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FORUM

Less Lethal Use of Force

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Editorial

In an era marked by rapid technological development, an increasingly litigious citizenry, and an ongoing critical review of all government practices by the general public, special interest groups, legislative bodies, and the courts, law enforcement administrators must constantly review administrative and operational practices for relevancy and workability. Police policies and practices must be updated to adequately address changing patterns occurring within the society at large.

Use of force by police, including deadly force, has always been an area of critical concern for police administrators. Written policy, training, and supervision have been the means by which such administrators have sought to ensure strict compliance with applicable law and acceptable standards. With the introduction of increasingly sophisticated technology/equipment and the development of attendant models for use and deployment (tactics) of such technology, many police agencies now encourage full consideration of less lethal use of force alternatives. Perhaps the best example of how new technology has impacted police policy and practice relative to less lethal use of force is the use of electro-muscular disruption devices. The following provides an illustration:

While many agencies throughout Illinois bought and deployed electro-muscular disruption devices, there were no statewide standards for the use of such devices. Customarily, the company selling the device would require training, but such training was not reviewed, approved or certified by a state governmental agency, such as the state POST (Police Officer's Training and Standards' Board). One small police agency in Illinois deployed an electro-muscular device (three times) on a teenager who had a history of mental illness. The teen died following the incident. The electro-muscular disruption device was later found not to be the cause of death. Nevertheless, there was public outcry charging the police with using inappropriate tactics. As a result, the Illinois State Senate passed a resolution directing the Illinois Law Enforcement Training and Standards Board to conduct a study of the use of electro-muscular devices by Illinois law enforcement agencies and officers, and to recommend Model Policies, Guidelines, and Training for Illinois law enforcement agencies and officers employing such devices. (The complete study can be viewed at www.ptb.state.il.us.)

This edition of the *Forum* focuses on less lethal use of force by police and related issues of consideration, including policy development, training, deployment, and review/evaluation. Public policy events and decisions, such as the one illustrated above, will become commonplace as new technology and alternative tactics for employing less lethal use of force develop.

Thomas J. Jurkanin, PhD

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The Continuum of Force and Less-Lethal Options

David Grossi, Police Procedures Expert

Most law enforcement managers and other law enforcement professionals accept the fact that our Fourth Amendment has long recognized that the right to make an arrest or investigatory stop carries with it the right to use some degree of physical force (or threat thereof) to effect it.

It is also a fact that resistance is commonplace today. Studies dating back over a quarter century show that about half of all arrestees challenge the officer making the arrest, at least verbally (Sykes & Brent, 1983). There is also ample anecdotal evidence from the field that indicates about 75% of subjects who assault police officers are likely to be under the influence of alcohol or drugs. In fact, intoxicated subjects are almost three times as likely to physically engage officers as subjects who are not intoxicated (International Association of Chiefs of Police [IACP], 2001).

While it is not surprising that a great many use-of-force situations do involve intoxicated (drug or alcohol) subjects, what many civilians may not know is that police officers rarely have to use force. The latest figures show that police officers only use force at a rate of about 3.5 times per 100,000 calls for service (Sykes & Brent, 1983). Put another way, police do not use force in over 99.9% of their citizen contacts (IACP, 2001). By far, the majority of use-of-force incidents involved physical force (empty-hand control), with chemical force (pepper spray or Mace™) and electronic weapons (TASERs) not far behind. Batons rank far behind all other force applications. Indeed, non-firearm force uses accounted for over 93% of all force applications.

There is a vast assortment of less-lethal force options available to today's law enforcement officers. Virtually all agencies provide some type of empty-hand control (physical skills) training for their officers, at least at the basic recruit academy level. Many provide defensive tactics updates annually or more frequently. Most, if not all, issue some form of aerosol restraint such as oleoresin capsicum (also known as pepper spray), Chemical Mace™ (9% purified tear gas), or a formulation of both agents as part of their less-lethal force options. A host of agencies issue some sort of impact weapon (batons) to their officers, with most now choosing the expandable or collapsible version rather than the traditional straight stick or side-handle baton so popular two decades ago. More than a few are also incorporating less-lethal, flexible baton (bean bag) rounds fired from specially designated pump-action shotguns into their arsenal of force options, and the latest figures from TASER International indicate that over 12,500 agencies (out of about 18,000 in the United States) are using either the M-26 or X-26 TASER electronic control device. In other words, there are many less-lethal force options available in the law enforcement workplace. With so many less-lethal, use-of-force tools available to law enforcement, how are officers to know what weapon to use and under what circumstances to use it?

One of the most effective and beneficial tools to guide officers in the reasonable use of force has been the *Force or Control Continuum*. Published almost three decades ago as *The Confrontational Continuum* by Appleton, Wisconsin-based force trainer Kevin Parsons, and since revised dozens of times by numerous agencies and identified by an assortment of other names (i.e., *Use of Force Continuum*, *Subject Control Model*, or *Level of Resistance Matrix*), most agencies' force policies and/or procedures manuals will contain some type of chart or matrix that outlines or identifies the gradations of force police officers may use in response to a subject's level of resistance, subject to their training.

Documents show that about 95% of the people engaged in inappropriate behavior will stop their questionable conduct when approached by a police officer (Geller & Scott, 1992). As such, most departments put *Presence* as the first (or lowest) level of force for *Cooperative* subjects. Of the remaining 5%, about 3% flee, with the remaining 2% offering some level of resistance. Some agencies that do not subscribe to the concept of an officer "just showing up" as a true level of force will usually place *Dialogue* (or *Verbal Commands*) as the first level of force on their continuums. However, most begin with *Presence* as Level 1 and *Dialogue* at Level 2. Virtually all will begin the actual less-lethal force application at Level 3 with some form of empty-hand control, either *Soft Control Techniques* or *Physical Restraint Tactics*, for those subjects who demonstrate *Passive Resistance*. The grey area for most agency managers and police executives seems to be the next step (Level 4), with the introduction of force tools other than an officer's personal weapons (i.e., hands).

Some agencies place chemical agents, such as pepper spray or Chemical Mace™, and electronic control devices (ECDs), such as TASERs or Stingers, within this level. They would rather an officer attempt to control *Active Resisters* with force options that have a lower risk of injury but a higher probability for compliance before considering higher force (Level 5) options. Most continuums place the use of OC spray (a purely organic substance derived from hot peppers) at the lower end of Level 4 with ECDs at the upper end, primarily due to the possibility of the ECD barbs impacting the skin of the suspect.

Officer/subject factors and special circumstances may also influence when a particular less-lethal force tool is used. *Officer/subject factors* include disparities in the size, sex, or age of the officer versus the offender along with issues such as the suspect's level of resistive tension and/or intoxication. *Special circumstances* may include injuries or exhaustion, or special knowledge the officer might have about the suspect such as a history of assaulting police officers or resisting arrest. Flexible baton (bean bag) rounds have been shown to be very effective when dealing with certain suspects, especially when officers, for tactical reasons, must remain outside the effective range of OC spray or ECDs.

Some agencies also view the baton when used as a leverage instrument to aid in the handcuffing or escorting procedure as Level 4 force. Level 5, *Hard Control Techniques*, such as take-downs and/or impact weapon strikes, or in some cases the use of the carotid neck restraint technique, are normally reserved for *Assaultive* subjects intending to injure an officer rather than just resist arrest. Regardless, the highest level (Level 6) of force, *Deadly Force*, is normally reserved for subjects engaged in aggravated assault where firearms use or use of impact weapons above the head would be authorized.

What is sometimes overlooked in the analysis of less-lethal force is the fact that there are actually gradations of force within the different force levels themselves. For example, *Dialogue* can be as simple as a request by an officer to “see your license and registration, please” or as forceful as “Police! Don’t move!” Likewise, *Soft Control Techniques* may be as delicate as an officer guiding a suspect by the elbow as a means of escorting him or her from one location to another or as forceful as digital manipulation of certain pressure points as a pain-compliance technique. *Active Resisters* may respond to one short burst of pepper spray or may require a controlled take-down and ground stabilization to complete the handcuffing process. The visual display of intermediate weapons such as OC spray, TASER, police baton, or even the activation of laser sights on a police sidearm when drawn can and should all be considered escalations of force within the specific gradations of force. It behooves police trainers as well as agency administrators to educate their officers to include these sublevels of less-lethal force when documenting or testifying to their use of force. Of course, *Dialogue* should always be present and ongoing during any and all force (less-lethal and lethal) applications.

While virtually all force experts agree that agencies must have a clearly defined, comprehensive force policy, there exists a small group of police force trainers who believe that control continuums should not be incorporated into that policy at all. Their belief is that since continuums of force are primarily guidelines, they should appear only in the training arena. Based on this author’s frequent audits and examination of use-of-force policies, it would appear that this philosophy has yet to receive widespread acceptance; however, it remains a controversial topic. Most, if not all, use-of-force policies state that only *reasonable force* should be used by officers when such use becomes necessary in the field. However, what comprises reasonable force? That question frequently is answered in the courtroom. The term *reasonable force* is derived from the language of the U.S. Supreme Court case of *Graham v. Connor*. It is defined by answering the question of “[what would] a reasonable officer do under the same set of circumstances?”

When the issue at hand is whether an officer’s specific force application was “within department policy,” however, it has been this author’s experience in almost 100 court appearances as a force expert that a clearly defined matrix identifying not only the specific force tools that are permitted by the agency but also under what circumstances those tools or techniques may be used has been extremely beneficial in determining the reasonableness of an officer’s actions and conduct. In other words, if the force used was within department policy, it most likely was reasonable as long as the policy itself was consistent with nationally accepted standards, constitutional restraints, and both state and federal laws.

If one accepts the fact that there is a grey area when it comes to the use of less-lethal force (and it appears there is from the amount of litigation resulting from non-deadly force usage), then an identifiable visual matrix outlining levels of resistance and reasonable officer responses, in this author’s opinion, needs to be included in any comprehensive use-of-force policy statement.

Most of the force continuums presently in use are *action/reaction-based guidelines*—not hard and fast rules. They usually list a reasonable officer’s perceptions of a subject’s actions on one side of the matrix and, on the other side, what a reasonable officer’s response (or reaction) should be based on that level of resistance and

supported by the officer's training. Or, put another way, an officer does not have to escalate up to chemical agents (OC spray) when encountering passive resistance if that officer reasonably believes he or she can gain compliance with continued dialogue or verbal persuasion.

Policies and procedures, on the other hand, state that officers use only that force which is reasonably necessary to control that suspect and take him or her into custody. Along those same lines, it is also important that officers use only the force tools they are certified to use. For example, officers not trained in carotid neck restraints should never attempt such a technique.

Similarly, officers not certified to use flexible baton (bean bag) guns should not be permitted to discharge one at the scenes of tactical events. For this reason, less-lethal force training should include intensive classroom immersion in the continuum as part of the less-lethal force training program, along with competency-based, hands-on practical exercises in simulated dynamic settings to ensure the officers know *when* (not just *how*) to use each tool properly. Likewise, as new less-lethal techniques or force tools are incorporated into an agency's repertoire of force options, an updating of the continuum or matrix should also be performed.

Notwithstanding manufacturers' suggestions on where their less-lethal devices should be placed on an agency's continuum of control, departments need to consider the fact that some level of after-care might be needed whenever less-lethal force is administered. For example, people with very fair skin might need more than plain water and exposure to air to recover from the effects of pepper spray, especially if multiple applications were required to gain control. TASER barbs penetrating the skin will need to be removed by a medical professional. Blunt force trauma from a flexible baton (bean bag) round or from a baton strike might also require a visit to the emergency room for treatment.

Finally, some agencies might be confused by manufacturers' claims to provide expert witness testimony to departments for their respective less-lethal force tools. As such, some departments may be swayed to either omit or neglect the need to send one or more of their own personnel to instructor-level training. This could be a major mistake should litigation arise from any less-lethal force application. This author has been trained and certified as an instructor in over a dozen manufacturers' training programs.

