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Examining Police Officer Resistance to Change and Body-Worn Cameras

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EXAMINING POLICE OFFICER RESISTANCE TO CHANGE AND

BODY-WORN CAMERAS

by

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EXAMINING POLICE OFFICER RESISTANCE TO

CHANGE AND BODY-WORN CAMERAS

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Dissertation

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ACKNOWLEDGMENTS

When I was younger, I wanted to climb a mountain. In many ways, this doctoral endeavor is much like climbing a mountain. It takes the effort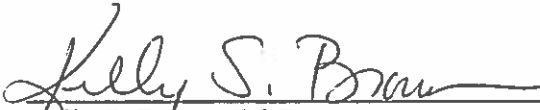 of many different people to reach the summit of a mountain and return safely. Multiple individuals helped me to reach my goal of completing this dissertation over the last three years. First, I thank God for giving me the strength and perseverance to finish this demanding process. I want to thank my incredible dissertation team, advisor Dr. Stan Tuttle and reader Dr. Bob Hull. I truly would not have been able to accomplish this dissertation without your patience, advice, feedback, and expertise during the process.

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DEDICATION

I solely dedicate this dissertation to my wife Rose and my two children, Rachel and Zane. I hope through my example that I have encouraged you to reach for what you want to achieve. Without your love, support, understanding, and encouragement I would not have been able to complete this process. I love you all!

ABSTRACT

Police departments are adopting the body-worn camera as an important tool in the restoration of trust and accountability for police officers. Although body-worn cameras can be beneficial to their work, police officers might resist the use of cameras. The purpose of the current study was to examine whether experiences with technology or the perceived usefulness of body-worn cameras predict resistance to the cameras in order to determine where resistance to body-worn cameras possibly exists. This study employed a quantitative design that examined the responses of 48 ($n = 48$) police officers' to possible resistance factors: experiences with technology, perceived usefulness (PU), and perceived ease of use of body-worn cameras (PEOU). Through a countywide email system, participating police officers completed a survey that incorporated the technology acceptance model (TAM). Data analysis included one-sample t-tests, correlational analyses, and multiple regressions. There was a statistically significant difference found between officers' levels of resistance to change and body-worn cameras in comparison to the scale midpoint, $t(45) = -5.23$, $p = .000$. In relationship to resistance to body-worn cameras, statistically significant correlations existed between the variables of experiences with technology ($r(43) = -.32$, $p = .034$.), PU ($r(39) = -.64$, $p = .000$), and PEOU ($r(42) = -.79$, $p = .000$). Additionally, the regression analyses showed that experience with technology, PU, and PEOU were statistically significant predictors of resistance to body-worn cameras. Police leadership should address resistance elements such as technology experience, PU, and PEOU before investing in body-worn cameras.

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CHAPTER I

INTRODUCTION

As innovations change the dynamics in which Americans live, so must police officers adjust with waves of change in policing. Police officers in the United States are under more scrutiny than ever before because of a myriad of problems ranging from excessive use-of-force to officer misconduct allegations (Ariel, Farrar, & Sutherland, 2014; Jennings, Fridell, & Lynch, 2014; Young & Ready, 2014). De Angelis (2015) discovered perceived lower levels of accountability in police departments, especially among African Americans and Latino populations. Based upon Gallup Poll data in 2015, Jones (2015) reported that citizen confidence in the police is at the lowest level since 1993. Of equal concern, citizens expect officers to act within the guidelines of the law and approach the application of force in a justifiable manner (Ariel et al.; Skogan, 2008).

As allegations of police misconduct and excessive use-of-force circulate across the television screen and newsprint, police departments confront the risk of litigation. Police departments are making dramatic changes to policies, rules, and regulations. Police agencies have made these changes to prevent the actions of officers applying an unnecessary amount of force that could prompt litigation, jeopardize citizen and police interactions, and damage the trust the community places in their officers (Ariel et al., 2014). Police officers possess a great deal of power and should exercise their authority

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with considerable discretion (Bronitt & Stenning, 2011; Nix, Wolfe, Rojek, & Kaminski, 2014).

Various technological applications exist that can monitor police performance and interactions with citizens. Technologies such as global positioning systems (GPS), automatic vehicle locations (AVL) (Wain & Ariel, 2014), and in-car cameras (International Association of Chiefs of Police, 2005) have supported monitoring practices of police officers.

Citizens' cell phones have drawn a great deal of attention because of their capability to record and monitor officers as well (Kopak, 2014). With the call for improved transparency and accountability, technologies that monitor police appear to be in the best interest of citizens and police in their interactions (Chan, 2001; Wain & Ariel, 2014; Young & Ready, 2015).

When introducing new technologies, police officers require time to adapt. Schmid (2006) stated that it was important to understand the technology that affects practices and processes of police officers. Additionally, Schmid said it was crucial to understand the implementation and interpretation of technology from the users' viewpoint. With the ever-increasing need and use of technologies that monitor police, it is imperative to investigate the impacts of technological devices.

Lindsay, Jackson, and Cooke (2011) explored acceptance factors of how technology fits into roles and peers influence toward mobile computers in police departments. They learned that technologies such as mobile computers affect employee work behaviors and production. In addition, Lindsay et al. discovered that officer involvement was important to the implementation process and perceived usefulness of

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the technology. Although the technology acceptance factors presented by Lindsay et al. were important, the investigation of resistance to technologies could yield an understanding of where resistance exists (Kim & Kankanhalli, 2009).

<div align="center">Statement of the Problem</div>

Nationwide, police departments confront the demand for more transparency and accountability. Skogan (2008) stressed that recurrent, publicized visions of police violence reduced favorable public opinion about police. Individual instances of excessive force or killings by police could further reduce public perceptions. Technological advancements facilitate better policing practices (Wain & Ariel, 2014), and the advent of the body-worn camera could restore transparency, accountability, and trust in the police.

With innovative technological advancements increasing at a rapid pace, officers could resist new technology changes (Jennings et al., 2014; Katz et al., 2014; Wain & Ariel, 2014; Young & Ready, 2015). Balci, Bedué, and Franzmann (2013) stated that user resistance to change was so substantial that it could affect future technology development and acceptance. Bateh, Castaneda, and Farah (2013) asserted that managers who ignored employees unwilling to work toward organizational goals could cause change initiatives to fail in the long term. Officers' negative opinions about surveillance and monitoring could coincide with lower acceptance of technology because of perceived loss of control and autonomy. Similarly, Byrne and Marx (2011) asserted that negative perceptions could compel unenthusiastic views of the camera's value and acceptance, as well as lower job satisfaction and commitment levels.

With technological advancements progressing, it seems important to examine the resistance that officers may have about technology, and the potential effects technology

have on the jobs police perform. Past researchers have studied the effects of body-worn cameras on police officers' use-of-force incidents and perceived legitimacy (Ariel et al., 2014; Young & Ready, 2014). Jennings et al. (2014) called for continued research on body-worn camera technology, especially considering officers' experiences. Little to no research has examined police officers' experiences, such as duration of use and proficiency with other technologies to determine if resistance to the body-worn camera may occur. In addition to experiences, Lindsay et al. (2011) and Skogan (2008) recognized officers' feedback influenced the perceived usefulness of technologies in their work. Because these variables, such as officers' experiences and perceived usefulness of technology, have little attention in the literature, they should be examined as potential predictors of resistance. The purpose of the current study was to examine whether experiences with technology or the perceived usefulness of body-worn cameras predict resistance to the cameras in order to determine where resistance to body-worn cameras possibly exists.

Background

With the tragic deaths of unarmed men at the hands of police capturing the emotions of America, questions lingered about how these events unfolded. Through copious media reports, skeptical inferences, and conclusions from citizens and police, a cultivated distrust in police developed. In the midst of the confusion, one question could be raised: Would the use of a body-worn camera that is worn by police officers resolve these tragic stories to a positive and transparent conclusion?

With the ubiquity of video cameras, closed circuit television (CCTV), in-car video cameras, and citizen's cell phones, technology advances the way for added

transparency in police and citizen interactions (Jennings et al., 2014; Kopak, 2014). With the enormous responsibility of protecting citizens, deterring and solving crimes, responding to crimes in progress, and answering calls for service, police officers adapt to numerous roles and change initiatives that impact their safety and anticipated concerns in the future (Ariel et al., 2014). As officers' roles expand and change, it may be necessary to broaden the dynamics that maintain control of police actions. However, with a new way to monitor and observe police, questions may arise how body-worn cameras encroach on officers' overall resistance to change. Additionally, police departments often implement new technologies before limitations become obvious. Therefore, the need to examine officers' resistance to body-worn cameras is paramount because video surveillance can change officers' beliefs about the purpose of the camera and usefulness of technology (Koper, Lum, & Willis, 2014).

Body-Worn Camera Research

Researchers studying about body-worn camera technology discovered that it lowered use-of-force incidents, decreased overall complaints, reduced assaults on officers, and established a compromising effect between police and citizen encounters (Ariel et al., 2014; Jennings et al., 2014; Jennings, Lynch, & Fridell, 2015). In their seminal study of body-worn cameras, Ariel et al. investigated the relationship between cameras and police officers' awareness and behaviors. Ariel et al. hypothesized a reduction in use-of-force incidents when officers wore the body-worn cameras while performing duties. Experimental and control shifts were randomly assigned and tracked to ascertain if officers or suspects initiated use-of-force incidents. Ariel et al. measured incidents and complaints against the total call volume to determine the effect on use-of-

force incidents. Ariel et al. discovered that officers who wore body-worn cameras had a reduction in use-of-force incidents and overall complaints.

Even though the dynamics of body-worn camera technology appear favorable, officers could still resist technology that monitors their performance (Ready & Young, 2015). Young and Ready (2014) asserted the following about resistance and reduced acceptance of body-worn cameras:

Specifically, concerns over the effectiveness of cameras in facilitating prosecutions, access to and review of video files, and perceived encroachment on police discretion are at the heart of resistance to officers. To the extent that these concerns are collectively shared, they represent a barrier to the effective implementation of technology to achieving the goals of police departments. (p. 2)

Young and Ready (2014) studied police legitimacy and body-worn camera use. Young and Ready randomly assigned officers to treatment conditions, with officers wearing the camera, and non-treatment conditions, where officers did not wear cameras. Young and Ready investigated correlations between legitimacy and camera use. They hypothesized that camera utilization would increase legitimacy as officers activated the device more often. Although the treatment group displayed a greater variability in the results, Young and Ready found little difference in officers' levels of legitimacy. Young and Ready concluded that police officers resist technology until effectiveness is established, and that agreement is imperative to the change effort. Furthermore, agency networks affected the implementation of the camera unless there is proper legitimacy framing. Because the likelihood that officers' resistance toward body-worn cameras

could be high due to a lack of perceived benefit, further investigation into officers'
resistance would seem prudent.

Resistance to Change

Technology researchers have determined that resistance develops from various
points of view. The implementation of technological devices that change the working
conditions of employees encourages resistance (Joshi, 1991; Laumer & Eckhardt, 2012).
Oreg (2003) conducted multiple studies on resistance to change. Oreg identified several
relevant resistance factors, including the reluctance to lose control, cognitive rigidity,
lack of psychological resilience, intolerance of adjustment to change, and reluctance to
abandon old habits. Using these factors, Oreg configured the resistance to change (RTC)
scale that measured individual differences in resistance to change. In a similar manner,
the change attitude (CA) scale examined affective, behavioral, and cognitive resistance
(Oreg, 2006). Lapointe and Rivard (2005) considered factors of perceived threats from a
model of resistance of information technology. According to Lapointe and Rivard,
perceived threats induce resistance and emerge from initial conditions and objects of
change.

Change is important to examine because of the context surrounding employees
tasked with carrying it out. Nixon (2014) conducted a study that addressed employees'
outlooks about organizational change. The phenomenological study used qualitative
inquiry that focused on the aspects of change and how employees handled the experience.
According to Nixon, change needs to support what the employees believe. Individuals
have their history; therefore, employees superimpose history to the context of
implemented change. Nixon further discovered that implementation of change links with

themes such as technology, training, planning, and participation. Nixon found the themes associated with change could affect resistance because of various learning curves. Learning curves are challenging to overcome because past change has not been reconciled.

Police departments across the world share the common idea of using technology to facilitate better services to the public. In fact, Lindsay et al. (2011) conducted a qualitative study that addressed police officer acceptance of new technology in the United Kingdom. They wanted to discover what factors affected police officers' acceptance of new technology and the barriers to implementation. Lindsay et al. utilized a longitudinal ethnographic method that allowed for a deep concentration of the factors that influence acceptance. For this particular study, Lindsay et al. focused on the acceptance of mobile technologies within a police department in Leicestershire Constabulary, England.

To obtain information for their study, Lindsey et al. (2011) employed focus groups, interviews, observations, and questionnaires designed to triangulate the sought after factors. Although the results varied, Lindsay et al. suggested that technology change ingrains in the culture before the achievement of acceptance. Officers recognized that new technologies might improve safety and feelings of empowerment within job contexts; however, police cultures adapt rather slowly to change. Lindsay et al.'s findings also indicated that the foremost barriers to officer acceptance were lack of awareness to the benefits of technology and deficient involvement in the implementation process.

As new technologies replace outdated technology, departments may uncover obstacles to the implementation of newer technologies. When newer technology replaces old technology, police departments may struggle with the ongoing change process. For

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example, Schuck (2015) recognized that users of technology have a certain expectation of a particular device. Technology interacts with processes within the organization and with the users who use it. In a similar manner, Young and Ready (2015) recognized that body-worn cameras represent a change that could interfere with officers' routines and discretion. Young and Ready further suggested, "The device may represent a major change to their job, creating resistance among those who lack the technical proficiency to utilize the technology for the assigned task" (p. 4).

While researchers such as Schuck (2015), and Young and Ready (2015) recognized that technology affects work processes and discretion, Wain and Ariel (2014) observed another obstacle. This obstacle is whether employees accepted a technology that enhances the goals of the organization. Wain and Ariel contended that surveillance could improve organizational accountability, but officers could disapprove of surveillance because of internal departmental concerns. Other researchers agreed with this argument:

Technology can also be used to enhance external accountability by making an agency's decisions more transparent to its publics and by holding it accountable for its performance, particularly in reducing crime. However, our research suggests that agencies placed much more emphasis on using technology to enhance internal rather than external accountability. (Koper, Lum, Willis, Woods, & Hibdon, 2010, p. 240)

Additionally, Wain and Ariel maintained that the intrusiveness of surveillance not only inhibited officer's discretion but also limited their amount of control over situations. Much like Wain and Ariel's contention, Schuck also pointed out that police officers resist change that affects their discretion and relationships with administrators.

Thompson, Higgins, and Howell (1994) recognized the potential obstacle of prior experience in the acceptance of computer technology. Thompson et al. tested the effects of prior experience with computers on overall utilization. They hypothesized the moderating effect of prior experience on constructs of social factors, affect, complexity, job fit, long-term consequences, and facilitating conditions of computer use. Thompson et al. used a sample of 219 participants from a variety of organizational settings. They discovered that past use of computers directly influenced the current use of computers. Moreover, Thompson et al. found a moderating effect of prior experience on the hypothesized constructs; furthermore, they concluded that prior experience is an important feature to analyze, and it should be investigated in other settings.

Prior experience may not be the only obstacle to change. Other researchers have examined usefulness and ease of use of technologies as determinates of resistance. Bhattacherjee and Hikmet (2007) examined physicians' perceived usefulness about a new information technology. Bhattacherjee and Hikmet used a sample size of 131 physicians from a large hospital in the Southern United States and partial least squares for analysis of the data. Bhattacherjee and Hikmet discovered that physicians' resistance to change negatively related to perceived usefulness of technology. They further discovered that physicians' resistance to change marginally related to ease of use of technology. Bhattacherjee and Hikmet concluded that physicians fear the loss of control over situations due to compulsory use of technology systems.

With so many unknowns about body-worn cameras, researchers should consider the continued study of camera technology and its effects on police organizations and officers (Jennings et al., 2014). Similarly, Schuck (2015) furthered this declaration,

"Scholarship that evaluates the adoption of advanced surveillance equipment is important because new developments in technology have the potential to influence organizational change and restructure police work" (p. 2).

Although body-worn cameras appear to be gaining momentum across the United States, officers will need to adapt to a device that could change their behavior and approach to police work (Ariel et al., 2014). Every officer pursues different goals and aspirations when planning a career in law enforcement. Individual experiences differentiate and impel new knowledge and foresight as well. With a strong need to research into the impacts of body-worn cameras, it would seem essential to investigate officers' experiences with technology and perceived usefulness of the body-worn camera that could affect resistance to the camera. The examination of officers' experiences and perceived usefulness could yield valuable insights into the probability and facilitation of resistance. While conducting research for the current study, the researcher did not locate any studies that addressed specifically how experience or perceived usefulness could affect the resistance to body-worn cameras. Body-worn camera research remains in its early stages, and few to no studies have been located that examined this technology from an officer resistance perspective.

Research Questions

The following research questions guided the current study:

1. To what extent are police officers dispositionally resistant to change?

2. To what extent are police officers resistant to body-worn cameras?

3. What is the relationship between officers' experiences with technology and resistance to body-worn cameras?

4. What is the relationship between officers' perceived usefulness of body-worn cameras and resistance to body-worn cameras?

5. Which variable primarily predicts resistance to the use of body-worn cameras: Officers' experiences or perceived usefulness?

Description of Terms

Automated Vehicle Location. The automated vehicle location (AVL) system tracks police patrol units in a given area by use of computer technology. The system allows supervisors to monitor patrol officers in a particular location within their jurisdiction (Wain & Ariel, 2014).

Body-Worn Camera. The body-worn camera (BWC) is an electronic innovation with audio and visual recording capabilities. Police officers wear the device on their uniform during the performance of duties. The device records various interactions between police and civilians. Further, it is used for evidentiary purposes in criminal or departmental proceedings (Drover & Ariel, 2015; Jennings et al. 2014).

Citizen Complaint. For the current study, a citizen complaint referred to any allegation brought to the attention of police management about aggressive police officer behavior or actions toward the public (Ariel et al., 2014).

Closed Circuit Television. Closed circuit television (CCTV) are monitoring, surveillance devices usually deployed community-wide to deter offenders, record criminal acts, and prevent certain behaviors (Wells, 2015). Common areas for a CCTV are "parks, train stations, bus stations, airports, and harbors, as well as areas of the city deemed trouble spots" (Manning, 2014, p. 2506).

Dispositionally Resistant. Dispositionally resistant refers to the natural human preference to oppose any change. (Laumer, Maier, Eckhardt, & Weitzel, 2015; Oreg, 2003).

Electronic Performance Monitoring. A concept that describes the surveillance, reviewing, recording, videotaping, and all other forms of electronic communication monitoring within an organization used to gather information about employee performance (Bartels & Nordstrom, 2012). Stanton and Julian (2002) recognized electronic performance monitoring as " . . . the collection of information about the work effectiveness and productivity of individuals, groups, and larger organizational units" (p. 1).

Experience. In the current study, the term experience refers to the overall accumulation of time with technology, frequency of use with technology, perceived competency with technology, and opportunity to use technology (Varma & Marler, 2013).

Global Information System. A Global Information System (GIS) tracks crimes and responses to calls for service; furthermore, it deploys officers in a more efficient manner. The system is further used to "capture, manage, and potentially analyse [*sic*] various types of geographical data, such as crime locations, temporal distributions, and general crime patterns on spatiotemporal levels" (Wain & Ariel, 2014, p. 278).

Global Positioning System. The global positioning system (GPS) is a satellite system that tracks and monitors officers' movements through radio, vehicle, or other electronic computer technology (Wain & Ariel, 2014).

In-car Camera. A recording device mounted inside of a police vehicle that records interactions with citizens and police. In-car cameras are especially useful on vehicle stops because they point forward toward the vehicle the officer has stopped. In-car cameras record audio and video data (International Association of Chiefs of Police, 2005).

Information Technology. Information technology refers to any technology that incorporates electronic computer or software abilities with the expectation to improve the organization's ability to function and employee outcomes (Manning, 2014).

Legitimacy. Legitimacy refers to using the body-worn camera as an effective tool to accomplish goals and not to sanction employees for minor policy violations (Young & Ready, 2014).

Patrol Officer. The lowest ranking member of a police organization, usually tasked with patrol assignments during duty hours (Skogan, 2008).

Resistance to Change. ". . . an individual's tendency to resist or avoid making changes, to devalue change generally, and to find change aversive across diverse contexts and types of change" (Oreg, 2003, p. 680).

Supervisor. For the current study, a supervisor includes the rank of sergeant or above in a police organization (Skogan, 2008).

Surveillance. Surveillance is a form of monitoring that involves audio and video capabilities. Surveillance tracks performance, behaviors, and personal characteristics of employees (Ball, 2010).

Use-of-Force. Use-of-force is the application of physical restraint on a member of the public. Police employ use-of-force to affect an arrest or control volatile situations (Ariel et al., 2014).

Significance of the Study

Body-worn camera technology has proceeded at a rapid pace, and the research about officer resistance is minimal especially associated with body-worn cameras. Police organizations might confront increased pressure to consider body-worn camera programs in the near future (Young & Ready, 2015). Current research has evaluated the performance of officers under experimental conditions in departments that are considering the technology. Although insightful, these studies only examined officers' perceptions of body-worn cameras, police performance in relationship to use-of-force, and legitimacy, meaning that the device serves the officers' self-interests of safety and goal attainment (Ariel et al., 2014; Drover & Ariel, 2015; Jennings et al., 2014; Young & Ready, 2014). The current study could add to the body of knowledge about where resistance occurs when using body-worn cameras in relation to police officers' experiences with other technologies and the perceived usefulness of the body-worn camera. It is important to recognize that technology adoption can be positive, but the opportunity to look at resistance factors could help enhance police management insight into what might be inhibiting the adoption of technology. For instance, Oreg (2006) recognized that the approach management pursues is vital to the change effort. Different forms of resistance designate different precursors to resistance such as lack of communication between management and officers, lower levels of involvement in the

implementation process, and differences between what officers expect of the technology and their goals.

The purpose of the current study was to examine whether experiences with technology or the perceived usefulness of body-worn cameras predict resistance to the cameras in order to determine where resistance to body-worn cameras possibly exists. Studying the level of resistance that officers have could reveal various reasons why they may reject or fear the cameras. Researchers have recognized that resistance can onset immediately; however, resistance can manifest well after the implementation of technological changes (Katz et al., 2014; Manning, 2014).

The current study could further facilitate action plans that better curtail the effects of resistance. The current study could further prepare police management for upcoming camera programs and discern the evolution of resistance. Knowing these factors could better prepare management for organizational change involving body-worn camera technology and reliably recognize the effects of resistance before resistance becomes overwhelming. Additionally, the insights from the current study could foster a team effort between police administrators and officers to assure proper policy implementation and facilitate a smoother transition to technological change.

Process to Accomplish

The current study examined experience with other technology and perceived usefulness of body-worn cameras in relation to the resistance of body-worn cameras in order to determine where resistance to body-worn cameras possibly exists. In order to answer the research questions, the current study used a quantitative methodology.

Participants

The current study used police officers drawn from police departments within a county in the Midwest United States. Eleven police departments function within this county and serve a total county population of 113,000 residents. The 11 police agencies within the county account for 250 sworn police officers working in their communities that use the countywide email system. The current study used participants from the 250 sworn police officers in the county of interest.

Measures

In order to assess items relevant to officers' experiences with technology, the researcher reviewed literature that examined the level of use with technology, amount of duration spent with technology, and proficiency with technology (Thompson et al., 1994; Varma & Marler, 2013). The researcher developed a self-reported scale based on prior research. In order to verify the items were sufficient for the current study, the researcher conducted a pilot study to determine the content validity of the items. The researcher contacted six officers with eight to 25 years of expertise in law enforcement. The researcher asked three patrol officers and three supervisors for their feedback about the items. The researcher chose these officers because of their years of experience and background with technology in law enforcement. Further, these officers serve different roles in the department as training officers and department technology officers. The feedback from these officers assisted the researcher in determining whether the items were clear and precise, and if any new information could enhance the items' clarity. Once the pilot study was completed, the researcher updated the scale items based on these officers' feedback.

To assess use with technology, the researcher assessed the hours per week the officer spent with technology with questions such as *In an average week, to what degree do you use technologies in policing to perform functions of the job?* These items were rated on a Likert scale from 1 to 5, with 1 meaning *not at all*, and 5 meaning *almost always*.

To determine the time officers spent with technologies, the researcher asked officers *In an average week, how much time do you spend becoming more knowledgeable with technologies at your department?* This item was rated on a five-point Likert scale from 1 to 5, with 1 representing *less than 2 hours*, and 5 representing *8 or more hours*. The scale also assessed officers' self-reported proficiency or skill with technology. These items asked officers how familiar they were with technologies based on a five-point Likert scale from 1 to 5, with 1 representing *unfamiliar* and 5 representing *expert*.

