telling; only a third or less of respondents felt that wearing a BWC would have an effect on their use of force, a question that had not been asked of officers regarding BWCs before this study. Findings for the one question on use of force perceptions from the general BWC survey items showed that just under half (46.5%) of officers felt that wearing a BWC makes an officer less likely to use force. Since use of force reductions have been a standard way to measure the effectiveness of BWCs, and results have been mixed across studies seeking to measure the relationship between use of force and BWCs, these results are not surprising.

The findings on officer perceptions of use of force draw into question assertions that BWCs will change officer behavior and have an effect on the numbers of use of force incidents. The findings presented here would seem to disprove foundational BWC scholarship that stated, “If we become aware that a video-camera is recording our actions, we may become more conscious that unacceptable behaviors will be captured on film, and that detection is perceived as certain” (Ariel, et al., 2014, p. 516). These findings are an important contribution that go towards answering the question of whether BWCs actually produce a “civilizing effect”, and at least in the case of this study, officers do not feel they change their behavior when outfitted with a BWC. Although this research is limited to officer perceptions, the fact that only a third or less of officers thought that BWCs would affect their use of force may indicate that RPD was not a department struggling with excessive use of force. Only a baseline pre and post BWC implementation comparison between use of force numbers and these current officer perception survey results could get closer at answering questions regarding the relationship between BWCs and use of force. These findings may indicate that either RPD officers have become accustomed to the BWCs over the two and a half years since the program was implemented, or that they are poor judges of their own behavior. In future, I would like to compare the officer perception results to the department’s use of force numbers and citizen complaints from pre and post BWC implementation to provide more clarity on officer behavior.

Research Question 3

Finally, the third question posed by this research was, “Are officer perceptions of organizational justice within their department associated with officer perceptions of personal behavior modification motivated by wearing a body-worn camera?” The hierarchical regression model run to answer this question indicated no significant relationship between officer

perceptions of *organizational justice* and officer perceptions of personal behavior modification motivated by wearing a BWC (see Table 15). These findings may indicate that officer perceptions of their personal behavior are considered quite differently and separately from their perceptions of fairness in internal organizational processes and outcomes. Perceptions of personal behavior are most likely based on officers' personal morals and values and are less dependent on organizational matters than general perceptions of BWCs. Future research should seek to explore the differences between general officer behavior and personal officer behavior perceptions related to BWCs to gain a deeper understanding of where the two perceptions diverge and why.

Policy Implications and Recommendations

While this research does substantially add to the existing BWC literature by expanding previous research and providing a first look at officers' perceptions of their own personal behavior motivated by BWCs, there are practical policy implications and recommendations that can be outlined and defined based on the results and existing *organizational justice* literature. The descriptive statistics on the *organizational justice* items indicated some specific areas where officer perceptions were negative and there are policy recommendations that can be made to improve in these areas. In particular, *organizational justice* survey items regarding command staff communication and employee input were quite negative, and it appears that officers perceive a lack clear communication from command staff and an opportunity to express their viewpoints. A primary recommendation to address the issue of command staff communication while also providing an appropriate forum for employees to express their opinions would be for command staff to attend roll calls at regular intervals. Command staff attendance would not necessarily have to be weekly, or even monthly, but attending all roll calls in the precincts or

units they oversee as majors and captains on a quarterly basis would enable a face-to-face open dialogue between line officers, sergeants, captains, and majors that could greatly improve officer perceptions of command staff communication and expression of their viewpoints. Internal communication within the department could utilize a similar model to what RPD uses in communicating with Richmond citizens.

Currently, RPD uses a community policing model (Cordner, 2006) to externally communicate with the public through attendance at community meetings and organizing town halls in all four precincts. These efforts made by command staff attempt to foster positive police/community relations, and a similar model of a communication forum implemented within the department might foster positive line staff/command staff relations. As Nix and Wolfe (2016) state, “internal fairness within a police agency may ultimately impact public safety by creating better street cops” (Nix & Wolfe, 2016, p. 13), an important point for command staff to consider when evaluating communication avenues within the department. Perceptions of *organizational justice*, or fairness, consists not just of policy structures that engender equity in the decision-making process but also whether officers perceive that their supervisors and command staff clearly explain their decision-making process and allow officers a voice in the process. This would require a two-way communication channel, something that a bureaucratic and quasi-militaristic police organization would have to adjust their “standard operating procedures” to accommodate. RPD does announce policy changes through their online Power DMS system where employees must review and electronically sign off on policies but they rarely provide an explanation of the policy changes. While there is foundational police literature detailing the strict militaristic internal regulations of police departments (Bittner, 1970/2006), there is a lack of police literature concerning communication within a police agency. From the

