

Assessing Lethal Force Liability Decisions and Human Factors Research

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Introduction

Law enforcement officers frequently work in an environment where they must evaluate the volatile behaviors of a subject, cognitively process them, and decide to fire their firearm within a split-second in self-defense or defense of another (Callahan, 2003; DuCharme, 2002; McGuiness, 2009). Whether confronting a suspect on a traffic stop, during a disturbance call, or when being fired upon, the environment in which the officer must make a decision to use lethal force is unique due to the stress and limited reaction time, and he or she must react immediately without time for leisurely reflection. The split-second decisionmaking environment commonly requires judgment making under severe environmental constraints such as darkness, shadows, and other limitations of vision; noise; weather; and other environmental confrontational variables. The rapidly evolving situation in which a suspect makes a furtive movement forces the officer to quickly and without deliberation make an instantaneous decision to shoot or not to shoot. Forming the perception of danger and making a decision to shoot under time pressures will be assessed in a nonstressful atmosphere for many years to determine the justification of the decision. The involved officer will be required to demonstrate that he or she was objectively reasonable in forming the perception that the decision to use lethal force was justified. Westley (1970) aptly described the plight of the officer by stating that the officer is often alone in this nightmare, like a pedestrian in Hell.

The use of lethal force by the police has been of great interest to policymakers and researchers (Engel & Smith, 2009; Fyfe, 1988, 1989; Geller

& Scott, 1992; Klinger, 2004; Lester, 1984; Matulia, 1982; McLaughlin, 1992; Skolnick & Fyfe, 1993). Further, the use of lethal force has generated much civil liability underscoring claims of excessive force and cases of criminal prosecution (del Carmen, 1991; Kappler, 2006; Lee & Vaughn, 2010; Novak, 2009; Novak, Smith, & Frank, 2003; Ross, 2000, 2013; Silver, 2010). To aid officers in making lawful and justifiable decisions in using force, including lethal force, the U.S. Supreme Court has provided guidance by rendering rulings in the seminal cases of *Tennessee v. Garner* (1985) and *Graham v. Connor* (1989). Importantly *Graham* underscores that under the Fourth Amendment, officers are authorized to use objective reasonable force and such degree of force will be assessed on a case-by case basis, within the totality of the circumstances, and based on the following criteria: the severity of the crime at issue, whether the suspect was actively resisting arrest, and whether the suspect was attempting to evade arrest by flight. The Court ruled that objective reasonable force is not capable of precise definition or mechanical application and stated that judging an officer's use of force must allow for the fact that police officers are often forced to make split-second decisions in circumstances that are tense, uncertain, and rapidly evolving and that the type and degree of force to use in a given situation must come from the perspective of a reasonable officer on the scene rather than from 20/20 hindsight.

Scientific research has shown that making a decision under stress and time pressures can affect a person's sensory perception and ultimately their performance (Horowitz, 1976; Hsieh, 2002; Kavanagh, 2006; Miller & Low,

2001). Processing incoming stimuli under time pressures and restricted reaction time can impact cognitive processing which can create perceptual distortions. Consistent with the *Graham* standard, assessing a claim of excessive force within the calculus of reasonableness must take into account perceptual distortions and performance limitations bearing directly on the question of an officer's reasonableness. The Court has endorsed a "reasonableness at the moment" standard noting that police officers are often forced to make split-second decisions in unpredictable and dynamic arrest environments. Applying the science behind cognitive and physiological processing, perceptual formation, and performance can be complicated when attempting to determine whether an officer's use of force was justified. Understanding the legal application of perceptual processing in circumstances in which the police use lethal force becomes important in fully understanding what constitutes justifiable force.

Determining what is reasonable force in a violent confrontation, however, is a challenging endeavor (Alpert & Smith, 1994). It is therefore important to examine how the courts apply various human factors affecting sensory perception formation in determining objective reasonable force. In the past, research assessing the trends in §1983 litigation on the police use of force has been performed independent of the psychological and physiological research on perception formation. Research, however, which examines published case decisions by the lower courts' application of the human factors impacting perception formation by the officer has not been previously performed. The purpose of this research is to assess how the lower courts apply the human factors associated with perception formation which aids them in determining whether a force incident was justified. The objective of the research is to determine whether there are identifiable court decision patterns which reveal how they review the totality of the circumstances of the incident and how they apply the officer's perception of deciding to use reasonable force in lethal force confrontations. The findings of this analysis will improve an officer's

understanding of the court's methodology in considering perception formation when determining reasonable use of force, it will assist administrators in revising training methods, and it will also assist investigators tasked with investigating officer-involved shootings.

Overview of Human Factors

Human factors research is the application of varied scientific disciplines which address the interrelationship between humans and the environment in which they live and work and examines cognitive processing and decisionmaking in an effort to optimize human well-being and overall performance (Nelson, 2012; Noy & Karwowski, 2005). A brief overview of the research on how human performance is effected when a survival stress response is activated impacting cognition, physiology, decisionmaking, and physical response when police officers are confronted with a perceived life-threatening lethal force situation is discussed.

Survival Stress Activation

It is well-known that physiological stress can impact perception (Janis & Mann, 1977; Welford, 1980). In a high-level stress situation in which the person develops the perception that their life is in immediate peril, a cascade of physiological components are automatically released which prepare the body to respond. Cannon (1929) best described this automatic and adaptive response mechanism as the "fight or flight" response. The physiological response under stress activates the autonomic nervous system triggering a sympathetic nervous system (SNS) discharge which results in an immediate release of epinephrine and hydrocortisone; an increase in blood pressure; an increase in heart rate; perspiration; muscle tension; an increase in pupil size; dry mouth; increased breathing rate; and improved blood flow to the brain, heart, and large muscles. This process is activated without conscious thought to prepare the person to respond to the stressful encounter (Groer et al., 2010; Sapolsky, 2004; Schwartz & Begley, 2003).

Under an SNS discharge, physiological resources flow to various regions of the body in order to respond to the threat. In a life-threatening and stressful circumstance, the focus of the brain shifts from thinking to reacting (Easterbrook, 1959). The focus is on the source of the threat; as cognition processing slows, instinctive decisionmaking takes over. As the brain tunes into the source of threat, the visual system is heightened and narrows if it is the dominant source of the information. The more complex the threat and the environment, the more pronounced the effect of the stress on perception will be (Welford, 1980). The phenomenon is referred to as *perceptual narrowing* (tunnel vision) or *selective attention*. *Intentional blindness* may occur, which is a failure to see what is obviously directly in line of the vision due to an attentional focus on a competing visual input. Peripheral vision can be significantly narrowed, and information thought to be of little concern is unconsciously rejected and filtered out. Hearing may be diminished causing auditory exclusion. If hearing is the dominant source of information, visual exclusion may occur when a loud sound is heard. Other senses may also be tuned out.

Perception

Perception can be effected under survival stress. Perception is a mental process by which the brain interprets and gives meaning to information received from the senses (Kandel, 2006). It depends on both the psychological and physiological characteristics of the perceiver, in addition to the nature of the stimulus. Perception is the condition of being aware and the product of careful mental activity (Gibson, 1950, 1966; James, 1890). The senses of vision, touch, taste, smell, and hearing all assist in developing a person's perception.