To enhance the proficiency aspect of this scale, the researcher incorporated a list of various technologies that are used in law enforcement. These technologies included in-car cameras, cell phones, global positioning systems, surveillance equipment, and closed circuit television. Officers were asked to rate their proficiency with each technology item on a five-point Likert scale from 1 to 5, with 1 representing *none*, and 5 representing *extensive*.

To assess officers' opinions about the usefulness and ease of use of body-worn cameras, the researcher modified the Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) scales developed by Davis (1993). Numerous studies have demonstrated that these scales have strong reliability and validity. Both scales assess users' attitudes toward technology that enhances job performance and is free of physical and mental

effort to function (Davis). Specifically, the researcher changed the words *electronic mail* to *body-worn cameras.* The modified PU scale included 10 items, such as *Using body-worn cameras will improve the quality of the work I do* and *Using body-worn cameras gives me greater control over my work.* The modified PEOU scale also had 10 items, such as *I think the body-worn camera will be cumbersome to use* and *Using the body-worn camera will require a lot of mental effort.* Both scales measured respondents' attitudes using a seven-point Likert scale ranging from 1 to 7, with 1 representing *strongly disagree* and 7 representing *strongly agree.*

To assess officers' resistance to body-worn cameras, the researcher modified the Change Attitude Scale (CA), with permission (Oreg, 2006). See Appendix I for Oreg's permission to modify the scale. The scale included three subscales examining affective, behavioral, and cognitive components of resistance to change. In order to fit the scale to the current study, the researcher modified items and replaced the terms *change* with *body-worn cameras.* Each subscale was anchored on a seven-point Likert scale from 1 to 7, with 1 representing *strongly disagree* and 7 representing *strongly agree.* The first subscale measured affective resistance to body-worn cameras, focusing on officers' positive and negative feelings toward the specific change. It contained five items, including *I am afraid of the body-worn cameras* and *I am stressed by the body-worn cameras.* The second subscale assessed behavioral resistance to body-worn cameras and measured intentions to act against the change. It contained five items, with statements such as *I will present my objections to body-worn cameras* and *I have complained about body-worn cameras to my colleagues.* The third subscale measured cognitive resistance to body-worn cameras and officers' evaluation of the worth of the change. It contained

five items, such as *I believe body-worn cameras will harm the way things are done in the organization* and *I believe that body-worn cameras will make my job harder.*

The researcher employed the resistance to change (RTC) scale (Oreg, 2003) to assess officers' overall dispositional resistance to change. In multiple studies conducted by Oreg, the RTC scale had strong validity and reliability. Oreg discovered that persons with a strong opposition to change were more likely to resist change and report decreased effectiveness at work. The RTC scale had four subscales. The first subscale, routine seeking, assessed participants' overall reluctance to give up old routines. The second subscale, emotional reaction, measured stress and comfort with change. The third subscale, short-term focus, measured the extent to which participants focused on short-term hassles as opposed to long-term benefits. The fourth subscale, cognitive rigidity, assessed participants' enthusiasm to consider change (Oreg). A seven-point Likert scale measured these items between 1 *strongly disagree* and 7 *strongly agree*. Finally, participants completed a brief demographic section at the end of the survey that asked participants their age, gender, tenure in law enforcement, ethnicity, and education level.

Procedures

The researcher emailed the link for the SurveyMonkey® survey system wide with permission from the administrator of the email system. The email invited officers to participant in the study and explained the purpose of the research. An electronic consent form was provided at the beginning of the SurveyMonkey® questionnaire. The consent form indicated the participants' responses would be kept confidential and anonymous. If participants consented to participate, clicking *next* indicated their consent.

Research Question 1. To what extent are police officers dispositionally resistant to change?

Data used.

To measure dispositional resistance to change, the researcher used the RTC scale.

Analysis

First, in order to justify combining the scale into a composite variable, the researcher assessed scale reliability using Cronbach's α. Because the scale had reliability, the researcher combined the RTC items into a single RTC measure by averaging them together. Then, the researcher calculated the means and standard deviations for the RTC composites. In addition, to demonstrate that officers had lower or higher dispositional resistance to change, the researcher ran a one-sample *t*-test against the scale midpoint in order to determine if officers are statistically higher or lower than neutral.

Research Question 2. To what extent are police officers resistant to body-worn cameras?

Data used.

To measure resistance to body-worn cameras, the researcher used the modified Change Attitude (CA) scale.

Analysis

The researcher combined the modified Change Attitude (CA) scale into single composite by averaging the items together. After calculating Cronbach's α, the researcher calculated the means and standard deviations for the CA composites. To determine if officers were higher or lower in resistance to body-worn cameras, the researcher ran a one-sample *t*-test against the scale midpoint to access if officers are statistically higher or lower than neutral.

Research Question 3. What is the relationship between officers' experiences with

technology and resistance to body-worn cameras?

Data used

The predictor variable was self-reported experiences with technology. To measure

this, the researcher used the combined scores from the experience self-reported items.

The outcome variable was resistance to body-worn cameras. To measure resistance to

body-worn cameras, the researcher used the modified Change Attitude (CA) scale.

Analysis

The researcher first assessed the reliability of the self-reported items using

Cronbach's α. Because they were reliable, the researcher averaged them together to

create an experience composite. The researcher then conducted a regression analysis

predicting resistance to body-worn cameras from experience with technology.

Research Question 4. What is the relationship between officers' perceived usefulness and

resistance to body-worn cameras?

Data used

Davis' (1993) Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

measured officers' beliefs about the usefulness of body-worn cameras and ease of use.

The overall composite score of the PU scale served as a predictor variable. The outcome

variable was body-worn camera resistance as measured by the modified Change Attitude

(CA) scale. Further, the researcher controlled for the Ease of Use (PEOU) scale as a

possible covariate in the analysis.

Analysis

The researcher conducted a regression analysis predicting resistance to body-worn cameras from perceived usefulness of body-worn cameras controlling for perceived ease of use.

Research Question 5. Which variable primarily predicts resistance to the use of body-worn cameras: Officers' experiences with technology or perceived usefulness of body-worn cameras?

Data used

The first predictor, experience with technology, was assessed with the self-reported experience composite used in Research Question 3. The second predictor, perceived usefulness, was measured using the modified PU scale used in Research Question 4. The outcome, resistance to the use of body-worn cameras, was measured using the modified Change Attitude (CA) scale.

Analysis

The researcher conducted a multiple regression predicting resistance to the use of body-worn cameras from both experience with technology and perceived usefulness of body-worn cameras. This regression allowed the researcher to compare directly the relative influences of each predictor in accounting for variation in resistance to body-worn cameras.

Summary

Research has shown that body-worn cameras are a positive technological advancement that has potential in helping to restore citizen trust in police. The benefits are encouraging considering the increased scrutiny the police receive. Researchers have

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commented at length that police officers might resist body-worn cameras (Young & Ready, 2015). Officers have various experiences with other technologies that could help predict their future resistance toward body-worn cameras. Likewise, officers' perceived usefulness of body-worn cameras could also provide predictability to body-worn camera resistance. Research is lacking in the area of police officer resistance especially involving body-worn cameras. Police agencies could benefit from the findings in the current study and learn from the additional knowledge gained how to recognize future resistance before it becomes overwhelming.

In chapter II, a review of the essential literature will provide a foundational context in reference to the current study's purpose. To provide a better context of police resistance, chapter II examines literature pertinent to the history of police and their use of technology. In addition, chapter II will examine literature pertaining to organizational change, body-worn cameras, and resistance to change.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Chapter I highlighted the background of the current study and briefly examined body-worn camera research and resistance to change. Other aspects need to be examined in order to consider the possible resistance to wearing body-worn cameras. The literature about change is abundant and may never reach an exhaustion point. However, the literature contains various themes that could account for resistance to change. Chapter II will explore the history of police, the progression of technologies in policing, change, resistance to change, and body-worn cameras. Chapter II will also examine the technology acceptance model (TAM) and other professional contexts where resistance to change occurred. Through this review, the researcher hopes that an understanding of change and resistance to change will emerge for the context of the current study.

History of Police

The following section gives a brief overview about the historical context of the current study. The modern examination of resistance to change and body-worn cameras demands a practical look at the history of policing. In the following paragraphs, the researcher illuminates the beginnings of policing, roles of police, and the progression of technology in policing.

Policing Society

The beginnings of policing date back to the 5th Century B.C. According to

Dempsey and Forst (2013), citizens were responsible for law and order, and protecting

themselves and property. Even during the time of Christ, the emperor appointed the

police, or the civil authority. Emperor Augustus appointed persons to a *Praetorian Guard*

who were responsible for protecting the palace and emperor. Likewise, Augustus

appointed subjects known as Urban Cohorts to protect the city. Through the 12th and 13th

Centuries, and especially in European countries, the kings appointed the civil authorities.

Police departments were rare and did not appear until the 14th Century in France and the

19th Century in England.

Terry (1985) remarked that societies build from the long-standing traditions and

the influential developments of other countries. England's influence on America is most

notable in the discussion of police agencies. Dempsey and Forst (2013) acknowledged

that England's influence was especially important with modeling police agencies. The

police model originated from the citizens who bonded together to help protect each other

from crime and called on each other in times of assistance. Citizens were expected to

assist each other when they were called on for assistance.

In England, organized policing emerged from the Metropolitan Police Act of

1829. The city of London honored the act and established a beginning police force of

1,000 officers. According to Terry (1985), English *Bobbies* were the hands of the law and

held a deep identification for the nation. These first police officers were extremely

impersonal because of their strong feelings of nationalism toward England. Even from the onset, English officers approached the idea of accountability differently than America officers.

Unlike England, American police developed a more personable style. Democratic and representative resources made policing more individualistic and helped to shape some of America's first police departments. In New York City, officers exercised their roles with more discretion than did their counterparts in England. New York City police officers did not hold any bureaucratic ties and performed their duties with the will of the people in mind, according to Terry (1985).

Even though American police officers developed a personalized approach when dealing with citizens, conflicts arose through history that personified a less-than-respectable image of police. Dempsey and Forst (2013) stated that the main duties of police were to curb crime and disorder. However, as the populations of towns and cities grew, crime increased as poverty and discrimination created new social problems. New police departments emerged in larger urban areas such as Boston, New York, Philadelphia, Chicago, Cincinnati, and Baltimore. The advent of new police departments brought forth political pressures noted for corruption, brutality, and incompetency. To say the least, political domination progressed through the 18th and 19th centuries, and corruption, brutality, and incompetency still linger on today.

Police Officer Roles

Dempsey and Forst (2013) remarked that politicians who ran the communities in the 19th century governed police officers. Duties of the police included protecting private property, service to the political party in power, and controlling the large influx of

immigrants. Some of these roles seemed appropriate for the police. However, with the

increased pressure to manage their beats, some police officers immersed themselves in

crimes that they were supposed to be working to prevent. Dempsey and Forst further

illuminated their point:

> Politics dominated police departments, and politicians determined who would be
>
> appointed a police officer and who would be promoted to higher ranks. Job
>
> security for police officers was nonexistent because when a new political party
>
> gained control of the city government, it would generally fire all police officers
>
> and hire new ones. (p. 14)

Police officers' roles were not limited to crime prevention in the 18th and 19th

centuries. Police were expected to clean streets, operate ambulances, inspect boilers, care

for the homeless, and conduct various other social services. Police officers did not carry

firearms during this time in history. Even though officers did not carry firearms,

Dempsey and Forst (2013) discussed a situation where an off-duty officer, carrying a

personal firearm, shot and killed a fleeing felon. Even though prosecutors presented this

case to a grand jury for indictment, the officer was not charged. This critical incident led

officers to arm themselves prior to departmental approval. Because of this incident,

police departments started arming their officers in the early 1900s. However, citizens

continued to disrespect the police, and the tension between police and citizens continued

to grow.

In the late 19th and early 20th centuries, police patrolled on foot and had no access

to radios, back-up officers, or supervision. Dempsey and Forst (2013) noted that police

officers relied on physical force to avoid becoming victims of crime. The public viewed

officers as political subordinates and afforded them little respect. Reiss (1971) remarked

that the police intervention in civilian matters created problems such as maintaining

political neutrality, exercising proper discretion, and applying acceptable force. Citizens

often questioned the legality of police officers' actions. Reiss further remarked:

> The capacity of the police to maintain legality in their relations with citizens
>
> depends to an important degree upon their ability to establish and maintain the
>
> legitimacy of their legal authority. This is particularly difficult in a country like
>
> the United States where strong institutionalized norms support both aggression
>
> and violence on the part of citizens as well as suspicion or hostility toward police
>
> intervention. (p. 2)

Dempsey and Forst further commented that when tensions between police and citizens

arose, police often relied on physical force to subdue persons for arrest. Police were

subjected to substantial persecution at the hands of criminals and gangs. Due to this

reciprocated disrespect, brutality emerged because police sought to gain compliance

when citizens refused to follow police commands.

Technology in Policing

As the 18th century passed, the 19th century witnessed the advent of new

technologies to assist police with their jobs. In the 1860s, cities like Chicago and

Cincinnati used the telegraph to help officers communicate and connect with

headquarters. Officers could check with headquarters for assignments or call for

assistance. In the 1880s, call boxes replaced the telegraph and were first erected in the

city of Cincinnati. Call boxes allowed officers to utilize a phone inside of a box erected

near the street. Officers could call precincts for assistance and order a patrol wagon to

transport prisoners. Likewise, call boxes employed a red light at the top, indicating that an officer had a message waiting in their beat area, according to Dempsey and Forst (2013).

As technology advanced, policing remained politicized, and corruption and brutality remained problematic. The early 1900s witnessed new reforms designed to curtail the corruption. However, these reforms failed, according to Dempsey and Forst (2013). Manning (2014) stated that globalization and political trending shaped technological developments. Because corruption saturated law enforcement during the early part of the 1900s, any technological advancement would have met with swift demise, according to Manning.

By the 1900s, the automobile appeared in police departments across the country. The patrol car changed the way officers patrolled because it allowed a quicker response to crimes in progress, disturbances, and police officers could cover a great deal more territory in their patrol areas. With the combination of patrol car and two-way radio, technology helped police accomplish tasks more efficiently and effectively. Citizens could call the precinct for assistance, and an officer would respond in a patrol car. Nevertheless, with the advancement of these technologies came a down side. Although police management viewed these advancements as favorable, the increase in vehicle patrols caused a divide between police and citizens that led to further problems in the latter 1900s, according to Dempsey and Forst (2013).

The latter part of the 1900s witnessed challenging times in American history, and police were often in the middle of the conflict. Social unrest, the struggle for racial equality, and the Vietnam War permeated the landscape of America. According to

Dempsey and Forst (2013), police officers were targeted by radical groups and as a result, were unable to fulfill their roles as protectors. Other governing units established laws that police officers had to enforce. When government used police to carry out enforcement actions against these radical groups, police and community relations further deteriorated. These methods remained static even into the 21st century and have led to aggressive policing methods. Moreover, even in recent times, the wounds from the past still remain and reinforce the need to monitor police and citizen interactions, according to Jennings et al. (2014).

Koper et al. (2014) remarked that in most of the 20th century, policing consisted of motorized patrols that were intended to deliver more effective and efficient policing services. With the assistance of technologies, such as the two-way radio systems, computers, analytic systems, 911 systems, license plate readers, and video surveillance systems, police agencies possess and have access to a vast amount of resources. However, with these increased resources at their disposal, police departments still face challenges posed by technology. Koper et al. stated that technologies have the potential to weaken efficiency and effectiveness. Lower efficiency and effectiveness may link directly to added workloads and contribute to officer and community frustrations.

In order to determine the impacts of technologies toward police functions, Koper et al. (2014) examined behavioral, social, and organizational aspects of technology used in policing. Koper et al. discovered that police agencies adapt to new technology change over time. The desired effects from technology are multifaceted and do not always lead to improved performance, satisfaction, or reduced crime. Koper et al. discovered implementation and functionality problems. Police officers, according to Koper et al., fall

short of using technology to optimal levels. This shortfall might lower their perceived legitimacy and create resistance toward the technology.

Koper et al. (2014) were not the only scholars who observed unintended consequences of new technologies. Manning (2014) suggested that external factors, including globalization and political trending, affected technologies. Manning further suggested that police work is a craft that depends on the confidence between citizens, police officers, and police managers. The sole purpose of technologies, according to Manning, is to produce a more effective officer. Because police work is a people-oriented business, technology may interfere with the human condition. Chan (2001) and Manning agreed that technology could improve efficiency, accountability, and assist with policing the police. However, whether technology has the capability to improve officer efficiency and accountability in practice remains unknown.

<div align="center">Change</div>

In the previous sections, the researcher of the current study examined the history of police, officers' roles, and the progression of technology in police work. In this section, the researcher will examine change from the practices of organizational development. Furthermore, the researcher will review relevant literature associated with different aspects of change.

Early Organizational Development and Change

According to Beer and Nohria (2000), about 70% of change initiatives fail because managers fail to realize what the change means. Burke (2014) commented that change contains unanticipated consequences and can be messy. Simply stated, change is a process and should be managed accordingly.

Much of the literature about change traces back to organizational development. Burke (2014) noted that one of the first examples of organizational development and change dated back to Biblical times. As he led the Israelites out of Egypt, Moses dealt with a multitude of social issues. Moses was the Israelites' minister, counselor, and leader. Realizing he would be overwhelmed with a multitude of problems, Moses constructed a hierarchy for the people to follow. Within the social structures, Moses developed a system of change and employed delegation. Through this system, Moses picked leaders who would be his subordinates and the rulers of the Israelites. Burke further noted that Moses' delegation coincided with the first pyramid structure of an organization in history. Although many leaders would follow Moses' example, organizational development and change have progressed to become more complex over the centuries.

Since the 1900s, new and improved systems of organizational development have emerged. Burke (2014) noted the work of Fredrick Taylor. According to Burke, Taylor approached change from the scientific management standpoint and focused on the costs and developments of manufacturing. Taylor's scientific process included data gathering, worker selection and development, integrating science with training, and dividing the work of the business into manageable pieces. Taylor believed that the scientific approach was the best means to organizational change. Through the process of gathering data, analyzing it, and applying knowledge, organizations enhance efficiency and effectiveness.

Taylor believed in the scientific approach to organizational change because it helped to reduce costs and increase profits. However, not everyone agreed with the

method. Burke (2014) noted that some managers who applied Taylor's principles focused more on the outcomes without appropriately implementing the method. This inappropriate implementation enabled resistance among front-line workers who believed their purpose was to make a profit. Taylor's influence on organizational change was especially important to organizations using technology. The blend of technology and Taylor's initiatives created new ways to reengineer work processes within the business. Taylor's approach also influenced other organizational change processes, such as total quality management and Six Sigma.

The Hawthorne Studies were another historical example of organizational change. According to Burke (2014), the Hawthorne Studies related more to psychology and sociology but contributed to organizational development in a manner similar to Taylor's scientific management approach. The Hawthorne researchers sought to investigate the effects of working conditions toward workers' productivity at the Hawthorne Works factory near Chicago, Illinois.

Burke (2014) noted that the Hawthorne Study researchers conducted four experiments that examined workers' productivity and morale in relationship to the variables of illumination, relay assembly, interviewing, and bank wiring operations within the organization. The Hawthorne researchers reviewed the differences between the test group and control group while manipulating variables on a series of four experiments. At first, researchers believed there was a causal link between variables because morale and productivity were improved. However, once the participant workers were interviewed, researchers discovered other connections from the data. When the researchers manipulated the independent variables, the participant workers responded in a

positive manner. However, the control group also showed a positive response without manipulation of the independent variables.

According to Burke (2014), the Hawthorne Study researchers discovered there was no actual cause and effect relationship between working conditions and productivity. Carey (1967) attributed this link failure to poor study design, observation effect, and the neglect of other confounding variables. However, other scholars, such as Levitt and List (2011) and Shepard (1971) contended that the Hawthorne Studies demonstrated the relationship between working conditions of change, productivity, and the additional human element in social structures.

The Hawthorne Study researchers learned that a worker's attitude was a positive contribution to the overall increase in productivity. These factory workers informed the researchers that the more freedom and control they had over their work, the greater the productivity of the workers. Less supervision and the ability to set their personal work standards also increased worker productivity. Additionally, workers voiced their problems to supervisors in an open manner. The open communication between management and employees allowed for the discovery of underlying problems, according to Burke (2014).

Burke (2014) further recognized that because the first Hawthorne experiments were successful, the researchers conducted other experiments to investigate the social relationships within job contexts. Researchers discovered that group standards were more influential for the worker than supervisor expectations. They also learned that the formal authority vested in the supervisor was often second to the group's influence in matters of productivity. The Hawthorne Study researchers showed that social relationships are

important to worker productivity, the relationships that form between management and front-line workers, and the employees' perceived autonomy and freedom. The Hawthorne Studies are applicable to police work because when working conditions change, officers may feel that their autonomy and freedom could be jeopardized. Moreover, with the reduction of autonomy and freedom, police officers might change their performance in ways that could affect organizational goals.

Organizational Development and Change in the Middle 1900s

Although change originated from organizational development in the early 1900s, the middle 1900s marked a pivotal timeframe for the broader discussion about organizational development. According to Burke (2014), change interventions are influential to organizational functions and development. All members of the organization become involved in planning changes that directly affect them.

Parker (1980) recognized that a manager's method of convincing employees to adopt changes is important to planned change. The development of sensitivity training and the formation of training groups or T-groups are managerial methods that help to create a diagnostic framework to improve organizational issues with planned change. According to Burke (2014), sensitivity training and T-group processes allow for deep analysis of group behaviors and the identification of primary sources of learning. Participants learn about each other from the feedback within the group.

As organizational development progressed through the middle 1900s, industrial psychology enhanced the field. Industrial psychologists developed and used questionnaires to study about morale and efficiency within organizations. During the middle 1900s, industrial psychologists discovered a new method of organizational change

that differed from the traditional methods used in business and military organizations. Numerous studies were conducted, and the results enabled industrial psychology researchers to screen and create hundreds of practical tests for employee training and supervisor development, according to Burke (2014).

Change Process Improvement

By the late 1900s, organizational development extended into change process modeling. Process modeling examines organizations from an outlook of probable consequences. Because organizations use the process, there are elements of application, collection, and data analysis from various sources. Systems such as Program Evaluation and Review Technique (PERT) combine these elements into a quantified and simplified form for the further consideration of change. These systems may be helpful to some extent but fail to consider time constraints and costs associated with such an evaluation, according to Whisenand (2009).

Several improvement processes incorporate the systematic review of various data within change process modeling. According to Mento, Jones, and Dirndorfer (2002) organizations can modify organizational systems that enable change through various measures. These measures include creating the urgency for change, communication of the corporate vision, leading the change, measuring progress, and institutionalizing change through the action of refreezing. Change should last and accommodate other system modifications.

The Six-Sigma method is another program for change process improvement. According to Antony and Banuelas (2002), Motorola was the first company to use the Six-Sigma method to improve quality and performance standards. One of the primary

goals of Six-Sigma is to reduce the number of defects through means such as measuring,

analyzing, and improvement. The Six-Sigma methodology incorporates five phases

including, defining the problem, measuring progress, data analysis, implementation, and

control. Within these phases, Six-Sigma provides valuable statistical and business

management information that encourages change through knowledge. Through the

change process improvement, multiple strategies allow organizations to control the

progress of change. The Six-Sigma process represents a method used throughout the

1900s and continues to evolve through the 21st Century.

Implementation of Change

In police organizations, top-level management, middle supervisors, and the front-

line patrol officers integrate together into a supportive group to encourage and implement

change. Each group should work together through the implementation process and

incorporate teamwork in order to diagnose problems and seek support for the change

effort. There are two types of change in a police agency. First, planned change alters

organizational actions in an ordered and time-sensitive manner. Second, reactive change

is a response to internal and external pressures within the environment. The environment

can be inside or outside of the organization. Sometimes, reactive changes can onset

quickly in response to environmental drivers, according to Whisenand (2009).

Police departments change because of many drivers within the environment.

Drivers that condition change in police agencies can be simple or very complex. No

matter the simple or complex nature of the change, management undertakes the

responsibility to influence change in a practical and satisfactory manner, according to

Whisenand (2009).

Whisenand (2009) identified external and internal drivers for change in police agencies. External drivers of change are outside of the organization and modify the organization's ability to maximize services. External drivers such as public expectations, financial conditions, high profile legal incidents, and social conditions could affect change in a police department. Internal drivers are located within the department and originate from conflict, technology, productivity, and employee attitudes. Internal drivers that influence change in one part of the organization may cause noteworthy changes in another. Moreover, police officers' interests, values, motivation, and skills become more diverse and influence an organization's character. Imposed change might affect these officer influences, especially when police managers fail to recognize volatile conditions within the environment.