organizational justice literature, Colquitt and colleagues (2001) found that all three *organizational justice* elements, *procedural*, *distributive*, and *interactional justice*, predict employee trust and commitment, improve job performance, and gain more compliance with workplace policies through improved organizational citizenship behaviors. Their recommendations to improve *organizational justice* perceptions include clear and concise policies and announcements that communicate policy changes and the reasons why (Colquitt et al., 2001). If improvements were actively made in the area of internal communication within RPD, the current survey results could serve as a baseline and the *organizational justice* portion of the survey could be re-administered following these improvements to compare pre- and post-officer perceptions.

Another area with room for improvement was *distributive justice*, and more specifically, fairness in promotion outcomes. Only a third of respondents felt that promotions were fair and based on merit, and over three-quarters of respondents felt that landing a good assignment was based on who you know (see Table 9). Given these findings, RPD should seek to re-evaluate their promotion process to address these critical employee perceptions. For police departments that are quasi-militaristic in organizational structure, there are increasingly rare opportunities for promotion as officers move up the ranks (Bittner, 1970/2006) and yet they are an important part of perceptions of *organizational justice* (Adams, 1965; Deutsch, 1985; Homans, 1961). Police promotions have received little attention from researchers (Bishopp, 2013; Topp, 2011), and what research does exist on police promotions has been focused on assessment centers, the most common process used for police and fire promotions (Lowry, 1997). The assessment center process can include an exam, in-basket exercises, critical incident exercises, and situational exercises where candidate responses are assessed and rated. Scores from the assessment center

determine who will get an interview in the final step of the promotion process. According to Bishopp (2013), evaluation research on assessment centers is incongruent with the claims that assessment centers have the ability to efficiently determine those most suited for management. Although many departments currently rely on assessment centers as an objective and legally defensible promotion process, Ross (1980) stated “it appears that the assessors relied mostly on evidence of interpersonal skills and communication skills to make their final rating” (Ross, 1980, p. 94), and Feltham (1988) found that assessors had varying definitions of job performance criterion when assessing the same performance, indicating that candidate ratings may have more to do with the assessors themselves than the candidate’s performance. Thus, assessment centers may not be the best way to determine which employees display leadership and management skills suited for promotions.

Again, to make up for the lack of police research on promotions, I have turned to the *organizational justice* scholarship. To address promotions and employee performance reviews, Cropanzano and colleagues (2007) recommend a fair rewards system that motivates individual behavior without losing group cohesion and can balance multiple goals, as well as internal conflict management and performance reviews that are based on evidence of performance, not opinion, as well as notifying employees in advance of performance reviews. Echoing the recommendation for a two-way communication chain within the police department, I would also recommend 360° reviews that allow supervisors to review subordinates on work performance and for subordinates to review supervisors on management and leadership skills. A 360° review process would provide documentation of subordinate perceptions of supervisor management and leadership skills that could be used as promotion materials. There is most likely no way to remove all subjective opinion from the promotion process, but there may be processes that better

reflect the realities of police and administrative work. Actual evidence of a candidate's performance in management and leadership skills from their track record within the department might be a better approach than relying on scores from the laboratory-like settings of an assessment center.

My recommendations regarding BWCs are twofold. Even though this research did not show that officers perceive a change in their personal behavior motivated by BWCs, BWCs are still being advertised as an accountability tool and a way to improve evidence. RPD generates more than 1,000 videos a day, a wealth of data that is expensive to store, especially if the true potential of this data to evaluate and improve training and officer performance has not been tapped. I would recommend for RPD, and any police agency with a BWC program, to partner with academic researchers to study and analyze BWC videos in an effort to produce evidence-based policy and training recommendations. Police agencies do not have the resources to conduct this laborious video analysis on their own and would benefit from outsourcing this work to academic scholars who are constantly challenged to make inroads with police departments for research purposes. Thus, this recommendation of police/researcher partnerships would be mutually beneficial to both parties. In regards to the evidentiary value of BWCs videos, research must also be conducted within the court system to determine how often BWC footage is used in court cases and to better understand judicial and jury perspectives of video evidence. BWC video data storage is extremely expensive and I recommend RPD and other agencies advocate for research that would provide a better understanding of downstream criminal justice system uses of BWC video as currently, the financial burden of BWCs falls under the police department budget. This information would aid the agency in having a better idea of the scope of BWC

video use in the court system and potentially highlight areas for cost savings in reducing video retention time.