The vast majority of testimony provided by this writer in federal civil rights cases resulting from the use of less-lethal force has centered on whether the officer's perception of the threat posed by the suspect was *reasonable* or not. If so, was the force used by that officer *reasonable*?

Undoubtedly, most manufacturers of less-lethal force devices would like to see their tools used at a much lower level than most force experts might deem appropriate. It is the totality of circumstances the officers faced, based on their reasonable perceptions of the threat, that will dictate the appropriateness of the less-lethal tools used.

One last caveat. Because any level of force, even hands-on force, under the right circumstance can result in death, most force practitioners would urge that the term

less-than-lethal not be used when describing the application of any force below deadly force since that term implies that death is not a possibility. *Less-lethal* would appear to be the most accurate descriptive phrase when identifying any force above *Dialogue* and below *Deadly Force*.

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Nonlethal Use-of-Force Policy: Perceptions from the Front Line¹

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Introduction

The use of administrative policy as a formal means of discretionary control of police officers began to take hold in the late 1960s (Davis, 1971; Walker, 1993). Shortly thereafter, empirical research on deadly force helped propel the belief that policy directives can influence officer behavior. In particular, work conducted by Fyfe (1978, 1979, 1980, 1982) showed that restrictive force policies can reduce deadly force practices. In an attempt to further guide officer use-of-force decisionmaking, police administrators also began to offer more policy guidance with respect to nonlethal force. Interestingly, research in this area has not sought to examine the restrictiveness of policy on force practices (Walker, 2006) or the extent to which a given force policy assists or guides officers in their day-to-day application of force. Rather, research has focused on such areas as policy development (Alpert & Smith, 1994), the extent to which departments incorporate a written policy (Law Enforcement and Administration Statistics [LEMAS], 2003), report and review procedures (Pate & Fridell, 1993), the specific types of tactics and weapons covered within an agency's policy (McEwen, 1997), and officer satisfaction with force training tactics (Kaminski & Martin, 2000).

Missing from the police literature is research investigating police officer views of administrative policy. While there are studies that look more globally at officer perceptions toward using force in general or the abuse of force (e.g., see Weisburd et al., 1998, for one such approach), our review of the literature did not uncover a single inquiry that examined officers' views toward their agency's force policy as to whether they believe such a policy is beneficial (or perhaps even detrimental) in some tangible manner. Given the discretionary nature of police work, such perceptions are potentially vital in terms of the degree to which officers use (or do not use) force in their dealings with citizens.

Assessing Police Use of Force Policy and Outcomes Study

In the Fall of 2005, the National Institute of Justice (NIJ) funded researchers from Michigan State University and the University of Central Florida to conduct a national study on police use-of-force policy practices. One key phase of the project involved an in-depth examination of policy approaches across eight U.S. police departments. As part of this inquiry, researchers sought to learn how agency policy is understood and viewed by front-line personnel. In particular, three areas of inquiry were investigated: (1) the extent to which officers feel their force policy assists or hinders decisionmaking, (2) whether it is too restrictive or not restrictive enough, and (3) whether it provides adequate guidance in terms of how to apply

force as well as when force can and cannot be used. Further, officers were questioned as to whether they believe their agency's policy has an effect on potential citizen and officer injuries, citizen complaints, and civil lawsuits. The present inquiry draws on data derived from one of these departments, the Colorado Springs Police Department (CSPD), in an attempt to shed light on how officers view departmental policy and begins to fill an important gap in the force literature.

Colorado Springs Use-of-Force Policy

The CSPD relies on a "Situational Force Model" (alternatively referred to as a "Wheel" Model) as its force continuum, which is depicted graphically with the police officer in the middle of the wheel and varying forms of subject resistance types arranged as the spokes of the wheel. Unlike many linear-based models, this model does not link specific levels of force with resistance, at least in graphical form (e.g., officers who encounter verbally resistant citizens are not explicitly required to use a specific type of force in response). Thus, officers are provided some flexibility with how to respond to varying forms of resistance. However, within the text portion of the policy, officers are instructed more specifically as to the appropriate forms of force given the level of resistance faced. For instance, seven levels of force (i.e., presence, voice, soft control, control and compliance tools, hard control, impact munitions, and lethal force) and six levels of resistance (i.e., psychological intimidation, verbal, passive, defensive, active, and aggravated active) are identified within the policy. As part of these descriptions, the policy includes language offering direction on the type of force to consider (e.g., soft control is appropriate "when subject fails to respond to verbal direction or resists in a defensive manner"). Further, the policy does explicitly instruct officers to use the least amount of force possible given the situation, and it calls for officers to escalate and de-escalate the level of force as the subject escalates and de-escalates the level of resistance.

In addition to subject resistance, the policy also instructs officers to take into account such factors as citizen age, size, skill level, disability, unavailable assistance, proximity of available weapons, and environmental awareness. Further, the policy includes a section titled "Special Circumstances" that notes instances where officers are permitted a more rapid escalation of force. Such cases include imminent danger (e.g., citizen is thought to be armed), special knowledge (e.g., citizen is under the influence), injury/exhaustion (e.g., pursuant to foot chase), proximity of the officer's firearm (e.g., protection of the officer's weapon), and when there are multiple subjects present. Finally, according to departmental officials, officers operate under the philosophy that there are "no absolutes." More directly, the force policy is not intended to indicate that officers may never do something but, rather, that their actions should be justified based upon the situation.

Methodology

The survey focused on police officers assigned to patrol duties. CSPD officers working patrol are assigned to one of four divisions that are geographically dispersed throughout the city. Within each division, officers are assigned to one of three shifts (i.e., day, middle, or night) and work four ten-hour shifts per week. Given this structural setup, researchers administered the survey to officers at roll call sessions held before each shift. To ensure each officer had an opportunity to participate in the survey, researchers attended roll call sessions on all shifts in

all divisions on two different occasions over the span of a one-week period in the summer of 2007. Patrol rosters across the four divisions were provided to the researchers to establish the survey protocol prior to site visitation. This allowed the research team to assess optimal days to survey each division to maximize the number of patrol officers who were on-duty. Officers were tracked via identification numbers to ensure that potential respondents were accounted for and that surveys were not duplicated (i.e., the same officer taking the survey both days) across the two roll call sessions. In total, of the 204 officers present during these roll call sessions, 199 completed the survey for a response rate of 97.5%.² While the survey as a whole focused on a variety of force-related questions with respect to the department’s policy environment, for purposes of the present inquiry, we focus on a series of questions designed to tap into officers’ views toward the agency’s use-of-force policy in relation to policy assistance, restrictiveness, and guidance, as well as the potential effect on injuries, complaints, and lawsuits.

Findings

We began by asking officers about their views concerning whether CSPD’s policy *assists* in decisionmaking. We followed this up with another question that was alternatively worded—whether the policy *hinders* decisionmaking. As shown in Table 1a, over one quarter (27.3%) of the respondents agreed “strongly” that CSPD’s policy assists in officer decisionmaking, with another 55.5% responding “agree somewhat.” Only 17.2% noted that they “disagree somewhat” with this statement, while no respondent answered “disagree strongly.” When the question was altered (Table 1b) and respondents were asked whether the policy hindered decisionmaking, nearly two-thirds (65.7%) disagreed. However, another third (34.3%) did agree that the policy hindered officer decisionmaking.

Table 1a. CSPD’s Policy Assists Officer Decisionmaking

	<i>n</i>	%
Agree strongly	54	27.3
Agree somewhat	110	55.5
Disagree somewhat	34	17.2
Disagree strongly	--	--
Total	198	100.0

Table 1b. CSPD’s Policy Hinders Officer Decisionmaking

	<i>n</i>	%
Agree strongly	7	3.5
Agree somewhat	61	30.8
Disagree somewhat	73	36.9
Disagree strongly	57	28.8
Total	198	100.0

A similar strategy was employed when soliciting officers’ views toward CSPD’s policy *restrictiveness*. Given prior research demonstrating the effects that restrictive deadly force policies have on deadly force behavior, we were interested in gauging officers’ views

in relation to whether they thought the department’s force policy was not restrictive enough or perhaps too restrictive. Not surprisingly, given the target population (line-level patrol officers), few of the respondents felt the policy was not restrictive enough as approximately 3% chose “agree somewhat,” while no respondent chose “agree strongly” for this statement (see Table 2a). Conversely, 42.1% of the officers agreed (strongly or somewhat strongly) that CSPD’s policy was actually overly restrictive (see Table 2b).

Table 2a. CSPD’s Policy Is Not Restrictive Enough

	<i>n</i>	%
Agree strongly	--	--
Agree somewhat	6	3.1
Disagree somewhat	77	39.7
Disagree strongly	111	57.2
Total	194	100.0

Table 2b. CSPD’s Policy Is Too Restrictive

	<i>n</i>	%
Agree strongly	21	10.8
Agree somewhat	61	31.3
Disagree somewhat	72	36.9
Disagree strongly	41	21.0
Total	195	100.0

The next two questions queried officers regarding whether the agency’s policy provided some sort of guidance with respect to *when* and *how* to use force. As shown in Table 3a, approximately three-quarters (75.6%) of the responding officers agreed that CSPD’s policy provides adequate guidance in terms of how to apply force. When turning to whether officers felt the department’s policy provides guidance in terms of when force can and cannot be used in the course of their duties (see Table 3b), over 80% agreed that it does. Thus, on the whole, more officers believe that CSPD’s policy offers more guidance as to *when* to apply force as opposed to *how* force can be used.

Table 3a. CSPD’s Policy Provides Adequate Guidance in terms of *How* to Apply Force

	<i>n</i>	%
Agree strongly	38	19.3
Agree somewhat	111	56.3
Disagree somewhat	45	22.9
Disagree strongly	3	1.5
Total	197	100.0

Table 3b. CSPD's Policy Provides Adequate Guidance in terms of *When Force Can and Cannot Be Used*

	<i>n</i>	%
Agree strongly	49	24.9
Agree somewhat	112	56.9
Disagree somewhat	32	16.2
Disagree strongly	4	2.0
Total	194	100.0

Given previous research showing that citizens are sometimes co-producers of forceful encounters with the police as a result of noncompliant behavior (Alpert & Dunham, 2004; Terrill, 2001), we also presented a series of questions with varying levels of citizen resistance in an attempt to determine more specifically if officers thought the policy was more or less helpful when dealing with certain types of resistant citizens. It is possible, for example, that the policy has differential benefits and/or deficiencies depending on the type of resistance (and subsequent force) that officers are confronted with. As illustrated in Tables 4a and 4b, while the majority of officers believed that the policy assists them across the different types of resistant citizens, they are most concerned with passively and verbally resistant citizens. For instance, when compared to either compliant (9.1%) or physically resistant citizens (14.1% non-assaultive, 8.0% assaultive), officers were more likely to disagree (either “somewhat” or “strongly”) with the statement that CSPD’s policy assists officer decisionmaking when dealing with passively (20.2%) or verbally (28.3%) resistant citizens. A similar pattern holds when asking officers if the policy hinders decisionmaking. In this case, 37.2% and 36.6% of the officers agreed that the policy hinders their decisionmaking capabilities when dealing with passively and verbally resistant citizens respectively.

Table 4a. CSPD's Policy Assists Officer Decisionmaking When Dealing with Citizens Who Are . . .

	Compliant Nonresistant		Passively Resistant		Verbally Resistant		Physically Resistant Non-Assaultive		Physically Resistant Assaultive	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Agree strongly	79	39.9	53	26.8	54	27.3	55	27.8	87	43.7
Agree somewhat	101	51.0	105	53.0	88	44.4	115	58.1	96	48.2
Disagree somewhat	17	8.6	35	17.7	52	26.3	27	13.6	13	6.5
Disagree strongly	1	0.5	5	2.5	4	2.0	1	0.5	3	1.5
Total	198	100.0	198	100.0	198	100.0	198	100.0	199	100.0

Table 4b. CSPD's Policy *Hinders* Officer Decisionmaking When Dealing with Citizens Who Are . . .