Specifically, Miller, Johnson, and Grau (1994) identified that the lack of information provided to the employee affected change within the environment. Workers have expectations of change influenced by the environment. Employees expect quality information about the implementation process so that they can prepare for upcoming changes. Employees outfitted with quality information will adjust their performances in alignment with organizational goals and are more capable of changing.

Hart (1996) and Whisenand (2009) considered police organizations as open systems that are prone to continuous change. An open-system organization shares information with the environment and experiences more frequent unplanned changes. Hart further commented:

> The issue is that police service as an open system will, by definition, change
> through time by virtue of inputs from the human/social environment. These inputs

may act directly upon, and influence existing members of the organisation [*sic*]

and therefore be reflected in the attitudes and cultures of the staff. Thus changes

in society brought about by changing values, education, social norms would

progressively bring about changes to policing systems. (p. 5)

Hart further recognized that the more that information is shared within the police

department, the more employees can cope with change. Notable unexpected changes,

such as new legislation and government directives encourage police agencies to change in

response to external factors. Whisenand (2009) contended that management might feel

pressure to implement externally forced changes as a means to prevent problems,

enabling employee resistance.

Accountability and Technology Change

In America, cultural diversity and the pursuit for social justice generate new

expectations in social change. Police managers find themselves in precarious situations

when high-profile incidents reach the public through mainstream and social media

outlets. Greater accountability and transparency are the new protocol for the police

manager. Skogan (2008) recognized the controversial nature with public involvement in

police department matters. Police want to maintain a tactical advantage even in the face

of new change. However, the public remains skeptical about change in police agencies

because many past reforms and changes have either failed or become obsolete.

Although most Americans are satisfied with their police services, they remain

skeptical about police accountability practices. Police remain accountable through

various methods such as community surveys, officer performance evaluations, and

oversight committees. These methods suggest that diverse situations and community contexts relate differently to overall police accountability, according to De Angelis (2015).

Each police agency approaches accountability differently and uses various tools to control officers' behaviors and the potential for complaints. Police managers already use civil and criminal law, institutional review boards, special investigation units, and judicial review to control the conduct of officers while on duty. A good practice for police managers is to unite many of these accountability tools together into an overall package of responsibility, according to Whisenand (2009).

In a rapidly changing environment with increased citizen expectations of accountability, police agencies need to adapt quickly to change. Police agencies need to be sensitive to the community's standard of accountability. Although there is no single best accountability measure, Whisenand (2009) concluded, "What becomes critical is that the police department and community view their roles in promoting accountability and preventing misconduct as equally important, and together, they work to identify the mechanisms of accountability that best suit their needs" (p. 711).

To address accountability in their organizations, police managers might use various technologies. Whisenand (2009) contended that technologies are used in the police organization's internal structures and external resources. Police organizations use new technological methods, devices, machines, and knowledge to enhance the quality of service provided to the public. With the rapid influx of technological advancements, many agencies find themselves employing specialists with expert knowledge about the technology to assist officers and supervisors with understanding technical functions.

Technologies such as GPS, video cameras, electronic performance monitoring practices, body-worn cameras, and various other surveillance devices are deployed throughout police organizations across the nation. These devices may help ensure accountability inside the station, inside squad cars, and during interactions with the public, according to Whisenand (2009).

Progressing Through Change

To work through any change, leaders should plan a climate that facilitates change. Kotter (1995) stated that change reforms fail due to an ineffective sense of urgency. The communication may be present in the agency; however, the lacking sense of urgency reflects poor motivation toward goals. Some organizations facing change employ consultants to communicate the news of impending change. However, many police agencies are unable to hire consultants due to the cost. More often than not, police leaders are responsible for the promotion and communication of change. Whisenand (2009) commented that planned change occurs when a sensitive need arises to modify the status quo. Police administrators should create a positive atmosphere to achieve change and maintain a winning attitude in the organization.

Eby, Adams, Russell, and Gaby (2000) stated that organizations planning for change should align their systems to handle change. These researchers examined whether organizational characteristics support a positive climate for change. Eby et al. found that an organization's ability to change centers around teamwork, reducing anxiety about change, and considering the trust between co-workers. Employees should have confidence in the organization's capacity to maintain the energy for change, and re-

examine systems and policies that support learning and improvement. Innovation within

an organization should promote a climate of participation, empowerment, and teamwork.

In agreement with Eby et al. (2000), Kontoghiorghes and Hanson (2004)

suggested that organizations should focus on improving the overall process of change.

Organizations that rapidly adapt to change take something new from the environment and

are able to produce quality outcomes. These authors also commented that employee

participation in the process, through improvement and empowerment, was central to

creating conditions that foster a positive change in the organization.

Whisenand (2009) agreed with Kontoghiorghes and Hanson (2004) that police

officers are more willing to accept change if they can participate in the process. Police

administrators should diminish the potential for threats from the officers' perspectives. If

organizations reduce threats, officers' attitudes should change toward an overall

acceptance and lower the levels of ambiguity about change. Whisenand further stated that

police officers must see the benefit of change or at the least observe that the change will

not adversely affect them. Maintaining a positive outlook toward approaching or planned

change is important to achieve implementation success in volatile environments.

Organization Culture and Change

Police administrators should consider the agency's culture when evaluating

environmental factors that influence organizational change. The culture permeates every

aspect of an organization and has a substantial bearing on the progression of change.

Kontoghiorghes and Hanson (2004) suggested that an organizational culture ready for

change promotes the ownership of the outcomes associated with the change. Burke

(2014) stated that changing an organization's culture begins with an understanding of the

culture. To understand the culture, Schein (2010) suggested that leaders consider the organization's espoused beliefs, values systems, and underlying assumptions.

Burke (2014) differentiated between revolutionary and evolutionary change that might affect organizational culture. According to Burke, revolutionary change involves transforming the organization's mission, leadership, strategy, and culture. Revolutionary change may be unexpected and cause internal disruption within organizational systems. Evolutionary change consists of incremental steps that correct problems within the system and accounts for most organizational changes. However, revolutionary change motivated by the external environment creates the driving need for change and accounts for most of the resistance in an organization.

Reactions to Change

Organizational readiness for change assist agencies through the progression, but employees may react differently to change. As Burke (2014) concluded, employees' reactions to change might be directed more at the imposition of change, rather than the actual change itself. Blackman, O'Flynn, and Ugyel (2013) argued that organizations need the capacity to change, but employees need to work together across different contexts.

Some employees are habitual and refuse to change their ways. Jick (1990) suggested that the interference with work routines might encourage a reaction to change. In essence, some people are for change while others oppose it. According to Ariel et al. (2014), Jennings et al. (2014), Jick, and Young and Ready (2015), most employees fall somewhere between for and against change except when the change is transformational in nature. Transformational change challenges the status quo and may alter employees'

roles, routines, and performance. According to Brehm (1966) and Jick, change may mean

there is a loss or threat to the employee. Through their reactions, whether negative or

positive, employees justify anxiety and attempt to maintain control over situations they

may perceive as lost.

No matter whether employees perceive change as negative or positive, there is

still a noted reaction. For example, in the 2008 baseball season, Major League Baseball

(MLB) instituted a new process of instant replay. At that time, instant replay had limited

use and was accessible only to the umpires who reviewed selected plays. For instance, in

a game between the Tampa Bay Rays and New York Yankees, Alex Rodriguez hit a ball

near the foul pole that was initially ruled a home run. Tampa Bay Rays' manager Joe

Maddon asked the umpires to review whether the home run was fair or foul. The umpires

contacted MLB headquarters for a review. Major League Baseball used various camera

angles and the best possible evidence available for a ruling. For the first time, umpires

utilized the instant review and upheld the home run for Alex Rodriquez, according to

Bloom (2008). Bloom further stated that the instant replay of Alex Rodriguez's home run

review took 2 minutes and 15 seconds to complete. Furthermore, players and coaches

expressed their contentment with the timing of the immediate review, and MLB

expressed the belief that the instant replay review process was successful.

However, Kussoy (2015) reported years later that MLB managers were

progressively becoming more agitated with the review system. Kussoy stated that more

problems were evolving than being solved. Not only were MLB managers upset with the

progress of the review system, they were also upset with the process of overturning calls.

Kussoy reported that MLB appeared to have many camera angles available that were

enhanced with slow motion. Even with all the technology to support the system, managers remained skeptical because there were no standards on the interpretation of calls. Too often, calls were deemed inconclusive and some managers believed the system was ineffective.

Major League Baseball administrators appeared to have change-related issues with the review system that needed to be addressed over the next few seasons. MLB should insure that implemented change affecting baseball teams and players become more useful, according to Bloom (2008) and Kussoy (2015). Likewise, police officers progress through changes that induce reactions as well. Take for instance the Supreme Court Case *Miranda v. Arizona* in 1966. Before any questioning, the Court established four procedural requirements of which police must advise a suspect while in custody. These procedural requirements include that an officer advise a suspect of their right to remain silent, anything that the suspect says can be used against them in court, that the suspect has the right to an attorney, and if the suspect cannot afford an attorney, one will be appointed. Prior to the Miranda ruling, police officers questioned suspects based on the suspect's voluntariness. Officers could not coerce a confession from a suspect prior to the Miranda ruling, according to Cassell (1998).

Rutledge (2014) studied the effects of the Miranda ruling toward the clearing rates of violent crimes. Before the implementation of the Miranda ruling, police were able to clear 63% of violent-crime cases. However, after Miranda police were only able to clear 45% of violent-crime cases. According to Rutledge, the Miranda decision reduced the ability to clear approximately 250,000 homicides and millions of other cases, such as sexual assaults, robberies, and aggravated batteries. Cassell (1998) supplemented

Rutledge's claim and stated that since Miranda's implementation, overall confession rates plunged 16% across the country.

Although Miranda applies across the United States, some states have implemented further changes for law enforcement officers. In 2004, the State of Illinois instituted a racial profiling law that applies to traffic stops. The Illinois Department of Transportation (IDOT) calls this law the Illinois Traffic Stop Study. A traffic stop is defined as a police officer activating the emergency lights on a police car to stop a violator for an infraction of a traffic law. After conducting a traffic stop, the officer must record the details about the traffic stop, driver, and occupants. These details include the driver's race and gender; the reason for the stop; the make and year of the vehicle; date and time of the stop; location of the stop; whether the officer conducted a search of the vehicle or persons in the vehicle; and the findings of these searches. The law was scheduled to expire in December of 2007; however, it was further expanded and set to expire in 2019, according to Illinois Traffic Stop Study (2015) and Weiss and Grumet-Morris (2005).

In 2004, Illinois police officers conducted 2,493,687 traffic stops. In contrast, 2013 marked only 2,095,876 traffic stops. By 2015, Illinois police officers conducted 2,022,332 traffic stops in the State of Illinois. The researcher of the current study was unable to locate any literature documenting how police officers feel about the traffic stop study. However, based on the numbers above, police in Illinois conducted fewer traffic stops over an 11-year period, according to Weiss and Grumet-Morris (2005).

In addition to the traffic stop study, Illinois lawmakers enacted another law designed to collect data about citizen stops. Beginning in 2016, officers in Illinois were

required to issue a receipt during citizen stops. The receipt contains the information about the reason for the stop, the officer's name, and badge number. Marketed as a positive means to promote officer accountability and transparency, debate continues as to whether these cards make officers hesitant to perform their duties because of the fear of profiling accusations ("Police in Illinois," 2016).

On top of the racial profiling laws applicable to traffic and citizens' stops, some police officers wear body-worn cameras on their uniforms. Body-worn cameras have increased in popularity, and one-third of the police departments around the United States use the devices, according to Goudie (2016). The researcher of the current study located little to no research about the possible resistance to the profiling laws or body-worn cameras.

The researcher of the current study examined change from multiple aspects. Organizational change is an ongoing and complex process. Burke (2014) summarized organizational development and change by saying, "Organizational development (OD) has given us a systematic approach to organizational change with its emphasis on the total system, clear steps and phases of organizational change, and an underlying set of humanistic values to guide the entire process" (p. 52). As change progresses in police agencies across America, there is an increased need to study the possible resistance to change and body-worn cameras. The researcher will now identify the theoretical aspect of the current study.

<center>Theoretical Aspect of the Current Study</center>

Prior to the examination of the various aspects of change, the researcher will establish the theoretical application of the current study. The literature that exists on the

theory of change is broad and abundant. Weiss (1998) conducted studies that examined

the theory of change and found that program evaluations were the groundwork of the

theory. According to Burke (2014), employees who resist change may face anxiety with

the possibility of losing something of value. Furthermore, employees forced to move in a

direction that is unfamiliar or uncomfortable to them may resist the imposition of change.

Brehm's (1966) theory of psychological reactance states that freedom of behavior and the

employee's choice of freedom are important, especially when a person wants to

maximize their needs. Employees are free to behave in a manner consistent with the

situation or environment. When employees face conflict between advantages of change

and the loss of behavioral freedoms, then reactance or resistance may occur.

Theory of Change

Weiss (1998) researched the theory of change, focusing primarily on program

evaluations that analyzed the how and why of program success. From the evaluation

process, the theory of change works backward and examines the past. There are rigid

organizational rules, different climates, and stagnant operating procedures that

encumbered the adoption of new methods of evaluation in organizations. Realistic

expectations are crucial for an organization to respond to changes. What Weiss referred

to was using evaluations to influence the organizational decision making processes.

Essentially, evaluations provide valuable information for an organization to expand and

glance forward to the future. The true goal of an evaluation process is to enhance the

future and take alternative explanations as to why programs work and how they affect the

intended users.

Essentially, the evaluation process aids organizational members to think deeply and ask relevant questions about why their programs succeed or fail. The process assembles members together to establish goals and seek long-term objectives that enhance the theory of change (Weiss, 1998). Weiss further added that "When evaluation adds to the accumulation of knowledge, it can contribute to the large-scale shifts in thinking-and sometimes, ultimately, to shifts in action" (p. 24).

From its roots in program evaluations, Taplin and Clark (2012) described the theory of change. They stated that the "theory of change is a rigorous yet participatory process whereby groups and stakeholders in a planning process articulate their long-term goals and identify the conditions they believe have to unfold for those goals to be met" (p. 1). Once success is achieved, data is collected on key indicators and monitored for progress throughout the change process. The theory can be used as an evaluation tool, issue planning tool, or a monitoring tool.

Taplin and Clark (2012) discussed mapping within the theory of change. The authors pointed out that the mapping process consists of seven stages. In accordance with Taplin and Clark's details of the theory, these stages include

- Identifying long-term goals;

- Working backwards from the long-terms goals and recognize conditions to achieve the goal;

- Express assumptions as to why the theory will not work, and why the benefits are important to other outcomes;

- Decide and choose which strategic plans bring about change;

- Measure progress about outcomes and assess performance of the program;

- Review the process and assess whether the theory is plausible, feasible, and testable; and

- Prepare a summary of the program's success (p. 45).

Other authors have examined how planning and evaluation relate to the theory of change. Breuer et al. (2016) investigated a program design's impact on mental health services in different countries. Breuer et al. used the theory of change as a framework to discover interventions that would benefit these countries. The framework helped to identify barriers, factors leading to implementation, and indicators that measure the success of the intervention. Using the mapping concept, Breuer et al. discovered that buy-in was essential to the outcome pathways within the theory. They further found that the theory provided a useful evaluation framework to measure performance indicators. Although used primarily for a mental health outlook, Breuer et al. study showed that the theory could adapt to other program evaluations.

Connell and Kubisch (1998) used the theory of change to explain how preliminary planning of an intervention might lead to the differences between short-term and long-term outcomes. Connell and Kubisch emphasized that the greatest factor in the theory of change is feasibility. All stakeholders arrange and measure the key actions and related conditions that affect the theory well in advance. Any possible opportunities that further progress or challenge the attainment of long-term goals of the organization need balanced against short-term goals.

Theory of Psychological Reactance

Another theoretical perspective that applies to change is reactance theory. Although change happens, employees need to feel that the autonomy to perform their

work is unaffected; otherwise, resistance may occur. Furthermore, if there is a reduction in freedom, an employee's motivation might slow, and reactance might transpire. In essence, the theory states that the greater the loss of freedom to the person, the greater the reactance that may occur, according to Brehm (1966).

Brehm (1966) remarked that the lack of explicit freedoms in the workplace could cause employees to react when they feel something is about to be taken away. The loss is especially detrimental when an individual feels that there is a potential threat to their independence, legitimacy, and work privileges. Even an illegitimate attempt to control another person may result in freedom loss and induce a reactance. Employers often fail to recognize an employee's psychological attachment to freedom. Brehm further asserted that reactance to lost freedoms might motivate a person toward regaining their freedom in manners inconsistent with organizational values. When told not to do something, a person will do it regardless.

Themes Associated with Resistance to Change

Change develops from various internal and external factors, environmental conditions, and technological applications within an organization. Organizations also change internally depending on the drivers that influence change. Even though change happens, resistance may occur before, during, and after the implementation of change. Burke, Lake, and Paine (2009) stated, ". . . anyone who has ever tried to bring about change in an individual, group, or an organization has always experienced resistance" (p. 331). Lewin (1951) described human behavior as the interactions between needs, personality, and the forces in the external environment. If the external forces of change discourage a person's viewpoint, then the change might be perceived as an imposition.

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A myriad of reasons circulate about why employees resist change. Correia and Jenks (2011) and Strebel (2009) stated that managers often underestimate their relationships with their employees and the effort it takes to obtain acceptance of change. Communication and change-implementation failures might occur and often miss the projected outcomes of the intended change. Strebel further stated that managers and employees have differing viewpoints of change, and individual commitments to change vary. Correia and Jenks further asserted that police managers might view change initiatives more favorably than patrol officers.

According to Patten, Caudill, Bor, Thomas, and Anderson (2015), the differences that exist between the managers' and patrol officers' viewpoints of change might generate anxiety, stress, and promote an overall lack of support for change. These differences represent a disruption in the organizational balance. Therefore, according to Correia and Jenks (2011) and Strebel (2009), officers may perceive changes as intrusive and fail to buy-in to the proposed change.

Identifying the themes of resistance may help to clarify why employees may resist change. The purpose of the current study was to examine whether experiences with technology or the perceived usefulness of body-worn cameras predict resistance to the cameras in order to determine where resistance to body-worn cameras possibly exists. The following sections will examine various themes associated with resistance to change. The following section will also explore some of the important literature on the resistance to change as it pertains to information technology, information systems, and other professional settings where technology change might be resisted.

Objects of Resistance

Technology, surveillance technology, EPM, change reforms, managers, and organizational policies might all be objects of resistance, according to Lapointe and Rivard (2005). Objects of change can be resisted. Lapointe and Rivard conceptualized resistance by examining the bottom-up processes within group settings. Using a longitudinal method, Lapointe and Rivard studied the implementation of a new records system in a hospital and examined health care workers' resistance levels toward the system.

Lapointe and Rivard (2005) found resistance in the form of apathy and disinterest. Some health care workers did not participate in the training that would acquaint them with the new system. Physicians perceived the new system as a threat to their work. The researchers noticed that the physicians' lack of interest to learn about the new system became an object of resistance.

Lapointe and Rivard (2005) noticed fluctuations between the physicians' episodes of resistance. Physicians had to perform different tasks associated with the new system, such as entering prescriptions and care orders. Because other health care workers were rapidly adapting to the new system, physicians felt their authority was threatened within the organization. Much like Markus' (1983) assertions about the balance of power within a new system, Lapointe and Rivard observed that nurses began to challenge the physicians' authority. At one point, the physicians' resistance manifested toward the worth of the system. When the physicians voiced their disapproval of the new system, the hospital administrators told them they had to use it. The physicians' focus of resistance shifted away from the worth of the system and toward the administrators as the objects of

resistance. Lapointe and Rivard further noted that perceived threats toward physicians'

professional authority related to the conditions of change and the physicians' resistive

behaviors. Physicians who demonstrated a lack of interest, complained about the new

system, and eventually directed resistance towards the administrators.

Lapointe and Rivard (2005) observed mixed results from individual and group

perspectives. The perceived level of threats, such as probable consequences and triggers

of resistance, influenced the severity of resistive behaviors in the individual. Lapointe and

Rivard stated that the individual level of resistance was less than that of the group;

however, individuals tend to influence overall group resistance behaviors. Because

individuals might influence group-resistive behaviors, organizations should delineate

between the system's benefits and the threats that may emerge from the implementation

of the new system. Laumer and Eckhardt (2012) also emphasized that it was important to

examine individual resistance behaviors rather than those of the group because in later

stages of change implementation, resistance might begin at the individual level.

Uncertainty about Change Initiatives

Patten et al. (2015) contended that police agencies often change in a top-down

strategic manner with little input from subordinates. Several scholars, including Burke

(2014), Correia and Jenks (2011), Joshi (1991), Miller et al. (1994), and Patten et al. have

defined the lack of employee participation, lack of communication, and the distribution of

inadequate information about change as important contributors to resistance. Likewise,

other scholars, such as Arkowitz (2002) and Piderit (2000), related these contributors

with uncertainty and ambivalence towards change.

Arkowitz (2002) identified resistance as nothing more than ambivalence or conflict. Arkowitz stated that individuals resist changes that contradict the status quo, especially when there is a lack of knowledge about change. Furthermore, individuals may have stress and anxiety because they fear new expectations and challenges associated with change. Resistance might be a product of the individual who is seeking a balance between a cost and a loss from change. As Brehm (1966) stated in the theory of reactance, the individual fears some loss associated with change because their freedom is limited or removed.

In an examination of parole officers, Steiner, Travis, and Makarios (2011) found that the organization influenced officers' viewpoints about how policies and practices were implemented. Steiner et al. further found that officers were concerned about the restrictions placed on them in the advent of new change. Officers felt an infringement upon their decision-making capabilities and a restriction in their professional judgment. Just as change can affect work routines in police departments, uncertainty and ambivalence might occur because the change initiative lacked the officers' input. In similarity with Steiner et al., Skogan (2008) stated that officers might feel their skill levels are not valued, and administrative officials may not appreciate the realistic experiences gained through the officers' work. Skogan commented that officers remember past change reforms and the reasons why these reforms either succeed or fail. Therefore, officers' input into the change initiative might be important to buy-in and acceptance of that initiative.

In their seminal study about change, Coch and French (1948) discovered that employees who participated in the change process were less inclined to resist.

Furthermore, employees not able to take part in the change process were prone to lower performance levels and morale. Miller et al. (1994) had similar conclusions about organizations that prepare employees for a quality information environment. Organizations that prepare their workforce are less apt to have employees face ambiguity about their roles. Furthermore, Miller et al. stated an organization that employs an open information environment encourages employee involvement in the change process and reduces the risk of resistance and role ambiguity.

Police officers want their knowledge used for the good of the organization. Limiting employee participation and communication about the change process might enable resistance to occur, according to Koper et al. (2014). Koper et al. suggested that technology could induce feelings of inequality because officers are tasked with new demands associated with surveillance technologies.

Perceived Threats of Technology

Aside from police work, Laumer, Maier, Eckhardt, and Weitzel (2016) studied physicians' resistance to a new information system and their work routines. The researchers argued that resistance would occur due to the relationship among work routines and the technology acceptance model (TAM) variables of perceived usefulness (PU) and perceived ease of use (PEOU). Laumer et al. found that both variables of TAM and the physicians' work routines resulted in resistance. The effect of work routines was more influential toward resistance than the physicians' perceptions of the technology. The researchers concluded that managers and employees should discuss the impact of technology on work routines and reach an informative consensus before implementation of technology. Laumer et al. further concluded that before resistance may occur,

managers should lay out the rules before technology implementation in an organization. Another reason for the resistance effect on work routines was the perceived threats an employee might encounter with change.

Researchers, such as Bhattacherjee and Hikmet (2007), have examined perceived threats as a variable toward resistance. These researchers remarked that resistance might be a precursor to overall technology acceptance and posited that the perceived threat from a technology affected resistance to change. They found support for their hypothesis that perceived threat affected resistance. Bhattacherjee and Hikmet observed that perceived threat explained 29% of the variance in resistance. The researchers concluded that management should uncover perceived threats that may induce resistance to the users of the technology.

Perceived threats that might lead to resistance are not only specific to professionals such as physicians. Steiner et al. (2011) studied parole officers' attitudes toward new reforms such as policies, procedures, and practices. In agreement with Skogan (2008), Steiner et al. suggested that front-line employees might examine how change reforms affect their work, or the employees might interpret the reforms as threatening.

Steiner et al. (2011) suggested there could be other influences that affect parole officers' perceived threat of a system. Overall, the new reform affected parole officers' perceptions about how they performed their work and that perceived threats were posed by the new system. Managers appeared to be a direct influence on officers' perceptions of the change. When officers perceived their relationships with mangers as positive, parole

officers interpreted a positive change in work procedures. When the relationship was negative, officers resisted and felt that their work procedures were threatened.

