ISJ investigative sciences journal

Volume 9, Number 3, June 2017

Cognitive Bias and Use of Force Investigations

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Abstract

The contemporary social/political negativity directed toward law enforcement (LE) has been historically cyclic. However, technology advances have substantially increased the dissemination of controversial police force responses via media outlets and have had a substantial influence on law enforcement. Research suggests media framing may affect beliefs and decisions and has been shown to influence politics and police executives. No known research explores the affective extension of negative media, social unrest, and political pressure on investigations regarding a law enforcement officer's force response. The current climate has correlated with increased prosecutions of officers involved in viral force response incidents with critics stating the prosecutions are biased. The current research establishes a hypothesis concerning the influence of negative media, social reactions, and politics in biasing police force response investigations. The hypothesis provides a platform to discuss the types of investigatory biases to include those created by a lack of understanding human performance science. Evidence-based recommendations of de-biasing are provided as a means to ensure objectivity.

Keywords: Cognitive Bias, Human Performance, Use of Force, Law Enforcement, Investigations, Heuristics, Police

Literature Review

Purpose & Problem

Law enforcement is a unique profession in which split-second decisions, especially those involving a force response[2] are evaluated in a protracted fashion and from every conceivable angle. To that end, investigations may produce forensic fact patterns substantially dissimilar from those experienced by the officer at the time he responded to a perceived threat (IACP, 2016). The resulting investigatory judgments based on weeks/months/years of microscopic focus on a law enforcement officer's actions, which often occur within seconds or milliseconds, may be framed by unintentional bias (Nordby, 1992; Ross, 2013; Wallentine, 2007).

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[2] "Use-of-Force is a biased term. Law enforcement officers operating under the law take legal action only in response to actions or behaviors (reasonably perceived or actual). Therefore, a more accurate linguistic representation is "Force Response" and will be the terminology used throughout the document.

The rigorous investigative methods deployed in a force response investigation allows for an overwhelming amount of information that must be viewed through the reasonable perspective of an involved officer (Graham v. Connor, 1989; Ross, 2013; Wallentine, 2007). A reasonable perspective based on objective facts known to the officer at the moment the force was used and not a perspective created by investigatory hindsight or adverse outcomes. The objective investigatory requirement becomes increasingly difficult when the officer's force response initially presents to investigators as ambiguous or excessive based upon out of context video review and/or contradictory witness statements. These two evidence items (video and witness statements) have been identified in research as often being incorrect or misleading and creating bias resulting in errors in judgement and performance (Blake, 2015; Boivin et al., 2016; Caruso, Burns, & Converse, 2016; Jaeger, Levin, & Porter, 2017; Norby, 1992).

Extensive research and expert discussion exists demonstrating investigative bias in law enforcement criminal investigations. Biased investigations which result in prosecution and incarceration of the innocent (Arce, & Whitmore, 2016; McLean, & Roach, 2011; Moran, 2016; Obrien, 2009; Obrien & Ellsworth, 2006; Oppenheimer, 2012). Contextually related research has extended to biased internal affairs investigations which favor officers and result in a lack of accountability (Liederbach et al., 2007; Moran, 2016). The reviewed research substantiates implicit and explicit bias exists in criminal and internal affairs (IA) investigations resulting in erroneous outcomes for criminal suspects and IA complainants.

While there is no shortage of literature concerning biased investigations, none known to the current author addresses biased investigations of police force responses which negatively affect the officer(s) involved. While likely controversial due to the preference given to research on law enforcement bias in the opposite direction (e.g.: blue wall of silence), the question of bias within police force response investigations/judgments is valid. The support for considering this question (of bias in force investigations) is found within the substantial media framing and political attention directed at force response incidents. The media's repetitive and often negatively framed portrayal of an officer's force response surpasses the attention given to most any other LE involved investigation(s). Another factor in considering the proposed question is a CNN report stating indictments of police officers have tripled recently (Sanchez, 2016). Within the report, Criminal Justice Professor Philip Stinson states, "That's the highest that it's ever been as long as I've been looking at it" (Sanchez, 2016, p.1).

Based on the current media/social/political negativity directed towards law enforcement and the increase in criminal prosecutions, the current author opines the gap within the research concerning bias investigations/judgment against police officers requires further exploration and hypothesis building. The following narrative provides anecdotal supporting evidence.

Force Response Investigatory Bias: Hypothesis Building

The influence of media on public perceptions of law enforcement has been well documented (Goidel, Freeman, & Procopio, 2010; Surette, 2011). To that end, viral video of police force responses has negatively affected social opinions of law enforcement (Dowler, & Zawilski, 2007; Wetzer, & Tuch, 2005). Boivin et al., (2016) explored bias developed by viewing short videos of police force responses. The study showed strong correlations between

controversial videos and increased negative bias toward police force responses prompting the authors to state, "It raises concerns that we were able to significantly affect attitudes toward police use of force simply by showing videos of controversial but fictional-police interventions" (Boivin et al., 2016, p.373).

Social bias correlated with media framing is not limited to the citizenry. Media has been empirically proven to influence politicians and politicians have been shown to impact the criminal justice field (Cohen, Tsfati, & Sheafer, 2008; Murdaugh, 2005; Rainguet & Dodge, 2001; Tunnell & Gaines, 1992). A real world, albeit anecdotal example of political influence on force response situations is found within the viral media coverage of the officer involved shooting (OIS) death of Michael Brown. The unprecedented level/type of involvement by the Obama administration after Michael Brown's death has been interpreted as having influenced the course of the investigation (Chasmar, 2014; Department of Justice, 2015; Judicial Watch, 2014; Rehkopf, 2016).

Closing the gap of biasing influences between media, politicians and law enforcement; research has shown that politicians/politics have a significant impact on the law enforcement profession and police chiefs specifically (Murdaugh, 2005; Rainguet & Dodge, 2001; Tunnell & Gaines, 1992). Politics have also been indicated to affect internal discipline (Johnson, 2015; Reynolds & Hicks, 2015; Shane, 2012). According to Shane (2012), "Two prominent investigative commissions (e.g., Mollen Commission, 1994, pp. 63-64; Rampart Independent Review Panel, 2000, p. 9) drew similar conclusions about unequal treatment during the disciplinary process. The Commissions' findings are also consistent with one earlier study that revealed differential treatment during the disciplinary process may arise from ". . . special interests and politics . . ." (Melnicoe & Menning, 1978, p. 193) that are unrelated to the merits of the allegation."

While no known research empirically correlates media, politics, and the criminal justice field together within a bias-creating construct, the anecdotal evidence supporting such a link is admittedly robust. Based on the evidence, a hypothesis regarding the correlation between implicit/explicit bias and media/political influence on criminal justice force response investigations is reasonable. More specifically, it is rational to question the biasing impact on the entire criminal justice system by adverse post-incident outcomes such as viral social media, politicized rhetoric, and violent protests on force response investigations/judgments (Johnson, 2016; Miller & Davis, 2008; Waters, 2012).