Limitations

The first limitation of this research was the focus on one police department, limiting its generalizability to other types of jurisdictions. Although the results are Richmond specific, the findings and recommendations may be useful for similar sized departments with or considering a BWC program. The results are exploratory in nature, as causal relationships cannot be drawn on whether or not BWCs actually change officer behavior. Another limitation of this study was the survey format. According to Babbie (2013), the artificiality of the survey format makes survey research weak on validity but strong on reliability. Taking this into account, I only sought to understand whether or not officers *perceive* a personal behavior modification motivated by BWCs, not whether BWCs were actually creating a “civilizing effect”. Cross-sectional survey research is often plagued by bias and respondents answering in socially desirable ways, and survey fatigue of the surveyed population must also be considered. I attempted to combat survey fatigue by going to roll calls in person with pen and paper surveys that yielded a high response rate. This research would have been strengthened by using a second research site as a comparison or by triangulating pre and post BWC implementation agency data on use of force numbers and citizen complaints as another measure of officer behavior. In the future, I would like to administer this survey in at least one other police department and would like to explore RPDs data on use of force and citizen complaints. Ultimately, officers’ perceptions of *organizational justice* may also have been affected by factors outside of command staff control that are common across many agencies in the U.S. These factors may include low pay, scarce

resources determined by a jurisdiction's mayor, city manager, or city council, low retention rates of new officers, lack of partnerships with other government agencies, and public opinion.

Additionally, there was also an important contextual factor that occurred just prior to data collection that must be noted for purposes of external validity. Data collection with the Richmond Police Department was scheduled in advance at the beginning of May 2018 to begin on May 29th, 2018. This data collection start date was adhered to but in the interim, a lethal police involved shooting occurred on May 14th, 2018.

In the late afternoon of May 14th, 2018, Mr. Marcus Peters was seen leaving the Jefferson Hotel (where he worked part time in security) running to his vehicle nude. From there, Mr. Peters proceeded to Belvidere Avenue where he rear-ended another vehicle, pushing the other vehicle off the road way and into a tree. An RPD officer traveling in the same Northward direction on Belvidere had seen the incident and began pursuit of Mr. Peters' vehicle. Ultimately, Mr. Peters crashed his vehicle into foliage off the I-95 ramp, jumped out his driver's side window and ran into moving traffic on I-95 where he was struck by a vehicle. Mr. Peter's then proceeded to do somersaults and snow angels on I-95 while the officer stood back and waited for back-up. While the officer was waiting, Mr. Peter's sat up from the roadway and began attacking the officer stating that he was going to kill the officer. The officer attempted to push Mr. Peters away and create distance between himself and Mr. Peters. This incident involved the deployment of a conducting electrical weapon (CEW) that was unsuccessful in landing both probes into Mr. Peters (one probe hit his shoulder and the other went through his legs) due to the wild movements and close proximity of Mr. Peters to the officer. Unable to achieve neuro-muscular incapacitation (NMI), the officer continued to push Mr. Peters away who had continued to attack the officer, until the officer used his service weapon to incapacitate

Mr. Peters. Ultimately, this police involved shooting was ruled justified by the Office of the Commonwealth's Attorney for Richmond, and criminal proceedings against the officer will not be pursued (Herring & Croxton, 2018).

This incident was captured by the officer's BWC and the footage provides a view from the officer's perspective. Due to press and public demand, Chief Durham released the BWC footage to the public after allowing the family to view the footage privately. In the two plus years since RPD implemented the BWC program, this was the first instance of public release of the video. Although completely unintentional, it must be noted that data collection began two weeks after this critical officer involved shooting, and only four days after the public release of the BWC video. Lacking any survey data that pre-dates this incident, it is impossible to know whether this incident had an effect on the officer responses on the survey but due to the high-profile nature of the incident and unprecedented release of BWC video, I feel it is important to provide this contextual and unexpected factor that occurred just prior to deploying the survey in the field.