	Compliant Nonresistant		Passively Resistant		Verbally Resistant		Physically Resistant Non-Assaultive		Physically Resistant Assaultive	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
	Agree strongly	9	4.5	10	5.0	12	6.1	8	4.0	8
Agree somewhat	42	21.1	64	32.2	60	30.5	47	23.7	38	19.2
Disagree somewhat	80	40.2	82	41.2	82	41.6	90	45.5	84	42.4
Disagree strongly	68	34.2	43	21.6	43	21.8	53	26.8	68	34.3
Total	199	100.0	199	100.0	197	100.0	198	100.0	198	100.0

When officers were asked about policy restrictiveness according to varying types of resistant citizens and whether they believe CSPD's policy is not restrictive enough, the one area that stood out, by far, involved passive resistance. As illustrated in Table 4c, while 10 to 11% of the officers "agree strongly" or "agree somewhat" that the policy was not restrictive enough in terms of nonresistant citizens or those displaying different forms of verbal or physical resistance, 37.2% felt (agreed "strongly" or "somewhat") that the policy was not restrictive enough in relation to passively resistant citizens. Interestingly, when asked in a similar manner if the policy was too restrictive, there was not a great deal of variation across resistance categories. As shown in Table 4d, when collapsing the "agree strongly" and "agree somewhat" categories, there was a range of 31.1% for nonresistant suspects to 43.0% for verbally resistant suspects.

Table 4c. CSPD's Policy Is *Not Restrictive Enough* When Dealing with Citizens Who Are . . .

	Compliant Nonresistant		Passively Resistant		Verbally Resistant		Physically Resistant Non-Assaultive		Physically Resistant Assaultive	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
	Agree strongly	4	2.0	2	5.0	1	0.5	1	0.5	2
Agree somewhat	18	9.0	18	32.2	21	10.6	19	9.6	19	9.6
Disagree somewhat	88	44.2	88	41.2	87	43.9	89	44.9	82	41.4
Disagree strongly	89	44.7	90	21.6	89	44.9	89	44.9	95	48.0
Total	199	100.0	198	100.0	198	100.0	198	100.0	198	100.0

Table 4d. CSPD's Policy Is *Too Restrictive* When Dealing with Citizens Who Are . . .

	Compliant Nonresistant		Passively Resistant		Verbally Resistant		Physically Resistant Non-Assaultive		Physically Resistant Assaultive	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
	Agree strongly	7	3.5	12	6.0	15	7.6	17	8.6	16
Agree somewhat	55	27.6	67	33.7	70	35.4	57	28.8	47	23.7
Disagree somewhat	78	39.2	73	36.7	67	33.8	75	37.9	80	40.4
Disagree strongly	59	29.6	47	23.6	46	23.2	49	24.7	55	27.8
Total	199	100.0	199	100.0	198	100.0	198	100.0	198	100.0

The next two questions outline results involving whether CSPD's policy offers guidance in terms of *how* and *when* to apply force according to varying resistance levels. As to how to use force, Table 4e shows that officers generally believe the policy officers guidance across the board, ranging from compliant citizens to assaultive physically resistant citizens, although the greatest area of concern involved passively and verbally resistant citizens (i.e., 34.8% and 33.3% of the officers disagreed, either "strongly" or "somewhat" that the policy offers adequate guidance when handling passively and verbally resistant citizens, respectively). This pattern holds as well in relation to when force can and cannot be used. As illustrated in Table 4f, officers were least likely to agree that the policy offers adequate guidance when faced with passively and verbally resistant suspects compared to others, although the overall percentages of agreement are still high (e.g., 70.2% of the responding officers agreed "strongly" or "somewhat" that the policy offers adequate guidance in terms of passively resistant citizens).

Table 4e. CSPD's Policy Provides Adequate Guidance in Terms of How to Apply Force on Citizens Who Are . . .

	Compliant Nonresistant		Passively Resistant		Verbally Resistant		Physically Resistant Non-Assaultive		Physically Resistant Assaultive	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Agree strongly	57	28.8	36	18.2	33	16.7	48	24.2	66	33.3
Agree somewhat	89	44.9	93	47.0	99	50.0	95	48.0	89	44.9
Disagree somewhat	45	22.7	59	29.7	54	27.3	46	23.2	36	18.2
Disagree strongly	7	3.5	10	5.1	12	6.0	9	4.5	7	3.5
Total	198	100.0	198	100.0	198	100.0	198	100.0	198	100.0

Table 4f. CSPD's Policy Provides Adequate Guidance in Terms of When Force Can and Cannot Be Used on Citizens Who Are . . .

	Compliant Nonresistant		Passively Resistant		Verbally Resistant		Physically Resistant Non-Assaultive		Physically Resistant Assaultive	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Agree strongly	55	27.9	37	18.7	36	18.1	43	21.6	62	31.3
Agree somewhat	104	52.5	102	51.5	105	52.8	115	57.8	108	54.5
Disagree somewhat	38	19.2	53	26.8	51	25.6	36	18.1	25	12.6
Disagree strongly	1	0.5	6	3.0	7	3.5	5	2.5	3	1.5
Total	198	100.0	198	100.0	198	100.0	198	100.0	198	100.0

Our final analysis examined officers' views in relation to whether they believe the agency's policy has an impact on citizen and officer injuries, citizen complaints, and potential civil lawsuits. Concerns over any of these areas might reasonably be expected to affect the frequency and perhaps severity of force utilized by officers. Tables 5a and 5b present results involving suspect and officer injuries. Over 90% of the officers surveyed believe that CSPD's policy either decreases or has no effect on citizen injuries. With respect to officer injuries, however, there is a substantial split between officers who believe the policy increases or decreases the potential for injury. Just over a third of the officers (34.7%) reported that they feel the policy

increases the likelihood of officer injuries, while nearly half of the officers (48.2%) feel the policy actually decreases the likelihood.

Table 5a. What Effect Does CSPD’s Policy Have on Potential *Citizen* Injuries?

	<i>n</i>	%
Increases the likelihood	14	7.0
Decreases the likelihood	120	60.3
No effect	65	32.7
Total	199	100.0

Table 5b. What Effect Does CSPD’s Policy Have on Potential *Officer* Injuries?

	<i>n</i>	%
Increases the likelihood	69	34.7
Decreases the likelihood	96	48.2
No effect	34	17.1
Total	199	100.0

Finally, Tables 5c and 5d report on officers’ views toward complaints and lawsuits. For complaints, 39.7% of the officers responded that the policy increases the likelihood of receiving complaints, with a similar percentage feeling the policy has no effect (38.2%). Still, over a fifth of the officers (22.1%) believe the policy decreases the likelihood of receiving complaints. In relation to lawsuits, 78.8% of the officers reported that CSPD’s policy decreases or has no effect, although in this case, roughly a fifth of the officers (21.2%) believe the policy increases the likelihood of a potential lawsuit.

Table 5c. What Effect Does CSPD’s Policy Have on Potential *Citizen* Complaints?

	<i>n</i>	%
Increases the likelihood	79	39.7
Decreases the likelihood	44	22.1
No effect	76	38.2
Total	199	100.0

Table 5d. What Effect Does CSPD’s Policy Have on Potential *Lawsuits*?

	<i>n</i>	%
Increases the likelihood	42	21.2
Decreases the likelihood	66	33.3
No effect	90	45.5
Total	198	100.0

Discussion

This study sought to examine patrol officers' perceptions of their department's use-of-force policy in terms of its assistance, restrictiveness, and guidance, as well as the potential effect of the policy in terms of injuries to citizens and officers, citizen complaints, and potential lawsuits. With respect to the overall policy, in terms of assistance, we found a majority of the patrol officers agreed (in varying degrees) that the policy assisted them in their decisionmaking. A similar pattern emerged, though with less intensity, in regards to policy hindrance of decisionmaking. These positive assessments may have to do with the flexibility that the CSPD policy provides the officer in using force (e.g., the lack of a strict connection between resistance and levels of force, taking into consideration a variety of situational factors, "special circumstances" for the escalation of force, etc.) as opposed to a policy that attempts to identify all the contingencies of the social world up-front without taking into consideration the dynamic nature of the force encounter. While the majority of respondents believe that the overall policy is assisting (and not hindering) them in their decisionmaking, it is worth noting that the modal category of responses for each question was "agree somewhat" as opposed to "agree strongly."

In terms of policy restrictiveness, we found that the majority of respondents disagreed strongly that the policy was not restrictive enough. In fact, of all the overall policy questions, officers expressed the strongest sentiment toward this question. While the majority of patrol officers also disagreed that the policy was too restrictive, we found much more variation than with the preceding question—that is, approximately 42% of the officers agreed that the policy was too restrictive. While CSPD's policy is flexible for officers in terms of permitting them to select the use of force deemed appropriate, it does mandate that the officer use the least amount of force possible, which may be interpreted by some respondents as being too restrictive in nature.

The final questions regarding the overall policy focused on officer guidance in terms of how and when to apply force. While the majority of respondents agreed (the modal category of which was "agree somewhat") that the policy provided adequate guidance in how and when to use force, there was slightly more agreement with the latter over the former. This pattern of response (like that of assistance and restrictiveness above) is better understood when an examination of policy across varying levels of citizen resistance was conducted.

In examining perceptions of the force policy across varying levels of citizen resistance (i.e., from nonresistance to physically assaultive resistance), the majority agreement is similar to the overall policy questions; a pattern of disagreement does emerge among respondents, however. Variation in the perception of assistance, restrictiveness, and guidance is not equally shared across each of the types of citizen resistance. It appears that even though the majority of respondents believe the policy is assisting, not restricting, and that it is guiding them in dealing with varying levels of resistant citizens, when we examine the variation in disagreement (the nonmajority), the highest levels are found when officers face "passively" and "verbally" resistant citizens (compared to compliant and physically resistant citizens). This is somewhat troubling given that the majority of resistance that citizens give officers is likely to be found in these two categories (Terrill, 2003).

This pattern may not be too surprising, however, given that force training may be dominated by a focus on the application of specific “hands on” maneuvers and weapons, which might tend to be reserved for higher levels of citizen resistance.

Finally, when queried as to the effect of policy on injuries, respondents nearly uniformly stated that the policy “decreases” or has “no effect” on citizen injuries, although majority agreement was less in terms of officer injuries. A similar finding occurred for citizen complaints and potential lawsuits as the majority responded that the policy “decreases” or has “no effect” on complaint likelihood, though 39.7% and 21.2% of the officers, respectively, noted the policy increased the likelihood. These findings among the minority of officers may be related to the previous section that examines views of the policy with respect to dealing with passively and verbally resistant citizens. Although speculative, it could be that the deficiencies in policy assistance, restrictiveness, and guidance at the low level of citizen resistance (where many force encounters are likely to begin) are perceived by some as a threat to officers both physically as well as in terms of citizen complaints and lawsuits.

The present study has implications for police practice and research. In terms of police practice, front-line personnel (i.e., patrol officers) are the ones who implement policy at the street level (Lipsky, 1980), and their direct assessment (and potential input via development and change) is critical. The patrol officers surveyed had relatively positive attitudes toward their force policy in terms of the major dimensions examined in this study, but we also found that there were some facets of the policy (i.e., dealing with passively and verbally resistant citizens) where patterns of disharmony emerged. This attitudinal divergence may be related to some officers’ perceptions that the policy actually increases the likelihood of officer injuries, complaints from citizens, and lawsuits. Police administrators and trainers could incorporate such findings into future training sessions (e.g., an enhanced training block on how to deal with lower levels of citizen resistance). Police practitioners may wish to incorporate attitudinal assessments in the form of officer surveys across other arenas as well (i.e., various policies and standard operating procedures) in gauging line-level agreement/disagreement with administrative mandates.