Cognitive processing impacts perception, and response to the perception formed from the senses is directly related to the person's performance (Artwohl, 2002; Honig & Lewinski, 2008; Kandel, 2006; Ratey, 2001; Salas & Driskell, 1996). Varying degrees of stress can significantly affect perception (Dror, 2007).

Perception is influenced by several factors, including intensity, physical dimensions of the stimuli, the person's past experiences, attention factors, stress levels, and the person's readiness to respond to the stimulus. Vision is influenced from perceived patterns, and the ability to perceive and distinguish important figures from background is critical. In a stressful situation, vision can be affected, and the brain directs the focus of attention to that stimuli requiring immediate attention while excluding peripheral stimuli (Chabris & Simons, 2009). Selective attention (or misperception) explains how a person may miss observing something that is in his direct sight of vision or not hear something because the brain has focused the vision directly on the immediate stressor that requires attention. Salas and Driskell (1996) found that cognitive effects of stress may include narrowing of attention, tunnel vision, color distortions, decisionmaking, increased errors, and longer reaction time to peripheral stimuli, which all can impact perception formation and create fragmented recall. Accordingly, this phenomenon occurs from an overload of visual sensory input or from focusing primarily on the task at hand. Environmental factors such as low lighting may also intensify selective attention as vasoconstriction of the retina occurs. This can explain why a person may misperceive a situation and actually be blind to seeing the obvious (Ross, Murphy, & Hazlett, 2012).

SNS Activation and Tactical Implications

Under a survival stress response, important tactical implications may arise. Threat cues may be missed due to perceptual narrowing. SNS activation can inhibit the ability to maintain near vision, the ability to focus, the ability to determine depth perception, and cause problems with night vision and monocular vision (Breedlove, 1995; Godnig, 2001). Breedlove (1995) found peripheral vision is reduced by approximately 70%. Fine motor skills begin to deteriorate giving way to gross motor skill applications. Ratey (2001) found that the effects of stress are shown to effect motor performance. Yerkes and Dodson

(1908) proposed that arousal (stress) and performance were associated. Creating a model known as the Inverted-U hypothesis, they explained that as arousal increased, performance also increased to a certain point, but that continued increase in arousal would lead to a detriment in performance (noting a curvilinear relationship). Gould, Petlichkoff, Simons, and Vevera (1987) found anxiety to have a curvilinear relationship with pistol-shooting performance, supporting the Inverted-U hypothesis.

Survival reaction time, which is the process of perceiving a threat and initiating a survival motor response, can be altered. Ratey (2001) developed a reactionary response model (RRM) which has three stages: (1) perceiving and assessing the threat, (2) formulating a response, and (3) initiating a motor response. Each component must be sequentially processed, and the stages must align with the effects of cognition, SNS, and vision. As perception of the threat commences, vision narrows, and the brain's ability to evaluate the threat also diminishes. If impairment occurs in the first two stages, the response selection motor response can also be impaired.

The RRM considers the conditions of the operational environment and integrates the cognitive process and a physical response. Further tactical implications are effected. Under time pressures, processing information can be disrupted as there is little time to take in the necessary information to fully assess it. Survival reaction time can be substantially impaired, impacting performance. Moreover, SNS can cause inaccuracy of shooting skills, limitations with physical skills, altered reaction time, and lack of awareness of environmental surroundings, which may pose additional threats to the officer. A myriad of perceptual distortions commonly emerge and are identified in the next section.

Stress and Perceptual Distortion in Officer-Involved Shootings

Prior research on stress and police officer performance identified various perceptual

distortions an officer may experience while engaged in a stressful lethal force encounter (Artwohl & Christensen, 1997; Campbell, 1992; Honig & Roland, 1998; Honig & Sultan, 2004; Klinger & Brunson, 2009; Nielson, 1981; Ross et al., 2012; Ross & Siddle, 2003; Solomon & Horn, 1986). Nielson (1981) reported that of the 63 law enforcement officers studied who are involved in a lethal force encounter, 75% experienced time distortions, vision narrowing, and auditory distortions (or not hearing at all). Solomon and Horn (1986) surveyed 75 police officers who had been involved in a lethal force situation and found that 56% experienced tunnel vision, 65% revealed that time slowed down during the event, and 39% experienced diminished hearing.

Campbell (1992) studied 167 FBI agents who had been involved in a lethal force confrontation and found that 44% reported experiencing tunnel vision, 42% experienced auditory exclusion, and 34% indicated that time slowed down during the incident. Honig and Roland (1998) studied 348 shootings of the Los Angeles Sheriff's Department and found that 45% of the officers experienced tunnel vision, 62% reported slowness in time, 20% stated time increased, and 51% indicated sounds were quieter.

Artwohl and Christensen (1997) surveyed 72 police officers who had survived a lethal force encounter and found that 88% experienced auditory exclusion, 82% experienced tunnel vision, 65% indicated visual clarity, 63% reported slowness in time, and 17% stated time sped up. They also found that 60% of the officers experienced memory difficulties, 36% reported distracted and intrusive thoughts, and 39% felt a sense of disassociation during the incident.

In a survey of 165 officers who were involved in an officer shooting incident, Ross and Siddle (2003) found that 65% experienced tunnel vision; about 33% of the officers experienced auditory exclusion; approximately 75% of the officers reported that they were able to identify the nature of the threat, its seriousness, were

able to execute a complex motor skill, and did not lose eye/hand coordination; and in 66% of the events, the officers were required to respond with no warning or within a few seconds of the altercation. Only 20% reported that they were caught offguard, that they observed the threat but could not believe it; and about 33% of the officers experienced memory loss after the event. For a majority of the officers reporting memory loss, it took two sleep cycles to improve their recall of the event.

In a survey of 982 officer-involved shootings in the Los Angeles Police Department, Honig and Sultan (2004) reported that 42% of the officers experienced tunnel vision, 72% reported experiencing sound distortions (louder or quieter), and that 41% experienced a sense of heightened detail during the event. Klinger and Brunson (2009) found in interviewing 80 officers involved in 113 police shootings that officers experienced visual distortions prior to and after shooting (30/27%). Tunnel vision was experienced by 30% of the officers, as were auditory distortions (59/70%) and time distortions (43/40%). They found correlations existing between sound distortions ($r = 0.24$) while firing their weapon ($r = 0.25$); tunnel vision and reduced sound while firing their weapon ($r = 0.29$); slow motion and auditory blunting prior to firing ($r = 0.28$); and that tunnel vision with increased visual acuity while firing their weapon ($r = -0.27$) were less likely to occur together. They further found that 30% of the officers revealed they felt a need to survive the encounter, 41% experienced fear for self, and 33% did not recall the number of rounds they fired.

Ross et al. (2012) examined the perceptions and misperceptions of 150 veteran police officers who encountered a lethal force situation during a virtual simulation scenario lasting about five minutes. All officers were outfitted with a wireless device which tracked their physiological data during the scenario, and each officer's saliva was measured one time pre scenario and twice post scenario. Post-scenario results showed a significant increase in the cortisol levels at 10- and 30-minute

intervals, showing a connection between an SNS response and elevated cortisol levels (Alpha Amylase and Interlukin-6), and illustrating that the brain did perceive the scenario as stressful. Further, study results indicated that officers experienced perceptual distortions, including tunnel vision (81%), auditory exclusion (24%), distortion in time (61%), depth perception (40%), memory fragmentation (30%), and focus on the threat (86%); and 30% of the officers reported misperceptions of varying suspects' actions throughout the scenario. About 36% of the officers experienced feelings of fear and a need to survive the experience. Results of the experiment showed that as the stressors increased throughout the scenario, the higher the likelihood the officer would experience perceptual distortions and misperceptions.