Conclusion

This study expands and refines previous BWC and *organizational justice* research within policing, while also investigating officer perceptions of their own personal behavior motivated by BWCs, a research direction that heretofore had gone unexplored. The results showed that *procedural justice* and officer *self-legitimacy* have a significant correlation with officers' general perceptions of BWCs but that RPD officers do not perceive a personal behavior change motivated by wearing a BWC. These officer perceptions on their own individual behavior does not lend itself to asserting that BWCs have a "civilizing effect" on officers in Richmond, Virginia. This may be due in large part because RPD was not a department known for excessive

uses of force prior to BWC implementation, and the BWC program was proactively sought by command staff, not a federal or civilian recommendation to curb practices of excess. Thus, it can be argued that RPD officers do not perceive a “civilizing effect” motivated by BWCs because they already perceive themselves as civilized officers.

Evidence regarding BWCs changing officer behavior is still inconclusive, even with the addition of the research presented here that does not confirm behavior change. Yet, police departments will continue to adopt BWC technology as the cameras have become an accepted part of the police tool-kit. BWCs may come to be viewed much like health insurance or car insurance, an expense regularly paid for in preparation for some future crisis. Department transparency and accountability may only come into play when a critical incident occurs and the insurance policy of BWC video justifies police action and stems the tide of civil protests, as was the case for the Richmond Police Department in 2018. Ultimately, the broader question is whether technology serves as a support to community policing in the function of an oversight and evidence gathering tool or whether policing is entering a new era where best policies and practices are based on advancing technology regardless of their community outcomes.

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RESEARCH SUBJECT INFORMATION AND CONSENT FORM**TITLE: Officer Perceptions of Policing Technology and Workplace Issues****VCU IRB NO.:****INVESTIGATOR: Hayley Cleary, Ph.D.****PURPOSE OF THE STUDY**

The purpose of this research study is to examine officer perceptions of policing technology and workplace issues within their agency. You are being asked to participate in this study because you are an officer with the Richmond Police Department.

DESCRIPTION OF THE STUDY AND YOUR INVOLVEMENT

If you decide to be in this research study, you will be asked to sign this consent form after you have had all your questions answered and understand what will happen to you.

In this study, you will be asked to complete a survey. The survey will take approximately 15 minutes of your time. In order to ensure that all information will remain confidential, please do not include your name. To ensure confidentiality, no identifying information will be used in dissemination of the research findings.

Copies of the completed dissertation and aggregate data will be provided to the VCU Dissertation Committee and to Richmond Police Department Command Staff. If you choose to participate in this survey, please answer all questions as honestly as possible.

RISKS AND DISCOMFORTS

There are is a potential risk that you may be identified by your responses. All precautions are being taken to ensure confidentiality of participating respondents. You may skip any questions you do not want to answer. Confidentiality precautions being taken are detailed below

BENEFITS TO YOU AND OTHERS

You may not get any direct benefit from this study, but the information we learn from people in this study may help to inform policy recommendations.

COSTS

There are no costs for participating in this study other than the time you will spend filling out the survey questionnaire.

CONFIDENTIALITY

Potentially identifiable information about you will consist of basic demographic information on the survey. Data is being collected only for research purposes.

Your survey will be identified by ID numbers, not names, and stored separately from research data in a locked research area. Hard copies of the survey and signed consent forms will be kept in a locked file cabinet in the researcher's private university office for one year after the study ends and will be destroyed at that time. Numerically coded data will be kept indefinitely. Data files will be password protected and stored on a secure server. Access to all data will be limited to study personnel.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

Your participation in this study is voluntary. You may decide to not participate in this study. Your decision not to take part will involve no penalty or loss of benefits to which you are otherwise entitled. If you do participate, you may freely withdraw from the study at any time. Your decision to withdraw will involve no penalty or loss of benefits to which you are otherwise entitled. Your decision to participate or not participate will not be shared with your commanding officers.

If you would like to take the survey offsite and in privacy, please retain this form and contact the researcher at your convenience to schedule a time and place to take the survey.

QUESTIONS

If you have any questions, complaints, or concerns about your participation in this research, contact:

Hayley Cleary, Ph.D.
Associate Professor of Criminal Justice
L. Douglas Wilder School of Government & Public Affairs
Virginia Commonwealth University
Phone: 804-827-0475
Email: hmcleary@vcu.edu

The researcher/study staff named above is the best person(s) to call for questions about your participation in this study.