In terms of police research, this study has provided a rare glimpse into officers’ perceptions of their department’s policy on the use of force. This is a critically missing component of force studies as behavioral manifestations of the use of force might be directly related to attitudinal assessments of their directives. For example, research has noted that not all officers feel comfortable utilizing their coercive power over citizens (Muir, 1977), and a source of potential discomfort could stem from views of the policy in terms of guidance, assistance, restrictiveness, and likelihood of injuries, complaints, and lawsuits. The next logical area of inquiry would be an examination of the ways in which the attitudinal assessments of the force policy (examined here) might relate to behavioral applications of force on the street. For example, are officers who deem the policy lacking, particularly with respect to dealing with passively and verbally resistant citizens, more likely to apply force at a greater rate or rely on higher levels of force (e.g., the TASER) compared to officers who expressed favorable perceptions of the policy when contending with such citizens? Another area of inquiry might focus on whether or not those officers who believe that the policy increases the likelihood of citizen injuries, officer injuries, citizen complaints, and civil lawsuits are basing these

assessments on behavioral realities that they have been involved in, or is it purely a perception issue? These are but a few of the research questions that could build off of the present empirical investigation.

Endnotes

- ¹ This manuscript is based on data from the Assessing Police Use of Force Policy and Outcomes Study, supported by Grant No. 2005-IJ-CX-0055 by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. Points of view in this document are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice.
- ² In total, CSPD has an allocated patrol staff of 313 officers. It was CSPD's standard protocol that all daily assigned patrol officers attend roll call. As such, those who were not present on survey days were either not working that day for a variety of reasons (e.g., scheduled vacation day, injury, sick, etc.) or were absent for a special circumstance (e.g., court, military leave, etc.). Thus, the five officers that did not complete the survey were present on one of the two days researchers were present but declined to participate.

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Commentary on Conducted Energy Weapon Safety and Associated Research

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Conducted energy weapons (CEW) research discussions are fraught with misunderstandings and partial truths. While vendor-funded research is nothing new, society has reason to be suspicious of it. Other professions rely upon it and are aware of its problems. Conversely, not every peer-reviewed article provides wholly reliable information. The intent of this article is to assist law enforcement officials and the public in evaluating CEW research and safety issues by providing background information usually absent from most media accounts.

Conducted energy weapons—even the name can be a point of dispute. Should they be called weapons or devices? Are they more appropriately termed *neuromuscular incapacitation weapons*, *stun guns*, *less-lethal weapons*, or *intermediate weapons*? If our society cannot even agree on a concept as simple as a name, how can we be expected to agree on their proper use or on research outcomes as to whether or not they are safe?

Sidestepping the issue of terminology, this paper will use the term *conducted energy weapon* and define them as any device designed to use an electrical discharge for the purpose of gaining lawful subject control while acting as an agent of the state. *Agent of the state* includes police and correctional officers as well as other law enforcement officials who may become responsible for enforcement and public order maintenance—for example, National Guard troops deployed as an aid to the civil power during major incidents such as a hurricane or flood. The term does not include citizen self-defence use.

This definition addresses the position that law enforcement use of a CEW is *de facto* a method of torture (Stanbrook, 2008). Federal statute within a developed, common law country exempts officers when they are used during arrest procedures (*Criminal Code*, 1985).¹ In other words, using force to effect a lawful arrest which results in the subject experiencing substantial discomfort is not torture but, rather, use *de jure* and consistent with international convention (UN Convention Against Torture, 1984; UN Office of the High Commission for Human Rights, 1979, 1990). The UN's concept of torture is associated with extracting confessions or statements and eliciting punishment—not with the force used to effect an arrest (Ingelse, 2001). Police use of force to protect themselves is consistent with current prudent police practice (Canadian Association of Chiefs of Police, 2000).

Focusing for a moment on the issue of sudden deaths, this is not the first time a series of deaths have alarmed a citizenry (Lancisi, White, & Boursy, 1971) nor will it likely be the last (Keller, 2002; Pandemic Influenza, 2008). In the early 18th century, Pope Clement XI addressed an alarming number of sudden, unexpected deaths in Rome beginning in the spring of 1705. Theories for the cause of the problem included divine displeasure, “the rotten quality of the tobacco . . . fetid exhalations from past earthquakes, then again the abuse of chocolate, and finally an unknown virus within

their surroundings” (Lancisi et al., 1971, p. xix). Giovanni Maria Lancisi, personal physician to the Pontiff, was directed to perform autopsies on the recently departed.

Once the true causes were determined—“pathological lesions of the brain and heart, . . . the first description of syphilis of the heart and of growths on the valves, . . . hypertrophy and dilation of the heart . . .” (Bett, 1954, p. 781)—Lancisi suggested that the results be published. The accuracy of information provided to the public by the media of the day concerned him:

And because, in consequence of the supreme command of the Pontiff, sufficient inquiry has now been made through autopsies and other observations into the causes of these rampant sudden deaths, we consider it as consonant with good sense to weigh carefully in the scale of judgment the examinations performed and faithfully described. These we permit now indeed the more willingly to issue forth into the hands of men, since we have seen here and there a number of dissertations published in the Tuscan² and the Latin languages about the sudden deaths of this year. These dissertations, although discussing the subject splendidly, nevertheless, because of the scantiness of their observations and their extremely inadequate investigation of the causes, do in no sense embrace the subject in its entirety. (Lancisi et al., 1971, p. xx)

The questions asked above are essentially the same as those asked today: “What is causing these unexplained deaths?”

In November 2007, Amnesty International USA Executive Director Larry Cox placed the number of deaths following police use of CEWs at 300 (CBS News, 2007). It seems that number is never amended even after a thorough investigation, some including inquests, concludes that the CEW played no role in the death. For example, on May 2, 2008, an Ohio court decided medical examiners must be prepared to present “evidence on the use and effect of TASER devices” (*TASER v. Kohler*, 2008, p. 11) should there be a “request for review of the Chief Medical Examiner’s cause and manner and mode of death determinations” (p. 1):

Even though the Medical Examiner’s conclusions are entitled to much weight, and assuming a nonbinding presumption in favor of the Medical Examiner, the Plaintiffs have proven their claims for changing the reports of autopsy and death certificates on the three individuals by more than a preponderance of evidence. (pp. 11-12)

In short, if one is unable to point to credible science to support an opinion, then that “opinion” cannot be expected to withstand a challenge, particularly if that challenge is based upon an opinion that does. Questionable decisions can lead to erosions of public confidence with potentially serious long-term consequences (Batty, 2006; “Inquiry into Pediatric Forensic Pathology in Ontario,” 2008).

The fact is that people have died after an altercation with the police long before CEWs were widely used by police (Wetli & Fishbain, 1985). Reports of death following restraint first appeared in 1650 before policing was even organized (Dewhurst, 1981); mentally ill patients have died after agitation and/or exhaustion without any police involvement (Adland, 1947; Bell, 1849; Billig & Freeman, 1944; Calmeil, 1832; Derby, 1933; Griesinger, 1867; Josephy, 1949; Kraines, 1934; Shulack,

1938, 1944, 1946); and some have died without being restrained at all (Rosh, Sampson, & Hirsch, 2003).

Modern police-related deaths have been blamed on a variety of causes:

- *Prone positioning*: A theory whose scientific validity has been questioned (Chan, Vilke, & Neuman, 1998; Chan, Vilke, Neuman, & Clausen, 1997; Chan et al., 2004; Di Maio & Di Maio, 2005; Reay, Flinger, Stillwell, & Arnold, 1992; Reay & Howard, 1999; Ross & Chan, 2006)
- *Pepper Spray*: Very few adhere to this theory any longer (Chan et al., 2000; Granfield, Onnen, & Petty, 1994; Smith & Stopford, 1999)
- *Neck restraints*: A recent Canadian Police Research Centre review of the topic addressed the misinformation associated with this issue (Hall & Butler, 2007)
- And today, CEWs

To paraphrase Dr. John Ratey (2001), an associate clinical professor of psychiatry at Harvard Medical School, part of the problem may involve scientists looking for the one component that explains the entire problem. Sudden deaths following an altercation with police are believed to be a complex, multifactorial event (Di Maio & Di Maio, 2005; Lawrence, 2005; Lawrence & Mohr, 2004; Ross & Chan, 2006), and death following restraint is not just a police problem. It also occurs in medical and healthcare settings (Mohr, Petti, & Mohr, 2003; Weiss, 1998). Deaths could involve a series of interactions between metabolic systems, any one of which could lead to sudden death (Laur, 2004).

Despite the history and terminology issues, the question remains: “Are CEWs safe?” According to a recent article published in a peer-reviewed medical journal, maybe not—at least in the swine model (Nanthakumar et al., 2008). This paper is actually a review of the authors’ earlier work (Nanthakumar et al., 2006) with greater consideration given to one aspect, myocardial capture. Using real-world circumstances and human interaction, they appear to have a high safety factor (Bozeman et al., 2007). An independent prospective Canadian study involving similar parameters as Bozeman et al. has recently moved past the data analysis stage and can be expected to report outcomes soon. At best, CEWs seem to pose a low risk of death and injury. Several research documents carry the caveat that while their conclusions may address one issue, further research is required or necessary to fully understand findings within the context of field use on a real population (Ho et al., 2006; Jauchem et al., 2006; Levine et al., 2006; Manojlovic et al., 2005; Nanthakumar et al., 2006, 2008).

In examining the CEW research landscape, there are basically three sources of research:

1. *Vendor-conducted research*: The vendor or more likely the manufacturer conducts research and reports their findings.
2. *Vendor-sponsored research*: The vendor provided researchers with either money and/or equipment to allow the investigation to be conducted.
3. *Independent research*: Research is conducted independently of any person or entity with a monetary interest in the outcome.

The public benefits from vendor-conducted research. For example, the Ford Motor Company spent 22.7 billion dollars in the years 2005 to 2007 in engineering, research, and development. Their intent was to build a better car. Ford spent an additional 15.5 billion in advertising, including major sponsorship of the Super

Bowl®. The public benefits from both the automotive innovation and from the money infused into the economy through their advertising budget as well as any sponsored entertainment. With respect to vendor-sponsored research, The Boeing Company (2008) spent over 17 billion dollars on research and development over the past five years. Indeed, Boeing intends on expanding their research capacity:

Accordingly, in addition to conducting our own internal R&D, Boeing is partnering with some of the best research agencies, universities and companies around the world. In doing so, we are leveraging their technologies and expertise to ensure we stay ahead of the competition by providing the most innovative and affordable aerospace solutions the world has to offer. Moreover, this approach provides Boeing with broader access to the \$1 trillion invested annually in R&D around the world. (p. 17)

Partnering with universities means there is a potential for tax money to benefit private enterprise in that public funding drives, at least partially, public universities. This point is raised not to condemn partnerships but to remind ourselves that corporate interests are intrinsic to many facets of daily life.

The cars driven and the aircraft flown on a daily basis depend in large part on vendor-conducted and vendor-sponsored research. The difference between these two products and CEWs is that automobiles and aircraft are subject to government testing and regulation; CEWs are not. That responsibility rests with legislators not law enforcement. Firearms are not subject to specific quality regulations in the manner that transportation products are. Batons and pepper spray are also without government certification. With respect to research on police batons, a search on PubMed (National Library of Medicine, 2008) conducted May 6, 2008, using the term *police baton* returned 11 documents, including five case studies. A similar search using the term *oleoresin capsicum* returned 19 papers. Batons have been carried by law enforcement officials even before Peel's organization of the British police (Babington, 1990), yet they are largely ignored by medical researchers despite their historic and ubiquitous presence in law enforcement. Pepper spray has been studied to a greater extent.

The real problem with vendor-associated CEW research stems from past experiences where science is discovered to be either wrong or subject to industry manipulation. Society's experience with the tobacco industry and the hazards of smoking comes quickly to mind. For years, cigarette companies advised that there was no causal link between cigarette smoking and lung cancer. Today, in many places in North America, it is illegal to smoke in a public area. Another ongoing court case involves a large pharmaceutical company, their 2004 withdrawal of a pain medication, and the research associated with the drug's side effects and associated health risks (Taylor, 2008).