These studies show that an SNS discharge produces varying levels of survival stress which can have a significant and diminishing impact on task performance in life and death encounters. It can diminish an officer's hearing (auditory exclusion), vision (tunnel vision and loss of near vision), thinking process (cognitive displacement), physical response (loss of motor control), and may impact performance (Salas & Driskell, 1996). A common theme of the case decisions showed that officers' reactions during shootings may adversely affect their ability to recall facts and circumstances surrounding the event accurately when they are questioned by investigators. Specifically, one or a combination of perceptual distortions may cause officers to offer accounts of shootings that are inconsistent with the physical evidence and/or witness statements.

Methods

A total of 1,100 (20%) of 5,550 §1983 lethal force case decisions published by the lower federal courts from 1989 to 2012 were analyzed. Using a Content Analysis Method, cases from the Westlaw and Americans for Effective Law Enforcement (AELE) databases were used to identify police use of deadly force. Using a longitudinal approach provided for a larger

sample of published cases to review, and the date of 1989 was selected as the *Graham* case was decided in that year. A random sample selection procedure was employed to examine the cases. Cases were assigned a four-digit number, and every fifth case was selected for analysis. Using a content analysis is an appropriate procedure to use to assess the trends and significant findings of the contents of published documents and is useful when performing a secondary analysis. This procedure followed the recommendations suggested by Kraska and Neuman (2008) and Maxfield and Babie (2005).

The cases examined represent only published §1983 cases decided by the lower federal courts during the study period. Not all cases, however, that are decided by the courts are published. A judge may believe that a decision does not merit publication of the written opinion or may believe that the case does not set a legal precedent and, subsequently, the case may not be published. Published cases do not reflect the number of cases filed by a plaintiff, the number of cases that may have been dropped by the plaintiff, or the cases that were settled out of court.

Trends in the Court Decisions

The police were awarded summary disposition in 78% of the cases. Cases proceeded to trial in 22% and the police prevailed in 82%. Cases decided in the Second, Fourth, Fifth, Sixth, Seventh, Ninth, and the Eleventh Circuit Courts accounted for 79% of the decisions. Appellate court decisions represented 84% of the total cases. In deciding for the officer, the court noted that the officer formed the reasonable belief that the plaintiff presented an immediate threat in 65% of the incidents, and 35% believed the plaintiff presented an imminent threat.

The case decisions all involved circumstantial and environmental factors, suspect behaviors, and human factors impacting the officer's perception and decisionmaking to fire his or her weapon. The collective totality of these

variables significantly assisted the court or the jury in finding in favor of the police in a high number of cases. In 65% of the decisions, the officer was dispatched to the location, 82% occurred outside, 64% occurred in low lighting, and 73% occurred between 9:00 PM and 3:00 AM. While the total time of an incident may have occurred over several minutes to several hours, the average reaction (response) time to shoot was less than two seconds (90%). Performing a traffic stop, responding to a disturbance call, serving a warrant, and investigating a suspicious person accounted for 88% of the incidents. In 10% of the incidents, the officer attempted less-lethal options prior to shooting; in 12%, physical control of the suspect was attempted; and in 86%, the officer used verbal commands prior to firing. On average, the officer fired five rounds per incident.

The estimated distance between the officer and the suspect at the moment the officer fired was within 12 feet in 86% of the incidents. In 32% of the incidents, the suspect shot at the officer, pointed a weapon at the officer, or pointed it at him- or herself; in 30%, the suspect drove a vehicle/struck the officer with a vehicle; in 13%, the suspect attacked the officer with a personal weapon; and in 10%, the suspect stabbed at the officer with an edged weapon. In 19% of the incidents, the suspect did not possess any weapon. The suspect sustained a fatal injury in 96% of the incidents, was sober in 43%, was determined to be mentally disturbed in 31%, and was intoxicated in 26% of the incidents. In 41% of the incidents, one officer confronted one suspect; two officers encountered one suspect in 49%; and in 10% of the cases, an emergency response team confronted one suspect. In about 81% of the incidents involving a mentally ill person, the person held, charged, or attacked the officer with a potentially deadly weapon.

Case Decisions and Human Factors

Many cases hinge on the issue of whether the arrestee presented an immediate threat of harm to the officer or others. Plaintiffs will most likely litigate such cases from the perspective

of hindsight. This strategy ignores the fundamental holdings of the *Garner* and *Graham* decisions in that the use of force will be judged at the moment it is required, from the perspective of the officer and the rapidly evolving events of the situation—not from hindsight, regardless of the outcome (*Carr v. Deeds*, 2006). Moreover, the perceived danger must only be apparent, not actual, in order to justify the use of lethal force (McGuinness, 2009). The use of lethal force by police underscores these principles as the following cases illustrate.

Suspect Movements

When confronting an individual, police officers are taught to perform a visual assessment of the individual, to watch the person's hands, to be alert to sudden furtive movements, and to maintain as much of a reactionary distance between themselves and the person as feasible. Hesitating in responding to the officer's instructions, ignoring the officer's commands, making furtive glances, making attempts to evade the officer, concealing the hands, and turning quickly are all common behaviors underscoring reasonable suspicion and potential danger for the officer. One of the most common gestures alerting an officer to use a level of force is when a person suddenly reaches toward a pocket or the waistband area.

The officer's justification for using lethal force was supported by developing the perception of a threat to him- or herself or others based on the suspect's movements alone. A common pattern of subject movements and behaviors identified by the courts included the following: sudden reaching motions in the waistband area or at other objects, quick movements of turning toward the officer, lunging and charging the officer, crouching, moving around, standing at an angle away from the officer with the arms crossed across the chest, concealing the hands, attacking the officer, motioning with arms and hands as if attempting to draw a weapon, dipping a shoulder, and grabbing for the officer's weapon.

The courts agree that an officer may use lethal force in self-defense and in defense of another, and the officer has discretion to determine the amount of force required under the circumstances based on the perception developed at the moment force was required. Police officers are required to react to apparent dangers and apparent weapons because normal conditions and lag time do not often allow an officer to ascertain with certainty whether a weapon is present, and the conditions in which an officer operates heightens the likelihood to make mistakes. Indeed, the court in *Monroe v. City of Phoenix, AZ* (2001) held that an officer is not required to wait and be seriously injured or killed before exercising his judgment and bringing the situation under control. The court further concluded by stating that the suspect need not be armed or pose an immediate threat to the officers or others at the time of the shooting. The perceived danger must only be apparent, not an actual danger, in order for the officer to use lethal force (McGuinness, 2009).