If you have any general questions about your rights as a participant in this or any other research, you may contact:

Office of Research
Virginia Commonwealth University
800 East Leigh Street, Suite 3000
Box 980568
Richmond, VA 23298
Telephone: (804) 827-2157

Contact this number to ask general questions, to obtain information or offer input, and to express concerns or complaints about research. You may also call this number if you cannot reach the research team or if you wish to talk with someone else. General information about participation in research studies can also be found at

http://www.research.vcu.edu/human_research/volunteers.htm.

CONSENT

I have been given the chance to read this consent form. I understand the information about this study. Questions that I wanted to ask about the study have been answered.

The following statements ask for your opinion on **body-worn cameras** and **conducted electrical weapons (CEWs)**.
Please circle the number that best corresponds with your opinion. To ensure anonymity, please do not write your name anywhere on this survey.

	Strongly Disagree	Disagree	Agree	Strongly Agree
When officers wear body-worn cameras they will spend less time filling out forms and other types of paperwork.	1	2	3	4
When officers wear body-worn cameras they will have a more accurate account of what has transpired.	1	2	3	4
When officers wear body-worn cameras it improves the quality of evidence they can submit.	1	2	3	4
When officers wear body-worn cameras it makes their job easier.	1	2	3	4
Citizens will be more cooperative once they become aware that an officer is wearing a body-worn camera.	1	2	3	4
Citizens will be more respectful once they become aware that an officer is wearing a body-worn camera.	1	2	3	4
Suspects are less likely to resist arrest when they become aware that the officer is wearing a body-worn camera.	1	2	3	4
Generally, people become less aggressive when they are aware that a body-worn camera is being used.	1	2	3	4
Having officers wear body-worn cameras will hurt police-community relations.	1	2	3	4
The use of body-worn cameras increases the number of citizen complaints against officers.	1	2	3	4
When wearing a body-worn camera, an officer is less likely to give warnings to citizens.	1	2	3	4
When wearing a body-worn camera, an officer will have fewer contacts with citizens.	1	2	3	4
When wearing a body-worn camera, an officer will feel like they have less discretion.	1	2	3	4
When wearing a body-worn camera, an officer will be more cautious in making decisions.	1	2	3	4
When wearing a body-worn camera an officer will act more professional.	1	2	3	4
Wearing a body-worn camera affects an officer's decision to use force.	1	2	3	4
When an officer wears a body-worn camera it is easy to locate and retrieve video for a specific incident if needed.	1	2	3	4
When an officer wears a body-worn camera, the equipment is easy to use.	1	2	3	4
The body-worn camera equipment is comfortable to wear.	1	2	3	4
The battery life of the body-worn camera is adequate.	1	2	3	4
When an officer wears a body-worn camera, it is easy to download data at the end of a shift.	1	2	3	4

	Strongly Disagree	Disagree	Agree	Strongly Agree
The use of body-worn camera equipment is well received by coworkers.	1	2	3	4
The police benefit more from body-worn cameras than citizens do.	1	2	3	4
When an officer wears a body-worn camera it improves their job satisfaction.	1	2	3	4
Body-worn cameras improve officer training.	1	2	3	4
Body-worn cameras improve the overall job performance of an officer.	1	2	3	4
Body-worn cameras tend to increase officer safety.	1	2	3	4
I think that the use of body-worn cameras should be expanded to other departments.	1	2	3	4
The advantages of police departments adopting body-worn cameras outweigh the disadvantages.	1	2	3	4
Wearing a body-worn camera makes me more cautious when making a decision.	1	2	3	4
Wearing a body-worn camera makes me act more professionally.	1	2	3	4
Wearing a body-worn camera affects my decision to use force.	1	2	3	4
Wearing a body-worn camera makes me less likely to give a warning to citizens.	1	2	3	4
Wearing a body-worn camera makes me have fewer contacts with citizens.	1	2	3	4
Wearing a body-worn camera makes me more respectful when interacting with citizens.	1	2	3	4
Wearing a body-worn camera makes me more considerate when dealing with the public.	1	2	3	4
Wearing a body-worn camera makes me think through my actions more thoroughly.	1	2	3	4
Wearing a body-worn camera makes me less likely to use force.	1	2	3	4
Wearing a body-worn camera does not make me act differently in my duties.	1	2	3	4
The TASER certification training conducted by my department makes me feel confident in knowing when it is appropriate to deploy my CEW.	1	2	3	4
CEWs increase officer safety.	1	2	3	4
CEWs increase citizen safety.	1	2	3	4
If used properly, I believe CEWs can save lives in use of force situations.	1	2	3	4