The current research is not intended to validate the proposed hypothesis empirically. The present author opines the supporting evidence is significant and creates a platform from which to discuss investigatory bias in force investigations, which is the purpose of this document. It is from an evidence-based platform linking media/political/social causal factors with implicit/explicit investigatory bias from which the reader may contemplate the following narrative.

Evidence of Bias

As previously stated, investigatory bias research concerning the criminal justice system[3] is robust and extends in a myriad of directions. However, most (if not all) contextual research focuses on cases where citizens were wrongfully convicted and/or internal investigations favored officers (Arce, & Whitmore, 2016; Liederbach et al., 2007; McLean, & Roach, 2011; Moran, 2016; Obrien, 2009; O'brien & Ellsworth, 2006; Oppenheimer, 2012). Recent force response investigations circumscribed by viral media, protests, and political pressure provide hypothetical foundation to consider biased decisions resulting in extraordinary discipline and/or criminal charges (Alberty, 2014; Department of Justice, 2014; Eiserer, 2015; Fenton, 2016; Garza, 2015; George, 2016; Fernandez, & Williams, 2015).

The extraordinary discipline and criminal charges have included firings, indictments, and prosecutions based upon human errors (mistake of fact), subjective determinations of proximal cause, and policy violations. Results in which similar errors, proximal causes, and policy violations without a viral negative outcome would typically lead to no or lower levels of discipline and retraining. However, the adverse outcome of these cases anecdotally increased the consequences.

When considering whether bias was involved in these types of situations, one must take into account whether the investigatory focus was on the officer's behavior or the negative outcome of the event. For instance, a Milwaukee officer was fired for policy violations/pre-incident decisions after the officer responded with deadly force to an emotionally disturbed man who disarmed and battered the officer with the officer's own baton. The Milwaukee Chief of Police supported the firing by stating: "If the outcome had been benign, we would be looking at a training issue" (Sachs, 2014, p.1).

In response to the firing, Milwaukee Alderman Bob Donovan stated,

> I am saddened and sickened by the way it seems some people are apparently playing politics. Decisions like this need to be based on facts and should not be influenced by anything other than a thorough investigation. Although I too am frustrated with how long the process is taking, firing this officer now is unjust and unfair. Cooler heads need to prevail, and before decisions like this are made, we need to know what the investigation revealed. Even if the officer was guilty of these alleged rule violations, under normal circumstances, they would never, be considered grounds for firing. To me, this entire matter reeks of politics (Sachs, 2014, p.1).

A second anecdotal example is the criminal prosecution of six Baltimore police officers for the death of Freddy Gray which, in part, circumscribed a policy violation (seat belting Gray). Criminal Justice experts were critical of Baltimore prosecutor Marilyn Mosby and questioned

[3] Internal equates to within the Criminal Justice organism. Includes police investigators, law enforcement executives, prosecutors, and judges. No human is immune from bias.

whether her vision might have been clouded by bias in charging the officers (Fenton, 2016; Kent, 2016). For example, legal commentator Horace Cooper, a former assistant law professor at the Antonin Scalia Law School at George Mason University in Virginia, said, "These cases have finally come to an end. They should never have begun. Trials are not fact-finding opportunities nor are they tools to quell a restless crowd" (Kent, 2016, p.1). Former Baltimore Police Chief Batts also indicated the prosecutions were biased in stating, "The justice system is supposed to be without bias for police officers, African Americans, for everyone" (George, 2016, p.1)

Lastly, an Arlington Texas police officer trainee was fired just days after shooting an unarmed but aggressively assaulting black male during a burglary. The Arlington Chief of Police supported the firing based on the officer's poor decisions leading up to the deadly force encounter. The officer's lawyer stated the chief "...used 20/20 hindsight to protect his job and appease anti-police activists…" (Fernandez, & Williams, 2015, p.1). A Grand Jury declined to indict the officer prompting his attorney to state, "Too often, police officers' decisions are judged without proper consideration of the tense and dangerous situations they face" (FOX4News, 2016, p.1).

Regarding internal discipline, research has shown the significant internal disparity with causal factors ranging from favoritism to political influences (Johnson, 2015; Reynolds & Hicks, 2015; Shane, 2012). According to Johnson (2015), 50% of public employee suspensions/terminations are overturned due to inconsistent discipline. While not all disparity in discipline is linked to bias, the presented evidence is compelling. The totality of which provides a platform to increase the awareness of bias for investigators and those who judge force responses.

Cognitive Bias

To avoid investigatory bias, investigators and those who judge force must realize its bias is prolific and often unintentional. Cognitive bias is a human trait which may unconsciously influence perception, judgment, and action (Arce, & Lowe, 2016; Nosek, Hawkins, & Frazier, 2012; Oppenheimer, 2012; Wier, 2016). Bias is often explained by associating it with our individualized learning (training and experience) garnered over a lifetime. Jack Glaser, Ph.D., a social psychologist at the University of California, Berkley states, "Our brains are wired to put things into boxes…when we're exposed to a member of a given category, we automatically activate related memories" (Wier, 2016, p.1). It is upon these related memories which human's make sound and rational decisions. Humans are fallible, and the academic literature is filled with adverse outcomes of investigatory bias in the criminal prosecution of civilians (Innocence Project, 2017; O'Brien, 2009; O'Brien, & Ellsworth, 2006).

The purpose of the following narrative is not intended to define every bias and heuristic that might effect a force investigation. However, awareness of them should be an endeavor of anyone who sits in judgment of another's actions. The primary purpose of the current research is the need to define important forms of bias associated with errors in investigatory decision making; which include but are not limited to: attribution, confirmation, hindsight, and outcome bias.

Attribution Bias

Forensic Psychologist Dr. Jason Roach of the University of Huddersfield defines attribution bias as when an investigator, "attributes different causal explanations to their own behavior than to the behavior of others, even though the behavior is the same" (McLean, & Roach, 2011). In practice, humans have a tendency to prejudge behavior as attributable more to the person than the circumstances that caused the behavior. Prejudgment of this type may be especially true when information is known concerning the person's previous trait based behaviors. For example, when a person is known to be uncoordinated trips and falls people will often attribute the cause to the person's lack of coordination rather than some other external factor (e.g.: unlevel ground) (McLean & Roach, 2011; Mellors, 2015).

The application of attribution bias is not hard to realize within the policing culture. For example; new police officers are stigmatized as having certain positive and negative traits early in their careers. Those stigmas remain long after behavior(s) reflecting the label cease. Therefore, officers said to be over/under aggressive or having less than optimal tactics may immediately have those characteristics attributed to controversial force response performance. While attribution errors may be found to be true, it is incumbent upon the investigator to disregard perspectives and focus solely on the objective facts of the incident.

Confirmation Bias

Confirmation bias is, "the tendency to selectively search for or interpret information in a way that confirms one's preconceptions or hypotheses" (Arce, & Lowe, 2016; Wilke, & Mata, 2012). This tendency cannot be associated with deliberate manipulation, but rather an unconscious process of providing more weight to evidence supporting an agreeable theory while discounting contradictory evidence (O'brien, & Ellsworth, 2006).