Electronic Performance Monitoring (EPM) and Surveillance

An organization that uses EPM and surveillance might have employees who view technology's purpose is to restrict their participation in policy development and performance. Stanton and Weiss (2000) explored the attitudes and beliefs of employees who were monitored with new surveillance. Organizational policies were important to the formation of the employees' attitudes and beliefs toward the technology. The researchers discovered that some employees viewed the technology as disturbing and indicated that employees should be aware of the actual intent of the surveillance technology. Similarly, Miller et al. (1994) found that quality information provided about change reduced ambiguous change experiences such as surveillance and monitoring from the employees' perspective. Because employees can infer different meanings about what management may intend with new surveillance, modified employee behaviors and attitudes may not align with organizational expectations.

In their seminal study between simple and complex task performance, Aiello and Kolb (1995) investigated the potential impact of EPM on individuals and work groups. Monitoring can influence performance in a negative and positive manner. Aiello and Kolb posited that monitored individuals would execute tasks at higher levels than unmonitored individuals, especially in a group.

Aiello and Kolb (1995) discovered that monitored individuals were more motivated to perform tasks than non-monitored individuals. Bartels and Nordstrom (2012) found similar results with participants who believed there were consequences to

the EPM. Participants who had higher degrees of uncertainty about EPM performed

better and were more motivated under surveillance. Bartels and Nordstrom also

discovered that the monitoring failed to enhance simple task achievement and showed no

increase in the stress levels of the participants. In contrast, Aiello and Kolb found that

monitored individuals felt more stress than non-monitored individuals.

Although Aiello and Kolb (1995) demonstrated that monitored individuals

performed better under surveillance than non-monitored, there was a notable distinction

in the findings. Participants who performed better under surveillance also completed

simpler tasks. More complex or demanding tasks might reveal different results. Aiello

and Kolb, as well as Bartels and Nordstrom (2012) concluded that highly skilled workers

might perform better under surveillance because of their past training. Depending on the

participants' abilities, a performance gap might result between members still learning the

tasks and performing at lower levels and those with experience performing at higher

levels. Although Aiello and Kolb and Bartels and Nordstrom's studies used university

students as participants, their results showed that communication was important when

implementing EPM systems. If provided an explanation or reason for the monitoring,

employees might perform better and show more motivation. However, employees who

are left out of the process might exhibit higher stress and lower work-satisfaction levels.

These researchers concluded that employee involvement is paramount because the

employee needs to assume ownership in the implementation of an EPM change.

Resistance Effect on Work Routines

According to Young and Ready (2015), although situations and environmental

issues may produce resistance, police officers might have individual needs that managers

should acknowledge within the police organization. Miller et al. (1994) stated that quality information that is passed through organizational chains might assist an individual with the need for achievement. Officers may have different expectations of proposed change and what that change means to their work routines, according to Correia and Jenks (2011). Nevertheless, according to Young and Ready, officers confronted with change that could modify their behavior and performance might face new challenges to their work procedures.

Markus (1983) examined the loss of power and designed a model that combined different explanations for user resistance. The author stated that if a system furthered an individual's loss of power, then resistance might ensue. Markus assumed that the interaction between an individual's personal characteristics and the design qualities of a change initiative might determine resistance. Markus' model is a lens that examined the conflict between system integration and the user's loss of power. Although a purposeful model, Markus' assumptions are confined to the organizational context and do not account for environmental influences.

In a multifaceted study, Chory, Vela, and Avtgis (2016) studied the relationship between employees' views of privacy and the perceptions of organizational justice, trust in management, and commitment. These researchers stated that employees view monitoring as a mechanism to garner compliance with performance standards. In addition, employees might think that their privacy is in jeopardy when organizations disrespect boundaries between monitoring and privacy. The employees' views were mixed in relationship to organizational outcomes. Employees voiced concerns with the

organization's ability to influence the level of surveillance control, and they rated organizational monitoring policies as less than fair.

When employees have the potential to control access to surveillance, trust in the organization increased. When employees had less control over the surveillance, their commitment and trust decreased, according to Chory et al. (2016). Chory et al. suggested that tension existed between the employees' overall view of surveillance methods and their perceived privacy controls. Employers should be transparent in their monitoring practices and demonstrate care toward the employee when implementing policies that involve surveillance.

In their investigation of a telecom service-company in Finland, researchers Seppänen, Pajarre, and Kuparinen (2015) found employee-privacy issues correlated with autonomy. Specifically, privacy issues and the perceived fairness of a technology correlated with decision-making autonomy. Of further interest, Seppänen et al. discovered that decision-making autonomy and tenure on the job were statistically significant to information and communication technologies used for monitoring purposes.

Similarly, Leclercq-Vandelannoitte (2015) recognized that ethical issues such as privacy concerned employees. Employers who implement technologies strive for better reactivity, efficiency, empowerment, and transparency. With the ultimate goal of better production, employers try to enhance the responsibility and productivity of the employee. Leclercq-Vandelannoitte found that technologies may have hidden control features and related to factors such as employee privacy, organizational justice, autonomy, human dignity, and health.

Leclercq-Vandelannoitte (2015) recognized that technologies have advantages, but some employees still view these technologies as tracking devices that create more stress and anxiety. Leclercq-Vandelannoitte noted that ethical issues with the use of technology might produce lower levels of employee satisfaction, motivation, and well-being. Even though some employees may not mind surveillance technologies, some employees disliked the control measures and heightened transparency.

West and Bowman (2014) asserted that when monitoring technologies go beyond what is prudent, the intrusiveness affects employees' levels of control and autonomy. West and Bowman further stated:

> Mere ownership of equipment should not be sufficient to defeat the expectation of autonomy as its loss creates feelings of vulnerability, violation, and shame, impinging on self-worth. Privacy is not just an individual right but also a societal good: The presumption of freedom and independence from being constantly watched and the ability to create one's professional role in an authentic manner. (p. 636)

West and Bowman argued that monitoring should not impede an employee's autonomy, and organizations should not adopt surveillance technology just because it is popular. Furthermore, monitoring is a tool used by management and should be evaluated for the mutual benefit of trust between employee and employer.

Dispositional Resistance to Change

Resistance to change may explain why large-scale changes in technology, production, and organizational practices fail to relate to the individuals within an organization. Specifically, dispositional resistance encompasses what a person thinks

about change in a multidimensional manner. The multidimensional manner incorporates cognitive, affective, and behavioral considerations toward an individual's belief in change, according to Oreg (2003) and Piderit (2000).

Piderit (2000) visualized resistance to change as a multidimensional concept that included cognitive, affective, and behavioral considerations about an individual's belief in change. Building from Piderit's multidimensional concept, Oreg (2006) recognized that personality and the situational context influenced individual resistance to change. Oreg suggested that employees with a dispositional preference to resist are more likely to associate their emotions with organizational changes. Contextual factors associate with the affective and cognitive considerations of resistance. The lack of information about change might contribute to resistance and relate to the cognitive and behavioral aspects of dispositional resistance. According to Brehm (1966) and Oreg, employees with something to lose want more information about the change in order to reduce resistance. Management should disseminate and communicate information in an effective manner.

Researchers such as Laumer et al. (2015) explored the effects of dispositional resistance to change. They posited that if an employee's resistance to change were high, there would be an increase in resistive behaviors. These authors also investigated whether dispositional resistance correlated with the information system's PEOU. Laumer et al. found that the personality attribute of dispositional resistance to change predicted how an individual reacts to information system implementations. This finding was particularly important because the information system in Laumer et al. study was a mandatory system. Oreg (2003) examined dispositional resistance to change in a voluntary use setting and contradicted Laumer et al.'s findings.

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Laumer et al. (2015) found that the dimensional aspects of dispositional resistance, such as routine seeking, emotional reaction, short-term focus, and cognitive rigidity, explain the variances in individual beliefs. Furthermore, dispositional resistance dimensions were more reliable predictors of employee technology perceptions than other variables such as age, gender, and work experience. Although relevant, Laumer et al.'s findings are limited because their model failed to investigate environmental factors, previous system characteristics, and the task demands associated with employees' roles.

Individuals with high dispositional resistance to change might perceive new technology as pessimistic, according to Laumer et al. (2015). Other researchers such as Nov and Schecter (2012) studied dispositional resistance in conjunction with variables of use, attitude, beliefs, and work approach. Nov and Schecter studied physicians and the continued use of a new record system after its implementation. The researchers combined dispositional resistance to change with other factors within the technology acceptance model (TAM). Perceived usefulness (PU) and perceived ease of use (PEOU) were assessed toward the intention and the actual use of a new system. The researchers also considered other factors of time loss and system compatibility in the model. The researchers examined these factors in relationship to the dependent variables of use intensity, frequency of system use, and the extent and scope of use. Nov and Schecter discovered that dispositional resistance to change related negatively to PU, and mediated PEOU and compatibility of work method.

Nov and Schecter (2012) concluded that employees should have familiar aspects of their jobs that associate with the use of a new system. Associating common aspects of the job may assist in reducing an employees' resistance to change. Nov and Schecter

stated that the work environment might increase employees' resistance, and that other factors of dispositional resistance may reveal barriers to implementation of new technology systems.

Although researchers such as Laumer et al. (2015), and Nov and Schecter (2012) demonstrated that dispositional resistance to change is an important concept to examine, other researchers contrasted how dispositional resistance has little to no effect on other variables. Michel, By, and Burnes (2013) studied the moderating effects of dispositional resistance. Specifically, they examined whether a moderating relationship existed between the variables of benefit, extent, and commitment to change. Michel et al. posited that resistance to change moderated the positive relationship between benefits of change and commitment to change. They further hypothesized that resistance to change would moderate the negative relationship between the extent of change and commitment to change.

Michel et al. (2013) conducted four studies and found support for a positive relationship between the benefits of change and employee commitment. The relationship between extent of change and commitment was mixed. Two studies confirmed a negative relationship between extent and commitment, while the other two studies confirmed a positive relationship between these variables. In one study, dispositional resistance moderated the positive correlation between benefits of change and commitment. In contrast, in the remaining studies, Michel et al. found no moderating effect of dispositional resistance between the variables.

Michel et al. (2013) determined that participants in the first two studies, students and staff at a university, were not accustomed to change. The participants may have

viewed change as a threat. Study participants in the last two studies were from private-sector organizations and might have been accustomed to changes that occur in their environment. Therefore, the final two studies showed that participants with more experience became more acquainted with the positive aspects of change.

Michel et al. (2013) concluded that other factors might influence the levels of dispositional resistance. Situational variables, like group norms and change management, could influence an individual's levels of dispositional resistance about group standards. Michel et al. further concluded that organizations facing greater amounts of change should consider the individual's dispositional resistance with factors, such as work experience, before, during, and after change is implemented.

Dispositional resistance appears to be an important element in the examination of employees' possible resistance to change. Dispositional resistance might relate to employees' personalities, and may demonstrate how an employee feels about change and how an employee develops their attitude about change. From the previously mentioned literature, themes such as perceived threats of technology and the uncertainty about change often interlock together. These themes influence resistance by limiting an employee's input in the change process and limiting decision-making abilities in work routines. Furthermore, employees appear to be concerned with the purpose and effectiveness of technology. Purpose and effectiveness might speak to an employee's perception of legitimacy in accepting change, according to Laumer et al. (2016), Skogan (2008), and Steiner et al. (2011).

Body-Worn Camera Literature

Although still in the beginning stages, body-worn camera use is becoming more popular and widespread. Ariel et al. (2014), as well as Jennings et al. (2014) asserted that the hope of these devices was to restore accountability and the citizens' trust in the police. According to Jennings et al. (2015), with less attention on other forms of monitoring such as GPS, CCTV, and in-car cameras, proponents of body-worn cameras endorse the body-worn camera as a means for police accountability. However, Manning (2014) asserted that the possibility of changing police behaviors with new technology will not occur unless there is a cultural shift. More often than not, technology advancements might benefit management goals more than improving police work. Manning further asserted that an organization's culture helps transform technological adoption from within, and no technology intervention can assure a difference in organizational outcomes. Because law enforcement agencies are considered conservative and often inflexible organizations, technological changes may not affect departmental cultures and attitudes. A police manager's goal with a body-worn camera is to transform the way police officers perform their duties. However, little to no evidence supports this assertion because the evidence of past policies and practices toward organizational change is practically non-existent.

Body-Worn Camera Experiments

Researchers such as Jennings et al. (2015) used a randomized control experiment to examine the use of body-worn cameras. Jennings et al. further examined officers' responses to resistive behaviors demonstrated by suspects and external complaints filed against officers. Without the officers' prior knowledge, Jennings et al. assigned the

officers to a control group consisting of officers without cameras and a treatment group consisting of officers wearing cameras. During pre-implementation of the cameras, no differences were noticed between the groups. However, during post-implementation, body-worn camera officers were involved in fewer resistant confrontations with suspects. Furthermore, these officers had lower external complaints compared with non-camera wearing officers. Of further interest, Jennings et al. noted that the non-camera wearing officers' knowledge about the department's use of the camera most likely contributed to lower complaints in both groups and changed officers' behaviors accordingly.

Even though accepting of body-worn cameras, Fouche (2014), Jennings et al. (2014), Katz et al. (2014), and Kopak (2014) have found that some police officers have an aversion to wearing the camera and being recorded. Katz et al. examined the use of body-worn cameras in relationship to the utility, impact on the public, officer accountability, and domestic violence processing. The study took place in the Maryvale precinct of the Phoenix Police Department. Officers in one zone deployed the cameras, while officers in the other zone did not.

Katz et al. (2014) discovered in some cases that officers were disappointed with the camera's influence on citizen behavior. Officers' perceptions about discretion were unaffected; however, officers were concerned about fewer citizen contacts, being overcautious, and the decreased use-of-force over the course of the study's duration. Officers' overall perceptions of the cameras were low in relationship to job satisfaction. Although arrest activity rose 8% over the study period, the majority of camera-wearing officers were not satisfied with wearing the device. Officers may not have perceived the camera as a safety improvement or as a device to enhance training. Katz et al. concluded

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that officers resisted wearing the cameras because of technological features such as camera downloads, time to complete reports, and their concerns that the camera could be a disciplinary tool used against them.

Katz et al.'s (2014) study was limited to a large police department, and the results cannot generalize to the overall population of police officers in the United States. The results of Katz et al.'s study were limited to video footage from traffic stops, violent offenses, and property offenses. Katz et al. excluded other offenses that could have influenced the results. In comparison, Jennings et al. (2014) revealed that officers accepted body-worn cameras but their study was limited to a large police agency and did not account for officers' perceptual differences about diverse situations. However, Katz et al., in addition with other researchers, such as Ariel et al. (2014) and Drover and Ariel (2015) have shown that the use of body-worn cameras lowers citizen complaints, use-of-force incidents, and might raise arrest activity and improve evidentiary value for court proceedings.

Hedberg, Katz, and Choate (2016) examined the factors of officer non-compliance with wearing cameras and the effectiveness of officers who desired to wear body-worn cameras. Using the Phoenix Police Department, Hedberg et al. focused on the compliance with policy and procedures concerning camera use. Hedberg et al. used overall incidents as the unit of analysis and related these incidents to whether activated cameras influenced the behavior of citizens and officers. In the current study, Hedberg et al. noted that officers assigned to wear the camera did not always activate it and lacked enthusiasm about deploying the cameras in their designated areas. These researchers assumed that choosing an area of camera deployment affected incident outcomes

associated with actual camera activation. Hedberg et al. observed fewer complaints in the treated areas where officers who desired to wear the camera worked. Furthermore, they found that the presence of a camera lowered the number of complaints against officers; however, the researchers noted fewer complaints in the non-treatment group as well.

In another study of a police agency in the Southwest United States, Ready and Young (2015) examined officers' perceptions of body-worn cameras and situational variables. Officers who wore the camera showed an increase in issuing ordinance citations and initiating citizen contacts. However, the researchers found that officers were less likely to perform a stop-and-frisk contact or make arrests. A stop-and-frisk contact is defined when an officer stops a citizen because the officer believes the citizen has committed or is about to commit a crime. During this type of stop, an officer conducts a search of the person for weapons. Ready and Young attributed the decrease in stop-and-frisk contacts and arrests to the officers' awareness about the camera. Furthermore, some officers questioned the legality of their actions within the circumstances of the stop.

In contrast to Ready and Young (2015), Katz et al. (2015) found an increase in arrests from the camera-wearing officers. However, non-camera wearing officers made more arrests than the camera-wearing officers during the study period. Katz et al. used a pre and post deployment design, while Ready and Young used random assignment of officers who wore cameras and officers who did not wear cameras during the study periods. Katz et al. also noted that there were fewer camera activations during the non-mandatory as opposed to the mandatory times of use. Ready and Young noted that officers who volunteered to wear the camera perceived the cameras as helpful in contrast to officers who had to wear the camera under mandatory conditions.

Police Officer Discretion While Using Body-Worn Cameras

     Manning (2014) commented that officers are given wide latitude in their job discretion. However, as Ready and Young (2015) and Katz et al. (2015) found, officers appear to have concerns with wearing a camera that might limit their discretion. Officers who wore cameras were more self-conscious of their actions and behavior. Although officers showed an increase in other performance aspects, both studies indicated that the periods of mandatory and non-mandatory use could have affected the results. In comparison, Hedberg et al. (2016) noted no differences in arrest rates between officers who wore cameras and those who did not. These findings may speak to the fact that officers might be more risk aversive while wearing the camera and not so much concerned about what they perform compared with how they perform their job.

     Katz et al. (2015) and Ready and Young (2015) have concluded that officers who use body-worn cameras in mandatory settings might perceive their discretion to arrest or not arrest to be inhibited. Moreover, researchers such as Ready and Young have concluded that officers who issue more citations while wearing the cameras were inclined to believe that their superiors might scrutinize their actions for failing to issue a citation or make an arrest. According to Jennings et al. (2014), police administrators should prepare for mixed reactions once body-worn cameras are implemented. Young and Ready (2014) stated that policies and procedures should reflect a level of discretionary control that indemnifies the department from civil liability but allows officers the latitude to choose a camera that improves their abilities in the profession.

Body-Worn Camera Use in Other Countries

Research about body-worn cameras has increased, and it is not limited to just the United States. In countries like England and Scotland, scholars have examined body-worn camera technology since 2007. Goodall (2007) stated that body-worn cameras used at the Plymouth, England Police Department allowed supervisors the ability to resolve complaints against officers in a more timely manner. Furthermore, officers remarked that they were able to review their videos and take notes on their performance. Officers were afforded the opportunity to observe their performance and improve work professionalism. Goodall also stated that prosecutors used the camera footage to obtain plea agreements, thereby limiting the amount of time officers spend in court.

Ellis, Jenkins, and Smith (2013) studied the use of body-worn cameras on the Isle of Wright, in England. Much like Goodall (2007), Ellis et al. focused on complaint data gathered from the department. Overall, Ellis et al. observed lower complaints with officers that used body-worn cameras as opposed to the rest of the area whose officers were without cameras. Although the camera's use lowered complaints against officers, some officers voiced their opinions that the camera's use should not be a supervisor's personal pursuit for minor policy violations. Of further interest, an officer remarked that a worn camera failed during a racially motivated citizen contact. The officer was accused of failing to activate the camera and suffered higher stress when an investigation was conducted.

In their study of the London Metropolitan Police Force in England, Grossmith et al. (2015) examined the effect of body-worn cameras on officer complaints. These researchers found a trend of lower complaints; however, they noted no statistical

significance between treatment and control officers. Of further interest, Grossmith et al. found no impact on stop-and-frisk incidents, levels of discretion applied by officers, compliance with procedures, or arrests. Even though these variables were unaffected, camera-wearing officers remarked they were more aware of their behavior and the justification for a citizen contact.

Body-Worn Cameras in the Midwest United States

Good (2016) remarked that some states have governing laws that inhibit police departments from using the body-worn camera because there are certain weaknesses associated with the device. For example, the State of Illinois was one of the first states to enact laws that promoted the technology. Under aspects of Illinois law, officers must refrain from recording police-citizen contacts under various circumstances, especially upon a citizen's request. Victims who are involved in an investigation such as sexual assault can request that an officer deactivate the camera. Turning the camera off leaves an officer vulnerable to accusations of misconduct without a voice. Additionally, under the Freedom of Information Act, departments are required to obscure faces in the video footage before release. Many departments are small and not able to acquire the resources to edit and manage video footage.

Consequently, Illinois law adds a fee to every traffic citation issued in the state. The added fee of $5 helps fund departments that pursue body-worn camera programs and training. However, the money collected for these programs could stall amidst budgetary issues in Illinois government. Although the body-worn camera appears to be a valuable asset, police departments are leery of using the device until laws change, according to Good (2016).

Several agencies in Illinois are discovering issues with the camera's use. According to Mallory (2016), the Minooka Police Department deployed body cameras in July of 2015 on a trial basis. Although the department used the cameras for less than a year, the administration decided to discontinue using the device because of unresolved technical problems. Cameras hold a large amount of footage, and the administration remarked that it could become problematic to upload footage from the cameras of multiple police officers. Due to administrative reasons, the department decided to discontinue use of the device until the laws change. Time and resources appear to be the problem with maintaining the body-worn camera program in Minooka.

Additionally, another police department in Illinois discovered that the body-worn cameras had recorded officers during bathroom breaks and other activities outside the scope of their jobs. According to Goudie (2016), the cameras recorded officers for approximately eight months at the Round Lake Park Police Department without their knowledge. Thousands of hours of the officers' personal lives were recorded because of an apparent device malfunction. Moreover, according to Goudie, Markoff, and Tressel (2016), Round Lake Park officers filed a federal lawsuit alleging a violation of their privacy because of this incident.

Public Perceptions about Body-Worn Cameras

Potential problems that might exist with body-worn cameras are not limited to police officers and administrators. The public has an investment in body-worn camera programs as well. Louis (2015) commented that with so little known about body-worn cameras, the goal of transparency and accountability might fade in the haze of policy debate. For example, Hedberg et al. (2016), Katz et al. (2015), and Young and Ready

(2014) found those officers who voluntarily wore body-worn cameras and those who did not showed few differences in activation behaviors. However, once department policy allowed the officers activation discretion, both wearing and non-wearing officers' volition to activate the camera decreased. Furthermore, Young and Ready recognized that individual officer preferences depended on whether camera activation was under a mandatory or discretionary policy.

Scheindlin and Manning (2015) asserted that body-worn cameras present an unbiased account of police and citizen interactions. The camera represents only a record of the event, has no venture in the outcome, and should vindicate an officer accused of wrongdoing. However, in contrast to Scheindlin and Manning's assertion, Louis (2015) contended that citizens' viewpoints and problematic policy considerations might jeopardize the original goal of the device. The belief that cameras somehow show every detail of a police-citizen encounter might be contradicting. Connecting with Louis' idea, Nguyen, Beford, Bretana, and Hayes (2011) studied the effects of surveillance and video cameras on participants from various occupations. The researchers determined that there were flaws in the belief that justice would prevail with the camera's use. They surmised that video recordings contain a perceived reality. However, without the proper context and the backing of participants' experiences, people create personally based conclusions to recorded content.

Much like Nguyen et al. (2011), Boivin, Gendron, Faubert, and Poulin (2016) recognized there might be a perspective bias with the use of body-worn cameras. In their study about perspective bias, the researchers used university students and police academy recruits as participants. Boivin et al. were specifically looking for variable differences

among the appropriateness of applied force, the number of details recalled from the incident, and the distance perceived between two dissimilar perspectives of the cameras. Two cameras were used in a situation of lethal force. One camera was a CCTV positioned differently than the second camera. The second camera was a body-worn camera worn by an officer involved in the encounter. Boivin et al. found that university students perceived the applied level of force as inappropriate. In contrast, police recruits agreed with the degree of force used, and the camera angles had no effect on either participant groups' perceptions of the event.

More police recruits were able to retain details about the incident over their university counterparts. There were also no statistical differences between the camera angles for either group, according to Boivin et al. (2016). However, Biovin et al. noted that recruit officers who viewed the body-worn camera video were less likely to believe that the officer acted with the appropriate amount of force during the incident. With this in mind, the researchers concluded that a perspective bias existed with the body-worn camera video because of the perception of distance. Recruits perceived the suspect in the video was further away and that the officer had other options to choose. These results led the researchers to conclude that anyone assigned to evaluate the appropriateness of force in a police incident might be biased. In the wake of a perspective bias, Boivin et al. recognized various limitations in their study. The researchers used one situation of police use-of-force and did not account for less-than-lethal options such as tasers or control tactics. They further acknowledged that police recruits maintained some degree of experience and knowledge with police situations. Police recruit experience could have

accounted for differences between the groups, and camera perspectives and distance perceptions are subjective to each individual.