The following statements ask for your opinion on **workplace issues**.
Please circle the number that best corresponds with your opinion. To ensure anonymity, please do not write your name anywhere on this survey.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I have confidence in the authority vested in me as a law enforcement officer.	1	2	3	4
As a law enforcement officer, I believe I occupy a position of special importance in society.	1	2	3	4
I believe people should always do what I tell them as long as my orders are lawful.	1	2	3	4
I am confident I have enough authority to do my job well.	1	2	3	4
I believe law enforcement is capable of providing security for all citizens of this county.	1	2	3	4
My agency's policies are designed to generate standards so that decisions can be made with consistency.	1	2	3	4
My agency's policies are designed to allow employees to have a voice in agency decisions (e.g. assignment changes, discipline).	1	2	3	4
My agency's performance evaluation system is fair.	1	2	3	4
My agency's investigation of civilian complaints is fair.	1	2	3	4
Landing a good assignment in my agency is based on whom you know.	1	2	3	4
If you work hard, you can get ahead at this agency.	1	2	3	4
Promotions in my agency are fair.	1	2	3	4
Promotions in my agency are based on merit.	1	2	3	4
Command staff considers employees' viewpoints.	1	2	3	4
Command staff treats employees with kindness and consideration.	1	2	3	4
Command staff treats employees the same regardless of their gender.	1	2	3	4
Command staff treats employees the same regardless of their race or ethnicity.	1	2	3	4
Command staff clearly explains the reasons for their decisions.	1	2	3	4
Command staff clearly explains the reasons the agency makes policy changes.	1	2	3	4
Command staff are candid in their communication with employees.	1	2	3	4
Generally, command staff treats employees with respect.	1	2	3	4

*The following questions ask for **demographic information**.
Please circle the answer that best reflects your answer or write in your answer where you see a blank box.*

1. Age
 - a. 21-29 years old
 - b. 30-35 years old
 - c. 36-39 years old
 - d. 40-49 years old
 - e. 50 years or older

2. Gender:
 - a. Male
 - b. Female

3. Race/Ethnicity:
 - a. Black/African American
 - b. White/Caucasian
 - c. Asian
 - d. Latinx/Hispanic
 - e. Middle Eastern/North African
 - f. Native American/Pacific Islander
 - g. Biracial or multiracial
 - h. Other

4. Years served with the Richmond Police Department:

5. Rank:

6. Precinct:
 - a. First Precinct
 - b. Second Precinct
 - c. Third Precinct
 - d. Fourth Precinct

7. Are you assigned a BWC? (If yes, please proceed to the next question)
 - a. Yes
 - b. No

8. If you are assigned a BWC, how long have you been assigned one? (months and/or years assigned)

9. Are you assigned a CEW? (If yes, please proceed to the next question)
 - a. Yes
 - b. No

10. If you are assigned a CEW, how long have you been assigned one? (months and/or years assigned)



CITY OF RICHMOND

INTRACITY CORRESPONDENCE

DATE: 05/31/2017

TO: Colonel Alfred Durham
Chief of Police

Alfred Durham
21 June 17

THRU: Deputy Chief Steven Drew
Business Services Division

THRU: Major William Smith
Business Services Division

FROM: Maximilian Pop
Information Services Manager

Maximilian Pop
5/31/17

SUBJECT: VCU Body Camera Study approval

VCU Doctoral Candidate Carolyn Zeppa is seeking Departmental approval to conduct a research study on officer perceptions of Body-Worn Cameras and Organizational Justice. Ms. Zeppa began this effort more than a year ago and has attended multiple RPD Body-Worn Camera training sessions and has also done multiple ride along sessions with a number of RPD officers. A Brief description of Ms. Zeppa's Research Synopsis and Data Collection methodology is attached for your review. Ms. Zeppa seeks to gather officer responses to Body-Worn Cameras through the use of a short anonymous survey given to RPD patrol and ranking officers at roll call. Ms. Zeppa anticipates conducting the surveys winter 2017 and spring 2018. She anticipates her final results to be ready in May 2018. Ms. Zeppa's findings and analyses will be made available to RPD upon completion of her study.