O'brien and Ellsworth (2006) state there are two distinct ways confirmation bias can effect a law enforcement investigation. The first is for investigators to unconsciously correlate ambiguous or even contradictory information with the preferred direction of the case. Secondly, confirmation bias could cause an experienced investigator to seek out information which positively correlates with the preferred direction of the case.

Hart et al., (2009) demonstrated the prevalence of confirmation bias by conducting a meta-analysis inclusive of 91 studies and 8,000 participants. The results showed that people are two times more likely to accept information that correlates with their preconceived beliefs. The meta-analysis shows an overwhelming need for investigators to realize confirmation bias is a valid concern that can and has affected both officers and citizens lives inappropriately (Dilch, Kipernik, & Goebelbecker, 2006; Rossmo, 2006; Wallace, 2015).

Hindsight Bias

Hindsight bias is described as a tendency for investigators to falsely believe that an incident/accident/mistake was more foreseeable than was the case for the officer(s) involved. It can exist even when those passing judgment are warned to disregard their after-the-fact

knowledge of the outcome (Dilch, Kipernik, & Goebelbecker, 2006; Fischoff, 1975). Hindsight bias causes investigators to evaluate an adverse result retrospectively with a clear understanding of every decision choice that they believe was available.

Villegjoubert et al., (2006) studied the effects of hindsight bias using facts from a controversial real world officer involved shooting in the United Kingdom. Participants were divided into one of two groups (police officer v. Commissioner) and provided the same narrative details of the shooting. Portions of both groups were given different hindsight information concerning whether the suspect was later found to be unarmed. Respondents were then asked to determine the probability of the suspect being an imminent threat. Respondents in the role of police officer perceived the event to be significantly more threatening than those in the position of commissioner. Respondents with hindsight knowledge of the suspect being unarmed were considerably more likely to indicate the officer used excessive force in using deadly force.

Investigators must consider the in-depth analysis of pre, median, and post-event details resulting from days or weeks of investigation may not be consistent with the officer's experience and perception. A perception that likely evolved in a time compressed, ambiguous, high-stress environment which may have resulted in rapid interpretive judgment while responding to the perceived aggressive actions of the suspect. An impartial force response investigator must ignore the outcome and focus on objective facts described by the totality of the circumstances.

This guidance is not as easily adhered to as some may believe. Research suggests, "hindsight bias is so natural and pervasive that it can be assumed its effect will prevail unless a substantial effort is made to de-bias the hindsight bias" (Dilch, Kipernik, & Goebelbecker, 2006, p.2). Therefore, anyone evaluating a force response must remind themselves they are using an investigative method that takes days and weeks while assessing a situation that occurred in seconds or even milliseconds. An evaluation which may occur concurrent with external (e.g.: social, political) and internal (e.g.: executive) pressures. The primary investigative focus should be on the objective facts and circumstances that led an officer to reasonably perceive and then decide to take a force response action at the moment the response occurred (Dilch et al, 2006; Fischoff, 1975; Graham v. Connor, 1989; Rossmo, 2006).

Outcome Bias

Outcome bias occurs when, "people take outcomes into account in a way that is irrelevant to the true quality of the decision" (Baron & Hershey, 1988, p.570). Outcome bias is different than hindsight bias in that the information used to evaluate an actor's decision is the same as that known to the actor at the time of the decision. However, judgment of the quality of the decision is affected by whether the outcome is positive or negative. Baron and Hershey (1988) conducted an experiment in which doctors were rated on decisions to carry out a type of bypass surgery. The surgery would relieve the patient's pain and increase their life expectancy but included an 8% chance of death during surgery. Two groups of evaluators judged the decision to operate with the only difference being that one group was provided outcome information of success while the other was informed the patient had died. In half the cases, lower decision ratings were given to the unsuccessful situations.

The outcome bias found in Baron and Hershey (1988) demonstrates those judging performance considered the same information and behaviors to be less favorable based solely on the outcome and not the quality of the decision itself. Outcome bias may be one of the more widespread investigatory errors in force response investigations as evidenced in the Milwaukee, Baltimore, and Arlington cases discussed previously. In those cases, policy, procedure, and tactics were cited as the cause for disciplinary action/criminal charges. However, the same conduct would have likely resulted in minor internal discipline or additional training if not for the adverse outcomes[4].

The Unbiased Evaluation

The United States Supreme Court addresses subjective bias within the reasonable officer standard found in Graham v. Connor (1989). The reasonable officer standard focuses on objective facts seemingly or likely intended to remove subjectivity and bias from the equation. The criteria for a force response evaluation includes; (1) the severity of the crime, at issue;[5] (2) the degree and intensity of resistance; and (3) the perceived threat of the offender to the officer or public. The three Graham (1989) factors are judged through an officer's reasonable perception of the objective facts under the totality of the circumstances. A perception often created by tense, uncertain, and rapidly evolving incidents associated with a threat of injury or death and requiring split-second decisions.

Included in the reasonableness evaluation are factors considered under the totality of the circumstances (TOC). These additional objective pieces of information are known to the officer at the time of the force response and should be included research variables. The TOC includes, but is not limited to; (1) prior subject contacts; (2) number of officers on scene compared to number of suspects; (3) age, size, and relative strength of a suspect; (4) special knowledge / skills of the suspect/officer; (5) injury/exhaustion; (6) mental illness/drug use; (7) environmental factors; and (8) suspect proximity to weapons (O'Linn, 2017). Inclusive under the totality of circumstances are visual, auditory, kinesthetic, and olfactory cues that officers may recognize both consciously (explicitly) and subconsciously (implicitly) as a precursor to a force response (Ross, 2013).

Human Performance Psychology

Respected Forensic Analyst, Dr. Jon Nordby (1992) has made it clear that lack of knowledge can bias interpretation and conclusions during investigations. Therefore, it appears vital to ensure force response investigators are informed of all aspects influencing a force response decision. Training in a myriad of investigatory methods and forensic evidence

[4] The Milwaukee Chief stated: "If the outcome had been benign, we would be looking at a training issue" (Sachs, 2014, p.1).

[5] The severity of the crime is often not the crime the offender is being arrested for. In a force event, the officer is making decisions based on the suspect's actions in that moment leading to the force response. The "severity of the crime at issue" is the type of assault or resistance the suspect is engaging in at that moment, e.g,, pulling away, running, punching the officer, shooting at the officer, approaching the officer with a knife in his or her hand, etc.

collection is provided to investigators. However, little if any training on human performance factors is provided to investigators and those who may judge a force response. Ross (2013) provides significant evidence for the inclusion of human performance science in the force response investigatory equation. Similarly, Engel and Smith (2009) argue convincingly for the inclusion of expert testimony regarding human performance factors involved in officer-involved shootings. Evidence suggests that understanding how people function and how they are affected by physiological arousal can be significant in accurately assessing the reasonableness of an officer's force response. Issues of import include aspects of performance psychology such as attention and perception, vision, motor performance, and memory. (Artwohl, 2008; Blake, 2015; Bumgarner et al., 2007; Campbell et al., 2013; Chabris et al., 2011; Engel & Smith, 2009; Honig & Roland, 1998; Hontz, 1999; Hope et al., 2015; Jason, 2010; Klinger, 2001; Lewinski et al., 2015; Ross, 2013; Solomon & Horn, 1986, Staal, 2004; Tobin & Fackler, 1997).