Considering that cell phones, in-car cameras, and CCTV have recorded many controversial police-citizen contacts, body-worn cameras might not provide every possible angle that reveals relevant information about these contacts. Controversial events that are recorded with cell phones and CCTV are angled and positioned differently and allow for different perspectives of an event, according to Louis (2016) and Nguyen et al. (2011).

Of further consideration, when requested, agencies such as the New York Police Department (NYPD) may charge in upwards of $36,000 for copies of the video footage from body-worn cameras, according to Louis (2015). Moreover, Nguyen et al. (2011) stated there remains a challenge for police agencies to determine who has access to recorded material and what personal information is disseminated from the recordings. Individuals have personal and multifaceted reactions to recording technologies. Until policy and privacy issues are thoroughly managed, some departments like NYPD will delay using the devices.

Evidentiary Value of Body-Worn Cameras

In a study of three police agencies, Gaub, Choate, Todak, Katz, and White (2016) found that the footage collected from body-worn cameras have evidentiary value. Officers believed that body-worn cameras would improve the reporting accuracy of the incident and the quality of evidence gathered. Fouche (2014) noted similar results in a study of university police officers in Georgia. Officers believed that the body-worn camera enhanced the documentation of various cases. Gaub et al. noted that officers

thought body-worn cameras improved the documentation and prosecution of domestic

violence cases, most notably when victims were uncooperative.

In contrast, officers at one department showed a decrease between the pre and

post deployment perspectives in relation to evidence. Officers' beliefs that the camera

would help with the prosecutions of domestic violence cases dropped 11.6 %. Of further

interest, officers voiced their concerns about the camera's downloading procedures at the

end of their tour of duty, according to Katz et al. (2015).

Body-Worn Cameras and Use-of-Force

In their meta-analysis of 10 randomized control trials, Ariel et al. (2016)

examined the effects of body-worn cameras on police officer's use-of-force and assaults

on officers. Ariel et al. found that body-worn camera use induced more use-of-force

incidents and assaults on officers. This finding is in contrast to Ariel et al.'s (2014) and

Jennings et al.'s (2015) findings that cameras reduced use-of-force incidents and assaults.

Ariel et al. (2016) used a protocol that required officers to use cameras in a mandatory

setting. The results were mixed and failed to account for other definitions of use-of-force

for each department. Ariel et al. (2016) attributed the higher officer-assault rates to

already strained relations between police and citizens.

Ariel et al.'s (2016) meta-analysis demonstrated that there could be challenges as

body-worn cameras are implemented across the country. Likewise, officers' perceptions

of cameras vary depending on jurisdictions. Other variables should be considered when

investigating body-worn cameras. Young and Ready (2014) asserted that understanding

why individuals accept and deploy technology is an important topic to scholars. The two

variables of the technology acceptance model (TAM) might be beneficial to examine the

relationship of resistance to body-worn cameras. Young and Ready stated that "Overall, the TAM helps elucidate why resistance to innovations may occur, persist, or subside" (p. 10). Following Young and Ready, Michel et al.'s (2013), and Jennings et al.'s (2014) calls for further exploration of other factors about resistance to change, the researcher will now examine experience with technology as a possible resistance to change factor.

Prior Experience and the Technology Acceptance Model

From prior research about resistance and dispositional resistance, technology use appears to have a substantial impact on the way employees perceive and perform their work. Employees also have different expectations of change especially technological change. One aspect that has received less direct influence in police organizations is experience with past technologies. Several scholars, including Lankton, Wilson, and Mao (2010), Partala and Saari (2015), and Varma and Marler (2013) have described technology experience using different constructs such as time, duration, use, habit, satisfaction, and frequency of use. Much of the literature that exists combines prior experiences with the technology acceptance model (TAM), and much like organizational change literature may never reach an exhaustion point. In the following section, the researcher examined experience with technology from these various constructs to gain a perspective that employees may use when they apply their experience with technology.

An Attribution Model of Prior Technology Experience

Martinko, Zmud, and Henry (1996) suggested that individuals determine how prior technology experience affects their resistance to new or changed technology. There are internal influences that speak to different biases toward technology. An individual's experience most likely contributes to expected failures with newer technologies, and they

may equate resistance in an affective and behavioral way. Oreg's (2006) change attitude scale (CA) uses affective, and behavior components in the same manner that Martinko et al. suggested, but Oreg added a cognitive component.

Martinko et al. (1996) suggested an attributional model that consisted of general experiences with technology, environmental factors, and the lack of participation and communication in the change process. These attributions combine with past outcomes and help shape an individual's interaction with new technology. Other attributional considerations were the individual's self-efficacy and expectations with previous technology.

Martinko et al. (1996) included reactions to technology within the attribution model. These three reactive levels included acceptance, resistance, and reactance. Individuals who have higher levels of technology use believe there will be positive outcomes associated with technology. People who lack the ability to perform often perceive new technology as negative because of prior experiences. Martinko et al. asserted that experience with past technology use and the individual evaluation of previous technology influenced the acceptance or rejection of new technologies.

Variables of Use and Proficiency

Other literature about experience examines the use of computers, information technology, and information systems within multiple organizational settings. Researchers have studied technology use in combination with the technology acceptance model (TAM) in order to explain participant behavior and reactions to new technology. Researchers such as Varma and Marler (2013) examined prior computer experience and the acceptance of technologies among university students. The authors used the aspects

of experience, computer proficiency, and computer use. Relating these elements to habitual behavior, Varma and Marler argued that computer use measured much like frequency and should help to influence the habits of an individual. Varma and Marler used a single self-reported item to measure computer use. Likewise, Varma and Marler measured computer proficiency with a self-report item that assessed the levels of the participant's proficiency with the internet and software. Participants rated their proficiency on a scale of 1-5, with 1 representing the lowest levels of proficiency and 5 representing the higher levels of proficiency.

Varma and Marler (2013) discovered that computer use and proficiency had different effects on individuals' intentions to use new technologies. The proficiency aspect was mediated by how perceptually easy it was to use a new technology, while use had more influence on the behavioral habits of the participants. In comparison, Fagan, Neill, and Wooldridge (2004) found similar results; however, experience correlated with self-efficacy and individual usage behaviors. In addition, less experienced employees had higher anxiety and might develop fear when faced with an unfamiliar technology. Fagan et al. concluded that prior experience with computers affected an individual's use of computers and enhanced their self-efficacy. However, Varma and Marler found that the time spent using computers, four hours a day or longer, may induce habitually adverse effects that might persuade participants to reject newer technologies. These researchers surmised that employees who are proficient in computers might have lower inhibitions about using new technologies. Furthermore, employees may require less training to familiarize them with those new technologies. Nevertheless, organizations should focus

more resources on employees' experiences with new technologies and determine acceptance levels before and after implementation.

Time, Access, and Exposure to Technology

In their study of a mandated electronic records system, Hennington, Janz, Amis, and Nichols (2009) found that besides use, other aspects of prior experience were important to nurses. These aspects were time and access to the system. Nurses appeared frustrated with their performance because of the system's functionality. Moreover, nurses were under more time constraints and were inhibited from performing essential tasks. Hennington et al. noted several barriers that affected timing and access. These barriers appeared to be management's decisions to implement a system, functionality of the equipment, regulations, and data-storage issues. Hennington et al. concluded that the employees might act as though they approve of a system, but their willingness to use the system might be lower. Moreover, because employees were mandated to use the system, employees' performance expectations may be lower.

In Germany, Hurtienne, Horn, Langdon, and Clarkson (2013) studied prior experience and specifically used the variables of exposure, competence, and subjective feeling. Hurtienne et al. posited that competence would influence usability more than exposure, and that the interaction with an electronic device would affect the users' subjective feelings. The researchers further investigated competence and exposure as general preconditions for the interaction with technology.

Hurtienne et al. (2013) differentiated three levels of previous exposure and competence that included product focus, variation, and different variation ranges. Participants' age and experience ranges did not differ between the old versions of the

electronic machine and newer versions in the study. Exposure to technology explained 30% of the variance in older versions, and 12% of the variance in the latest version. Similarly, competence explained 48% of the variance with older versions, compared to 16% percent with newer versions. What the researchers discovered was that competence was a better predictor of usability in both older and newer versions of technology. Usability was higher because of the link between competence and participant behavior.

Experience and the Technology Acceptance Model (TAM)

Partala and Saari (2015) used several constructs embedded within experience and the TAM variables to explain users' acceptance or rejection of technology in Finland. The embedded experience constructs integrated emotion, values, needs, task loading, and well-being. The researchers were able to identify which of the constructs related more to the successful adoption of technology. Using the Positive Affect Negative Affect Schedule (PANAS), developed by Watson, Clark, and Tellegen (1988), Partala and Saari found that emotion influenced the adoption of technologies more than the other constructs. Perceived usefulness correlated with the users' emotional experiences and predicted successful or unsuccessful technology adoption. Partala and Saari found that users might form perceptions of technology more from negative rather than positive emotions.

Some researchers have noted that inexperienced users of technology differentiate between the TAM variables, usage, and intention. With TAM, inexperienced users may focus more on the perceived ease of use (PEOU) of technology than on perceived usefulness (PU). On the other hand, more experienced users might focus on the PU of technology. Past researchers have asserted that experienced users cognitively utilize their

prior experiences with technologies to form their perceptions, according to Fishbein and

Ajzen (1975) and Taylor and Todd (1994).

Davis (1989) used a regression analysis to investigate the TAM variables and

noted that PEOU might be an antecedent to PU. Davis clustered other constructs into PU

such as job effectiveness, productivity, time saving, and the importance of technology to

person's job.

The technology acceptance model has been a well-used construct for explaining

users' acceptance of new technology. Furthermore, TAM could be used in the

investigation of attitudes and the behaviors of employees, according to Davis (1989).

Davis further commented that other research studies and other applications could use

TAM as a model. Because TAM is a useful construct for the examination of the

acceptance of technology, it is feasible to assume TAM might be beneficial in explaining

resistance as well.

In a study of a record system in Germany, Meier, Ben, and Schuppan (2013)

examined TAM as a resistance predictor. Meier et al. hypothesized that limitations on

autonomy, communication, and information about technology change might affect

resistance to change. In a similar manner, these researchers posited that PU would

influence resistance to change. Using Oreg's (2006) change attitude scale as the

dependent variable in the study, Meier et al. found that the TAM variables influenced

employees' resistance to change. Meier et al. further found that the quality, rather than

the extent of information handed down in an organization, affected resistance.

Overall, Meier et al. (2013) found that the TAM variables influenced employees'

resistance to change more than the other variables in their study. Of importance, these

researchers found that when employees felt a lack of discretion over their work, resistance increased in the behavioral component. Although not significant in their study, Meier et al. assumed the variables of participation and autonomy could have more impact on resistance to change in the initial stages of an implemented change as opposed to the later stages of implementation.

<div align="center">Conclusion</div>

Change is an inevitable and evolving process in organizations. Burke (2014) stated that factors within the environment are ever altering the capacity for an organization to change. Likewise, resistance to change can modify an employee's viewpoints of change and disrupt the balance in organizational processes. To obtain organizational stability and continuity with change, the variables of TAM, dispositional resistance, and resistance to change appear to be important aspects of study.

Resistance to change is a complex, multifaceted, and evolving concept. Chapter II identified themes, such as positive and substantial communication of change, legitimacy and usefulness of change, and employee participation in the change process as factors that influence adoption of change. Moreover, a lack of these themes within an organization might produce employee resistance. Prior experience and TAM appear to be very influential aspects toward the study about an employee's adoption, acceptance, and resistance to change.

Even with increased body-worn camera research, a notable gap exists between police officers' possible resistance to body-worn cameras and the relationship to the TAM and experience with technology. The researcher of the current study found little to no research that examined police officers' resistance to change or technology. A gap

exists because police officers' perceptions about resistance have not been examined, especially prior to implementation. Distinguishing any possible relationships between PU and officers' experiences with technology are important because officers rely on their prior experience and the usefulness of technological devices to assist them in their work. Much of the experience and technology acceptance research has occurred after the implementation of a technology. Research is needed that examines prior experience and the TAM variables before technology implementation. The purpose of the current study was to examine whether experiences with technology or the perceived usefulness of body-worn cameras predict resistance to the cameras in order to determine where resistance to body-worn cameras possibly exists.

Summary

Resistance to change can become a problem. Some police officers tasked with change might view the change as a threat to their autonomy and legitimacy of work routines. Technology that influences police officers' work and behaviors could influence officers to resist technological devices. With the demand to improve transparency and accountability, police departments are encouraged to implement technological advancements such as body-worn cameras before investigating the impacts of the particular technology, according to Chan (2001), Koper et al. (2014), Manning (2014), and Young and Ready (2014). In chapter II, the researcher of the current study examined the various facets of resistance to change and identified some of the underlying assumptions that police might have about body-worn cameras. Chapter III will discuss the methodology of the current study.

CHAPTER III

METHODOLOGY

Introduction

In Chapter II, the researcher reviewed literature about change, resistance to change, and body-worn cameras. Additionally, the researcher examined the literature about experience with technology and the application of the technology acceptance model (TAM) within professional settings where change might be resisted. Young and Ready (2014) remarked that body-worn camera research is ongoing, and little to no research examines whether officers will use the devices. Moreover, to what extent police officers might resist change and body-worn cameras is relatively unexplored. Jennings et al. (2014) stated that there might be different factors that shape officers' viewpoints about the cameras and should be investigated further.

Resistance to change appears to be an important aspect to examine. Officers' resistance to technologies might affect the goals of a police department. According to Burke (2014), change is a dynamic and influential aspect of organizational life. Resistance may occur in organizations where employees face change that might alter the work environment. Confronted with change, employees might resist because they feel a loss in work routines and face a lack of options. However, organizations change to survive and strive for quality in an ever-evolving workplace.

In Chapter III, the researcher described the selected research design, analytical methods, and limitations. Chapter III is divided into six sections that outline the research design, participants, data collection, data analysis, limitations, and summary of the chapter.

Research Design

The purpose of the current study was to examine whether experiences with technology or the perceived usefulness of body-worn cameras predict resistance to the cameras in order to determine where resistance to body-worn cameras possibly exists. The researcher found little to no research that examined police officers' resistance to change or body-worn cameras. Additionally, the researcher found little to no research that examined resistance to any technology before the particular technology's implementation. The following research questions guided the current study:

1. To what extent are police officers dispositionally resistant to change?

2. To what extent are police officers resistant to body-worn cameras?

3. What is the relationship between officers' experiences with technology and resistance to body-worn cameras?

4. What is the relationship between officers' perceived usefulness of body-worn cameras and resistance to body-worn cameras?

 5. Which variable primarily predicts resistance to the use of body-worn cameras: Officers' experiences or perceived usefulness?

The current study used a quantitative methodology and employed descriptive and correlational research to answer the related research questions. Leedy and Ormrod (2013)

stated that quantitative research measures variables of interest in some numerical way without modifying the situation under study.

The researcher did not use random assignment or manipulate the independent variables because the current study was non-experimental and used a correlational design. Salkind (2012) stated that correlational research determines if there is a relationship between variables of interest without attributing the effect of one variable to another. Additionally, the researcher used a regression statistic to ascertain any predictive relationship between the variables of interest. Salkind (2014) stated that a regression statistic assesses the predictor variables against the criterion variable; however, no cause and effect relationship can be established.

The researcher analyzed and interpreted data collected from police officers' attitudes about the two predictor variables of perceived usefulness (PU) and experience with technology. Additionally, the researcher collected data about police officers' views about resistance to body-worn cameras, identified as the criterion variable. The researcher analyzed the predictor variables against the criterion variable to determine whether any prediction could be assessed.

<div align="center">Participants</div>

The researcher used police officers serving in a county in the midwest United States. At the time of data collection, there were approximately 250 full-time and part-time officers available for the current study. These officers served 11 different individual police agencies within this county. The researcher sent an email with the survey link to

all sworn officers using a countywide email system. Sworn officers include those who take an oath or affirmation to uphold the laws and constitution of the state and country. Sworn officers are police officers.

Furthermore, police officers serving this location are required to participate and pass rigorous standards for the state. After their hire date, officers are required to attend a police academy for several months. During academy training, officers are required to demonstrate their law-enforcement skills and pass other aspects of training.

After academy training, the officer returns to his or her department for placement into a field-training program. In the field-training program, new officers work with more experienced officers who evaluate their performance. During the field training process, officers handle various calls and circumstances. Additionally, officers use different technologies, such as computers, global positioning systems, surveillance equipment, and video cameras in the execution of their duties. Through the course of their duties, the participant officers used and were exposed to various technologies. However, at the time of data collection, most of the officers working in this county did not use body-worn cameras. One of the central aspects of the current study was to obtain the perspectives of officers about the body-worn cameras before the cameras' implementation. Because most officers did not use body-worn cameras in the county of study, this location was a good place to start.

The researcher had a working knowledge of the location of the current study. The researcher was a police officer who worked for one of the 11 individual departments within the county. The researcher had 22 years of experience in the field of law

enforcement. Additionally, the researcher had served as a patrol officer, supervisor, firearms instructor, and training officer.

The researcher used a purposive sample of participating police officers for the current study. A purposive sample was used because the purpose of the current study directly involved police officers. Leedy and Ormrod (2013) stated that purposive sampling takes participants who are "typical" (p. 215) and represent a certain viewpoint about a topic. The total number of police officers in this county was approximated at 250. However, the actual number of available police officers was unknown. Regretfully, the administrator of the email system had no way of knowing or finding out the total number of officers. Additionally, the total number of officers was subject to attrition within the individual departments, thereby limiting the total number of officers available to participate in the current study.

After obtaining permission from the countywide email system's administrator, and from Olivet Nazarene University's Institutional Review Board (IRB), the researcher sent the survey link to all sworn officers in this county through the countywide email system. To obtain as many participants as possible, the researcher sent reminder emails at the beginning of each of the four months, August through November, to remind potential participants that the study was open. Because there were low participant numbers, the researcher allowed a separate link to be distributed among officers of different agencies outside of the study's location. The different link distributed the survey to an expanded participant pool in an attempt to obtain more participants through a snowball sample. According to Gay, Mills, and Airasian (2012), researchers use a snowball sample when the study has a low participation rate. The snowball sample allows the original

participants to recruit other participants in fulfilling the researcher's needs. The expanded

area surrounded the county used in the current study and netted additional participants. In

total, 55 officers responded to the survey. However, because of various missing values in

some of the participants' responses, seven responses were removed from the data set. The

total number of participants used in the current study was 48 ($n = 48$).

To understand the police officers who participated in the current study better, the

researcher collected demographic data about the participants regarding their age, gender,

education, and ethnicity. The researcher further collected demographic data about the

officers' length of time and capacity in law enforcement. From the data, seven

participants indicated they were between the ages of 21 to 30, 20 between the ages of 31

to 40, 17 between the ages of 41-50, and four between the ages of 51-60. The data also

indicated that 44 participants were male, and that four were female.

Participants reported their levels of education. From the data collected, two

officers stated that they obtained a high school diploma or GED equivalent; four had

some college, eight had associate's degrees, and 28 had bachelor's degrees. Six

participants indicated that they had a master's degree or more. The data showed that one

African American, two Hispanic, one Asian/Pacific Islander, and 44 Caucasians

participated in the current study.

Participants indicated their length of time as a police officer and capacity in law

enforcement. Regarding the duration of time as an officer, seven participants indicated

less than four years, six stated five to nine years, 15 said 10 to 14 years, eight stated 15 to

19 years, and 12 indicated more than 20 years. Fifteen officers reported that they were

patrol officers, 10 were supervisors, 10 were detectives, six indicated that they were in specially assigned units, six were in administration, and one was a retired officer.

The researcher collected data about whether these participants currently used body-worn cameras. From data gathered, nine participants stated that they did use cameras. Thirty-nine officers indicated that they did not use cameras at the time of the current study. Furthermore, the researcher collected data about the size of the department in which the participants worked. Eleven participants stated that they had a department size of 1 to 20 officers, 17 reported that they worked in a department with 21 to 40 officers, 12 reported a department size of 41-60 officers, five were in a department with 61 to 80 officers, and three officers were from departments with more than 80 officers.

The researcher maintained strict confidentiality with the participants' data. No names or other identifiable pieces of information were collected about the participants. The researcher organized collected data from the participants and assigned each respondent a number.

<div align="center">Data Collection</div>

Data collection occurred between August and November of 2016. The researcher used SurveyMonkey® to create and administer the survey. The researcher distributed the survey link through the countywide email system and included a consent page that explained the purpose of the study. Once participants reviewed the consent page, a button at the bottom of the page stated *next*. By clicking the *next* button, participants agreed to participate.

At the beginning of each month, August through November, the researcher included a reminder email that the survey was open and an invitation to participate.

SurveyMonkey® stored the participants' raw data until the collection was over. After data collection ended in November, the researcher downloaded the participants' data into a Microsoft Excel® spreadsheet. From the Microsoft Excel® spreadsheet, the data were loaded into the IBM® Statistical Package for the Social Sciences (SPSS) for analysis.

The researcher conducted an examination of several available research questionnaires used in other studies. Multiple variables were of interest for the current study included the technology acceptance model (TAM), dispositional resistance to change, experience with technology, and resistance to body-worn cameras. Leedy and Ormrod (2013) stated that rating scales are useful in measuring individual's attitudes, behaviors, or other criteria evaluated on a continuum such as strongly disagree and strongly agree. The current study used several satisfactory questionnaires and included rating scales that utilized the interval level of measurement. Appendices A, C, and G contain the original questionnaires the researcher examined and incorporated into the current study.

To determine whether police officers were dispositionally resistant to change, the researcher used Oreg's (2003) resistance to change (RTC) scale because the scale has good reliability and validity. Oreg conducted a study that demonstrated there were statistically significant correlations between resistance to change and the four personality components that included routine seeking (.74), emotional reaction (.80), short-term thinking (.74), and cognitive rigidity (.63). Oreg also discovered in additional studies that the combined Cronbach's alpha for the scale was above .80. The RTC scale assessed to what degree police officers are resistant to change. The items used a seven-point Likert

scale to measure the intensity of the participants' responses. Appendix A contains the original items used in the RTC scale that were incorporated into the current study.

The researcher chose Davis' (1993) technology acceptance model (TAM) questionnaire because it has good reliability and validity. In two studies, Davis (1989) found that perceived usefulness (PU) obtained a Cronbach's alpha above .90, and perceived ease of use (PEOU) obtained a Cronbach's alpha above .90. Additionally, Davis (1989) used a factor analysis and a multitrait-multimethod analysis to support the construct validity for the scales. The TAM survey asked 10 questions about PU and 10 questions about PEOU. The questions used a seven-point Likert scale that accessed police officers' attitudes about body-worn cameras. See Appendix B for the TAM survey items about body-worn cameras. Appendix C contains the TAM items from Davis' (1993) original study about electronic mail.

The researcher examined literature about prior experience with technology. Much of the literature used single-item measures to access participants' attitudes about technology or implementation of technology. As a result, the researcher designed a questionnaire intended to obtain police officers' views about their overall accumulation of time with technology, the frequency of use of technology, opportunity to use technology, and competency with technology.

Before distribution of the survey, the researcher conducted a pilot study that assessed the content validity of these scale items. Once the researcher collected the returned pilot-study copies from the participants, the researcher clarified and reworded several items to enhance content validity. See Appendix D for the items in the pilot study.

The prior experience questions used a five-point Likert scale to access police officers' beliefs about their skills and usage with technology. Additionally, the researcher included nine technologies used in police work. These technologies included in-car cameras, closed circuit television (CCTV), cell phones, global positional systems (GPS), automated vehicle location (AVL), surveillance equipment, body-worn cameras, in-car computers, and software for computers. The researcher developed this list of technologies from the literature review and personal experience. Participants ranked how often they used or encountered a technology on a Likert scale. See Appendix E for the experience with technology items.

For the criterion variable of resistance to body-worn cameras, the researcher used Oreg's (2006) change attitude scale (CA). The CA has good reliability and validity. Oreg validated the CA scale and found the affective ($\alpha = .78$), cognitive ($\alpha = .86$), and behavioral ($\alpha = .77$) components of the scale were internally consistent. With permission from Oreg, the researcher modified the CA to reflect body-worn cameras instead of change. Participants rated their responses on a 7-point Likert scale to assess levels of agreement. See Appendix F for the items in the modified CA scale. Appendix G contains the unmodified items from Oreg's CA scale. Appendix I contains permission from the author to modify the scale.

To add to the data collection process, the researcher included an open-ended question about what the participants believed would cause resistance to body-worn cameras. See Appendix H for the responses to the open-ended question.