In concept, research that results in publication within peer-reviewed journals should be of dependable quality. According to an editorial in a respected medical journal, that dependability is now being questioned:

The profession of medicine, in every aspect—clinical, education, and research—has been inundated with profound influence from the pharmaceutical and medical device industries. This has occurred because physicians have allowed it to happen, and it is time to stop. (DeAngelis & Fontanarosa, 2008, p. 1833)

In 2005, the *Journal of the American Medical Association (JAMA)* and the BMJ Publishing Group held the Fifth International Congress on Peer Review and Biomedical Publication in Chicago. Two of the sponsors included companies that were involved substantially in the publishing of peer-reviewed medical journals and textbooks: Elsevier and Wolters Kluwer Health (*International Congress on Peer Review and Biomedical Publication*, 2005). During the Congress of 2001, at about the same time as CEWs were being deployed in increasing numbers, the sponsors of this academic endeavor included the following corporations:

- Pfizer Inc.
- Aventis Pharma
- AstraZeneca
- Merck & Co Inc.
- Eli Lilly & Co.
- Takeda Pharmaceuticals North America

It seems that other professions outside of law enforcement have received support from business interests. Indeed, the participants discussed reliability issues surrounding peer-reviewed medical literature (Chew & Armstrong, 2001; Singh, 2001). Taylor's (2008) news article indicates that questions concerning publication bias arose as early as 1994. In making his point, he refers to a Canadian study that examined 56 "industry-funded trials for non-steroidal anti-inflammatory drugs, which are used for treating arthritis" (p. A10). Not one found unfavorable results, and it was reported that the trials had been designed to favor the sponsor (Rochon et al., 1994). It seems there may be more windows for stone-throwing-critics than first believed.

The purpose of these examples is not to blame another system for the public's concerns about police use of CEWs but to illustrate that even systems held in high esteem are not flawless. Clearly, experts in every field of endeavor exist, and their assistance is invaluable to our collective existence. Experts rely upon their related industry for information, and that is simply the way it is. True independence from any industry support may be very difficult to maintain. Assurances can be given to offset concerns, and some peer-reviewed journals are requiring that the author disclose financial and professional relationships.

In closing, it may be best to review the problem objectively and in context to see what can be made of it. The stone-throwing-critics, on all sides, may want to re-examine the structure of their own house before hurling future rocks—no group seems to have the truth cornered. The problem of sudden, unexplained deaths has been with us for longer than a particular weapon system or restraint method, policing, or even modern medicine.

For the sake of those who have lost someone and for those who have passed, let us make an informed decision. Let us do what is right rather than what is convenient. We are all in this together.

Note: The comments and opinions expressed are those of the author and are not necessarily those of the Ontario Police College, the Ministry of Community Safety and Correctional Service, or any other agency.

Conflict of Interest: The author has no financial connection with any weapon or police equipment manufacturer. The author is on staff at the Ontario Police College; is a project partner at the Canadian Police Research Centre – Defense Research Development Canada; and is a technical advisor to the Force Science Research Center, Minnesota State University–Mankato.

Endnotes

¹ Excerpt from *Criminal Code* (1985), RSC, c. 46, 269.1:

(1) Torture – Every official, or every person acting at the instigation of or with the consent or acquiescence of an official, who inflicts torture on any other person is guilty of an indictable offence and is liable to imprisonment for a term not exceeding 14 years.

(2) Definitions – For the purpose of this section, “official” means

- (a) a peace officer,
- (b) a public officer,
- (c) a member of the Canadian Armed Forces, or
- (d) any person who may exercise powers, pursuant to a law in force in a foreign state, that would, in Canada be exercised by a person referred to in paragraph (a), (b), or (c),

whether the person exercises powers in Canada or outside Canada;

“torture” means any act or omission by which severe pain or suffering, whether physical or mental, is intentionally inflicted on any person

- (a) for a purpose including
 - (i) obtaining from the purpose or from a third person information or a statement,
 - (ii) punishing the person for an act that the person or a third person has committed or is suspected of having committed, and
 - (iii) intimidating or coercing the person or a third person, or
- (b) for any reason based on discrimination of any kind

but *does not include any act or omission arising only from, inherent in or incidental to lawful sanctions* (author’s emphasis).

² A prominent language of the day

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TASER Training, Use, and Effectiveness: Analyzing Issuance and Deployment Issues in a Large Law Enforcement Agency

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Introduction

The issue of TASER training, use, and effectiveness has come to the forefront of law enforcement agencies given the trend of unfortunate incidents that are dominating the international media. Video has played a major role in the dissemination of these types of incidents, and with only limited segments portraying the entire incident's circumstances, the public and law enforcement administrators are casting undue scrutiny on this very effective control tool in the limited less-lethal law enforcement arsenal. This study examines a research population of TASER operators in a large law enforcement agency in an effort to answer questions surrounding the hypothesis that TASER training, use, and effectiveness are above organizational standards and, thus, use is within the agency's guidelines in both the letter and spirit of the policy structure.

Literature Review

Introduction

Police officers around the nation are facing a continually changing environment. Police departments are dealing with increased pressure from the public to make cities safer as violent crime steadily rises across the country. The safety of citizens as well as the officers tasked with ensuring their safety is often in question (Burtka, 2005). The streets are plagued by violence related to guns, gangs, and drugs.

Police departments are constantly exploring the use of new and innovative tools to assist them with keeping the public, their officers, and suspects safer. New and innovative tools come in a variety of forms. They can range from a policy change to a technological advance such as the TASER. The TASER has seen an increase in use by numerous departments around the country. A TASER is an electronic control device used to control suspects. TASERS are a high voltage, but low current, device that causes involuntary muscle contractions and variable levels of pain (Fish & Geddes, 2001). TASERS are an additional less-lethal force option for officers to use when faced with situations that would often justify the use of deadly force. Less-lethal physical force options, such as oleoresin capsicum (OC or pepper spray), impact projectiles, or batons, rely on pain compliance to control a suspect. Mentally disturbed persons and persons under the influence of alcohol or drugs may have a high tolerance for pain. The TASER overrides the central nervous system and does not rely on pain to gain compliance (Means & Edwards, 2005).

Departments considering using the TASER need to reflect on numerous factors such as safety, community acceptance, department policy, training, liability, and cost (Batts & Steiner, 2006). A wide range of police departments have implemented TASER programs as a tool to aid them in keeping the public, officers, and suspects safer. TASER training, use, and effectiveness will be the main points examined throughout this research study.

TASER Training

TASER training was identified through the literature as one of the three key components that should be evaluated. Training topics ranged from instrument, tactics, policy, and legal issues to name a few. For the purposes of this study, TASER training was limited to the issues directly related to those faced by the target research population.

Many law enforcement organizations advocate the use-of-force continuums for TASER deployment situations. A Use-of-Force Continuum is a model that an officer can refer to and utilize to offer options from a variety of control techniques to control the suspect and the situation without overreacting (Brown, 1994). Continuums offer a level of guidance to situations faced in the field that are the result of some chaos, providing a thought process to bring order back to the situation. Models for TASER use can include traditional as well as circular continuums. Traditional models tend to follow a ladder style, with the lowest level of force being at the bottom. Officers climb the ladder to the next level of acceptable force. Ladder models are more rigid, whereas circular models give the opportunity to meet escalating situations with the Dynamic Resistance Response Model, which is discussed in Joyner and Basile (2007). Every police department across the nation has its own version of a Use-of-Force Continuum. Each department has to evaluate its policy and procedures. TASER training must include the application of the TASER in the department's Use-of-Force Continuum (Burtka, 2005). Which level TASER use ends up on will be determined by the individual department's training and liability tolerance level.

TASER programs across the nation have gone through the same growing pains that any new tool has progressed through such as when pepper spray was first introduced. Exposure to pepper spray as part of the certification program accomplishes two goals. First, it gives the officer firsthand knowledge of the effects and how to react when exposed. Second, it develops a history of the product's reliability and safety, which may be introduced in a jury trial to show that the officer was exposed to the same treatment as the suspect and has not had any lasting effects (Hunter, 1994). TASER operators should be subjected to the TASER shock in order to fully understand the power of the defensive tool (Burtka, 2005), which, in turn, will build the officers' confidence in the tool. This experience will also give officers increased credibility in front of a jury, which will hopefully result in the successful prosecution of suspects.

One common denominator in felonious assaults on officers was officer hesitation when responding with force. Officers hesitated because they were uncertain as to what was permissible by law and departmental policy (Petrowski, 2002). Not only will a clear and concise policy aid the officer on the street with effective deployment and use, but it will ultimately ensure the safety of the public, the officer, and the suspect. Use-of-force training must provide officers with a comprehensive understanding of what force is and how to use that force in a reasonable yet effective manner (Nowicki, 2005b).

One of the common pitfalls experienced by training programs is the inability to build upon basic skills. Departments provide initial basic training on use and policy but often fail to train on failure drills and follow-up techniques (Holshouser, 2008). This occurs for a variety of reasons such as lack of training funds and time. Department heads must think of training and training updates not as an expense but as an investment in their officers and the organization. When an officer's certification lapses, his or her skills may diminish, resulting in a lack of proficiency leading to an officer safety issue. Certification lapses may also leave the door open to possible liability when questioned in court (Nowicki, 2005a).

Many people believe that the TASER will be abused by officers and used as a form of punishment. Still others believe the TASER is killing people through electrocution because of the recent deaths associated with TASER use. TASER International discourages inappropriate use of the TASER (Rappert, 2003). It has built in several systems to aid a department during an investigation. The TASER is fully trackable. Each TASER cartridge is filled with numerous confetti type identifiers. Each identifier has the serial number of that particular cartridge imprinted on it, so when the cartridge is fired, these identifiers are ejected into the area where the TASER was used, thus enabling the department to identify which officer that cartridge was assigned to through their tracking system (Bigg, 2003). TASER International has also placed electronics into each TASER with a data port. Each department receives the software to download the data from the TASER. This data provides information on when the TASER was used and for how long it was utilized each time. The newest model developed by TASER includes a TASER cam. Organizations must gather and analyze their own data to ensure proper and accountable use of the TASER (Rappert, 2003). These systems will help a department conduct an in-depth investigation. The results of this investigation, provided no wrongdoing was found, should aid district attorneys and agency attorneys in successfully resolving any criminal or civil claims made against the department.

TASER Use

TASER use has increased around the nation. The City of Phoenix, Arizona, observed a 54% drop in police shootings the first year it began using the TASER (Cusac, 2005). TASER is considered a less-lethal force option. Proper training allows officers to utilize the TASER properly and effectively. Like any other less-lethal force option, there is always the chance of death or serious injury (Burtka, 2006). Proper use of the TASER will be dictated by a department's placement of the TASER on its Use-of-Force Continuum. In keeping with the thought process of TASER usage, the operator must have a guide to the types of offenders who will also be faced. Joyner and Basile (2007) identify four broad categories of suspects:

1. Not resistant (compliant)
2. Passively resistant
3. Aggressively resistant
4. Deadly resistant

Some agencies allow the range of TASER use from Levels 2 through 4 in this list, while others only allow for the use in Levels 3 and 4. Research has revealed some general guides for the use of the TASER wherein, unless extreme circumstances exist, it will not be used on handcuffed prisoners, pregnant females, pre-teen

children, the elderly, or the physically disabled (Batts & Steiner, 2006). To reiterate, TASER acquisition and use continues to grow across the United States.

TASER Effectiveness

There is little doubt as to the effectiveness of the TASER when it is used correctly. The TASER does not rely on pain compliance and is effective on mentally ill people and people under the influence of drugs and alcohol. As the criminal element becomes more aware of the TASER, it may be more effective because the threat of being Tased is enough to stop criminals (Bigg, 2003). The TASER normalizes officer/subject confrontations by reducing the need for higher levels of force due to significant differences in size, ability, and gender. For example, the TASER enables a 5'2", 130 lb officer to contain a 6'2", 300 lb suspect who is out of control while reducing the likelihood of incurring injuries during the arrest. TASER effectiveness/compliance for single to multiple use can range from as high as 46% to as low as 6% (Marks, 2005).