For instance, Tulsa (Ok.) Officer Betty Shelby's attorney reports she did not hear a fellow officer state he had his Taser ready when she shot and killed Terence Crutcher. According to her lawyer, Shelby was even unaware that other officers were on scene. This information may be pivotal in her upcoming first-degree manslaughter trial. To that point, several researchers have explored perceptual deficits experienced under high stress to include officer-involved shootings (by the officer). The distortions include occurrences of auditory and visual narrowing, cognitive deficits, time speeding up/slowing down, and memory distortions (Artwohl, 2008; Chabris et al., 2011; Klinger, 2001; Honig & Roland, 1998; Solomon & Horn, 1986; Staal, 2004).

Reaction time is also a critical aspect for investigators to include in their evaluations. The time from a perceived threat presentation until the officer can respond are necessary evaluative criteria for the reasonableness of officer force responses. The same application of total response time must also be considered when a threat has ended. For instance, research on officer response times to start/stop shooting and the biodynamics of human movement have empirically demonstrated why additional rounds may be fired after a perceived threat has ended and why those rounds may impact a suspect's back (Bumgarner et al., 2007; Campbell et al., 2013; Hontz, 1999; Jason, 2010; Lewinski et al., 2015; Tobin & Fackler, 1997).

Memory science is another area of interest regarding force investigations. NASA researcher Mark Staal (2004) provides a lengthy discussion on the effects of stress on memory while providing significant evidence that anxiety, noise, combat, divided attention, cognitive tunneling, task difficulty, time pressure, and emotional events are some of the reasons for deficits in memory recall. Staal (2004) summarizes his analysis of memory literature by stating, "The research literature concerning the effects of stress on memory consistently demonstrates that elements of working memory are impaired" (p.60).

Unique to law enforcement, Hope et al., (2015) conducted a study comparing the memory of an involved witness to that of an operationally involved police officer after both simultaneously experience a high-stress reality-based scenario. The operationally involved officers, experiencing increased physiological arousal, "…reported significantly fewer correct details about the scenario than observer witnesses" (Hope et al., 2015, p.8). Operational officers reported less information about the weapon involved (in the scenario) and were more likely to report they were unable to answer a question than the involved witness. Of particular interest is 33 of 39 operational officers fired their weapons at the suspect involved in the scenario. 15% of

operational officers and 22% of involved witnesses reported the suspect pointed the weapon at them when in fact the gun remained in the suspect's waistband for the duration of the scenario (Hope et al., 2015).

Lastly, contemporary force response investigations often include evidence from body worn cameras and other video sources. Video evidence can be a source of investigatory confirmation bias as many believe what is seen in the video must have been experienced by the officer. However, research empirically demonstrates the limitations of human vision/perception. Blake (2015) reviews the differences between the human visual experience and recorded video and while not repeating the entirety of those differences here; several theories of visual attention can be instrumental towards mitigating investigatory bias.

Although not all inclusive, some primary human performance theories investigators should be aware of are selective attention, weapons focus, inattention blindness, and change blindness. Selective attention describes the filtering of peripheral information to focus on salient items in the visual field (Blake, 2015). Weapons focus theory pertains to eyewitness testimony and represents a focus of attention on the weapon as opposed to other aspects of the crime scene; particularly the identification of the suspect (Hope & Wright, 2006). Inattention blindness describes the failure to see an unexpected object within the field of view (Chabris et al., 2011). Lastly, change blindness refers to a failure to notice the change in the environment due to shifts in attention or divided attention (Levin & Simons, 1997).

Each of these empirically supported theories are well established within the contextual literature and have been shown to have external validity in force response situations (Artwohl, 2008; Blake, 2015; Bumgarner et al., 2007; Chabris et al., 2011; Hope et al., 2016; Klinger, 2001; Honig & Roland, 1998). These theories apply to witnesses, suspects, and officers and can be of import when reports of an incident do not have internal (e.g.: between officers) or external (e.g.: body camera) consistency.

Kenny Conley and Investigatory Bias

While scenarios have been created to empirically validate aspects of performance psychology in police related settings (Hope et al., 2015; Ross, 2013), there is only one empirical study known to the author which recreates a previous real-world police incident and involves a potentially biased investigation (Chabris et al., 2011). The real-world incident occurred on January 25th, 1995 and included Boston Police Officer Kenny Conley. Conley assisted in a pursuit of several shooting suspects. During the chase, other responding officers caught a man they believed to be a suspect and battered him severely. Unfortunately, that man was a black undercover officer (Michael Cox) who was mistaken for the suspect. At some point, the officers realized their mistake and fled the scene (Spiegel, 2011). Cox received kidney damage and head wounds as a result of the beating he received from responding officers. The incident prompted an internal investigation in which none of the responding officers admitted involvement. The incident became a “huge scandal” (Spiegel, 2011, p.1) and after the Boston PD investigation had stalled, federal authorities became involved (The National Registry of Exonerations, 2012).

During the investigation, Conley was the only involved officer to state he ran by the area where the beating occurred (Spiegel, 2011). However, Conley denied witnessing the event and continued this denial in light of continued pressure. Many assumed (bias) this was a case of the blue wall of silence and could not believe Conley had not seen the incident (Spiegel, 2011; The National Registry of Exonerations, 2012).

The U.S. Attorney at the time stated Conley provided false testimony in regards to not seeing the excessive force used upon the undercover officer. In August 1997, Officer Conley was indicted by a grand jury for perjury and obstruction of justice. Conley was convicted of both perjury and obstruction of justice, fined $6,000 and sentenced to 34 months in federal prison. The conviction was based on Conley lying about not seeing anyone else pursue the suspect. He was acquitted of a second charge of lying about not seeing the beating of Cox.

The bias associated with this case is not difficult to conceptualize. Dick Lehr, a Boston Globe reporter who wrote a book about the incident stated in an interview, "Common sense would say that he had to see something…whether it's two feet away or five yards away, the beating is in his area, his radar, so to speak" (Spiegel, 2011, p.1). To convict Conley, evidence suggests the investigators, prosecutor, jury, and judge all likely had the same bias as Lehr concerning what Conley must have seen.

Applying the theory of inattention blindness to the Conley incident, Chabris et al, (2011) conducted research replicating the facts of the case entitled, *You do not talk about fight club if you do not notice fight club: Inattentional blindness for a simulated real-world assault.* The research asked graduate students to play the part of Officer Conley as they foot pursued other students simulating a fleeing suspect. The foot pursuit passed 25 feet away from a staged fight between three people. The fight was within their field of view for a significant period of time. The results? At nighttime, when the Conley incident occurred, only 35% of the participants noticed the fight. Even more impressive is the fact that only half the students noticed the fight during daylight (Chabris et al, 2011). For more on Kenny Conley: https://www.youtube.com/watch?v=pFp-J_aY-80&t=1s

In the context of the current research, the Kenny Conley incident provides some anecdotal insight on investigatory bias. First, we must consider the racial implications of the police beating of a black man, one who is actually a fellow police officer. According to Dick Lehr, this was a massive scandal for the Boston Police Department and is described as "Rodney King-like" (Boser, 2012). What effect did social and political pressure on investigators and prosecutors to act based on the racial implications of the case as well as accusations of a "blue wall of silence"?