Human factor research demonstrates that visually observing a threat level, cognitively processing and recognizing the threat, and responding physically, under time pressure and stressful conditions, can take about 0.5 to 0.75 seconds (Dror, 2007; Godnig, 2001; Hillman, 1995; Lewinski & Hudson, 2003; Lewinski & Redmann, 2009; Sharps & Hess, 2008). The survival system is predisposed to focus all of its resources on responding to the detriment of cognition or conscious thought and slower reasoned decisionmaking. Decisionmaking speed is reduced as is the ability to cognitively process (Squire, 1986). Activation of the SNS under stress can alter survival reaction time, which is the process of perceiving a threat and responding physically. Ratey's (2001) RRM (reactionary response model), discussed earlier, considers the conditions of the operational environment and integrates the cognitive process and a physical response. When time pressures and stress are experienced due to the perception of experiencing a life-threatening event, the time needed to fully process the incoming stimuli

will be disrupted, which may create tactical implications for the officer.

The axiom is that action always beats reaction, and an officer's response will always be slower than the action that prompted the response. An officer more frequently operates behind the reactionary curve, which places him or her at a significant disadvantage (Callahan, 2003; Lewinski, 2000; Lewinski & Redmann, 2009). A suspect may suddenly charge and close the distance between him- or herself and the officer and may also attack the officer faster than the officer may be able to react. An officer does not have the luxury to "wait and see" what an aggressor may or may not do, and responding under stress to a life-threatening circumstance frequently must be performed without full deliberation. Understanding the disadvantages that officers face in unpredictable violent encounters, the courts acknowledge that officers are frequently forced to make a decision in haste without the luxury of a second chance and, therefore, may respond in order to enhance his or her and another's safety. The courts note that it is not necessary that the danger which gave rise to the belief actually existed; it is sufficient that the person resorting to self-defense at the time in question reasonably believed in the existence of such a danger, and such reasonable belief is sufficient even when it is mistaken (*Davis v. Freels*, 1978).

A significant pattern of case decisions make it clear that an officer may use lethal force based on the formation of the perception that he or she is in immediate danger based on the suspect's aggressive movements and behaviors. In *Deluna v. City of Rockford, Ill.* (2006), an officer responded to a domestic disturbance call; as he exited his vehicle, he observed the subject outside of the house, shirtless, approaching him, and stating that he had "something for the officer." The officer commanded him to raise his hands, and the subject refused. The officer drew his firearm and began to walk backward as the suspect continued to approach him. As the officer walked backward, he stumbled on a black plastic pipe and struggled to maintain

his balance. The officer observed the suspect reach behind his back and lunge toward him as he stumbled. Fearing that he was reaching for a weapon, the officer shot the suspect one time from a distance of about 5 to 15 feet, killing the subject. The appellate court affirmed the lower court's summary judgment decision holding that the use of lethal force was justified. The court ruled that regardless of whether the officer saw a gun or believed he was reaching for a weapon, the action of the subject lunging toward him after the bizarre conduct established the real danger of imminent serious bodily injury should the subject actually reach the officer. The court noted that the officer need not wait until there is a serious physical struggle for control of his weapon before the situation presents an imminent danger of serious of physical injury.

In *Wyche v. City of Franklin* (1993), an officer responded to a convenience store where the subject had been acting in a bizarre manner. The store clerk advised the officer of the behaviors of the suspect, and the officer confronted him, from about six feet away. The suspect appeared unarmed as the officer approached him, but the suspect quickly reached behind his back. Fearing that he was reaching for a weapon, the officer shot him in the leg. The suspect charged the officer; the officer commanded him to stop; he continued to advance toward the officer; and the officer shot again, killing him. The court granted qualified immunity to the officer, holding that the officer could have believed that the suspect was attempting to access a weapon and determining that the shooting was justified.

Further, in *Reese v. Anderson* (1991), a responding officer was investigating a robbery suspect who was sitting in his vehicle. The officer ordered him to keep his hands raised. The suspect ignored the instructions and lowered his hands twice out of the view of the officer. During the second time, the suspect leaned over and reached toward the floor of the car and popped back up. When the suspect popped back up, the officer shot and killed him. The appellate court held that the shooting

was reasonable as the officer had less than a second to form the perception that the suspect was reaching for a weapon, and such action presented the officer with a life-threatening situation. Additional court rulings support the principle that an officer forms the perception that the behaviors and actions of a suspect justify the use of lethal force when the suspect represents an immediate threat to the officer, even though the suspect is unarmed (*Billingsley v. City of Omaha*, 2002; *Blossom v. Yarbrough*, 2005; *Carswell v. Borough*, 2004; *Forrett v. Richardson*, 1997; *Greenridge v. Ruffin*, 1991; *Johnson v. City of Memphis*, 2010; *Krueger v. Fuhr*, 1993; *Lamont v. State of New Jersey*, 2011; *Linder v. Richmond County, GA*, 1994; *Manis v. Lawson*, 2009; *Muhammad v. City of Chicago*, 2002; *Ontiveros v. City of Rosenberg*, 2009; *St. Hilaire v. City of Laconia*, 1995; *Thompson v. Hubbard*, 2001). In *Elliott v. Leavitt* (1996), the court opined that the Constitution simply does not require an officer to gamble with his or her life in the face of a serious threat of harm. The courts consistently hold that they will not second guess the split-second judgments of a police officer to use lethal force in a context of rapidly evolving circumstance when inaction could threaten the safety of the officers or others.

Suspect Believed to Have a Weapon

Police officers will inevitably make occasional mistakes when operating under tense, unpredictable, and fast-paced circumstances. Such mistakes may result from a subject's behaviors, environmental conditions, and other causes. Applying the human factors model, the RRM (Ratey, 2001), to different circumstances, the courts consider officer perception formation based on the officer's belief that a subject's actions demonstrated that he or she actually had a dangerous weapon, when in fact he did not.

In *Anderson v. Russell* (2001), an appellate court overturned a jury verdict finding in favor of the plaintiff. Officer Russell worked part-time at a local mall as a security officer, and a patron informed him that a man in the mall had a gun under his sweater. Anderson had been

drinking all day, wore several sweaters and a jacket, carried a Walkman radio concealed in his back pocket as well as other bulky items under his sweater. Officer Russell observed Anderson for about 20 minutes and observed a bulge in his back pocket which was covered by the jacket. Russell and a second officer followed Anderson outside and confronted him in the parking lot. With their firearms drawn, the officers instructed him to raise his hands and to kneel on the ground to which he complied. Suddenly, Anderson reached back to his back pocket, and, forming the perception that he was reaching for a weapon, Russell shot Anderson three times for safety reasons. Anderson sustained serious injuries. The appellate court reversed the jury verdict, holding that Russell was forced to make a split-second decision and was reasonable in his thinking that Anderson was armed with a gun. The court noted that an officer does not have to wait until a gun is pointed at him before the officer is entitled to take action.

Frequently, an officer may have to quickly determine whether a subject is holding a weapon or something else. Court decisions have examined whether the officer used reasonable force when confronted with a cell phone or some other object which could be mistaken for a firearm. In *Hudspeth v. City of Shreveport* (2008), officers were engaged in a night pursuit with Hudspeth which lasted about five minutes. Hudspeth pulled into a convenience store parking lot and exited his vehicle holding a silver cell phone. Officers followed him, and he extended his arm with the cell phone and pointed it like a handgun. An officer began to struggle with him. Hudspeth pulled away, aiming the cell phone at a second officer who shot Hudspeth twice. Hudspeth continued to walk toward the convenience store, then turned quickly toward the officers with both hands outstretched as if to point a handgun. The officers instinctively crouched and fired their weapons, hitting Hudspeth in the back and killing him. The entire incident took about seven seconds. The court ruled in favor of the officers and noted that the officers were forced to make a split-second judgment

in a circumstance which was tense, uncertain, and rapidly evolving. The court noted that the officers had an articulable basis to believe that, based on Hudspeth's behaviors, suddenly turning toward the officers and extending his arms with a cell phone as if to point a weapon, the officers could have reasonably perceived him as posing a threat of serious bodily harm, and their actions were reasonable. The incident components illustrate the principle of action versus reaction.