One factor that impacts TASER effectiveness is environment. Departments working in colder environments may have a higher rate of non-effective TASER deployments. Dart hits are affected by suspects wearing heavy sweatshirts and puffy jackets during cold weather when the prongs do not deploy properly. Departments in warmer environments do not have this consideration. The Long Beach Police Department deployed the TASER 284 times. Of that figure, 78% ($n = 221$) were effective, and the suspect was taken into custody without further incident (Batts & Steiner, 2006). TASER International has completed numerous studies and has shown that the TASER is more than 90% effective. Only issues such as bad batteries or one or both of the probes missing the target contributed to the majority of failures (Eiserer, 2003).

The TASER with its attached cartridge can provide a 21-foot safety zone and reduce the need for officers to be forced into hands-on situations with combative suspects. Reducing the need for an officer to go hands-on significantly reduces the chances that an officer will get injured during an arrest. When officers have better options to solve problems, prevent injury, and ensure safety a likely result will be an increase in morale and a positive impact on the community (Batts & Steiner, 2006).

For TASER effectiveness, the Long Beach Police Department saw a 2% increase in arrests and an 8% increase in the overall use of force during the period of June 2003 through June 2005. During this same period, officer injuries related to arrests dropped 25% (Batts & Steiner, 2006). In addition, TASERs prevent more deaths and injuries than they are causing (Marshall, 2007).

Literature Review Summary

The concept of TASER use has not come without significant support and controversy. Departments across the country have been placed on both sides of the spectrum, from full support to no support of the concept. Public opinion is often driven by media portrayal. The accuracy or inaccuracy of media accounts should not be the driving factor for use. Rather, the use of empirical data and analysis in order to make the best and safest decision for all of the stakeholders who are involved in the process should be the pivotal factor.

Methodology

The methodology used to examine the issue of officer opinions concerning the training, use, and effectiveness of TASERs was through a large police organization in New York State. Organization and size were selected due to the perception of heightened concerns of danger in urban policing environments and the propensity for violent contacts and the need for TASER deployment being higher in a larger police organization. The final criterion was the use of a police agency that fully embraced the concept of TASER use.

Data Collection Instrument

The data collection instrument was developed based upon the examination of the literature and issues discovered balanced against the unique issues of officer safety. The literature and problem statement comparison to contemporary and empirical research was augmented by the tacit knowledge of the researchers/principle investigators in the instrument design. Historical and empirical examples were examined, and the final data collection instrument was designed to meet the needs of the specific research hypothesis as well as the needs of the organization. The culmination of this process led to the final adjustments in survey form and content. The data collection instrument examined three constructs as follows:

1. TASER use
2. TASER effectiveness
3. TASER training

This set of constructs were examined through a base set of statistical analyses and tested through descriptive statistics. Descriptive statistics were used as the research population of 28 respondents represented 43% (N = 65) of all personnel assigned a TASER and thus had generalizable implications within this specific target group. Twenty-eight respondents also reflected a 0.062% rate in comparison to the entire organization's complement of total department patrol personnel.

The data collection instrument was delivered in a hard-copy format to the targeted population. A researcher was present for the instructions, informed consent, and completion of the instrument. The instrument contained 19 Likert Scale type questions with the scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Six scale response questions were added. Five additional demographic questions were added to assist in examining the relevant variables in the research population. There were 790 usable observations in the final analysis presented.

Limitations of the Data Collection Plan

The data collection plan was limited by the size of the research population. While the organization employs approximately hundreds of personnel, the specific hypothesis limited the size of the sample to 28 officers who had the specific knowledge, experiences, and exposure to offer an informed opinion on the research hypothesis being examined. This fact was observed as a limitation only due to sample size. All other factors of consideration for limitations did not result in a significant impact to the research plan or subsequent findings.

Results

The results are categorized based upon the three constructs examined through the use of the data collection instrument. Additional analyses were conducted based upon an in-depth analysis of the available data.

Population Demographics

An overview of the research population demographics is provided in Table 1. Mean police experience (9.91 years) and mean time in the TASER program (3.04 years) were both statistically significant as the research population, from a wide range of views, could offer informed opinions based upon significant experiences in the field as directly related to the research hypothesis.

Table 1. Population Demographics (N = 28)

Variable	Mean	Median	Mode	SD
Years in policing	9.91	8.63	7.75	5.07
Time in TASER program	3.04	3.00	4.00	1.53

An additional demographic that was considered was rank. Officers represented 79% ($n = 22$), sergeants represented 11% ($n = 3$), lieutenants represented 7% ($n = 2$), and captains represented 3% ($n = 1$) of the research population.

The next section addresses each construct and the data collection instrument questions that were used to answer those research questions posed by the hypothesis. Table 2, "Individual Question Analysis Grouped by Construct," is provided in the Appendix. This table depicts each construct as delineated below, the respective questions as asked of the respondents, and subsequent statistical analyses of the aggregate responses.

TASER Training

TASER training in the research organization revealed the following results:

- The majority received inservice, updated, and pertinent information through training in the use of the TASER.
- The majority believed training was facilitated in a positive manner with adequate supplies and time.
- The majority believed the training was relevant to the position, well-organized, and that they would recommend the TASER training to their peers.

Additionally, training needs were also addressed. A range of options were put to the research population, and the following needs were revealed:

- Use: 10%
- Policy and procedure: 4%
- Officer awareness: 25%
- More training in general: 35%
- Legal: 10%
- Internal affairs/subject resistance reports: 14%

TASER Use

TASER use in the research organization revealed the following results:

- The majority of the population always carries their issued TASERs.
- The majority have observed violent situations successfully resolved by merely displaying/paining the subject.
- The majority believe that the TASER did not cause any serious injury to the subject after deployment.
- The majority of the research population recommend that the TASER should be lowered on the department's Use-of-Force Continuum from Level 3 to Level 2 so that it can be used in a wider array of situations faced in the field.

TASER Effectiveness

TASER effectiveness in the research organization revealed the following results:

- The majority have used the TASERs and incidents have been resolved successfully.
- The drive stun was extremely effective in close contact situations.

Discussion and Conclusions

Discussion

The issues of TASER training, use, and effectiveness and its effect on officer safety has been examined in this research study. In developing the three distinct constructs, a global view of the hypothesis could be examined and placed in context within a large urban police organization. The evidence-based discussion addresses the positive findings, neutral and inconclusive findings, and negative findings of the research project.

Positive Findings

The preponderance of the evidence weighed in on the side of the use of TASERs as a viable less-lethal force option in this specific agency. Training was in general adequate and relevant to the officer's use of the instrument. Use questions revealed officers carry and use the TASER in situations that fit within current force policy requirements. TASER effectiveness also revealed that the instrument was effective in the majority of deployment situations.

Neutral and Inconclusive Findings

There were no neutral or inconclusive findings from the statistical analysis.

Negative Findings

There were no negative findings from the statistical analysis.

Conclusions

In review, the researcher's have identified the most salient points, from a discussion perspective, that allowed for an understanding of opinions, behaviors, and value

delivered to the organization and community from the use of the TASER. In addition, the TASER is a viable and less-lethal alternative to the defensive weapons available to the officers of this particular law enforcement agency. The research revealed that the majority of the research population believe the TASER is highly effective at resolving violent incidents in both appearance/pre-deployment and in deployment.

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Appendix

Table 2. Individual Question Analysis Grouped by Construct (N = 28)

Construct and Survey Question	Mean	Median	Mode	SD
TASER Training				
21. You have received an inservice update or training since your initial training.	4.75	5.00	5.00	0.44
22. The training you received was pertinent to your use of the TASER.	4.82	5.00	5.00	0.39
23. The training was facilitated in a positive manner.	4.79	5.00	5.00	0.42
24. There were adequate training supplies.	4.71	5.00	5.00	0.46
25. There was adequate training time.	4.50	5.00	5.00	0.69
26. The training pertained to my job and is transferred into daily use.	4.79	5.00	5.00	0.42
27. You receive regular updates and trends on current events related to the TASER.	3.86	4.00	5.00	1.35
29. TASER training is well-organized and you would recommend this training to your peers.	4.64	5.00	5.00	0.68
30. Everyone in the department should be trained and certified to carry the TASER.	4.00	4.00	5.00	1.21
TASER Use				
7. As a TASER operator you always carry your TASER.	3.93	4.50	5.00	1.33
9. You have/have seen a situation successfully resolved with a spark test.	3.64	4.00	5.00	1.28
10. You have/have seen a situation successfully resolved with the use of laser painting of suspects.	4.00	4.00	5.00	1.02
14. The TASER "dry stun"/"drive stun" caused serious injury to the suspect.	1.58	1.00	1.00	0.90
15. How many times have you seen a TASER cartridge used?	3.13	2.50	2.00	2.01
18. The TASER caused serious injury to the suspect related to the cartridge use.	1.75	1.00	1.00	1.14
19. You would like to stay a part of the department TASER program?	4.64	5.00	5.00	0.68
20. On what level of the Use-of-Force Continuum should the TASER be listed at?	2.22	2.00	2.00	0.67
TASER Effectiveness				
6. You have seen the TASER used and it was extremely successful.	4.25	5.00	5.00	1.08
8. You have had the opportunity to use your TASER successfully.	3.71	4.00	5.00	1.44
11. How many times have you seen a TASER "dry stun"/"drive stun" used?	3.33	3.00	1.00	2.50
12. The TASER "dry stun"/"drive stun" was extremely effective.	3.59	4.00	4.00	0.93
16. The deployment of the TASER cartridge was extremely effective.	4.32	4.00	5.00	0.72

Nonlethal Weapons: The Promise and the Challenge

Greg Meyer, Captain, Los Angeles Police Department (Retired)

Introduction

The aggressive use of available nonlethal weapons early in standoff confrontations between police and suspects who resist arrest or threaten violence predictably results in fewer and less severe injuries to suspects and officers. The traditional tactical alternative of prolonging the standoff frequently leads to the use of more injurious degrees of force, including deadly force. The police, in well-meaning but ineffective efforts to resolve standoff confrontations without force or with relatively little force, literally talk some people to death, or become victims themselves. Nonlethal weapons technology gives police agencies the opportunity to create policy, training, equipment, tactics, supervision, and review practices that lead to better outcomes than traditional tools and tactics.

The technology brings with it a promise and a challenge.

The *promise* is that police and political leaders who see the value of this approach and who successfully implement it will experience fewer and less severe injuries among officers and subjects, fewer citizen complaints and lawsuits, fewer disability pensions, reduced chances of civil unrest following a high-visibility use of force incident, and an improved public image for the law enforcement agency that is seen by the public as trying to do the right thing.

The *challenge* is to do it right. Technological and tactical innovations must be seen as reasonable (therefore acceptable) in the eyes of the public. The public is rightly concerned about police tools and tactics, sudden in-custody deaths, and use-of-force incidents that provoke strong emotions when viewed on television. Historically, some of these incidents have led to rioting in the streets. Clearly, it is in the public interest to attempt to reduce or prevent such outcomes.

The Nature of the Challenge

Many police use-of-force situations are sudden, close-contact situations that require immediate, instinctive response. Other situations begin as standoff situations, with time for planning and maneuvering, but change to immediate-response situations if the suspect increases resistance; if officers approach the suspect without a plan; or if officers do not take appropriate, aggressive actions to control the suspect before the standoff situation deteriorates.

In 1977, a police officer was disarmed and shot in the face by a naked man who was under the influence of phencyclidine (PCP), an illegal drug reputed to give some users what doctors and police officers refer to as *super-human strength*. That same year, four police officers responding to a single incident suffered an assortment of broken bones and concussions at the hands of a naked man who resisted arrest. Another officer shot and killed a naked man on PHP (a PCP analog); the man had

twice taken the officer's baton and was about to overpower him. In 1978, an officer was disarmed and shot to death in a fight with a PCP suspect (Meyer, 1991).

On January 3, 1979, an emotionally distraught woman was shot and killed during a standoff situation. Minutes of strenuous effort by two Los Angeles Police Department officers to persuade her to put down the 11-inch butcher knife failed. After repeated verbal efforts and the use of a police baton failed to control the situation, the officers shot her with their handguns as she threw the knife at them at close range. The butcher knife came to ground some 60 feet away, after flying past one officer's head.