We may never know whether anyone considered that Conley was telling the truth. Once the focus became the 'blue wall of silence' and a belief that Conley had to have seen something, cognitive bias seemingly prevailed. Dick Lehr later stated, "The Boston Police Department chewed up one of its own and spit him out" (Haygood, 2009). Lehr, a critic of Conley, later admitted to his biased thinking after understanding the concept of inattention blindness (Boser, 2012). Would it have made a difference if the investigators, prosecutor, or jury been presented with this human performance deficit in vision?

The second critical area of import is considering the ramifications of biased investigations (Shane, 2015). Conley lost a great portion of his career and nearly lost his freedom. The current author realizes this error, and its ramifications are no different from any other person who has been wrongfully disciplined, charged, or convicted due to any manner of cognitive bias or investigatory error (Innocence Project, 2017; O'brien, 2009; O'brien, & Ellsworth, 2006). Kenneth Conley was lucky; he has been vindicated, returned to the Boston PD and was recently promoted to the rank of Sergeant (Gelzinis, 2016).

Conclusion

The narrative to this point has created a sound hypothesis of cognitive bias involved in force response investigations. Hypothesis development occurred through the presentation of empirical evidence on the influences of media, social discontent, and politics on the criminal justice system. Also provided for consideration are anecdotal examples where indications of bias exist (e.g., Milwaukee, Texas, Baltimore). The examples resulted in internal discipline inconsistent with behavior, but closely related to the outcome (Fenton & Wenger, 2016; Sachs, 2014), as well as criminal indictments perceived by some as incompatible with the reasonableness standard defined in Graham v. Connor (Kent, 2016; Fenton & Wenger, 2016).

Discipline (administrative or criminal) based more on adverse outcomes and less on objective facts establishes a dangerous precedent. A precedent which has had and is having negative social consequences related to de-policing and dangerous officer safety issues associated with hesitation to take appropriate action (Alberty, 2014; Blake, in press; Department of Justice, 2014; Fenton, 2016; Garza, 2015). This article is a reminder that force investigations and associated judgments should not be based upon the outcome of the event, the protests, the riots, or any other post-incident knowledge gathered from an investigation and not available to the officer at the time a force response occurred. Rather, the investigation should be fair and impartial while inclusive of an understanding of human performance science.

Recommendations

1. *Investigators should be adequately qualified and impartial*

Reynolds & Hicks (2015) conducted a study on officer perceptions of organizational justice with a small sample of former and current officers. The results showed that 92% believed police law enforcement agencies are unfair in administering discipline. Johnson (2016) provided evidence that arbitrators overturn 55% of discipline due to the inconsistency of discipline between similar acts of misconduct (e.g.: outcome bias).

Arce & Whitmore (2016) suggest selecting someone from inside or outside the agency who has appropriate "credibility, rank, experience, and are impartial to the outcome of the investigation" (p.1). The International Association of Chiefs of Police (IACP) published a document entitled, *Officer-Involved Shootings: A Guide for Law Enforcement Leaders* which discusses the training of force response investigators (IACP, 2016). One of their recommendations includes the appointment of adequately trained response teams before an

incident occurrs. The IACP (2016) states investigators should be selected and trained before an event, but also strongly recommend an outside committee independently review the completed investigation. A committee consisting of, "…command-level officers, personnel at the supervisory level who were not involved in the incident or investigation, and any other agency specialists who can provide insight" (p.22).

2. *Provide awareness training concerning investigatory bias*

Arce & Whitmore (2016) suggest that investigators and those judging investigative outcomes should attempt to reduce their biases. The only reasonable way to reduce bias is to know it exists, the forms it may take, and to ensure the anti-bias training is consistent throughout one's career (Shane, 2015). Rossmo (2016) states, "By recognizing cognitive biases and employing strategies to counter their influence, law enforcement agencies can take steps to avoid investigative failures" (p.7).

3. *Provide awareness training concerning human factors involved in police force response*

The IACP (2016) recommends an officer-involved shooting investigations team be trained in, "…human performance factors that influence all human behavior during high-stress, time-pressured deadly force confrontations (p.4). Ken Wallentine (2007), Senior Legal Advisor of Lexipol LLC., a former police chief and prosecutor stated, "Anyone claiming to provide an objective evaluation of police use of force must gain the necessary educational foundation to ask the right questions to reach reliable conclusions[6]"(p.1). Lastly, Ross (2013) stated force response investigators should be trained in human factors associated with survival stress to include, "…cognitive processing of lethal force confrontation stressors, responses to an SNS discharge, threat and assault cue recognition, perception formation, perceptual distortions, reaction time principles, decision making, and tactical responses under stress" (p.101).

4. *Avoid coming to conclusions early in the investigation*

Investigators should begin without preconceived beliefs and wait to review all of the evidence before developing a hypothesis. Consider alternative causes and other explanations as to why the hypothesis may be incorrect (Arce & Whitmore, 2016). Investigators and those judging performance should focus on behaviors before outcome to ensure fairness (Gino, Moore, & Baserman, 2008).

Of particular concern is the natural rush to view and interpret video of the force response event. Jon Nordby (1992), a tenured forensic crime scene analyst discussed the biasing effects of visual experiences for investigators. A video review of a force response can easily create a snap judgment that will be hard to reject as an investigation continues. Blake (2015) discusses the differences between the human visual experience and evidence portrayed via video from body worn cameras (BWCs). Theories of cognitive & visual attention presented in this document,

[6] Stated in the context of Human Factors science.

along with the literature on perceptual distortions under stress should be considered as a reason to view the video with an open mind in regards to the officer's experiences/memories.

In addition to the differences between the human and camera, investigators should be aware of their limitations in viewing the video. Recording devices vary in recording speed and have differing capabilities (e.g., night vision). For instance, a video recorded at five frames per second (e.g.: security footage) will not provide near the evidentiary quality of a body worn camera at 30 to 60 frames per second. Further, some iPhones capture data at 240 frames per second which provides significantly more information. According to human response time and bio-mechanical movement research, significant events can occur in less than 250 milliseconds or 7.5 individual frames at 30 frames per second (Blake, 2015; Bumgarner et al., 2007; Campbell et al., 2013; Hontz, 1999; Jason, 2010; Lewinski et al., 2015; Tobin & Fackler, 1997). Therefore, the current author opines that judgment of a force response without forensic frame by frame analysis is deficient and borders on investigatory malpractice.

5. *Seek new ideas rather than rote agreement and expand to new directions as needed*

Shane (2015) recommends seeking independent consultation to challenge findings and to solidify weak areas of an investigation. Rossmo (2006) provides several contextual recommendations; "(1) encourage an atmosphere of open inquiry, (2) consider different perspectives and encourage cross-fertilization of ideas, (3) organize brainstorming sessions and seek creativity, rather than consensus, and (4) ensure investigative managers willingly accept objections, doubts, and criticisms from team members" (p.6.)