Likewise, in *Summerland v. County of Livingston* (2007), officers were dispatched to a mobile home where the occupant was mentally ill and was causing a disturbance in the neighborhood. On scene, the subject began yelling and threatening the officers through a window. After about 40 minutes, the subject extended an object out of the window which resembled a weapon. Within several minutes, the subject exited the mobile home with the object, and the officers instructed him to drop the weapon several times. He began running at the officers' location, raised the object, and began to lower it as if to point it at the officers. At this point, one officer fired his firearm four times, killing the subject. The object was a metal, tubular L-shaped pipe, which, in the dark and shadows, appeared to look like the barrel of a shotgun. The subject closed to within about 18 feet from the officer. The appellate court affirmed the lower court's summary judgment in favor of the officers, holding that the officers were faced with an aggressive person who had posted a sign threatening "no police or you will be shot"; brandished an object which appeared to be a shotgun; and began charging the officer, forcing him to make a split-second judgment. The court ruled that the diminished capacity of the subject did not make him any less of a serious threat to the officers and that it was reasonable for the officer to shoot to protect himself and others.

Examples of other cases in which the courts ruled in favor of the officer in this category include the following: *Berbue v. Conley* (2007), *Carnaby v. City of Houston* (2011), *Estate of Escobedo v. City of Fort Wayne* (2008), *Loch v. City of Litchfield* (2012), *Lopez v. Las Vegas Metropolitan*

Police Department (2009), and *Simmonds v. Genesee County* (2012). These cases and others represent human factors of perceptual distortions in vision, reaction time, and cognitive processing when the officer is forced to make a split-second decision under rapidly unfolding circumstances and when the environment is less than optimal. Central vision increases at the expense of peripheral vision and depth perception irrespective of whether the shooting occurred in bright sunlight (Breedlove, 1995; Honig & Lewinski, 2008). Environmental conditions like lighting, distance, visibility, and reaction time, as well as emotional issues like fear, anxiety, and stress may cause and enhance perceptual distortions. Processing visual cues by the brain takes longer than auditory cues; and motion is perceived before color, and color is processed before shape. When an officer is forced to process these factors and others under pressures of time and forming the belief that his or her life is in immediate danger, a mistake of fact shooting may occur. This may be more likely for those incidents involving furtive movements as the officer perceives the suspect's motion; sees a dark-colored object of unidentified shape; and, based on the officer's prior experiences, expectations, and contextual cues, perceives a handgun and responds based on that perception (Honig & Lewinski, 2008). This is all occurring within milliseconds without the ability for a second chance. The court in *Gregory v. Zumult* (2008) ruled that the Constitution does not require omniscience or absolute certitude to act in self-defense, and the officer need not be absolutely sure of the nature of the threat or suspect's intent in order to justify the use of reasonable force.

Vehicles Used Against the Officer

The important component from *Garner* is that deadly force may not be used unless it is necessary to prevent escape and if the officer has probable cause to believe the suspect poses a significant threat of death or serious injury to the officer or others. An emerging trend associated with a number of shootings is the suspect using a vehicle as a deadly force instrument against the officer. This type

of incident accounted for about 30% of the shootings. Attempting to evade an officer by flight through the use of a vehicle illustrates the perception of danger the officer may experience from a desperate suspect. The risk of significant injury or death is increased as officers are out of their vehicle when dealing with a stopped motorist. In this position, an officer is extremely vulnerable, and the ability to cognitively process a decision to react and to protect his own or another's safety can be severely compromised. A vehicle may quickly turn, back up, or be driven directly at an officer, which requires split-second decisionmaking and activates the RRM (Ratey, 2001).

In *Smith v. Freland* (1992), an officer acted reasonably when he shot and killed a motorist who had fled from him at speeds in excess of 90 miles per hour when the officer reasonably believed he and citizens were in imminent danger. The motorist attempted to run over the officer and went through a roadblock. When the officer had him cornered in a cul de sac, he turned around on a lawn and drove right at the officer, at which point the officer fired his firearm. The officer's use of lethal force was measured against the facts at the time the force was used as opposed to what may have been done or what was possible by way of hindsight. The court concluded that a car can be used as a deadly weapon, that the officer, fearing for his life, fired in self-defense, preventing the motorist's escape as it presented a threat to others.

Confirming that a car can be used as a deadly weapon, the U.S. Supreme Court implied in *Brosseau v. Haugen* (2004) that using deadly force to stop a car from possibly injuring others, including the officer, was objectively reasonable. Officer Brosseau ran after a suspect who was attempting to evade her arrest. The suspect ran to a car, jumped in, and prepared to start the engine. Officer Brosseau reached the vehicle, ordered the suspect to step out three or four times, and to stop. The suspect refused, began to drive away, and the officer was forced to jump away from the vehicle and then shot the suspect in the back.

Officer Brosseau explained that she shot as she feared for her safety and believed the suspect might strike other officers or citizens in the area. The Court concluded that officer's use of force was justifiable, and the officer was granted qualified immunity.

In *Thomas v. Durastanti* (2010), an agent of the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) shot a suspect who drove his vehicle at him. The appellate court noted that a court considering the issue of summary judgment on the basis of qualified immunity must ordinarily consider disputed facts from the perspective most favorable to the plaintiff. That was not true, however, when there is clear contrary video evidence of the incident. The confrontation between the occupants of the vehicle and the ATF agent, as well as a uniformed state trooper, occurred in a parking lot, and the occupants attempted to drive off, at one point placing one of the agents in possible danger. The driver was shot in the head, and the plaintiff suffered a gunshot wound to his leg. The appellate court noted that the use of lethal force is justified when an officer is threatened by a weapon, which may include a vehicle attempting to run over an officer as occurred in this case. The plaintiff claimed that the car slowed or perhaps even stopped; the court found that this was contradicted by the video evidence. The agent argued that the car was accelerating toward him and that he had no way to escape. Indeed, it did strike the agent, justifying the use of lethal force. The court rejected the plaintiff's argument that the vehicle occupants were "harmless" individuals who had merely been stopped for a routine traffic violation since the driver engaged in an assault on the agent, narrowly missing him with his car and actually striking the other officer. Under these circumstances, the officer's use of lethal force was reasonable.