In the wake of that tragedy, the Los Angeles Board of Police Commissioners directed "continued research into the use of intermediate weapons and/or control devices which have the potential to significantly reduce reliance upon deadly force" (Los Angeles Police Department, 1980). On April 30, 1981, after extensive research and field-testing (coordinated by the author) and dozens of successes, the LAPD adopted the TASER and two types of chemical irritant spray as authorized nonlethal weapons. The TASER in particular worked very well on violent PCP suspects and mentally disabled persons.

The Public Interest

Meeting the challenge of garnering public acceptance for the innovative use of force options requires outreach via the media to educate the public about the benefits of the proposed tools and tactics. This outreach to the public can be a major challenge.

Use of force by police naturally upsets onlookers across the street as well as viewers of the six o'clock news. Conditioned by fictional media depictions of sanitized violence on one hand and fantastic *megaviolence* on the other, most people have no frame of reference other than personal emotions to evaluate an incident. The average viewer has little or no experience with real violence and the chaos that typically surrounds it. There is an abundance of surveys about people's perceptions and attitudes about police brutality, but there is little data on people's experience with or exposure to it (Geller & Toch, 1995). Real-life incidents combined with inaccurate media stereotypes result in people having unrealistic expectations of police officers: cops are too soft; cops are too tough; cops are superheroes (Bailey, 1995).

Law enforcement officers are unique in society because they are permitted by law to use physical force to compel others to do their bidding. Officers intervene in a variety of urgent, unpredictable situations, and their mission is to keep the peace or to restore it (Silberman, 1978). This awesome power must be wielded sparingly in a democratic society. The public rightly holds public administrators, including police officials, responsible to public preferences and demands (Cooper, 1982). When officers use force, they must do so to control a situation, not to punish an offender. However, violent civil unrest occasionally occurs when the public perceives that police power has been abused.

People tend not to understand even legitimate use-of-force incident dynamics; they are repulsed when they see force applied to a fellow human being. But force

is used in relatively small percentages of police confrontations, and people should not be surprised or offended that police must occasionally use force (Skolnick, 1993). In a perfect society, force would be unnecessary and reason would prevail. But humans are not perfect, so force must sometimes be used (Koon, 1992).

While officer-involved shootings receive the most attention from the public and from officers during their training, more than 99% of police use-of-force incidents are *nonlethal* confrontations, although any confrontation that is not effectively controlled may degenerate into a lethal one.

The International Association of Chiefs of Police (2005) created “A Nine-Step Strategy for Effective Deployment” of electro-muscular disruption technology (EMDT) (such as TASERs) that included outreach to the public as one of the necessary components. Step 5 of the nine-step process is to “[e]mploy an outreach strategy with key stakeholders and the community. Their acceptance of EMDT is essential to successful deployment” (p. 12). Step 5 includes educating the public about the injury potential of the devices and the cost/benefit considerations of adopting them.

Political officials, police leaders, and officers on the beat and in custody facilities must support and apply policy, training, equipment, tactics, and review processes that ensure that force is used appropriately.

Failures to Meet the Challenge

The legitimacy of police power is questioned in the wake of a high-visibility police use-of-force incident if the public perceives that the law enforcement actions were improper. Most people understand when officers are forced to shoot someone who shoots at them, but disparate viewpoints surround other use-of-force situations that attract public attention.

The Rodney King incident in Los Angeles was perhaps the most prominent modern example of a controversial nonlethal encounter. In the middle of the night of March 3, 1991, King, a paroled robber, drove a vehicle at speeds over 100 miles-per-hour on a Southern California freeway. He was pursued by California Highway Patrol officers who requested Los Angeles Police Department assistance when King exited the freeway and continued driving recklessly on surface streets. Once stopped, King’s two passengers complied with police orders to get out of the car and submit to arrest. King eventually got out of the car and performed a bizarre “dance.” He was sweating, laughing, and talking irrationally, and many officers on the scene believed he was on drugs. The sergeant on the scene ordered four officers to approach and handcuff King, but King threw them off. The sergeant used a TASER electronic stun device on King, who fell to the ground. At that moment, a bystander across the street began videotaping the event. King rose to his feet and charged an officer who delivered a baton blow to King’s upper body simultaneously with the sergeant’s use of the TASER device again. King fell to the ground and sustained an ugly facial wound. King repeatedly attempted to regain his footing as two officers kicked and used police batons on him for well over a minute as the amateur video camera recorded the action.

The videotape was broadcast on a local news program and then was rebroadcast worldwide. Because Rodney King and his companions were Black and most of the officers on the scene were White, the brutality argument was immediately framed in racial terms. Many people falsely believed (and continue to falsely believe) that King had been beaten while he was handcuffed and that he was nearly killed by the police. In reality, he sustained numerous bruises and contusions along with a fractured ankle and fractured cheek bone. Ultimately, three officers and their sergeant faced criminal charges. The chief of police buckled under relentless public pressure and announced his retirement. In court, the accused officers argued that the force options they used were legitimate, based on what they had been taught for years. They were acquitted in a California state court, and the biggest riots in modern United States history occurred.

In Los Angeles, 56 people died during the violence. At the behest of the President of the United States, the Department of Justice brought federal criminal charges for violation of King's civil rights against the four officers; two were convicted and sent to prison. Another federal civil jury later awarded Rodney King \$3.8 million in general and compensatory damages. No punitive damages, which the accused officers themselves would have had to pay, were awarded after the jury heard (from this author and others) about the evolution of policy, training, equipment, and tactics that led to the sorry event.

The Rodney King incident was a complex event open to many interpretations. Depending upon one's life experiences and point of view, the King incident was an example of uncontrolled brutality, or it was a controlled use of force that was the logical (but ugly and inept) outcome of years of indefensible policy and training. Rodney King was an African-American motorist who was gratuitously brutalized by rogue, racist cops, or he was a drunken ex-con who led police on a high-speed chase, then resisted arrest because, as King himself admitted, he did not want to go back to prison. Responsibility for the incident lay with the involved officers and the supervisor of this single incident or it lay with the police chief, his political bosses, and their misbegotten policies that resulted during the previous decade in thousands of other baton-based, use-of-force incidents that did not come to the public's attention. When the accused officers were acquitted at their first criminal trial in 1992, the Los Angeles riots were the fault of the jurors who failed to convict the officers, or they were the fault of the rioters who were encouraged by inflammatory comments from the Mayor of Los Angeles and the President of the United States, or they were the fault of the police who ironically hesitated to use deadly force against the initial rioters who engaged in major race-based assaults against innocent people, and of police leaders who failed to organize a coherent response to suppress the riot (Cannon, 1997).

The King incident may be viewed from many perspectives: the officers on the scene, officers with the same policy and training who were *not* on the scene, officers who do not have similar policy and training, police management, people of different races and backgrounds who apply their own life experiences to the situation, politicians, special interest groups, the media, and countless others.

The emotions, the complexity of issues, and the tragic aftermath, including the riots that surrounded the King incident and the famous videotape that documented the incident, combined to make the Rodney King case a defining moment in law

enforcement history. The incident must be studied in depth so that appropriate conclusions can be drawn, learning can occur, and necessary improvements made by police personnel the world over.

In November 1992, nearly two years after the Rodney King incident in Los Angeles, two Detroit police officers attempted to arrest narcotics suspect Malice Green, who died after being repeatedly struck with heavy flashlights (Samaha, 1994). In a videotaped deposition, Detroit Mayor Coleman Young defended his decision to immediately suspend the involved officers, saying he was afraid of a "Rodney King-style riot" (Shepardson, 1995). Later, both officers were sent to prison. There were no riots.

There are many examples that support the general belief that violent social unrest typically stems from an unpopular police use-of-force incident. The Watts riot of 1965 began as a California Highway Patrol arrest of a drunk driver in Los Angeles. The Miami riots of the early 1980s were outgrowths of police use-of-force incidents when accused officers were not penalized the way some members of the public thought they should be after an officer clubbed to death a fleeing motorcyclist in one instance, and an officer shot a fleeing motorcyclist in another.

As a result of police use-of-force incidents, there have been riots of varying scale from Atlanta to Dayton, Detroit to Seattle, and Tampa to Omaha (Geller & Scott, 1992). As law enforcement professionals make arrests that offend public sensibilities, there will be future similar consequences. Therefore, police leaders must promote policies and practices that minimize the risks of adverse incidents. The proper deployment and use of nonlethal weapons is a step in that direction.

Police officers should still be taught to "talk" in most tactical situations, but they should also assess each situation on its own merits for how long they will talk without acting. There will in many cases be some level of injury or discomfort from use of these innovative technologies. This must be acceptable to the public, the politicians, and the media. Lower numbers of deaths and injuries must be seen as positive tradeoffs for aggressive efforts to end the incident before the danger increases.

Tactical Considerations

Certainly, many confrontations are immediate and life-threatening, thus deadly force is the appropriate response. But many confrontations begin as standoffs with unarmed suspects, suspects who are armed with less than a firearm, or mentally ill persons or drug abusers, when there is often time for officers to plan their tactics and there is distance between the officers and the suspect.

Time and *distance* are two critical dynamics. They affect police choices of tools and tactics to use during a confrontation with a suspect who is resistant to police commands to submit to lawful arrest. Nonlethal weapons are useful when deadly force is not a reasonable option, when conventional tactics have failed or will likely fail in the situation, or when it is unsafe to approach to within contact range of the suspect.

The proper combination of tactics and technology can help solve problems and reduce the potential for injury and death among officers and suspects (Ijames, 1998). Pepper spray, TASERS, a variety of stun guns, bean-bag guns, capture nets, intense light and sound emission devices, and a variety of other “nonlethal weapons” are available or are in development.

Policymakers and trainers must consider the potential consequences of using nonlethal weapons gratuitously or in situations that merely call for *compliance* and not *control*. Officers have lost their jobs and have even been prosecuted for gratuitous use of pepper spray and TASERS, for example. The public is occasionally outraged when a nonlethal weapons incident is televised in which the objective was merely to achieve *compliance* with an officer’s direction rather than *control* of a person’s resistive or assaultive actions. As innovative technology is deployed to the field, there is sometimes a tendency to “find out if this thing works,” resulting in occasional inappropriate applications of the device in situations that do not pass the “reasonable use of force” test. While many instances of *noncompliance* result in legitimate applications of nonlethal weapons that the public will not necessarily understand, agency review processes should ensure that these occur in circumstances supported by policy and training.

Implications for Police Policy and Training

Progressive law enforcement officials provide policy, training, equipment, tactics, and review processes designed to support legitimate use of force while reducing the number and severity of injuries to officers and suspects. Policy must provide officers with conceptual guidelines grounded in the values of society and protections of our Constitution to provide a frame of reference for decisionmaking. Police agencies typically document use-of-force policy in their department manual of operations. Policy must also take into account decisions about training, equipment, tactics, and review processes (Meyer, 1994).

Therefore, policymaking should be approached scientifically. Policymakers should consider what changes might be expected as a result of policy, whether anticipated changes actually occurred, what outside variables might explain the changes, and what unintended consequences occurred after a policy change (Geller & Scott, 1992). In the case of use of force, policy should be grounded in empirical research that demonstrates the effectiveness of and injuries caused by various weapons and tactics (Meyer, 1994).

Police use of force must be *reasonable* for the circumstances when it is used. This has been the law of the land since 1989 when the U.S. Supreme Court held that police use of force is a seizure of the person subject to the protections of the Fourth Amendment to the Constitution. The Court further held that the standard for evaluating police conduct in a use-of-force incident is whether the officers’ actions were “objectively reasonable.” In his opinion for the landmark case *Graham v. Connor* (1989), Chief Justice William Rehnquist wrote that this “calculus of reasonableness” must recognize that police must make split-second decisions in situations that are “tense, uncertain, and rapidly evolving.” Administrators routinely ought to incorporate into policy the advice of agency attorneys.