6. Consider utilizing the Cognitive Interview or the Forensic Experiential Trauma Interview

The Cognitive Interview (CI) is based upon the science of memory and has been empirically proven to increase recall both within laboratory experiments and field research dramatically. In general, the CI allows for open narration, probing of particular memory scenes, allowing the interviewee to explore other perspectives, and even presenting details in reverse order (e.g.: end of the event to the beginning) (Memon, Meissner, & Fraser, 2010). A meta-analysis of the cognitive interview conducted by Memon, Meissner, and Fraser (2010) demonstrated the CI to substantially increase recall; prompting the authors to state, "…the current literature provides a strong basis from which policymakers and law enforcement should seriously consider altering their everyday practices to allow for introduction of the CI" (p.363).

The Forensic Experiential Trauma Interview (FETI) was introduced in 2010 and is presented as an improvement to the methods used within the Cognitive Interview (CI) as it focuses on trauma victims. The FETI is similar with the CI in regards to open-ended questioning, rapport building, and avoidance of victim blaming (Malone, & Strand, 2015). However, the FETI technique allows the interviewee to begin at any point of the experience, is interested in the emotional experiences as a method to gather evidence, and avoids questions which memory science has established are likely unavailable in memory. Malone & Strand, (2015) report the FETI as increasing solve rates as well as increased prosecution/conviction rates in sexual assault cases.

References

Alberty, E. (2014, October 23). *D.A. Seeks Appeal of Dismissed Manslaughter Charge Against Shaun Cowley*. The Salt Lake Tribune. Retrieved March 19, 2017, from http://www.sltrib.com/news/1739619-155/case-cowley-dever-appeal-judge-prosecutors

Arce, E.T., & Lowe, S.J. (2016). *A Practical Look at Eliminating Biases (Unconscious or otherwise) in Investigations and Discipline*. League of California Cities. Retrieved on May 11, 2017 from https://www.cacities.org/Resources-Documents/Member-Engagement/Professional-Departments/City-Attorneys/Library/2016/Spring-2016/5-2019-Spring-A-Practical-Look-at-Eliminating-Bias.aspx

Artwohl, A. (2008). *Perceptual and Memory Distortions During Officer Involved Shootings*. AELE Lethal & Less Lethal Workshop. Retrieved from http://www.aele.org/law/2008FPJUN/wb-19.pdf

Blake, D. (in press). De-Policing In America: The Effects of Media and Leadership on Officer's Discretionary Enforcement. Law Enforcement Executive Forum.

Blake, D. (2015). Body Worn Cameras: Comparing Human and Device to Ensure Unbiased Investigations. *Law Enforcement Executive Forum,15*(4). doi:10.19151/leef.2015.1504c

Boivin, R., Gendron, A., Faubert, C., & Poulin, B. (2016). The malleability of attitudes toward the police: immediate effects of the viewing of police use of force videos. *Police Practice and Research,18*(4), 366-375. doi:10.1080/15614263.2016.1230063

Brief of Amicus Curiae Major County Sheriffs' Association In Support of Petitioners, County of Los Angeles v. Mendez. (February 2017) (No. 16-369). Retrieved from http://www.scotusblog.com/wp-content/uploads/2017/02/16-369_amicus_pet_major_county_sheriffs_association.pdf

Boser, U. (2012, November 14). Q and A with Dick Lehr. Retrieved on April 9, 2017, from http://ulrichboser.com/q-and-a-with-dick-lehr/

Bumgarner, J.B., Lewinski, W.J., Hudson, W., Sapp, C. (2007). An Examination of Police Officer Mental Chronometry. *Journal of The Association for Crime Scene Reconstruction.* Retrieved from http://www.forcescience.org/articles/mentalchronometry.pdf

Campbell, A., Roelofs, A., Davey, P., Straker, L. (2013). Response Time, Pistol Fire Position Variability, and Pistol Draw Success Rates for Hip and Thigh Holsters. *The Journal of Human Factors and Ergonomic Society*. 55(2): p 425-434

Caruso, E. M., Burns, Z. C., & Converse, B. A. (2016). Slow motion increases perceived intent. *Proceedings of the National Academy of Sciences,113*(33), 9250-9255. doi:10.1073/pnas.1603865113

Chasmar, J. (2014, August 26). Obama sent three representatives to Michael Brown funeral; none to James Foley Mass. The Washington Times. Retrieved on April 6, 2017, from http://www.washingtontimes.com/news/2014/aug/26/obama-sent-three-representatives-michael-brown-fun/

Chabris, C. F., Weinberger, A., Fontaine, M., & Simons, D. J. (2011). You Do Not Talk about Fight Club if You Do Not Notice Fight Club: Inattentional Blindness for a Simulated Real-World Assault. *I-Perception,2*(2), 150-153. doi:10.1068/i0436

Cohen, J., Tsfati, Y., Sheafer, T. (2008). The Influence of Presumed Media Influence in Politics: Do Politicians' Perceptions of Media Power Matter? *Public Opinion Quarterly*, 72(2), 331-344. doi: https://doi.org/10.1093/poq/nfn014

Department of Justice (2015). *Department of Justice Report Regarding The Criminal Investigation Into The Shooting Death of Michael Brown By Ferguson, Missouri Police Officer Darrent Wilson*. Retrieved on April 6, 2017, from https://www.justice.gov/sites/default/files/opa/press-releases/attachments/2015/03/04/doj_report_on_shooting_of_michael_brown_1.pdf

Dilich, M., Kopernik, D., & Goebelbecker, J. (2006). Hindsight Judgment of Driver Fault in Traffic Accident Analysis: Misusing the Science of Accident Reconstruction. *Transportation Research Record: Journal of the Transportation Research Board,1980*, 1-7. doi:10.3141/1980-03

Dowler, K., & Zawilski, V. (2007). Public perceptions of police misconduct and discrimination: Examining the impact of media consumption. *Journal of Criminal Justice,35*(2), 193-203. doi:10.1016/j.jcrimjus.2007.01.006

Engel, R. S., & Smith, M. R. (2009). Perceptual distortion and reasonableness during police shootings: Law, legitimacy, and future research. *Criminology & Public Policy,8*(1), 141-151. doi:10.1111/j.1745-9133.2009.00538.x

Eiserer, T. (2015, March 31). *Fired Dallas Officer Explains Why She Shot Suspect.* Retrieved on March 25, 2017, from http://www.wfaa.com/news/crime/fired-dallas-officer-explains-why-she-shot-suspect/302003753

Fenton, J. (2016, May 09). *Prosecutors to test novel legal theory in trial of officer charged in Freddie Gray case.* Retrieved March 19, 2017, from http://www.baltimoresun.com/news/maryland/freddie-gray/bs-md-ci-nero-trial-preview-20160508-story.html

Fenton, J. & Wenger, Y. (2016, September 28). *Rawlings-Blake Accuses Mosby of Bowing to Political Pressure, Charging Baltimore Officers Too Soon*. Retrieved on May 15, 2017 from http://www.baltimoresun.com/news/maryland/baltimore-city/politics/bs-md-ci-mosby-rawlings-blake-20160928-story.html