In a series of case decisions, the courts have determined that the suspects used their vehicles in a dangerous and lethal manner which provided the officers with probable cause to believe that the vehicle posed a threat of serious physical harm or death to the officer

or others. In *Pace v. Capobianco* (2002), the driver of a vehicle aggressively and recklessly advanced toward the officer. The court concluded that the officer used reasonable force within seconds when he confronted a “gravely dangerous” situation and fired in self-defense. In *Robinson v. Arrugueta* (2005), the court noted that the officer had 2.72 seconds to react before getting crushed between two cars, and he fired his weapon based on the perception of self-defense. In *Wilkinson v. Torres* (2010), the court found that the officer confronting a van accelerating at him on a slippery yard, formed the perception within three seconds that he was in immediate threat of serious physical harm and had probable cause to believe, in this tense, uncertain, and rapidly evolving situation, that the threat to his safety justified the use of deadly force. Similarly, in *Terrell v. Smith* (2012), the court granted summary judgment to an officer who shot and killed the driver of a vehicle that was endangering his safety. Officer Smith ordered the driver to stop several times as the driver drove toward him, near enough to crush him, and the car door did strike him. The court noted that the officer quickly formed the perception that he was in immediate danger and had to make a split-second decision in response to a rapidly unfolding and uncontrolled situation.

The consensus view of the courts supports an officer’s use of force and will grant qualified immunity in cases in which the subject used or threatened to use his car as a weapon to endanger officers or civilians immediately preceding the officer’s use of force. Additional cases supporting this consensus view include *Beets v. County of Los Angeles* (2012), *Cann v. Baltimore Co, MD* (2011), *Drewitt v. Pratt* (1993), *Edmundson v. Keesler* (1996), *Fraire v. City of Arlington* (1992), *Hill v. Nigro* (2008), *Long v. Slaton* (2007), *Marion v. City of Corydon* (2009), *McCullough v. Antonlini* (2009), *Medeiros v. Town of Dracut* (1998), *Owens v. City of Austin* (2007), *Pittman v. Nelms* (1996), *Smith v. Cupp* (2005), *Troupe v. Sarasota County Fla.* (2005), *Webster v. Beary* (2007), *Williams v. City of Grosse Pointe Park* (2007), and *Wilson v. Meeks* (1995).

Deadly Weapons and Potential Deadly Weapons Used

The display of potentially deadly weapons usually justifies the use of lethal force (McGuiness, 2009). The cases analyzed revealed numerous potentially lethal weapons (besides vehicles) used against the officers such as edged weapons, tire iron, bats, pipes, bottles, fireplace poker, axe, golf clubs, hatchet, mechanical tools, swords, machete, police baton, pieces of concrete, and a flashlight, to mention a few. These items were in the possession of the subject confronting the officer, and the courts held that the officer could reasonably believe that such items could have been used to kill or seriously harm the officer or others. Suspects also held, pointed, or shot at the officers with shotguns, rifles, and handguns.

In *Napier v. Town of Windham* (1999), neighbors of Napier summoned the police after he fired several rounds into a woodpile with his rifle. After surveying the property, an officer approached the front door and observed a rifle on a table and a hand holding a handgun partially hidden behind a door. The officer gave several commands to Napier to drop the gun, but rather than comply, Napier approached the officer, pointing the gun at him. A second officer arrived and fired one shot, missed, and Napier continued to approach the first officer. Simultaneously, the first officer fired three rounds and missed. Napier turned toward the officer, and he fired three more rounds, which wounded him. Napier claimed in his lawsuit that he did not point the weapon at the officers although he held it. The appellate court ruled that officers properly formed the perception that Napier, by possessing a weapon, placed them in immediate fear of bodily harm and whether Napier was pointing a gun or not at an officer is irrelevant, that holding the gun can still pose an immediate threat to an officer.

An officer is not required to wait for the threat or violence to materialize before stopping the threat to others or him- or herself as long as the officer has formed the perception that

there is imminent danger of death or serious bodily injury. When feasible, an officer should be on the action side of the action/reactionary assessment model (Petrowski, 2002). In *Montoute v. Carr* (1997), an officer responded to a call of a man with a gun. Once the officer arrived on location, the man fled, still holding the gun. The officer followed and ordered him to stop and to drop the gun. The subject did not comply, and the officer fired a shot, wounding the subject. The appellate court determined that even though the suspect fled, he posed an immediate threat of danger to the officer and that the officer justifiably formed the perception that lethal force was warranted. The court stated that as long as the suspect retained the weapon and was in range of using it against the officers or others, there was a legitimate basis that an officer could reasonably believe that the person posed an imminent threat of death or serious bodily injury.

In *DeMerrell v. City of Cheboygan* (2006), officers responded to a domestic violence call in which DeMerrell stabbed his girlfriend (who fled the house) several times with a knife and was held up in the house with his girlfriend's 5-year-old granddaughter. As the officers approached the house, DeMerrell, who was intoxicated, exited the house with a pellet gun, which, from a distance, looked like a handgun. The officers attempted to negotiate with him from a covered position and commanded him to put the gun down. DeMerrell began waving the gun around and taunting the officers. Suddenly, DeMerrell advanced two to three steps toward the officers, lowered and pointed the gun at the officers, and one officer fired his shotgun, killing DeMerrell. The officer was about 15 to 20 feet from DeMerrell when he discharged the shotgun. Other officers were preparing to fire but did not. The appellate court affirmed the lower court's summary judgment holding that it did not matter what distance existed between the subject and the officer when he shot as DeMerrell pointed the gun at the officers. The court opined that there was overwhelming evidence that the officers were in a dangerous, volatile situation involving an intoxicated, armed, aggressive

suspect who was advancing on the police, defying commands to stand down. The court held that officers are entitled to qualified immunity when they fire on a person pointing a gun at them. Additional case decisions, such as the following, underscore the justifiable use of lethal force when a suspect presented a threat to the officer by possessing a firearm, pointing the firearm, or shooting at the officer: *Brooks v. Gaenzle* (2010), *Connors v. Graves* (2008), *Cunningham v. Hamilton* (2003), *Estate of Escobedo v. Martin* (2012), *Flynn v. Mills* (2005), *Garcia v. Santa Clara* (2008), *Garczynski v. Bradshaw* (2009), *Gravelly v. Speranza* (2006), *Ingle v. Yelton* (2008), *Livermore v. Lubelan* (2007), *Long v. City and County of Honolulu* (2007), *Messer v. Indiana State Police* (2008), *Penley v. Eslinger* (2010), *Ramirez v. Knoulton* (2008), and *Thompson v. Salt Lake County, UT* (2009).

In *Sudac v. Hoang* (2005), a mentally disturbed man began destroying items in the house and approached his mother and sister holding a knife. They fled to a neighbor's house and called the police. The man exited the house and began lunging at neighbors, holding the knife. Within several minutes, two officers responded and observed the man running down the street waving the knife. The officers commanded the man to drop the knife, but he ran down an alley and the officers followed him. The man suddenly stopped, and Officer Hoang sprayed him with pepper spray from about 15 feet, which was ineffective. The man ran into the street and stopped near a vehicle containing two occupants who had just pulled to the curb when they saw the officers chasing the subject. Officer Hoang stopped from a distance of about 5 to 8 feet and ordered the man to drop the weapon and to kneel down. The man suddenly turned toward Hoang, raised the knife at shoulder level, and lunged at him. Officer Hoang fired three rounds, which killed the suspect. The court held that the assessment of the incident must be viewed from Officer Hoang's perception and concluded that the shooting was objectively reasonable. The court noted that the suspect's conduct in quickly stopping, turning, and raising the knife from a close range was

an aggressive move, especially in light of his actions in the alley, which provided probable cause to believe that he was threatening serious physical harm to Hoang and others. Even though Officer Hoang had his firearm drawn, he faced an immediate threat and was forced to make a split-second decision which was justified. The court held that the diminished capacity of Sudac was not a factor to consider when he raised the knife at the officer.