Analytical Methods

The purpose of the current study was to examine whether experiences with technology or the perceived usefulness of body-worn cameras predict resistance to the cameras in order to determine where resistance to body-worn cameras possibly exists. To analyze data gathered in the current study, the researcher used the SPSS package. In the current study, the researcher utilized Cronbach's alpha in order to assess reliability. According to Yockey (2011), reliability refers to the consistency of a set of scores on a measure of interest. The internal-consistency reliability determines whether items on a test or measure are consistent with each other and represent one dimension of interest. Salkind (2014) and Yockey stated that Cronbach's alpha is a measure of internal consistency that could be used when there is only one administration of a test or measure. When internal consistency is high, the items on the test are considered to be measuring what they contend to measure.

Research Question 1: To what extent are police officers dispositionally resistant to change?

Research question one was primarily descriptive and examined police officers' overall resistance to change. The resistance to change (RTC) scale (Oreg, 2003) was used to discover whether police officers' resistance to change was high or low. In the current study, the researcher calculated the reliability for the RTC scale. Cronbach's alpha for the RTC was .80, indicating a good degree of internal consistency among the items on the scale.

The researcher calculated measures of central tendency for research question one such as the mean and standard deviation. Once calculated, the mean was compared to the

scale midpoint to determine if officers' resistance to change was high or low.

Additionally, the statistic used was a one-sample *t*-test against the scale midpoint. The

one-sample *t*-test method was chosen because there was only one variable of interest, and

participants were tested once. Salkind (2014) stated that the one sample *t*-test measures

one sample's mean score against another score to determine if there are any differences

between the two scores. In the current study, the scale midpoint was used for the

comparable score.

Research Question 2: To what extent are police officers resistant to body-worn cameras?

  Research question two used a descriptive design and examined whether police

officers are high or low regarding resistance to body-worn cameras. Oreg's (2006) change

attitude scale (CA) was used for this question. Modifications were made to this scale with

permission from the author. The researcher modified the word *change* to *body-worn*

cameras. For the current study, Cronbach's alpha for the modified CA scale was .97,

indicating a high degree of internal consistency among the items on the scale.

  The researcher calculated the measures of central tendency for research question

two using the mean and standard deviation. Research question two also used the one-

sample *t*-test because there was only one variable of interest, and participants were tested

once. Research question two measured the police officers' mean score against the scale

midpoint to determine whether officers were high or low pertaining to resistance to body-

worn cameras.

Research Question 3: What is the relationship between officers' experiences with

technology and resistance to body-worn cameras?

Research question three used a correlational design to assess whether the predictor variable of officers' experiences with technology (X^1) predicted the criterion variable of resistance to body-worn cameras (Y). Salkind (2014) stated, "Prediction is the computation of future outcomes based on a knowledge of present ones" (p. 283). The simple linear regression statistic was chosen because participants were assessed on past events, and the knowledge gained from past events was applied to another variable. The researcher designed the self-reported experience with technology items based on previous research. The experience with technology items served as the measurement for the predictor variable of experience (X^1). In the current study, the researcher calculated the internal consistency of the experience with technology items. Cronbach's alpha for the items was .78, indicating a good degree of internal consistency.

Research Question 4: What is the relationship between officers' perceived usefulness of body-worn cameras and resistance to body-worn cameras?

Research question four used a correlational design to assess whether perceived usefulness of body-worn cameras (X^2) predicted resistance to body-worn cameras (Y). The simple linear regression statistic was chosen because the participants' perceptions of the usefulness of a device, such as a body-worn camera, and the application of the usefulness of the device, were of interest as a possible predictor of resistance to the camera. The researcher used the technology acceptance model (TAM) variables to assess the prediction of resistance to body-worn cameras. Davis (1989) designed the TAM and stated that perceived usefulness (PU) examines participants' attitudes about whether technology enhances job performance. The TAM has been used in numerous studies about technology benefits and user acceptance. In the current study, the researcher

calculated the internal consistency of the scores on the perceived usefulness of body-worn cameras scale. For the current study, Cronbach's alpha for the perceived usefulness scale was .89, indicating a high degree of internal consistency among the items on the scale.

The researcher sought participants who had limited familiarity with the body-worn cameras. At the time of the current study, several officers indicated that they used body-worn cameras in their work. The researcher was familiar with the study area and the officers who indicated that they used body-worn cameras. The researcher knew that the officers who indicated that they used body-worn cameras at the time of the current study were in the beginning stages of their utilization of body-worn cameras during their work activities. Additionally, the researcher also obtained responses from officers who do not use the cameras in their work. Participants with limited or no experiences with the body-worn cameras were chosen to get a sense of their attitudes about the resistance that may occur prior to implementation. Because the researcher was seeking to get a picture of the unfamiliar-officer aspect, perceived ease of use of body-worn cameras (PEOU) was used as a covariate. Because the researcher was interested in participants who had not used the camera, PEOU represented a variable that was considered in the predictive value of resistance to body-worn cameras. After the researcher reversed coded half of the items on the PEOU scale, Cronbach's alpha for the PEOU scale was .87, indicating a high degree of internal consistency among the items on the scale.

Research Question 5: Which variable primarily predicts resistance to the use of body-worn cameras: Officers' experiences or perceived usefulness?

Research question five was a correlational design and used a multiple regression statistic to assess which predictor, officers' experiences with technology (X^1) or perceived usefulness of the cameras (X^2), predicted resistance to body-worn cameras (Y). Salkind (2014) stated that a multiple regression uses two independent variables instead of just one to predict an outcome. Salkind further stated that any independent variable added to a regression should contribute to the understanding of the dependent variable. Additionally, Salkind indicated that the independent variables combined should predict the dependent variable better than one independent variable alone. For this research question, the researcher wanted to know whether experience with technology or perceived usefulness contributed to the understanding of resistance to cameras.

In a regression analysis, a statistically significant correlation is sought between the independent variable (X) and the dependent variable (Y). According to Yockey (2011), SPSS uses several steps to calculate a regression analysis. First, the Pearson correlation coefficient (r) assesses the relationship between the independent and dependent variables. Second, SPSS calculates the r^2 to determine the amount of variance in the dependent variable accounted for by the independent variable. Last, an ANOVA tests whether the independent variables are a statistically significant predictor of the dependent variable.

<div align="center">Limitations</div>

The current study faced several limitations that may have affected the overall results. The first limitation was the overall participation rate. Although there were nearly 250 police officers in the study location, the response was low. With a separate link, the researcher allowed participants to send the survey to other officers within proximity to

<div align="center">102</div>

the study area. From the snowball sample, six additional participants provided data in the study. Leedy and Ormrod (2013) stated that low return rates might affect the overall representativeness of the sample, possibly distorting the results. The current study utilized a homogeneous group of police officers and had a limited number of females and different ethnicities who participated. Some of the data collected from the current study's participants were missing and those participants' data were removed from further analysis. Participants might have exited the survey early because of the demands of their job and never returned.

The researcher maintained strict confidentiality with the participants' data and collected no personal information. However, many of the participants may know the researcher and believe that a particular response was sought in the current study. Additionally, given the climate between police and public perceptions of law enforcement at the time of the current study, participants may have been concerned with their responses to the survey items. Many participants used their employer's computer resources to complete the questionnaire. Although risk was low that employers would have reviewed the responses, participants might have felt that their supervisors would review responses and may have affected their honesty when responding to the items.

Time was also a limitation and might have affected the study's research design. Although several test instruments with good reliability and validity were used, there may be more instruments that should be considered. The current study used two variables for a prediction model toward resistance of body-worn cameras. With the lack of additional variables for consideration, the current study's design is limited to PU and experience with other technology to understand the resistance to cameras.

Another limitation to the current study was the location of data collection. The researcher utilized an area with a rural demographic. Because the researcher used a rural setting, participants who work in an urban setting, such as a large city, were not utilized. Participants working in an urban demographic could have differing perspectives about body-worn cameras and the potential for resistance to their use.

A final limitation of the current study was the variable of experience with technology. Although content validity was taken into consideration to provide a better domain of representation to this variable, other validity measures could be conducted. Content validity is subjective, and caution should be taken when applying the results of the current study to other settings.

Summary

Chapter III summarized the methodology used in the current study. The researcher implemented descriptive and correlational research methods to answer the research questions. Fifty-five participants provided data for the current study. However, seven participants' data were missing values and were removed from further consideration. The current study used 48 participants, representing a 19% return rate from the available 250 officers in the study area.

Research questions one and two used descriptive statistics and a one-sample *t*-test to answer the questions about officers' resistance to change and body-worn cameras. Research questions three and four used correlations and a simple linear regression to answer the questions about experience and perceived usefulness as predictors of resistance. Research question five used a multiple regression to predict which variable from questions three and four would be the primary predictor of resistance to body-worn

cameras. In Chapter IV, the researcher will present the results and conclusions to the

current study.

CHAPTER IV

FINDINGS AND CONCLUSIONS

Introduction

Past researchers, including Bhattacherjee and Hikmet (2007), Klaus and Blanton (2010), Lapointe and Rivard (2005), and Laumer et al. (2015) have examined resistance to technology change in different settings such as hospitals, manufacturing, and individually between physicians and nurses. However, the research is minimal when examining police officer's resistance to technology change. Bhattacherjee and Hikmet concluded that those managers who understand and effectively control resistance might insure successful change implementation. The current study's researcher noted a gap in the literature that lacked the examination of police officers' resistance to technological change. With the benefits of body-worn cameras becoming evident (Ariel et al., 2014; Jennings et al., 2014), little to no research examines police officers' possible resistance to the body-worn camera.

In Chapters I and II, the researcher provided the context, the study's purpose, the research questions, and the relevant literature that examined change and resistance to change. Additionally, the researcher addressed the relevant variables of interest in the current study. In Chapter III, the researcher discussed the methodology of the current study and explained the analytical process to answer the research questions.

In Chapter IV, the researcher will present the findings of the current study. The purpose of the current study was to examine whether experiences with technology or the perceived usefulness of body-worn cameras predict resistance to the cameras in order to determine where resistance to body-worn cameras possibly exists. The following research questions guided the current study:

1. To what extent are police officers dispositionally resistant to change?

2. To what extent are police officers resistant to body-worn cameras?

3. What is the relationship between officers' experiences with technology and resistance to body-worn cameras?

4. What is the relationship between officers' perceived usefulness of body-worn cameras and resistance to body-worn cameras?

5. Which variable primarily predicts resistance to the use of body-worn cameras: Officers' experiences or perceived usefulness?

The current study's researcher used a quantitative methodology to examine the collected data. The researcher employed a correlational design and used regression analysis to determine where resistance to body-worn cameras possibly exists.

Findings

To understand who participated in the current study, the following tables represent the demographic characteristics of the participants used in the current study. Tables 1, 2, and 3 depict the age, tenure in law enforcement, ethnicity, gender, education, capacity as an officer, body-worn camera use, and the number of sworn officers who participated in the current study.

Table 1

Demographic Characteristics of the Participant Officers: Age, Tenure in Law Enforcement, and Ethnicity

Demographic	Frequency	Percentage
Age		
21-30	7	14.6
31-40	20	41.7
41-50	17	35.4
51-60	4	8.3
Tenure in Law		
Enforcement		
4 Years or Less	7	14.6
5 Years to 9 Years	6	12.5
10 Years to 14 Years	15	31.3
15 Years to 19 Years	8	16.7
More than 20 Years	12	25.0
Ethnicity		
African American	1	2.1
Hispanic	2	4.2
Asian/Pacific Islander	1	2.1
Caucasian	44	91.7

Table 2

Demographic Characteristics of Participant Officers: Gender, Education, Capacity as an Officer, and Body-Worn Camera Use

Demographic	Frequency	Percentage
Gender		
Female	4	8.3
Male	44	91.7
Education		
High School/GED	2	4.2
Some College	4	8.3
Associate's Degree	8	16.7
Bachelor's Degree	28	58.3
Master's Degree or More	6	12.5
Capacity as an Officer		
Patrol Officer	15	31.3
Supervisor	10	20.8
Detective	10	20.8
Special Assigned Unit	6	12.5
Administrator	6	12.5
Retired	1	2.1
Body-Worn Camera Use		
Yes	9	18.8
No	39	81.3

Table 3

Demographic Characteristics of Participant Officers: Number of Sworn Officers in their Department

Demographic	Frequency	Percentage
Number of Sworn Officers		
1 to 20	11	22.9
21 to 40	17	35.4
41 to 60	12	25.0
61 to 80	5	10.4
More than 81	3	6.3

The preceding tables displayed the demographic characteristics about the participants who contributed to the current study. As shown in Tables 1, 2, and 3, the majority of participants did not use body-worn cameras, were male, between the ages of 31 to 40, and had 10 to 14 years of law enforcement experience. Furthermore, the majority of the study's participants were patrol officers who were Caucasian, had a bachelor's degree, and worked in police departments consisting of between 21 to 40 total officers. The following section will display the results of each research question. Research questions one and two used a one-sample *t*-test to analyze the data. Questions three, four, and five used a regression analysis to analyze the data.

Research Question 1

To what extent are police officers dispositionally resistant to change?

Research question one addressed the extent to which police officers were dispositionally resistant to change. To answer this question, the researcher calculated

Cronbach's alpha of the resistance to change (RTC) scale. Cronbach's alpha for the RTC was .80, indicating good internal consistency among the items on the scale. The researcher also calculated a scale midpoint for the variable of resistance to change using the RTC scale. A seven-point Likert scale measured the degree of the RTC items between 1 *strongly disagree* and 7 *strongly agree*. The RTC contained 18 total items, and an overall high and low composite score was calculated. To calculate the high and low composite scores, the researcher multiplied the total number of items on the RTC scale to the maximum and minimum Likert scale degrees. Because there were 18 items on the RTC scale, and a total Likert scale maximum degree of 7, the maximum scale composite was 126. Likewise, the minimum value obtained was the total number of items multiplied to the lowest Likert degree of 1. The minimum composite obtained was 18 for the RTC scale. To calculate the mid-point, the middle value of Likert scale was multiplied by the total number of items contained in the RTC scale. For the current study, the middle degree on the Likert scale was 4 and was multiplied by the total number of RTC scale items of 18. The researcher calculated the descriptive statistics and calculated a scale midpoint of 72 for the RTC scale. Furthermore, a score greater than 72 would indicate that officers' predispositions to resist change was higher, and a score lower than 72 would indicate that officers' predispositions to resist change was lower.

The researcher chose a one-sample *t*-test to examine whether there was a statistically significant difference between the mean of the officers' responses ($M =$ 61.51) and the scale midpoint (72). The results indicated a statistically significant difference between the mean of officers' responses ($M = 61.51$, $SD = 11.78$) and the scale

midpoint, $t(42) = -5.84$, $p = .000$. The results for question one indicated that officers'

dispositional resistance to change was low because the mean of the officer's responses

($M = 61.51$) was lower than the scale midpoint of 72 in a statistically significant way.

Research Question 2

To what extent are police officers resistant to body-worn cameras?

Research question two addressed the extent to which police officers were resistant

to body-worn cameras. To answer this question, the scale midpoint was calculated for the

variable of resistance to body-worn cameras using the modified change attitude (CA)

scale. The researcher calculated Cronbach's alpha of .97, indicating a high degree of

internal consistency among the items. A seven-point Likert scale measured the degree of

the modified CA items between 1 *strongly disagree* and 7 *strongly agree*. The modified

CA instrument contained 15 total items. The researcher first calculated an overall high

and low composite score. To calculate the high and low composites, the researcher

multiplied the total number of items on the modified CA scale to the maximum and

minimum Likert scale degrees. Because there were 15 total items on the modified CA

scale and a total Likert scale maximum degree of 7, the maximum scale composite was

105. Likewise, the minimum value obtained was the total number of items multiplied by

the lowest Likert degree of 1. The minimum composite obtained was 15. To calculate the

midpoint, the middle value of Likert scale was multiplied by the total number of items

contained in the RTC scale. For the current study, the middle degree on the Likert scale

was 4 and was multiplied by the total number of modified CA scale items of 15. The

researcher calculated the descriptive statistics and calculated a scale midpoint of 60 for

the modified CA scale. Therefore, a score greater than 60 would indicate that officers were more resistant to body-worn cameras, and a score lower than 60 would indicate that officers were less resistant to body-worn cameras.

The researcher chose a one-sample *t*-test to examine whether there was a statistically significant difference between the mean of the officer's responses ($M =$ 43.26) and the scale midpoint, 60. The results indicated a statistically significant difference between the mean of officers' responses ($M = 43.26$, $SD = 21.69$) and the scale midpoint, $t(45) = -5.23$, $p = .000$. The difference between the mean of officers' responses ($M = 43.26$) was lower than the scale midpoint of 60 and indicated that officers' resistance to body-worn cameras was low.

Research Question 3

What is the relationship between officers' experiences with technology and resistance to body-worn cameras?

Research question three addressed whether there was a relationship between officers' experiences with technology (X^1) and resistance to body-worn cameras (Y). Research question three used a correlational design and regression analysis to answer whether the predictor variable of officers' experiences with technology (X^1) predicted the criterion variable of resistance to body-worn cameras (Y). Prior to using the experience with technology items, the researcher conducted a pilot study about officers' prior experiences with technology in order to enhance the content validity of the items. After obtaining information from the pilot study participants, the researcher used the insight to clarify and refine the experience with technology items. Additionally, Cronbach's alpha for the items was .78, indicating a good degree of internal consistency.

Using the self-reported experience with technology items as the predictor variable (X^1), the researcher discovered a statistically significant, negative correlation between officers' experiences with technology and resistance to body-worn cameras (Y), $r(43) = -.32$, $p = .034$. According to Salkind (2014), the Pearson product-moment correlation coefficient of -.32 represented a weak relationship between the variables of experience with technology and resistance to body-worn cameras.

As displayed in Figure 1, the participants scored somewhere between the overall high and low composite numbers. To determine the highest composite value for the experience with technology variable, the researcher multiplied the total number of items by the highest Likert scale degree. The total number of items for this variable was 14, and the highest Likert scale degree was 5. The highest value obtained for the experience with technology scale was 70. Scores closer to 70 represented higher levels of experience with technology. To determine the lowest composite value for the experience with technology variable, the researcher multiplied the total number of items by the lowest Likert scale degree. The lowest Likert scale degree was 1, creating the lowest composite value of 14. The lowest value for the experience with technology items that represented lower experience with technology was 14. The resistance to body-worn camera variable was computed from the modified CA scale discussed in research question two. Scores closer to 105 represented higher resistance, and scores closer to 15 represented lower resistance. Figure 1 depicts the relationship between experience with technology and resistance to body-worn cameras.

Figure 1. Scatterplot depicting the relationship between experiences with technology and resistance to body-worn cameras.

From Figure 1, the researcher observed a negative relationship between experiences with technology (X^1) and resistance to body-worn cameras (Y). As officers' experiences with technology increased, resistance to body-worn cameras decreased. Additionally, the researcher conducted a linear regression using the resistance to body-worn cameras as the criterion variable (Y) and officers' experiences as a predictor variable (X^1). The results indicated that officers' experiences with technology (X^1) was a statistically significant predictor of officers' resistance to cameras, $\beta = -.32$, $t(43) = -2.19$, $p = .034$, and accounted for 10% ($R^2 = .10$) of the variance in the resistance to body-worn camera variable. According to Cohen (1988), an $R^2 = .10$ indicates a medium effect size

for the experience variable. Although a weak relationship was discovered between the variables of experiences with technology and resistance to body-worn cameras, 90% of the variance remained unexplained.

Research Question 4

What is the relationship between officers' perceived usefulness of body-worn cameras and resistance to body-worn cameras?

Research question four addressed whether a relationship existed between perceived usefulness (X^2) and resistance to body-worn cameras (Y) based on the participant's low levels of knowledge about body-worn cameras. The scale of choice for question four was Davis' (1993) technology acceptance model (TAM) that utilized the variable of perceived usefulness (PU). Davis stated that PU associated with a user's positive-performance perspective. Cronbach's alpha for the PU scale was .89, indicating a high degree of internal consistency. The researcher used the modified CA scale to assess the criterion variable of resistance to body-worn cameras. The researcher discovered a statistically significant, negative correlation between perceived usefulness of body-worn cameras and resistance to body-worn cameras, $r(39) = -.64$, $p = .000$. As officers' perceived usefulness of body-worn cameras increased, resistance to body-worn cameras decreased. Salkind (2014) stated that the Pearson product-moment correlation coefficient of -.64 represents a strong relationship between the variables of PU and resistance to body-worn cameras.

As represented in Figure 2, the participants scored somewhere between the overall highest and lowest composite numbers. To determine the highest composite value for the PU variable, the researcher multiplied the total number of items by the highest Likert

scale degree. The total number of items for the PU variable was 10, and the highest Likert

scale degree was 7. The highest value obtained for the PU scale was 70. Scores closer to

70 represented higher levels of PU. To determine the lowest composite value for the PU

variable, the researcher multiplied the total number of items by the lowest Likert scale

degree. The lowest Likert scale degree was 1, creating the lowest composite value of 10.

The lowest composite value of 10 represented a lower degree of PU. The resistance to

body-worn cameras variable was computed from the modified CA scale discussed in

research question two. Scores closer to 105 represented higher resistance, and scores

closer to 15 represented lower resistance. Figure 2 depicts the relationship between
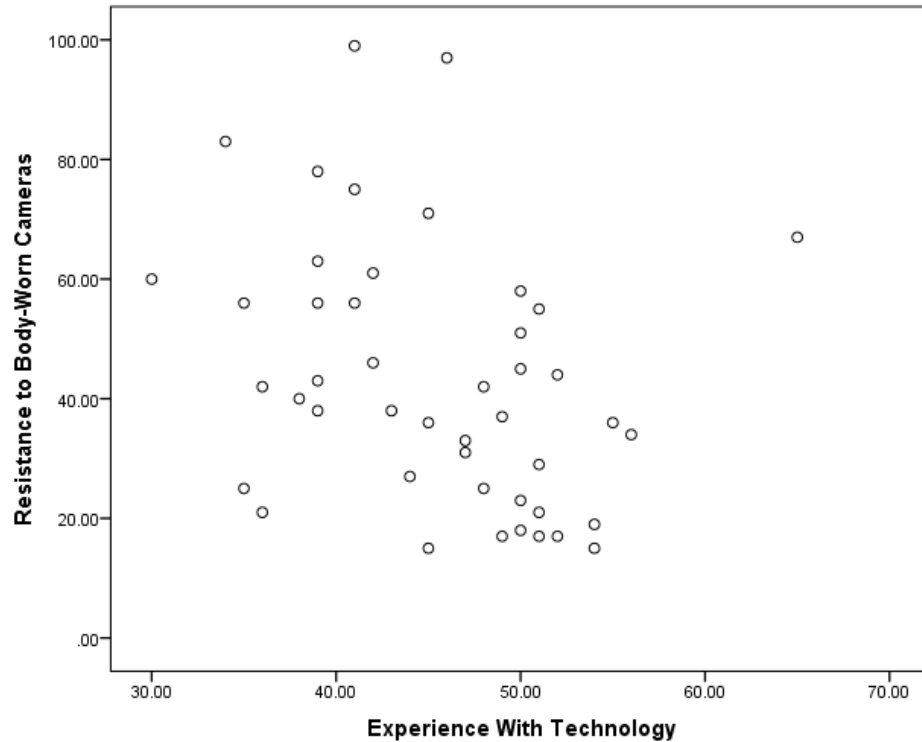
perceived usefulness of body-worn cameras and resistance to body-worn cameras.

Figure 2. Scatterplot depicting the relationship between perceived usefulness and
resistance to body-worn cameras.

From the results displayed in Figure 2, the researcher observed a statistically significant, negative relationship between PU and resistance to body-worn cameras. As PU increased, resistance to body-worn cameras decreased. Furthermore, the researcher conducted a simple linear regression using the resistance to body-worn cameras as the criterion variable (Y) and perceived usefulness of body-worn cameras (X^2) as the predictor variable. The results of the linear regression indicated that perceived usefulness of body-worn cameras was a statistically significant predictor of officers' resistance to cameras, $\beta = -.64$, $t\,(39) = -5.18$, $p = .000$. Perceived usefulness of body-worn cameras accounted for 41% ($R^2 = .41$) of the variance in resistance to body-worn cameras. Cohen (1988) stated that an $R^2 = .41$ represented a large effect size for the perceived usefulness variable. Although a stronger relationship was found between PU and resistance to body-worn cameras, 59% of the variance remains unexplained. Because 59% of the variance was unexplained, other variables or factors could possibly explain the remaining variance.

The researcher conducted a multiple regression to determine whether perceived ease of use (PEOU) was a covariate in the current study. Davis (1989) stated that a system or device high in PEOU would take less effort to use and be accepted by the users. The PEOU scale, contained in the TAM, and the modified CA scale served as the scales of choice for this analysis. Cronbach's alpha for the PEOU scale was .87, indicating a high degree of internal consistency. The researcher discovered a statistically significant, negative correlation between PEOU and resistance to body-worn cameras, $r(42) = -.79$, $p = .000$. As officers' PEOU increased, resistance to body-worn cameras

decreased. Salkind (2014) stated that a Pearson product-moment correlation coefficient of -.79 represents a strong relationship between the variables of PEOU and resistance to body-worn cameras.