Fernandez, M. & Williams, T. (2015, August 12). Texas Officer Who Killed Unarmed Man Made Mistakes, Police Experts Say. Retrieved on May 14, 2017 from https://www.nytimes.com/2015/08/13/us/texas-arlington-shooting-christian-taylor-brad-miller.html?_r=0

Fischhoff, B. (1975). Hindsight is not equal to foresight: The effect of outcome knowledge on judgment under uncertainty. *Journal of Experimental Psychology: Human perception and performance, 1*, 288-299. doi:10.1037/0096-1523.1.3.288

FOX4News. (2016, June 8). *Grand Jury Declines to Indict Arlington Officer for Shooting Teen at Dealership*. Retrieved on May 15, 2017 from http://www.fox4news.com/news/156025177-story

Fryer, R. (2016). An Empirical Analysis of Racial Differences in Police Use of Force. *National Bureau of Economic Research* [Working Paper 22399]. doi:10.3386/w22399

Garza, L.M. (2015, August 11). *Officer Fired for 'Troubling' Decisions in Shooting of Texas Teen.* Reuters. Retrieved March 19, 2017, from http://www.reuters.com/article/us-usa-police-texas-idUSKCN0QG2AR20150812

Graham v. Connor, 490 U.S. 386 (1989).

George, J. (2016, July 27). *Former Police Commissioner: Mosby 'incompetent' and 'vindictive'*. Retrieved on March 25, 2017, from http://www.baltimoresun.com/news/maryland/freddie-gray/bs-md-ci-batts-gray-20160727-story.html

Gelzinis, P. (2016, April, 5). Gelzinis: Ken Conley Vindicated by Making Rank. Boston Herald. Retrieved on April 9, 2017, from http://www.bostonherald.com/news/columnists/peter_gelzinis/2016/04/gelzinis_ken_conley_vindicated_by_making_rank

Goidel, R. K., Freeman, C. M., & Procopio, S. T. (2006). The Impact of Television Viewing on Perceptions of Juvenile Crime. *Journal of Broadcasting & Electronic Media,50*(1), 119-139. doi:10.1207/s15506878jobem5001_7

Haygood, W. (2009, July 21). 1995 Beating by Boston Police Highlights Dangers for Black Undercover Officers. Washington Post. Retrieved on April 9, 2017, from http://www.washingtonpost.com/wp-dyn/content/article/2009/07/20/AR2009072003216.html

Hontz, T.A. (1999). Justifying the Deadly Force Response. *Police Quarterly*. 2(4): p462-476.

Honig, A.L. & Roland, J.E. (1998) *"Shots Fired: Officer Involved."* The Police Chief, October, 1998.

Hope, L., & Wright, D. (2007). Beyond unusual? Examining the role of attention in the weapon focus effect. *Applied Cognitive Psychology*,*21*(7), 951-961. doi:10.1002/acp.1307

Innocence Project (2017). *The Cases*. Retrieved on March 25, 2017, from https://www.innocenceproject.org/cases/

International Association of Chiefs of Police (2016). *Officer-Involved Shootings: A Guide for Law Enforcement Leaders*. Washington, DC: Officer of Community Oriented Policing Services. Retrieved on March 19, 2017, from http://www.theiacp.org/portals/0/documents/pdfs/e051602754_Officer_Involved_v8.pdf

Jaeger, C. B., Levin, D. T., & Porter, E. (2017). Justice Is (Change) Blind: Applying Research on Visual Metacognition in Legal Settings. *Psychology, Public Policy, and Law*. doi:10.1037/law0000107

James, L., James, S. M., & Vila, B. J. (2016). The Reverse Racism Effect. *Criminology & Public Policy*,*15*(2), 457-479. doi:10.1111/1745-9133.12187

Johnson, D. (2016, October 13). Social Media's Impact on Incidents Involving Police Use of Deadly Force. *Claims Journal*. Retrieved on March 19, 2017, from http://www.claimsjournal.com/news/national/2016/10/13/274204.htm

Johnson, R.R., (2016). Inconsistent Employee Discipline. Dolan Consulting Group. Retrieved on May 14, 2017 from http://dolanconsultinggroup.com/wp-content/uploads/2016/11/RB_Inconsistent-Discipline_November-2016.pdf

Judicial Watch (2014, December 5). Exposed: Holder Uses Tax Dollars to Attack Police. Retrieved on May 16, 2017 from http://www.judicialwatch.org/press-room/weekly-updates/obama-lawless-amnesty-costs-exposed/

Kent, J. (2016, July 27). Baltimore Prosecutor Condemned for Remarks, Actions in Freddie Gray Case. The National Center for Public Policy Research [Press Release]. Retrieved on May 15, 2017 from http://www.nationalcenter.org/P21PR-Mosby_Freddie_Gray_072716.html

Klinger, David (In Review) Police Responses to Officer-Involved Shootings. Washington, D.C.: National Institute of Justice.

Levin, D. T., & Simons, D. J. (1997). Failure to detect changes to attended objects in motion pictures. *Psychonomic Bulletin & Review*, *4*(4), 501-506.

Lewinski, W.J., Dysterheft, J.L., Bushey, J.M., Dicks, N.D. (2015). Ambushes Leading Cause of Officer Fatalities – When Every Second Counts: Analysis of Officer Movement from Trained Ready Tactical Positions. *Law Enforcement Executive Forum*. 15(1): 1-15

Liederbach, J., Boyd, L. M., Taylor, R. W., & Kawucha, S. K. (2007). Is It an Inside Job?: An Examination of Internal Affairs Complaint Investigation Files and the Production of Nonsustained Findings. *Criminal Justice Policy Review*,*18*(4), 353-377. doi:10.1177/0887403407303799

Mellors, O. (2015, September 17). Human Factors and the Fundamental Attribution Error of Incident Investigations. *Safety & Health Practicioner*. Retrieved on March 21, 2017, from http://www.shponline.co.uk/human-factors-and-the-fundamental-attribution-error-of-incident-investigations/

Melnicoe, W., & Menning, J. (1978). *Elements of police supervision* (2nd ed.). New York, NY: Macmillan

McLean, M., & Roach, J. (2011). Cognitive Bias and Criminal Investigations. *University of Huddersfield Repository*. Retrieved on March 21, 2017, from http://eprints.hud.ac.uk/10482/

Miller, J., & Davis, R. C. (2008). Unpacking public attitudes to the police: contrasting perceptions of misconduct with traditional measures of satisfaction. *International Journal of Police Science & Management*,*10*(1), 9-22. doi:10.1350/ijps.2008.10.1.9

Mollen Commission. (1994). Commission to investigate allegations of police corruption and the anti-corruption procedures of the police department (Commission Report). New York, NY: City of New York.