Further, in *Buchanan v. Gulfport Police Department* (2012), three officers were transporting arrestees to the jail and observed a shirtless man swinging a baseball bat at cars as they exited the parking lot of a restaurant. The officers radioed for additional officers, stopped, and two officers approached Buchanan and spoke with him from about 12 feet away. A third officer responded and instructed Buchanan to drop the bat; he refused and was TASERed by two officers. Buchanan pulled the TASER lead wires from his chest and dropped the bat but would not move away from it. Suddenly, Buchanan bent over, picked up the bat, raised it above his head, and charged the officers. Two of the officers shot four rounds from their firearms, which seriously wounded Buchanan. He was transported to the hospital and survived.

The district court granted summary judgment to the officers. The court noted that the officers confronted a mentally agitated and dangerous subject at night, in a busy public area. They attempted to use less-lethal means to control him but were rebuffed when he pulled the TASER probes from his chest, picked up the bat, and charged the officers. They were forced to make a split-second decision when he charged at them with the raised bat. The court held that the subject, although mentally disturbed, posed a risk of danger to the public and the officers and that the officers had less than two seconds to form the perception that the subject posed an immediate threat of harm to the officers. Moreover, the following case decisions illustrate the principles of using justifiable reasonable force when confronted by subjects attacking or possessing a potentially

lethal weapon and faced with forming a perception of danger within seconds: *Blanford v. Sacramento County* (2005), *Buchanan v. State of Maine* (2006), *Butler v. City of Tulsa* (2007), *Estate of Morgan v. Cook* (2012), *Gaddis v. Redford Township* (2004), *Hassan v. City of Minneapolis* (2007), *Hayek v. City of St. Paul* (2007), *Larsen v. Murr* (2008), *Lewis v. County of Riverside* (2007), *Nicarrry v. Cannaday* (2007), *Thompson v. Williamson County, Tennessee* (2000), and *Untalan v. City of Lorain* (2005). Of these cases, in 85% of the incidents, the officers confronted a mentally disturbed person and the courts opined that the officers used reasonable and justifiable lethal force in response to the immediate, violent, and threatening behavior of the subject and that the mental condition of the subject did not override the need to protect the officer or others.

These types of incidents exemplify that the officer is at a distinct time disadvantage and behind the perceptual processing and reactionary curve in that even if the barrel of a gun is pointed down or away, a quick movement to raise, aim, and fire it at the officer can occur before the officer can react (action vs. reaction). The same perceptual disadvantage is applied when the officer faced a subject who either held or quickly moved toward the officer with a potentially deadly weapon. In a significant number of incidents, the officer faced a lethal weapon or potentially lethal weapon and was justified in using preemptive force. The courts noted that the officer faced an immediate threat and had from one to two seconds to perceive the threat and form the reasonable belief that lethal force was necessary, and such force was reasonable for personal protection or the protection of others (again, underscoring the RRM). Under these conditions, perceptual distortions are highly likely to be experienced by the officer. In a majority of incidents, the courts opined that the officer is not required to wait and see what a suspect may do as the officer is a fraction of a second (or more) behind the suspect's actions and such a disadvantage places the officer in a position of immediate harm which justifies the use of lethal force.

Application of the Science and the Law

The fact patterns of these cases overwhelmingly show that the officers are forced to form perceptions and make split-second decisions in volatile situations without the luxury of reflection. The trends in the courts' decisions since *Graham* recognize that police officers face growing threats from dangerous, resisting subjects, which include firearms, vehicles, empty hand assaults, and other potentially deadly weapons which could be used to harm and kill the officer. The criteria used in *Graham* not only focuses on the legal justification of using lethal force but it also allows for the assessment to include the officer's perception and those factors which impact the formation of the perception in varying and rapidly evolving operating environments. The review is not to be performed from hindsight.

The *Graham* holding allows the introduction of the science of human factors to be interjected into the legal analysis of whether the officer used justifiable force. Justification, however, may not rely solely on an explanation of perception as there must be a logical nexus established between an officer's belief and action in response to the perception formed based on the dynamics of the situation and the subject's behaviors. Recall that about 18% of the decisions were found in favor of the plaintiff. The objective assessment of what determines the reasonable use of force must combine the legal components and the officer's perception within the totality of circumstances. Indeed, the trends of these case decisions illustrate that the lower courts are not only applying the legal criteria in their review but they are also examining the dynamics impacting human factors which influence the formation of perception and fear of an officer as they review the use of reasonable force.

The scientific research described earlier demonstrated that under life-threatening circumstances, the survival stress response will automatically be activated in order to respond to the immediate danger. When faced with a

dangerous situation and under time pressures, associated circumstantial factors will create varying perceptual distortions, and officer performance may be impaired. Important human factors which emerged from these case decisions in response to an immediate or imminent threat of harm impacting perception included sudden and quick suspect movements, suspect body mechanics, suspect threat cues and behaviors, possession of a weapon and potential weapons, confrontational environmental factors, dynamics of the confrontational circumstance, distance between the suspect and officer and rate of speed to close the reactionary gap, physiological components (including SNS activation, attention narrowing, auditory distortion, cognitive processing, motor skill selection, and physical response), the principle of action vs. reaction, reaction time/lag time, and depth perception. Under-scoring these principles and specifically the reactionary distance between the officer and the suspect, the court in *Plakas v. Drinski* (1994) ruled that an officer is not required to maintain a particular distance or barrier between himself and the suspect.

Implications

Beyond claiming that the officer used excessive force in the lethal force situation, an additional claim of failure to provide training for officers is commonly filed in accordance with the decision in *City of Canton, OH v. Harris* (1989). In *Canton*, the U.S. Supreme Court held that a municipality may be held liable under the standard of deliberate indifference for failing to provide ongoing training to recurrent tasks assigned to officers. The courts generally agree that the topic of lethal force is a critical subject matter that needs to be addressed through ongoing training. For example, in *Atchinson v. D.C.* (1996), *Herrera v. Las Vegas Metropolitan Police Department* (2004), *Rodriguez v. Quintero* (2007), *Swofford v. Eslinger* (2009), and *Zuchel v. City of Denver* (1993), the courts ruled that administrators were deliberately indifferent in providing ongoing training in the use of lethal force for their officers and liability was attached. In

Roy v. Inhabitants of City of Lewiston (1994), the court ruled that there was no evidence that any inadequate training or supervision was linked to an off-duty officer's shooting. Based on the assessment of the case decisions, the following recommendations are presented.

Policy Revision and Training

Consistent with the *Graham* criteria, administrators are encouraged to review their use-of-force policy and revise it in accordance with the philosophy of Response to Resistance. This philosophy addresses the criteria established in the *Graham* ruling and focuses the force response based on the subject's actions. Further, administrators should revise their policy by crafting language which states that objective reasonable force will be assessed in conjunction with the officer's perception based on the threat posed by the subject's behaviors, based on what the officer believed at the moment forced was used, and assessed within the totality of circumstances. Policy should direct an officer to respond to the pre-assault threat cues of an assault without waiting for the actual assault to commence. Language which directs an officer to use the minimum amount of force or the least intrusive amount should be removed from existing policies. The U.S. Supreme Court and every federal circuit court recognizes this point. Training on the policy should be provided to all sworn personnel on a regular basis.