As shown in Figure 3, participants scored somewhere between the overall highest and lowest composite numbers. To determine the highest composite value for the PEOU variable, the researcher multiplied the total number of scale items by the highest Likert scale degree. The total number of items for the PEOU variable was 10, and the highest Likert scale degree was 7. The highest value obtained for the PEOU scale was 70. Scores closer to 70 represented higher levels of PEOU. To determine the lowest composite value for the PEOU variable, the researcher multiplied the total number of items by the lowest Likert scale degree. The lowest Likert scale degree was 1, creating the lowest composite value of 10. Scores closer to 10 represented lower degrees of PEOU. The resistance to body-worn cameras variable was computed from the modified CA scale discussed in research question two. Scores closer to 105 represented higher resistance, and scores closer to 15 represented lower resistance. Figure 3 depicts the relationship between perceived ease of use of body-worn cameras and resistance to cameras.

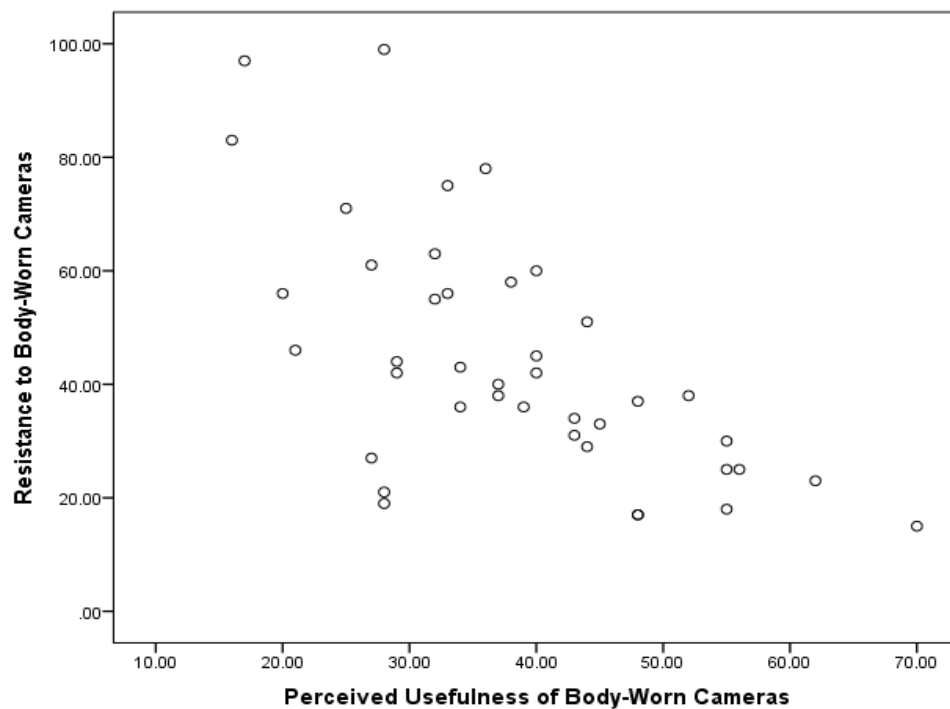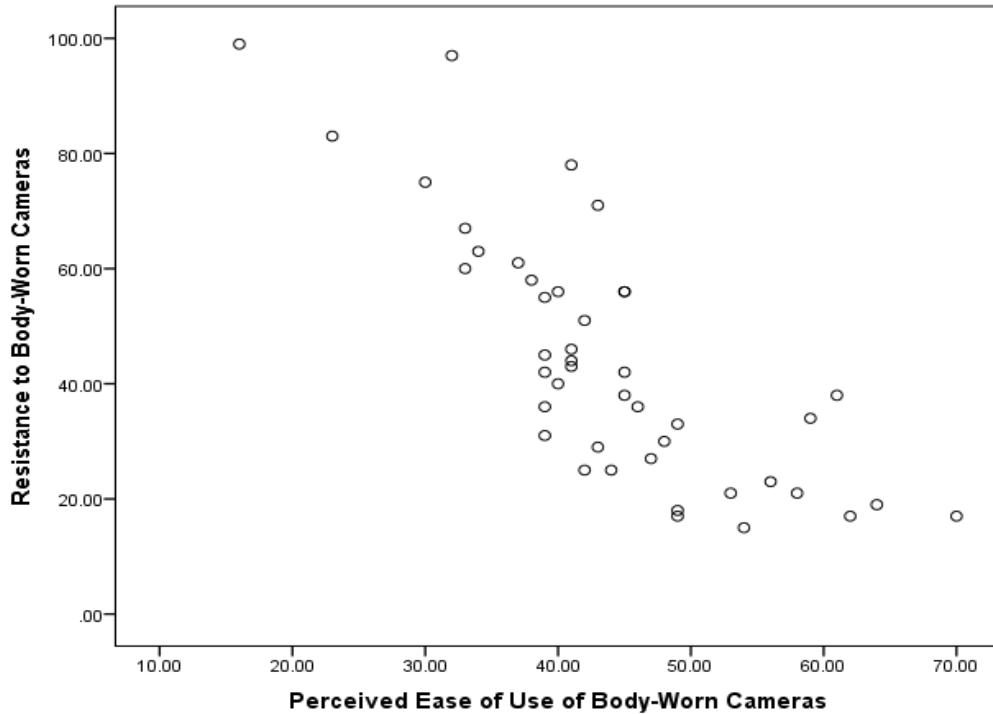*Figure 3.* Scatterplot depicting the relationship between perceived ease of use of body-worn cameras and resistance to body-worn cameras.

The researcher conducted a multiple regression, predicting resistance to body-worn cameras from the PU and PEOU of body-worn cameras variables. The multiple regression was statistically significant, $F(2, 37) = 43.34$, $p = .000$, $R^2 = .70$. Of these two predictors, both PU ($\beta = -.35$, $t(37) = -3.44$, $p = .001$) and PEOU ($\beta = -.61$, $t(37) = -6.04$, $p = .000$) were statistically significant. Cohen (1988) stated that an $R^2 = .70$ would be considered a very large effect size. Perceived usefulness of body-worn cameras and PEOU accounted for 70% of the variance in resistance to body-worn cameras. Furthermore, from the analysis, PEOU appeared to be an important aspect that police officers were considering in terms of resistance body-worn cameras. Although the two variables of PU and PEOU accounted for 70% of the variance in the resistance to body-worn camera variable, 30% of the variance remains unexplained.

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In Table 4, the correlations, beta weights, and *t*-values are displayed for the

multiple regression utilizing PU and PEOU of body-worn cameras. In a multiple

regression, a beta weight is recognized from the symbol *β*. According to Yockey (2011),

beta weights are standardized coefficients that are equal to the regression coefficient if

the predictor and criterion variables were converted to a *z* score. The beta weight shows

the change in the criterion variable from the predictor when other variables are held

constant. Assuming other predictors are held constant, the predictor increases one

standard deviation with the increase in the criterion variable. However, in the current

study, the negative beta weight represented a one-point increase, but the criterion variable

decreased. From the analysis, the PU variable's beta weight lowered when PEOU was

introduced into the analysis. From the data, participant police officers were already

thinking about the amount of effort needed to use the body-worn camera. Table 4

presents the correlations, beta weights, and *t*-values for the multiple regressions PU and

the covariant of PEOU.

Table 4

Pearson Product Correlation, Beta Weights, and t-*values for Multiple Regression:*
Perceived Usefulness and the Covariant of Perceived Ease of Use of Body-Worn
Cameras

	Resistance to Body-Worn Cameras		
Predictor Variable	*r*	*β*	*t*
Perceived Usefulness of BWC	-.64*	-.35	-3.44
Perceived Ease of Use of BWC	-.78*	-.61	-6.04

*p < .01

Research Question 5

Which variable primarily predicts resistance to the use of body-worn cameras: Officers'

experiences or perceived usefulness?

Research question five addressed which variable, between experience with

technology (X^1) and perceived usefulness (X^2), primarily predicted resistance to body-

worn cameras (Y). As described in research question three, the researcher used the

experience with technology items for the variable of officers' experiences with

technology. Described in research question four, the researcher used Davis' (1993) PU

scale for the variable of perceived usefulness of body-worn cameras. Additionally, the

researcher utilized the modified CA scale for the variable of resistance to body-worn

cameras used in research question two.

A multiple regression determined if resistance to body-worn cameras was

predicted from the variables of experience and perceived usefulness. The regression was

statistically significant, $F(2, 37) = 14.91$, $p = .000$, $R^2 = .47$. Of the two predictors

investigated, perceived usefulness (X^2), was statistically significant, $\beta = -.58$,

$t(37) = -4.58$, $p = .000$. The other predictor, experience with technology (X^1), was not

statistically significant, $\beta = -.22$, $t(37) = -1.73$, $p = .092$. According to Cohen (1988), an

$R^2 = .47$ represents a large effect size indicating that the predictors accounted for 47% of

the variance in resistance to body-worn cameras. Although the predictors accounted for

47% of the variance in the resistance to body-worn cameras, 53% remains unexplained.

Because 53% of the variance remained unexplained, other variables not included in the

current study might explain the remaining variance in resistance to body-worn cameras.

In Table 5 below, the results from research question five are displayed. As evidenced in the table, the beta weight of experience with technology decreased when compared to PU. Table 5 presents the correlations, beta weights, and t-values for the multiple regressions of experience with technology and PU.

Table 5

Pearson Product Correlation, Beta Weights, and t-*values for Multiple Regressions: Experience and Perceived Usefulness as Predictors*

	Resistance to Body-Worn Cameras		
Predictor Variable	r	β	t
Experience with Prior Technology	-.36	-.22	-1.73
Perceived Usefulness of BWC	-.63*	-.58	-4.58

*$p < .01$

The researcher asked participants to respond to an open-ended question about other sources of resistance to body-worn cameras. From the 48 total participants utilized in the current study, 17 participants responded to the question. Appendix H contains the participant's full responses. In Table 6, the researcher constructed a frequency table that summarized possible sources of resistance. Based on the participants' responses, maintenance costs associated with software and video storage could potentially raise resistance issues. Of interest, participant responses about the amount of effort to utilize body-worn cameras were associated with PEOU. Table 6 represents the condensed frequency table of the participant's responses to the open-ended question 59. Question 59, contained in Appendix H, asked officers, Based on your experience in law enforcement, is there anything else that would cause resistance to body worn cameras?

Table 6

Frequency Counts of Possible Sources of Resistance

Source of Resistance	Frequency
Costs Including Maintenance of Software and Video Storage	5
PEOU Issues Including Camera Operation	5
Camera Limitations or Misrepresentation	4
Fear of Misuse or Abuse	4
General Problems with Change	1

The researcher wanted to examine all the variables of interest within the current study. All the variables of interest included dispositional resistance to change, resistance to body-worn cameras, perceived usefulness of body-worn cameras, experience with technology, and perceived ease of use of body-worn cameras. The reason the researcher sought further analysis about all the variables was to determine if any relationships existed. In Table 7, the Pearson product correlations are displayed between each variable of interest.

Table 7

Summary of Pearson Product Correlations: Variables of DRTC, MCA, PU, EXP, and PEOU

Measure	1	2	3	4	5
1. DRTC	1(43)	.117(41)	-.024(37)	-.194(43)	-.143(39)
2. MCA	.117(41)	1(46)	-.638**(41)	-.316*(45)	-.791**(44)
3. PU	-.024(37)	-.638**(41)	1(42)	.295(41)	.467**(40)
4. EXP	-.194(43)	-.316*(45)	.295(41)	1(47)	.322*(43)
5. PEOU	-.143(39)	-.791**(44)	.467**(40)	.322*(43)	1(44)

Note. DRTC = Dispositional Resistance to Change (Resistance to Change scale); MCA = Modified Change Attitude Scale (Measuring Resistance to Body-Worn Cameras); PU = Perceived Usefulness; EXP = Experience with Technology Items; PEOU = Perceived Ease of Use. Numbers within parentheses represent *n* for the correlation.
*$p < .05$. **$p < .01$

As presented in Table 7, police officers' dispositional resistance to change shared weak and statistically insignificant correlations with the variables of resistance to body-worn cameras ($r = .117$), perceived usefulness ($r = -.024$), experience with technology ($r = -.194$), and perceived ease of use ($r = -.143$). These interesting lower correlations could serve as an indicator that any police officer's predisposition to resist change was unrelated to the way they felt about technology. Interestingly, experience with technology shared a positive and statistically significant relationship with PEOU ($r(43) = .32$, $p = .035$). As officers' experiences with technology increased, PEOU of body-worn cameras increased. In terms of the past technologies that they have used, officers associated the amount of effort needed with their prior technology experience.

In Table 8, the Pearson product moment correlation coefficients for the predictor variables in relationship to the individual components of the modified CA scale are

displayed. The modified CA scale measured resistance to body-worn cameras. The affective, behavioral, and cognitive components are associated with the resistance to body-worn cameras.

Table 8

Pearson Correlations Showing Individual Relationships among Predictors with Resistance to Body-Worn Cameras Variable Components: Affective, Behavioral, and Cognitive

	Resistance to body-worn cameras criterion		
Predictors	Affective	Behavioral	Cognitive
PU	-.625**(42)	-.550**(41)	-.657**(42)
EXP	-.327*(46)	-.328*(45)	-.372*(47)
PEOU	-.757**(44)	-.769**(44)	-.736**(44)

Note. PU = Perceived Usefulness; EXP = Experience with technology items; PEOU = Perceived ease of use. Numbers within parentheses represent *n* for the correlation. *p < .05. **p < .01

From Table 8, the researcher observed statistically significant correlations associated with each predictor variable in relationship to the resistance of body-worn cameras. The relationships are negative and stronger between PEOU and each component of the resistance to body-worn camera criterion variable. The researcher noted that experience with technology was the weaker variable in the overall analysis.

Perceived usefulness and PEOU, modeled together, combined as the strongest predictor of resistance to body-worn cameras ($F(2, 37) = 43.34$, $p = .000$). PEOU appeared to be a variable that police officers were already considering in terms of

resistance to body-worn cameras. The data from the current study showed that police officers considered the effort it takes to use a body-worn camera even prior to program implementation.

The previous section displayed the current study's findings. From the data presented for each research question, police officers exhibited little to no resistance to change or body-worn cameras. Additionally, PU appeared to be the better predictor of resistance to body-worn cameras than experience with technology. However, PEOU was an important covariate in terms of police officer resistance to body-worn cameras. In the next sections, the researcher will present the conclusions, implications, and recommendations for the current study.

Conclusions

The purpose of the current study was to examine whether experiences with technology or the perceived usefulness of body-worn cameras predict resistance to the cameras in order to determine where resistance to body-worn cameras possibly exists. The current study's results could have been affected by the low participation rate of police officers ($n = 48$). An increased number of participants could obtain different results than were obtained in the current study.

The current study used a one-sample t-test and scale midpoint to answer two research questions. Additionally, a correlational design answered the remaining three research questions. Therefore, caution should be used when generalizing the results of the current study to a larger population of police officers. Leedy and Ormrod (2013) pointed out that correlations do not imply causation, and further research should take place in order to examine causal factors in resistance to change and body-worn cameras.

The results of the current study contributed to an area of resistance research that has not received much attention. Past research about police officer's responses to technological change, or change in general, are scant and deserve further investigation. To the best of the researcher's knowledge, the current study represented one of the first that quantified police officers' resistance to change. Additionally, the current study's findings drew out where the possibility of resistance to body-worn cameras exists. The following section presents the conclusions drawn from each research question.

Research Question 1

Research question one asked, To what extent are police officers dispositionally resistant to change? As discussed in the findings from research question one, the mean of police officers' responses ($M = 61.51$) was lower than the scale midpoint of 72 in a statistically significant way. The researcher discovered that the participant police officers seemed positive about change, and they had little to no predisposition to resist change. According to Laumer et al. (2015), mandatory system users perceived a system negatively because of a predisposition to resist change. Laumer et al.'s findings about dispositional resistance to change contrasted the current study's finding.

Jones (2015) asserted that police officers work in a heavily scrutinized climate. A reason for low dispositional resistance could be attributed to the climate in which officers work. Because police officers face scrutiny about their performance, they may feel that new changes are needed to minimize criticism and improve their image within their communities.

Police officers could be rethinking how change occurs in their agencies. Police officers could be embracing change as it happens because the change improves their

agency's dynamics and performance expectations. Burke (2014) referred to this type of change as evolutionary change. Burke stated that, "Evolutionary change is characteristic of most organization change. Evolutionary change is typically an attempt to improve aspects of the organization that will lead to higher performance" (p. 98). Evolutionary change is continuous and enables organizations to learn as change progresses without altering the organization's mission or objectives.

Research Question 2

Research question two asked, To what extent are police officers resistant to body-worn cameras? As discussed in the findings from research question two, the mean of police officers' responses ($M = 43.26$) was lower than the scale midpoint of 60 in a statistically significant way. The researcher discovered that the participant police officers had little to no resistance to body-worn cameras. The current study's results supported Jennings et al.'s (2014) findings that police officer's willingness to adopt body-worn cameras was high.

At the time of the current study, resistance to body-worn cameras might not be an issue prior to implementation. Officers may already be aware of the benefits that the body-worn cameras provide and may have decided to embrace body-worn camera change. Therefore, officers demonstrated low resistance. With the benefits of cameras clearly documented (Ariel et al., 2014; Jennings et al., 2014), officers may be at ease knowing the camera footage might defend their actions. Additionally, Bartels and Nordstrom (2012) found that employees who used monitoring devices with a performance contingency attached to their use performed better and were more

motivated. Moreover, Katz et al. (2014) discovered that some officers who used body-worn cameras improved their performance.

Research Question 3

Research question three asked, What is the relationship between officers' experiences with technology and resistance to body-worn cameras? As evidenced in the findings from research question three, experience with prior technology shared a statistically significant but weak relationship with resistance to body-worn cameras (r(43) = -.32, p = .034). As police officers' experiences with other technology increased, resistance to body-worn cameras decreased. Additionally, experience with technology predicted the resistance of body-worn cameras (β = -.32, t(43) = -2.19, p = .034) in a statistically significant way. This result coincided with Nixon's (2014) findings about an individual's frustrations with frequent technology change prior to coping with past change. The combined parts of the experience with technology variable demonstrated that if officers have less experience with other technologies, they could be resistive to using the body-worn camera technology.

As officers' experiences with technology increased, their resistance to body-worn cameras decreased. However, the strength of the relationship was weak. From the evidence displayed in research question three and four, officers do not employ their prior experience over other variables, such as perceived usefulness (β = -.35, t(37) = -3.44, p = .001) and perceived ease of use (β = -.61, t(37) = - 6.04, p = .000). Even with limited experience or no experience with body-worn cameras, the experience variable did not account for enough of the variance in resistance to body-worn cameras (R^2 = .10).

Research Question 4

        Research question four asked, What is the relationship between officers' perceived usefulness of body-worn cameras and resistance to body-worn cameras? From the evidence described in research question four, perceived usefulness (PU) accounted for 41% of the variance in resistance to body-worn cameras. This finding suggested that an officers' performance is important in relationship to resistance to the cameras. From the evidence displayed in Figure 2, when officers' PU of the camera increased, resistance to body-worn cameras decreased. This finding might imply that police officers may be content with body-worn cameras as suggested from past research (Ariel et al., 2014; Jennings et al., 2014). However, police officers might not always be content with the camera's use or benefits. In other words, police officers may believe that the cameras are a needed and necessary tool for the performance of their duties, but officers may not like wearing the device. For instance, perceived usefulness (PU) appeared to be an important variable reflecting officers' attitudes toward the camera. However, a noticeable difference occurred with the introduction of the covariate, perceived ease of use (PEOU).

        As shown in Table 4, when PEOU (β = -.61) was introduced into the model, the PU beta weight (β = -.35) decreased. Additionally, the shared variance between the two variables was 70%, indicating that PU and PEOU together accounted for most of the resistance to body-worn cameras. This finding might suggest that officers could be thinking about the amount of effort to use the device even before implementation begins. Additionally, officers could be thinking that the effort needed to use the body-worn camera could shape their performance. The two variables, PU and PEOU (R^2 = .70), together carry more weight in officers' attitudes about resistance than just PU alone (R^2 =

.41). This finding differed in respect to Bhattacherjee and Hikmet's (2007) findings that users' resistance to technology related more negatively to PU and was only moderately related to PEOU.

Officers' attitudes about body-worn cameras may be separate from what they reflect in their behavior. Katz et al. (2014) offered a similar conclusion that officers' perceptions about the use of cameras could change over time from positive to negative. Katz et al. discovered that officers were worried about the problems with the way the camera functioned. Moreover, Davis (1989) suggested that PEOU might be a causal antecedent to PU. Although a causal link was not established in the current study, the findings overlapped with Davis' conclusion about these variables and the ability for one variable to influence the other. As discussed by previous researchers, including Ariel et al. (2014), Drover and Ariel (2015), Jennings et al. (2014), and Young and Ready (2014), the easier a device is free from effort to operate, the more perceptually useful the device becomes. Because cameras could keep an officer safe, prevent or lower citizen complaints, and keep public contacts peaceful does not mean that officers will enjoy using the camera.

Research Question 5

Research question five asked, Which variable primarily predicts resistance to the use of body-worn cameras: Officers' experiences or perceived usefulness? As evidenced in the findings from research question five, experiences with technologies might play a smaller role in officers' attitudes toward resistance than expected. Reflecting Varma and Marler's (2013) point, technology experience as a variable remains subjective and not well understood. Experience with technology ($\beta = -.22$, $t(37) = -1.73$, $p = .092$) was the

weaker predictor to the use of resistance of cameras than PU ($\beta = -.58$, $t(37) = -4.58$, $p = .000$). As shown in Table 5, the beta weight from the experience with technology variable ($\beta = -.22$) weakened as perceived usefulness ($\beta = .58$) strengthened. Therefore, the validity of the experience with technology items remains questionable. The researcher explored experience from the overall accumulation of time with technology, frequency of use with technology, perceived competency with technology, and opportunity to use technology. Experience, as a variable, might be more multifaceted and affect a criterion variable differently than other variables. Separating the experience construct, and examining each component, could yield different results on a criterion variable and possibly better explain variances with the experience variable.

Theoretical Connection to the Current Study

According to Brehm's (1966) theory of psychological reactance, people resist change when the change limits or removes their freedom. The implementation of body-worn cameras and their use might not affect an officer's discretion, comfort, and freedom on the job. However, Brehm further stated that the magnitude of resistance was related to the amount of importance that a person places in a particular freedom. Officers' freedoms reside in their ability to perform their jobs with a body-worn camera that is free of effort to use. Effort, in this case, could mean that an officer might believe that a body-worn camera is difficult to use, or the effort to perform their duties with a camera is difficult. When an officer perceives that the effort to use a body-worn camera exceeds their level of freedom, the magnitude of officer's resistance may rise.

As shown in the current study, officers' predisposition to resist change was low. Additionally, officers' resistance to body-worn cameras was low. As shown in Table 8,

the findings from the current study demonstrated that the variables of experience with technology, PU, and PEOU might associate with the magnitude of resistant attitudes that could lead to resistant behavior. For example, if police managers told officers that they could no longer perform certain duties because the effort to use the body-worn camera will limit them, then officers might resist. Subsequently, if police managers told officers that the camera could limit their performance, then officers might resist.

Additionally, the current study operated in an exploratory manner to determine whether Young and Ready's (2014) statement was accurate. Young and Ready stated that the technology acceptance model (TAM) could explain resistance. The researcher showed that the TAM was an accurate tool to predict where resistance exists ($R^2 = .70$). From the findings displayed in the current study, police officers might be thinking about the amount of effort to use a body-worn camera prior to the implementation of a body-worn camera program.

In the previous section, the researcher presented the conclusions drawn from the current study. Police managers should consider each of the predictor variables as important assessment points when implementing a new body-worn camera program. In the next section, the researcher will present the implications and recommendations.

Implications and Recommendations

Several implications can be drawn from the findings of the current study. Burke (2014) stated that not all resistance is detrimental to an organization. Some resistance could be positive, especially when organizations change often. Allowing police officers to voice where resistance may exist, especially involving PEOU and PU might aid police managers in the identification and treatment of resistance. A police manager should

consider the following implications and recommendations as a foundational framework to assess the resistance to body-worn cameras and discover where the potential for resistance exists.

Resistance to Change Scale as a Management Tool

Officers who view change as positive may produce better outputs and have higher levels of commitment to the organization. According to Burke (2014), resistance should not be a dynamic used for disciplinary action against employees. Resistance should be utilized as a tool that allows employees to express their concerns and help mangers further improve upon the change. Burke also stated that managers who ignore individuals' suggestions, or misrepresent the details about an upcoming change, face the possibility of negative resistance.