Moran, R. (2016). Ending the Internal Affairs Farce. *Buffalo Law Review*, 64, 837-906. Retrieved on March 26, 2017, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2778702##

Murdaugh, J.T. (2005). *Succession and the Police Chief: An Examination of the Nature of Turnover Among Florida Police Chiefs* [Dissertation]. Retrieved on April 6, 2017, from http://diginole.lib.fsu.edu/islandora/object/fsu:180415/datastream/PDF/view

Nordby, J. J. (1992). Can We Believe What We See, If We See What We Believe?—Expert Disagreement. *Journal of Forensic Sciences*,*37*(4): 1115-24. doi:10.1520/jfs13297j

Nosek, B. A., Hawkins, C. B., & Frazier, R. S. (2012). Implicit Social Cognition: From Measures to Mechanisms. *Trends in Cognitive Science*,*15*(4), 152-159. doi:10.2139/ssrn.1781222

O'brien, B., & Ellsworth, P.C. (2006). Confrimation Bias in Criminal Investigations. *1st Annual Conference on Empirical Legal Studies Paper*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract-id=913357##

O'brien, B. (2009). Prime suspect: An examination of factors that aggravate and counteract confirmation bias in criminal investigations. *Psychology, Public Policy, and Law,* 15(4), 315-334. doi:10.1037/a0017881

Oppenheimer, A. (2012). *The Psychology of Bias: Understanding and Eliminating Bias in Invesitgations.* Retreived on May 11, 2017 from http://amyopp.com/wp-content/uploads/2013/07/Psychology_of_Bias_May_2012.pdf

Rainguet, F. W. & Dodge, M. (2001). The Problems of Police Chiefs: An Examination of the Issues in Tenure and Turnover. Police Quarterly, 4(3), 268-288. doi: 10.1177/109861101129197851

Rampart Independent Review Panel. (2000). *Report of the Rampart Independent Review Panel: A report to the Los Angeles Board of Police Commissioners concerning the operations, policies, and procedures of the Los Angeles Police Department in the wake of the Rampart scandal.* Retrieved from http://www.oiglapd.org/rirprpt.pdf

Rehkopf, B. (2016, July 7). Transcript: Obama comments on police involved shootings. *The Hill*. Retrieved on April 6, 2017, from http://thehill.com/blogs/pundits-blog/civil-rights/286941-transcript-obama-comments-on-police-involved-shootings

Reynolds, P., & Hicks, J. (2014). 'There is no justice in a police department': a phenomenological study of police experiences. *Police Practice and Research,16*(6), 469-484. doi:10.1080/15614263.2014.931229

Rossmo, D.K. (2006, September). Criminal Investigative Failures; Avoiding the Pitfalls. FBI Law Enforcement Bulletin. Retrieved on March 21, 2017, from http://www.au.af.mil/au/awc/awcgate/fbi/cognitive_bias.pdf

Ross, D.L. (2013). Assessing Lethal Force Liability Decisinos and Human Factors Research. Law Enforcement Executive Forum, 13(2), 85-107. Retrieved on March 19, 2017, from http://www.aele.org/Ross_Forum_2013-2.pdf

Sachs, J. (2014, October 15). *Officer Who Fatally Shot Dontre Hamilton Fired From the Milwaukee Police Department*. Retrieved on May 14, 2017 from http://fox6now.com/2014/10/15/breaking-mpd-fires-police-officer-who-fatally-shot-dontre-hamilton/

Sanchez, R. (2016, September 23). Charging the Police: By the Numbers. Retrieved on June 2, 2017 from http://www.cnn.com/2016/09/23/us/police-involved-shooting-charges/

Surette, R. (2015). *Media, crime, and criminal justice: images, realities, and policies*. Stamford, CT: Cengage Learning.

Shane, J. M. (2012). Police Employee Disciplinary Matrix. *Police Quarterly,15*(1), 62-91. doi:10.1177/1098611111433026

Spiegel, A. (2011, June 20). *Whey Seeing (The Unexpected) Is Often Not Believing*. Retrieved on March 23, 2017, from http://www.npr.org/2011/06/20/137086464/why-seeing-the-unexpected-is-often-not-believing

Solomon, R.M. & Horn, J.M. (1986) *Post-Shooting Traumatic Reactions: A Pilot Study,* in Reese, J.T. and Goldstein, H.A. (eds). Psychological Services for Law Enforcement. Washington, D.C.: U.S. Goverment Printing Office

Staal, M. A. (2004). *Stress, Cognition, and Human Performance: A Literature Review and Conceptual Framework* (pp. 1-168, Tech. No. 212824). Moffett Field, CA: NASA. https://human-factors.arc.nasa.gov/flightcognition/Publications/IH_054_Staal.pdf

Surette, R. (2011). *Media, crime, and criminal justice: Images, realities, and policies* (4th ed.). Belmont, CA: Wadsworth Publishing Co.

The National Registry of Exonerations (2012). Kenneth Conley. Retrieved on March 23, 2017, from https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3120

Tunnel, K.D. & Gaines, L.K. (1992). Political Pressures and Influences on Police Executives: A Descriptive Analysis. *American Journal of Police*, 11(1), 1-16. Retrieved from https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=137591

Tobin, E.J. & Fackler, M.L. (1997). Officer Reaction – Response Times in Firing a Handgun. *Journal of the International Wound Ballistic Association*. 3(1): p 6-9

United States Department of Justice (2015, March 4). *Department of Justice Report Regarding the Criminal Investigation Into the Shooting Death of Michael Brown by Ferguson, Missouri Police Officer Darren Wilson* (Rep.). Retrieved March 19, 2017, from Department of Justice website: https://www.justice.gov/sites/default/files/opa/press-releases/attachments/2015/03/04/doj_report_on_shooting_of_michael_brown_1.pdf

Villejoubert, G., O'Keeffe, C.J., Alison, L.J., & Cole, J.C. (2006). Hindsight bias and shooting incidents. In S. Giles & M. Santar Cangelo (Eds.), Psychological aspects of legal processes (pp. 17-24). Liverpool: IA-IP Press.

Wallentine, K. (2007, September 5). *How to Ensure Use of Force is "Reasonable and Necessary" and Avoid Claims of Excessive Force*. PoliceOne.com. Retrieved on May 19, 2017 from https://www.policeone.com/legal/articles/1271618-How-to-ensure-use-of-force-is-reasonable-and-necessary-and-avoid-claims-of-excessive-force/

Waters, G. (2012, November). Social Media and Law Enforcement. *FBI Law Enforcement Bulletin.* Retrieved on March 21, 2017, from https://leb.fbi.gov/2012/november/social-media-and-law-enforcement-potential-risks

Weir, K. (2016, December). Adoption of Implicit Bias Tests is 'Hasty'. Monitor on Psychology, 47(11) p. 40. Retrieved on March 21, 2017, from http://www.apa.org/monitor/2016/12/policing-sidebar.aspx

Weitzer, R., & Tuch, S. A. (2005). Racially Biased Policing: Determinants of Citizen Perceptions. *Social Forces,83*(3), 1009-1030. doi:10.1353/sof.2005.0050

Wilke, A., & Mata, R. (2012). *Cognitive Bias*. V.S. Ramachandran (ed.) The Encyclopedia of Human Behavior, vol. 1, pp. 531-535. Academic Press.