Frequency, Type, and Intensity of Training

To defeat potential claims of a failure to train, to defend the agency's use-of-force training system, and to increase officer safety and survival in the field, a pattern of providing documented training needs to be performed on a regular basis. Impacting the frequency issue, the training needs to be performed such as to demonstrate the officer's comprehension and confidence level in the skill required to use lethal force reasonably. Next, the state standard for qualifying in firearms should be considered in the frequency formula, and agency

policy and practice must be combined when addressing the frequency of training.

The type of and the intensity of training is as important as the frequency of training. As observed in these case decisions, making a decision to use lethal force has to frequently be made within seconds under stressful conditions, which may result in perceptual distortions. Use-of-force decisionmaking and human factors must therefore be considered and integrated into realistic training. Training that is designed to replicate field stressor variables and environmental conditions underscore realistic training. Such realistic training that is provided on a frequent basis places the agency in compliance with the *Canton* decision, and concomitantly it provides the best method for practicing skills that enhance officer safety. Recurrent training can strengthen skill proficiency and officer confidence.

Police officers confronting a lethal force situation is not only a dangerous proposition but the stress of the encounter can impact decisionmaking, human performance, and perceptual distortions as observed by the prior research and the cases analyzed. Scenario-based firearms training that activates the SNS of trainees is recommended. Researchers have recommended that police officers receive stress-induced training through a force simulator or simmunitions training to help officers understand how to recognize assault cues, cognitively process them, make solid decisions, and perform under stress (Engel & Smith, 2009; Honig & Lewinski, 2008; Klinger & Brunson, 2009; Novak, 2009; Ross et al., 2012; Ross & Siddle, 2003). The researchers have found that when police officers were exposed to dynamic stressors in spontaneous simmunitions or simulator firearm training exercises, their reactionary time was enhanced significantly; and by exposing them to situations which activated the SNS, the training assisted officers in recognizing how to appropriately respond. Training which moves past range qualification is recommended. In order to respond to spontaneous, realistic life-threatening attacks, the use

of virtual simulators, simmunitions exercises, and realistic scenario-based training should be provided on a regular basis. Officers should routinely be provided with virtual simulator training with stress immersion strategies to enhance the officers' understanding of how human factors are affected and processed in a stressful lethal force encounter.

Moreover, stress inoculation and dynamic scenario-based training are highly useful in helping officers recognize a level of threat, exposing them to the effects of perceptual narrowing problems at combat distance, and enhancing force decisionmaking. Such "intensity" factors complement the "frequency" factor necessary in use-of-force training. This type of training enhances the ability to build expertise in field performance and maximizes proper decisionmaking. It keeps the brain in the training mode which is essential for officer field performance.

Ongoing training should focus on recognizing and responding to threat cues in spontaneous circumstances and assist the officer in removing hesitation. Realistic scenario-based training should be structured around dynamic encounters in which the instructor has previously trained the officer to recognize a threat level with response options consistent with the threat cue. Exposing officers to anticipated/unaccepted threat cues in spontaneous lethal force encounters during which the officer can experience the effects of SNS activation are important in managing stress, perceptions, and performance. Training should be designed which exposes officers to sudden furtive movements and pre-assault cues, which can aid officers in recognizing dangerous behaviors and assist officers in determining how to respond appropriately, enhancing their reaction time and response options. Ongoing training in threat assessment is critical for officers to associate force with a threat and associate discontinuing force with the termination of a threat (Petrowski, 2002). Integrating scenario-based and inoculation training and building dynamic scenario-based training around the RRM with integrated threat cues can assist

officers in calculating and planning their reaction to a dangerous situation. The focus of training should be geared toward the fusion of motor skills with cognitive skills.

Realistic scenario-based training should be videotaped, and feedback should be provided by the instructor to the officer. All aspects of the officer's performance should be reviewed which constructively assesses the nature of the circumstance, the subject's behaviors, the thinking process employed, perception development, decisionmaking, communication skills, and execution of the response tactics employed. During the critique, the instructor should request that the officer articulate his or her justification for his or her response.

Investigators

The goal of an officer-involved shooting investigation is the truth. Administrators and investigators who are tasked with evaluating an officer's use of lethal force must have an understanding of the department's force policy, use-of-force case law, and use-of-force training, and must also understand the varying human factors which are associated with survival stress which may impact perceptual distortions. Investigators should receive training on cognitive processing of lethal force confrontation stressors, responses to an SNS discharge, threat and assault cue recognition, perception formation, perceptual distortions, reaction time principles, decisionmaking, and tactical responses under stress. They should further be trained in processing shooting scene investigations, evidence collection, and evidence assessment, which can be used for comparison purposes after witness and officer interviews have been performed. Investigators should be trained in how to appropriately investigate incidents of trauma and critical incidents, including processing the involved officer(s), removing the officer from the scene to a low stress environment, and conducting the interview with the officer(s) after one or two sleep cycles. This will provide a reasonable period of recovery prior to providing a full formal statement. Investigators should be

trained in cognitive interview skills, which can assist in improving officer recall of the incident. Policy and guidelines should be developed which incorporate investigating the impact of human factors and post-traumatic reactions of the officer involved in the shooting. Finally, investigators should be trained in the criminal and civil aspects of performing an officer-involved shooting investigation.

Liability Update Training

Training which addresses force standards and liability issues should also be provided to officers, administrators/supervisors, and investigators on a regular basis. As this case analysis has shown, officers need to be aware of how the courts assess their lethal force decisionmaking in the field and need to know how the courts apply the legal principles which are associated with human factors impacting the application of force in a life-threatening circumstance. A review of the courts' application of the "objective reasonableness" standard in use-of-force cases should be provided to officers regularly. Further, changes in state legislation, state standards, and state court laws impacting the use of force should also be addressed with officers. Liability training which addresses supervisory liability concerns should also be presented to command personnel. Using the case studies pedagogy supported with available videos will enhance officer comprehension of legal principles.

Conclusion

Combining the legal analysis with the scientific human factors experienced by an officer confronting an immediate survival stress situation establishes the framework for an objective assessment to determine the reasonableness of an officer's use of force. The courts use a contextual test for analyzing a claim of excessive force, and the officer's perception is at the core of this assessment, which incorporates the totality of circumstances. The methodology for carrying out the assessment includes assessing the reasonableness of the actions of the officer "at the moment" force was used,

the perceived apparent danger, the suspect's behaviors, split-second decisionmaking, the dynamics and nature of the circumstance, and the operating environment. The courts generally agree with the court's opinion in *Salim v. Proulx* (1996), writing that reasonableness depends only upon the officer's knowledge of circumstances immediately prior to and at the moment that he made the split-second decision to employ deadly force.

Providing use-of-force training on an ongoing basis keeps officers' use of force Constitutional and ensures superior field performance by officers. Frequency of and intensity of the type and methods of training increases officer competency and confidence in their abilities by honing their skills while simultaneously enhancing their street survivability. The methodology and frequency of training facilitates appropriate formation of perceptions and decisionmaking, making responses by the officer instinctive. While each use-of-force incident contains its own unique set of circumstances, the human factors research shows that there are specific principles that can and should be applied to assessing whether the officer used objectively reasonable force when confronted with a violent encounter.

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