Burke (2014) pointed out that resistance might not be considered such a negative concept. Police department members may take into account that some aspects of the police organization are stable, and the introduction of body-worn cameras might not affect the stability of the organization. Burke further commented that organizational managers might not be completely overhauling the organization by introducing new change. The structures and current changes might not affect the officer's working procedures enough to warrant resistance in police departments.

Oreg (2006) stated that the RTC could be used for selecting and training individuals who encounter frequent change. Therefore, the researcher recommends that the RTC scale supplement officer-development programs that aid and help to identify areas of resistance. By allowing officers to reveal points of resistance, managers could

obtain valuable information about an upcoming change to modify expectations and adjust

policies accordingly. However, questions could remain about how police officers feel

about the cameras after several years of use. Although the researcher found little to no

evidence that police officers were predisposed to resistance, future researchers should

consider other aspects that might predisposed police officers to resist change. Future

researchers should examine the differences that may exist between groups of supervisors

and patrol officers that predispose them to positive and negative aspects of resistance.

Police Training Contexts

The current study's findings have implications for police training contexts. To

avoid surprises that new technology may create, police managers should implement

body-worn cameras in training scenarios before full-duty implementation. Surprisingly,

because PEOU represented an important dynamic about the resistance to body-worn

cameras in the current study, the use of cameras in training scenarios could help officers

understand the limitations that camera use might create. Officers can become acutely

aware of the effort needed to use and manipulate the cameras efficiently and effectively

in order to enhance their performance. Additionally, officers would be able to review

video footage and reflect about their performances. Performance reflections allow

officers to be able to track issues they may have with their performance before

implementation. More thorough and realistic training helps officers to perform better

while on duty. Introducing officers to the body-worn cameras before full implementation

might help sort out some of the tensions that could develop over time. Future researchers

should examine the differences between officers who use body-worn cameras and those

officers who do not use cameras. The reason researchers should examine these

differences is to determine whether the camera's use helps officers perform better than an officers who do not use cameras.

Body-Worn Camera Program Implementation

Resistance may contribute to an individual's perception about the use of a technological device and may reflect where barriers may originate. The evolution of resistance might be complex. Koper et al. (2014) noted that the desired effect from technology might be multifaceted and not always be associated with performance improvement, satisfaction, and crime reduction. However, as evidenced in the current study, PU and PEOU alluded to the potential for resistance, especially regarding police officers.

Police managers who are considering the implementation of body-worn cameras should use the findings from the current study as a foundation for building an assessment tool for their programs. Police officers appear to be concerned with PEOU issues. The amount of effort a body-worn camera creates could be reflected in an officer's performance. Perceived ease of use could serve as the starting point in discovering the shortfalls in the implementation process and functionality of body-worn cameras. To verify whether PEOU is the proper starting point in the identification of resistance, future researchers should examine PEOU issues specifically that could affect an officer's performance. Additionally, future researchers could examine the PEOU issues that specifically affect PU of body-worn cameras and the affective, behavioral, and cognitive processes of police officers.

The data presented in Table 6 showed that some police officers worry about the costs associated with body-worn cameras. As noted by Goudie (2016), police managers

have considered the costs related to the body-worn camera and the effort that members put into the program to maintain standards. A question for future researchers to consider is whether the benefits outweigh the costs of cameras. Future research should examine whether the costs align with the direct benefits that the cameras provide to officers. Such benefits regarding exoneration of citizen's complaints, higher convictions rates in the courts, and improved investigative work should be compared to the police department's overall costs.

Misrepresentation of the Body-Worn Camera Angles

Police officers are considering the angles that body-worn cameras provide. According to Table 6, public and media perceptions about the camera's representation of an event are of concern to police officers. Great care should be taken by police mangers when considering those individuals who view camera footage. Persons who have little knowledge about police work or procedures could perceive camera footage with a bias and view police actions as unfavorable, as suggested by Boivin et al. (2016), who discovered a body-worn camera perspective bias.

The body-worn camera cannot provide an accurate account from every angle, and the camera angle used at the time of an event can be obscured or distorted. Police agencies should invest in quality camera devices that have been through extensive testing and research. Additionally, camera manufacturers should use empirical evidence that their products are up to the high standards that police department managers expect. Future researchers should examine the differences between different brands of body-worn cameras, functionality of the cameras, and the ability of the cameras to present an accurate representation of an event.

Police Manager's Overuse

A police manager's misuse of the body-worn camera could turn into abuse and increase officers' concerns about using the device. As Nguyen et al. (2011) remarked, employees might react differently if expectations about a technology are not explained. As shown in Table 6, police officers were concerned about managers who use body-worn cameras unnecessarily to spy on employees. If employees feel that management abused the purposes for the use of the cameras, then employees may build resistance to the device, especially considering an officer's privacy and times when camera use is not mandatory. As Ball (2010) pointed out, excessive monitoring could yield more information than what management intended. Therefore, police managers should curb excessive surveillance without justification and consult with employees when further explanation is needed. Clear expectations, policy mandates, and communication should be considered to control the instances when officers might interpret that the camera's use is being abused.

Gaub et al. (2016) discovered that officers' perceptions about body-worn cameras deteriorated over time, especially when considering the impact that the cameras had on citizens. Katz et al. (2014) also discovered that as body-worn cameras became the norm, officers became increasingly frustrated with citizens' reactions when cameras were in use. Although Katz et al. remarked that the camera benefits outweighed the weaknesses, officers' perceptions over time changed because they were concerned that the camera footage was being used against them.

New technology could be viewed negatively not just by officers but also by members of the community. Open communication should occur between officers,

supervisors, administrators, and the community about the benefits and concerns of body-worn camera use. As researchers Gaub et al. stated, " . . . even the best laid plans can be made obsolete if departments do not continually assess officer perceptions and adjust policies or procedures as needed to address officer concerns" (p. 21).

Communication lines should remain open between officers and police administrations to keep officer's input in the implementation process. This recommendation aligned with Patten et al.'s (2015) findings that lower ranking officers lacked the support of a new change intervention when they were distanced from the implementation process. Officers may feel that their effort to use the device does not assist them with their job performance. The researcher of the current study recommends that body-worn camera technology be integrated with both department and community needs in mind. Further research should investigate whether body-worn camera implementation meets the needs of the community and officers' PEOU needs.

Addressing the Limitations of the Current Study

Each research question was answered but not without considering the limitations of the current study. A low participation rate, the lack of diversity among the participants, and the lack of other research pertaining to police officer resistance limited the researcher's methodology. The methodology should be replicated to support or not support the conclusions drawn from the findings of the current study. Replications should occur in various settings and locations. The addition of other variables, such as self-efficacy, job satisfaction, and workload might change the results, especially considering different locations and groups of police officers.

The chosen location for the current study had a rural demographic, meaning that the officers who participated in the study worked primarily in a rural setting. Future research should examine the differences between rural and urban environments regarding officers' attitudes, behavioral intentions, and resistance to body-worn cameras. Future research should also consider additional participants, especially participants from larger agencies with more than 100 officers. Researchers should reach out to participants by utilizing officers' personal emails to obtain data that are more diverse. By using personal email accounts, officers may feel more honest and comfortable with providing the data that superiors cannot monitor.

The experience with technology items were subjective and need additional study to validate the items further. One of the particular reasons the experience with technology items were subjective was time. The time available to complete the current study limited the researcher's resources to obtain reliable and valid instruments. Therefore, future research should examine new ways to refine, validate, and increase the reliability of the experience to technology items. Future researchers should conduct longitudinal studies to examine new ways to expand and validate the experience with technology items. Additionally, researchers should use test-retest reliability and test the items in different settings to improve the construct and criterion validity. There may be additional instruments that could enhance the value and quality of the items as well.

The results discovered in the current study are just a small step to identifying where the potential for resistance exists in terms of body-worn cameras. Police departments will certainly face many more challenges as technology advances. With the findings from the current study, police managers can examine the probability and

facilitation of resistance. They can enhance their own insight into why the adoption of technological change might fail. Additionally, police managers can design and assess body-worn camera programs that are able to identify where resistance starts and apply the necessary adjustments to resolve resistance issues before problems begin.

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Appendix A

Resistance to Change (RTC) Scale

Resistance to Change (RTC) Scale

Please rate the following questions on a scale of 1-7. 1 represents STRONGLY DISAGREE, 4 represents NEUTRAL, and 7 represents STRONGLY AGREE.

I generally consider changes to be a negative thing.
1   2   3   4   5   6   7

I'll take a routine day over a day full of unexpected events any time.
1   2   3   4   5   6   7

I like to do the same old things rather than try new and different ones.
1   2   3   4   5   6   7

Whenever my life forms a stable routine, I look for ways to change it.
1   2   3   4   5   6   7

I'd rather be bored than surprised.
1   2   3   4   5   6   7

If I were to be informed that there's going to be a significant change regarding the way things are done at work, I would probably feel stressed.
1   2   3   4   5   6   7

When I am informed of a change of plans, I tense up a bit.
1   2   3   4   5   6   7

When things don't go according to plans, it stresses me out.
1   2   3   4   5   6   7

If my boss changed the criteria for evaluating employees, it would probably make me feel uncomfortable even if I thought I'd do just as well without having to do any extra work.
1   2   3   4   5   6   7

Changing plans seems like a real hassle to me.
1   2   3   4   5   6   7

Often, I feel a bit uncomfortable even about changes that may potentially improve my life.
1   2   3   4   5   6   7

When someone pressures me to change something, I tend to resist it even if I think the change may ultimately benefit me.
1   2   3   4   5   6   7

I sometimes find myself avoiding changes that I know will be good for me.
1   2   3   4   5   6   7

Once I've made plans, I'm not likely to change them.
1   2   3   4   5   6   7

I often change my mind.
1   2   3   4   5   6   7

Once I've come to a conclusion, I'm not likely to change my mind.
1   2   3   4   5   6   7

I don't change my mind easily.
1   2   3   4   5   6   7

My views are very consistent over time.
1   2   3   4   5   6   7

Oreg, 2003

Appendix B

Technology Acceptance Model (TAM) with Perceived Usefulness (PU) and Perceived

Ease of Use (PEOU) of Body-Worn Camera Scales

Technology Acceptance Model with PU and PEOU of Body-Worn Camera Scales

Please rate the following questions on a scale of 1-7. 1 represents STRONGLY DISAGREE, 4 represents NEUTRAL, and 7 represents STRONGLY AGREE. An * denotes reverse coding.

Perceived Usefulness

The use of body worn cameras will improve the quality of the work I do

1   2   3   4   5   6   7

Using body worn cameras will give me greater control over my work

1   2   3   4   5   6   7

Body worn cameras will enable me to accomplish tasks more quickly

1   2   3   4   5   6   7

Body worn cameras will support critical aspects of my job

1   2   3   4   5   6   7

Using body worn cameras will increase my productivity

1   2   3   4   5   6   7

Using body worn cameras will improve my performance

1   2   3   4   5   6   7

Using body worn cameras will allow me to accomplish more work than would otherwise be possible

1   2   3   4   5   6   7

Body worn cameras will enhance my effectiveness on the job

1   2   3   4   5   6   7

Using the body worn camera will make it easier to do my job

1   2   3   4   5   6   7

Overall, I think the body worn camera system will be useful in my job

1   2   3   4   5   6   7

Perceived Ease of Use

I believe the use of body worn cameras will be burdensome*
1   2   3   4   5   6   7

I believe the body worn camera system will be easy to use
1   2   3   4   5   6   7

I anticipate interacting with body worn camera systems will be frustrating*
1   2   3   4   5   6   7

I think it will be easy to get the body worn cameras system to do what I want it to do
1   2   3   4   5   6   7

I think the body worn camera system will be rigid and inflexible to use*
1   2   3   4   5   6   7

I think it will be easy for me to remember how to perform tasks using the body worn camera
1   2   3   4   5   6   7

Interacting with the body worn cameras system will require a lot of mental effort*
1   2   3   4   5   6   7

I believe my interactions with the body worn camera system will be clear and understandable
1   2   3   4   5   6   7

I think it will take a lot of effort to become skillful at using the body worn camera*
1   2   3   4   5   6   7

Overall, I think the body worn camera will be easy to use
1   2   3   4   5   6   7

Appendix C

Technology Acceptance Model with Perceived Usefulness of Electronic Mail and

Perceived Ease of Use of Electronic Mail Scale

Technology Acceptance Model (TAM) from Davis (1993)

Perceived Usefulness of Electronic Mail

	Strongly Agree		Neutral			Strongly Disagree	
1. Using electronic mail improves the quality of the work I do.	1	2	3	4	5	6	7
2. Using electronic mail gives me greater control over my work.	1	2	3	4	5	6	7
3. Electronic mail enables me to accomplish tasks more quickly.	1	2	3	4	5	6	7
4. Electronic mail supports critical aspects of my job.	1	2	3	4	5	6	7
5. Using electronic mail increases my productivity.	1	2	3	4	5	6	7
6. Using electronic mail improves my job performance.	1	2	3	4	5	6	7
7. Using electronic mail allows me to accomplish more work than would otherwise be possible.	1	2	3	4	5	6	7
8. Using electronic mail enhances my effectiveness on the job.	1	2	3	4	5	6	7
9. Using electronic mail makes it easier to do my job.	1	2	3	4	5	6	7
10. Overall, I find the electronic mail system useful in my job.	1	2	3	4	5	6	7

Perceived Ease of Use of Electronic Mail

	Strongly Agree		Neutral			Strongly Disagree	
1. I find the electronic mail system cumbersome to use.	1	2	3	4	5	6	7
2. Learning to operate the electronic mail system is easy for me.	1	2	3	4	5	6	7
3. Interacting with the electronic mail system is often frustrating.	1	2	3	4	5	6	7
4. I find it easy to get the electronic mail system to do what I want it to do.	1	2	3	4	5	6	7
5. The electronic mail system is rigid and inflexible to interact with.	1	2	3	4	5	6	7
6. It is easy for me to remember how to perform tasks using the electronic mail system.	1	2	3	4	5	6	7
7. Interacting with the electronic mail system requires a lot of mental effort.	1	2	3	4	5	6	7
8. My interaction with the electronic mail system is clear and understandable.	1	2	3	4	5	6	7
9. I find it takes a lot of effort to become skillful at using electronic mail.	1	2	3	4	5	6	7
10. Overall, I find the electronic mail system easy to use.	1	2	3	4	5	6	7

Davis, 1993

Appendix D

Experiences with Technology Pilot Questionnaire

Pilot Questionnaire

Thank you for participating in this important aspect of my research. Along with other variables, I am examining the influence of our experiences with technology in relationship to resistance to body worn cameras. On the following items, I am asking you to give me your honest feedback. I want to make sure these survey items are understandable, make sense, and have sufficient content and clarity. If you have any suggestions how to make the items more clear and precise, or to include other items dealing with our experience with technology as police officers, PLEASE give me your honest opinion and let me know. Your participation if voluntary and no personal information will be released.

All of these items will be rated on Likert Scales.

Experience with technology (Based on Hurtienne, Horn, Langdon, & Clarkson, 2013; Thompson, Higgins, & Howell, 1994; Varma & Marler, 2013)

54. How often do you incorporate technology into policing?
A. Not at all
B. Rarely
C. Occasionally
D. Frequently
E. Almost always
F. All the time
Comments:

55. On an average week, how often do you use technologies in policing to perform functions of the job (such as such as running license plates and subjects, reviewing video, writing reports, preparing for court, etc.)?
A. Less than 2 hours
B. 2 hours or more, but less than 4 hours
C. 4 or more, but less than 6
D. 6 or more, but less than 8
E. 8 or more
Comments:

56. On average, how many hours per week do you use technologies in your personal time outside of law enforcement?

A. Less than 2 hours

B. 2 hours or more, but less than 4 hours

C. 4 or more, but less than 6

D. 6 or more, but less than 8

E. 8 or more

Comments:

57. How would you rate your proficiency/skill levels with other technologies in policing?

A. Unfamiliar

B. Newcomer

C. Beginner

D. Average

E. Advanced

F. Expert

Comments:

58. How would you rate your overall experience with technologies in law enforcement?

A. Very dissatisfied

B. Dissatisfied

C. Neutral

D. Satisfied

E. Very satisfied

Comments:

Please rate your level of experience (whether you have encountered it on the job or used it) with the following technologies:

Technology Item	None	Very Limited	Some Experience	Quite a Lot	Extensive
	1	2	3	4	5
In-Car cameras	1	2	3	4	5
CCTV	1	2	3	4	5
Cell Phone Video	1	2	3	4	5
GPS	1	2	3	4	5
AVL	1	2	3	4	5
Surveillance Equipment	1	2	3	4	5
Body-worn cameras	1	2	3	4	5

Comments:

Appendix E

Experiences with Technology Questionnaire

Experience with Technology

When considering the following items, please think of all the technology you have encountered in your career as a law enforcement officer. Technology means anything including: new squad cars, spot lights/flashlights, new siren systems, new overhead light control boxes, speed radars, in-car radios, license plate readers, global positioning systems, automatic vehicle locators, in-car cameras, computers, cell phones, any software used, portable radios, public announcement equipment, and kind of surveillance equipment (example: night vision or thermal imager), CCTV (closed circuit television), and mobile in-car computers.

To what degree do you use technology in policing?
1. Not at all
2. Rarely
3. Occasionally
4. Frequently
5. Almost always

In an average week, to what degree do you use technologies in policing to perform functions of the job (such as such as looking up license plates and subjects, reviewing video, writing reports, preparing for court, traffic stops, etc.)?
1. Less than 8 hours
2. 8 hours or more, but less than 16 hours
3. 16 or more, but less than 24
4. 24 or more, but less than 32
5. 32 or more

How would you rate your proficiency/skill levels with technologies in policing?
1. Unfamiliar
2. Beginner
3. Average
4. Advanced
5. Expert

In an average week, how much time do you spend becoming more knowledgeable with technologies at your department? (This can include training time, on-duty time, or personal time)

1. Less than 2 hours
2. 2 hours or more, but less than 4 hours
3. 4 hours or more, but less than 6 hours
4. 6 hours or more, but less than 8 hours
5. More than 8 hours

Please rate your level of experience (whether you have encountered it on the job or used it) with the following technologies:

Technology Item	None	Very Limited	Some Experience	Quite a Lot	Extensive
	1	2	3	4	5
In-Car Cameras	1	2	3	4	5
CCTV	1	2	3	4	5
Cell Phone	1	2	3	4	5
GPS	1	2	3	4	5
AVL	1	2	3	4	5
Surveillance Equipment	1	2	3	4	5
Body-worn Cameras	1	2	3	4	5
In-car Computers	1	2	3	4	5
Software for Computers	1	2	3	4	5

Appendix F

Resistance to Body-Worn Camera Scale

Resistance to Body-Worn Camera Scale

Please rate the following questions on a scale of 1-7. 1 represents STRONGLY DISAGREE, 4 represents NEUTRAL, and 7 represents STRONGLY AGREE. Items with an * denotes reverse coding.

I am afraid of body worn cameras
1   2   3   4   5   6   7

I have a bad feeling about body worn cameras
1   2   3   4   5   6   7

I am quite excited about body worn cameras*
1   2   3   4   5   6   7

Body worn cameras make me upset
1   2   3   4   5   6   7

I am stressed about body worn cameras
1   2   3   4   5   6   7

I will look for ways to prevent body worn cameras from being used
1   2   3   4   5   6   7

I will protest against body worn cameras
1   2   3   4   5   6   7

I will complain about body worn cameras to my colleagues
1   2   3   4   5   6   7

I will present my objections regarding body worn cameras to management
1   2   3   4   5   6   7

I will speak rather highly of body worn cameras to others*
1   2   3   4   5   6   7

I believe that body worn cameras will harm the way things are done in my organization
1   2   3   4   5   6   7

I think that it is a negative thing that we might be getting body worn cameras
1   2   3   4   5   6   7

I believe that body worn cameras will make my job harder

1   2   3   4   5   6   7

I believe that body worn cameras will benefit my organization*

1   2   3   4   5   6   7

I believe that I could personally benefit from body worn cameras*

1   2   3   4   5   6   7

Appendix G

Change Attitude (CA) Scale Unmodified

Change Attitude Scale

Affective   I was afraid of the change

                      I had a bad feeling about the change

                      I was quite excited about the change*

                      The change made me upset

                      I was stressed by the change

Behavioral   I looked for ways to prevent the change from taking place

                      I protested against the change

                      I complained about the change to my colleagues

                      I presented my objections regarding the change to management

                      I spoke rather highly of the change to others*

Cognitive   I believed that the change would harm the way things are done in

                         organization

                      I thought that it's a negative thing that we were going through this

                         change

                      I believed that the change would make my job harder

                      I believed that the change would benefit the organization*

                      I believed that I could personally benefit from the change*

*denotes reverse coded items

Oreg, 2006

Appendix H

Responses to Question 59

Responses to Question 59

Based on your experience in law enforcement, is there anything else that would cause resistance to body worn cameras? Please write a response if you have one.

1. Cost

2. Costs of hardware and software for storage--costs of the many FOIA requests that would come of them-as a supervisor, staying on the officers about learning to use them, actually using them, etc.

3. The common man doesn't understand how officers are trained. I fear that if a body worn camera video was released to be public they would negatively critic (*sic*) the officers and his actions. It gives room for further misunderstanding between officers and the general public. Until the general public can understand the training and true role of a police officer, the video recording taken from a body worn camera could be used to provoke tensions between the public and the police. I think body worn cameras have benifits to the officer and for documentation purposes but at this time the potential for the media to misuse the recording of body worn cameras outweighs the benefits to law enforcement and to communities as a whole. Until tensions between citizens and officers can be put to ease body worn cameras will continue to have the ability to show only a portion of a full incident which could result in damaging the image of law enforcement rather than uplifting it.

4. People wouldn't speak with me when the camera was on, it didn't matter if they were few victim or offender. Other then (*sic*) that, I found great use for the camera. But, the size was cumbersome. Finding a spot was difficult in a way to have the camera pointing to the person you're speaking to.

5. The cost to run/maintain the equipment. You need to be able to store all that video for an extended amount of time. 2yrs maybe 5years. Think of bigger departments and the call volume.

6. The distraction of turning the camera on during a tense engagement.

7. Old school officers are often too stubborn to change, even to a good thing

8. Data Storage Limitations

9. There needs to be a way for the camera to activate without having to consciously think about it during an immediate stressful circumstance.

10. No. For the most part, I believe body-worn cameras are beneficial.

11. N/A

12. N/A

13. Officers worrying about being monday morning qaurterbacked (*sic*). An officer has a split second to make decisions, Admin and society make judgements after watching the video over and over.

14. I believe that cameras are over all a good thing in law enforcement, but I also believe there are some limitations with bony (*sic*) worn Cameras that the public doesn't see. After all we are going to these cameras because the "public" as (*sic*) lost trust in us and our government (local or Feds) doesn't have a back bone to stand up to this liberal BS.

15. Fear of cameras being used against you.

16. No

17. Media perception

18. If the footage could be used against officers, when no complaint is lodged. "such as officer's having work place talks recorded and reviewed by administation".

19. no

20. They don't give the full perspective of the situation

21. Discipline

22. As long as it has good, dependable software-meaning no issues on the front end for officer use.

Appendix I

Permission from Author to Use and Modify Change Attitude (CA) Scale

Re: Permission to use instrument

Rich Jakobitz

Wed 2/10/2016 5:50 PM
Sent Items

To Shaul Oreg <so44@cornell.edu>;

Thank you Professor Oreg!!
Rich

From: Shaul Oreg <so44@cornell.edu>
Sent: Wednesday, February 10, 2016 5:44 AM
To: Rich Jakobitz
Subject: Re: Permission to use instrument

Dear Rich,

Please feel free to use and modify the scales for your research.

Best,

Shaul Oreg

Sent from my mobile phone. Please excuse brevity and typos.

On Feb 9, 2016, at 23:39, Rich Jakobitz <wrjakobitz@olivet.edu> wrote:

Hello Professor Oreg,

My name is Rich Jakobitz and I am currently a doctoral student at Olivet Nazarene University in Bourbonnais, IL. I have been enjoying your research articles dealing with organizational change. I am sending this email so to ask you if I would have permission to use your change attitude scale listed in your article "Personality, Context, and Resistance to Organizational Change." If I could also inquire if it would be permissible to change some of the items' wordings as to fit my research would be helpful as well??

Furthermore, I would also ask if it would be permissible to use you 17 item dispositional resistance to change scale? Your research has been very helpful to me and I look forward to hearing from you.

Thank you for your consideration,

Respectfully,

Rich Jakobitz
Olivet Nazarene University
Bourbonnais, IL 60914
815-954-7882