Unfortunately, much law enforcement “training” is merely classroom presentation, or it is given in the form of a handout or a videotape. Even training that is intended to be practical application tends to be static instead of dynamic. For example, standing on the line on the pistol range and shooting at the target, reloading, then shooting more is mainly static training. It may develop certain skills, but it does not facilitate decisionmaking under pressure.

Dynamic trainers put the participants into fast-breaking situations, featuring fire-and-movement and cover-and-concealment concepts that force participants to act out shoot/don’t-shoot simulation scenarios and experience emergency decisionmaking and psychological pressures likely to be encountered on the street. Interactive “force options simulators” use computer models, digital cameras, sound effects, and weaponry to provide realistic, split-second decision training on nonlethal and lethal force. The advent of laser and paintball shooting technology facilitates dynamic training that simulates realistic deadly force encounters. Apart from firearms training, dynamic body-contact training requires participants to resist, grapple with, and fight each other in a manner that attempts to minimize injuries to provide experience and build individual confidence in more realistic ways than static training allows.

The results of an agency providing dynamic training can be dramatic. One major East Coast police agency switching from static to dynamic firearms training experienced a 45% reduction in armed confrontations, a 56% decrease in officers wounded or killed, and a 51% decrease in offenders wounded or killed (Remsberg, 1986).

Classroom presentation of policy, use-of-force law issues, and “What if?” scenarios may be appropriate. But that which is learned intellectually in the classroom ought to be reinforced through practical, dynamic training and periodic retraining. A study by the U.S. Department of Justice of felonious assaults against officers stated this need clearly:

It is the obligation of law enforcement agencies to keep their officers apprised of updates in the latest law enforcement methods and practices. Staying abreast of new literature, studies, procedures, concepts, court decisions, and equipment is central to ensuring that training programs are current and relevant to today’s law enforcement problems. Adequate training not only benefits the department and its officers, but the communities they serve as well. Well-educated officers can better respond to the needs and demands of the agency’s constituency. (Davis, Miller, & Pinizzotto, 1997)

Putting effective, less injurious tools into the hands of the police ought to be a national priority (Meyer, 1994). Four decades ago the President’s Commission on Law Enforcement and Administration of Justice asserted that nonlethal weapons must provide almost immediate incapacitation of the offender with little risk of injury (Katzenbach, 1968).

A plethora of nonlethal weapons now exists, and many others are in development as law enforcement seeks to reduce the risks of injury and death associated with control of violent suspects. A variety of police batons (straight, PR-24, expandable/collapsible), chemical sprays (pepper spray, CN, CS), electronic weapons

(particularly the TASER), capture nets, extended-reach grabbing devices, and various projectile launchers (bean bags, shot bags, “rubber bullets”) are available and used by American law enforcement (Geller & Scott, 1992).

The *administrative climate* where use-of-force incidents are reviewed has a dramatic effect in field practices (Geller & Scott, 1992). The value of incident review processes depends upon the ability of agencies to promote ethical behavior through effective communication of standards, institutional oversight to ensure that employees meet these standards, and a willingness to learn from mistakes (Gaffigan & McDonald, 1997).

Research has found that implementation of nonlethal weapons has indeed resulted in fewer and less severe injuries to officers and suspects. It is important to note that all tools and tactics have an associated number of failures to work as intended. But most of these tools and tactics are effective eight or nine times out of ten if properly used (Meyer, 1991). The point is that the nonlethal weapons typically result in relatively fewer and less severe injuries.

Unfortunately, there will still be occasional shootings when there is a nonlethal device failure or a tactical situation that is not thoroughly controllable. Some number of persons who act out violently because of schizophrenia or illicit drug use will continue to die in custody when their hearts fail. There will still be individual incidents and individual families who will ask “Why?” when a nonlethal weapon is not used, or is used but is not successful. Overall, there will be significant, measurable reductions in tragic outcomes if the police embrace these technologies.

Sudden In-Custody Deaths

The question of law enforcement culpability for sudden in-custody deaths following the use of various nonlethal force options is a developing area that is of great concern and study by police practitioners and those who insure or defend them. These deaths occur quickly and quietly, sometimes in the back seat of a police car or in an ambulance during transportation shortly after an arrest involving a violent altercation. In truth, this problem reaches beyond law enforcement. Sudden in-custody deaths occur in jails and prisons as well as in psychiatric lock-up facilities where violent people are occasionally restrained.

Some doctors teach that sudden in-custody deaths occasionally result regardless of what police tools or tactics are employed. Over the course of several decades there have been sudden in-custody deaths following police application of neck-restraint holds (*chokeholds*), chemical sprays, pepper spray, the so-called *hog-tie* restraint, TASERs, restraint chairs, and other methods.

For several years, many doctors and police personnel have believed that certain methods of restraining and transporting violent people would occasionally result in suspects’ demise, particularly due to neck-restraint holds and a phenomenon known as *positional asphyxia*. In particular, the *maximal restraint* or *hog-tie* technique in which a person’s ankles are bound together then bent toward and attached to the handcuffs behind a person’s back has been the subject of intense debate. As a result of these concerns, many agencies changed their policies to prohibit the use of such techniques (Meyer, 1994). However, Dr. Donald Reay of Seattle, the

primary medical proponent of the dangers of the positional asphyxia phenomena, changed his long-standing opinion about the hog-tie technique when confronted in court with recent medical research at the University of California–San Diego Medical Center that showed different results than Reay’s earlier study (*Price v. County of San Diego*, 1998).

Many medical and police personnel theorize that sudden in-custody death syndrome occurs as a result of *excited delirium* (also known as *agitated delirium* and *acute exhaustive mania*, among other labels) brought on by schizophrenia or acute drug intoxication, particularly cocaine, phencyclidine (PCP), or methamphetamine. Excited delirium brings about hyperactivity, profuse sweating, incoherence, and extreme violence along with a massive release of adrenaline that causes the heart to beat faster. In some cases, these factors combine to trigger a fatal heart attack (Wetli, 1997). The police tend to be blamed for these deaths even if the officers did nothing wrong. To the extent that the effects of schizophrenia and drug abuse are uncontrollable, it may be that many of these deaths cannot be prevented. However, it is prudent that officers be trained to obtain immediate medical attention for people who exhibit excited delirium symptoms. Medical examiners need to learn more about these types of deaths and why relatively few people who experience excited delirium die in custody, while the overwhelming majority of such people do not (Lapostata, 1997).

Dr. Vincent DiMaio (2007), retired chief medical examiner of Bexar County, Texas, lectures that it is not the method of restraint, but, rather, excited delirium, the struggle, legal and illegal drugs, natural disease, or genetic predisposition that leads to such deaths.

Dr. Christine Hall (2006), former staff physician at the Department of Emergency Medicine, Calgary Health Services in Alberta, Canada, notes that in the 1970s, there was a tendency to blame police-applied neck restraints; in the 1980s, “positional asphyxia” was in vogue; in the 1990s, it was pepper spray; and in the current era, conducted energy weapons (CEWs) (like the TASER) tend to be blamed for sudden deaths of people who experience excited delirium.

At the time this article is being written, much attention is focused on investigative hearings in Vancouver, Canada, following the sudden in-custody death at Vancouver Airport in 2007 of a Polish immigrant on whom the Royal Canadian Mounted Police used a TASER during the arrest. There is much public hue and cry in Canada and elsewhere about standards for controlling TASER use, for using the TASER only as a substitute for deadly force, or for banning the devices outright.

Causes of death in these types of cases continue to be debated by doctors, lawyers, and law enforcement personnel. On May 2, 2008, a judge in Summit County, Ohio, ordered that three autopsy reports that had listed a TASER as a causative or contributing factor to sudden in-custody deaths be changed to eliminate such conclusions when the medical examiners could provide no evidence to support their opinions in the three autopsy findings implicating the device (*TASER International, Inc. and City of Akron v. Chief Medical Examiner of Summit County, Ohio*, 2008).

More medical research is needed (and is occurring) as law enforcement, jails and prisons, hospitals, and psychiatric facilities attempt to cope with the challenge to prevent sudden in-custody deaths.

Conclusion

If we truly have reverence for human life, and even though we accept that perfection will elude us, the police must continuously improve our ways of dealing with these situations if we are to be public servants. We must also take an interest in our police officers as human beings. It is well-known that the aftermath of a controversial shooting or other major use-of-force incident is devastating to the officer and his or her family.

Law enforcement leaders should encourage officers to use nonlethal weapons as the first resort in situations where it is necessary to cause resisting suspects to fall to the ground whenever the situation allows officers to have a choice. Incident reviewers should ask why conventional force types were used instead of nonlethal weapons. Moral and legal constraints allow officers to use reasonable force. Whatever force types are effective and result in the fewest and least severe injuries to officers and offenders ought to be seen as more reasonable than those that result in greater injuries.

For officers to be able to make greater use of nonlethal weapons, agencies will need to obtain enough to be immediately available when needed. Additional tactical training must be given to officers, who will then be expected to use the devices more often than in the past. The failure to adopt and make first-resort use of nonlethal weapons has led to countless unnecessary injuries and deaths to officers and suspects. The costs of equipping and training an entire police force with effective nonlethal technology is typically less than the cost of defending and losing a single wrongful-death lawsuit.

If we can put a man on the moon and return him safely to Earth, why can't we put a man on the ground and take him safely to jail?

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Verbal Judo: A Gentle but Powerful Form of Less-than-Lethal Force

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Police officers, by virtue of their vested authority to maintain social order and to protect human life (Roberg, Novak, & Corder, 2005), are given legally justified opportunities to use force. Officers may use force for a myriad of situations such as during traffic stops, executing an arrest warrant, maintaining order during a demonstration, or any other routine police-citizen encounter during which more than the mere presence of the officer is needed to accomplish a legitimate police duty (Walker & Katz, 2005). Weber (1954) suggests that police are given *coercive power* (physical or psychological) to bring about conformity in society and are thus granted with the legal privilege to gain compliance from members of society through the use of force. Roberg et al. (2005) agree that the use of force and coercion are synonymous and that force “occurs any time the police attempt to have a citizen act in a particular way” (p. 315). Although some may disagree with the contention that police *coerce* individuals to comply with the law (Lyman, 2005; Walker & Katz, 2005), the police are bestowed with officially permitted power to use force.

There are various forms of force such as verbal force, psychological force, non-lethal force, and deadly force (Skolnick & Fyfe, 1993). When viewed along a continuum of reasonableness as defined by legal parameters established in case law, such as *Graham v. Connor* (1989) and *Tennessee v. Garner* (1985), force can either be reasonable or unreasonable and/or excessive. Admittedly, the use of unreasonable or excessive force has resulted in numerous criminal and civil lawsuits against police as exemplified by the 1991 Rodney King case in Los Angeles (Lyman, 2005) and more recent cases particularly in New Orleans after Hurricane Katrina (Dewan, 2006). Police agencies, as a result of a barrage of criminal and especially civil lawsuits, not only began to re-train officers on use of force but also turned to non-lethal forms of incapacitation. Nonlethal forms of incapacitation, such as TASERs or chemical agents (e.g., pepper spray or oleoresin spray), may cause unintended consequences, however, and can also result in civil liability for police (Roberg et al., 2005). Thus, agencies have turned toward lesser forms of nonlethal force.

One of the most widely adopted forms of nonlethal force is verbal force, primarily verbal judo (Johnson, 2004). Verbal judo focuses on educating officers on interpersonal communication skills and/or conflict resolution skills to diffuse potentially volatile confrontations with members of the community. It also teaches officers to be empathetic, conduct themselves in a professional manner, and gain compliance through verbal appeals (Thompson & Jenkins, 2004). Verbal judo fits well within a community policing philosophy and can potentially shield agencies from civil liability. It can also diminish threats to officer safety.

This paper will discuss justifications for the use of force as well as various forms of force, civil liability as a result of the use of excessive force, and lesser forms of nonlethal force. In particular, the salience of verbal judo will be explored within

the context of a community policing philosophy and also within the parameters of officer safety. Finally, verbal judo will be assessed in terms of its suitability in dealing with the public and also pressing social concerns such as domestic terrorism.

Literature Review

Use-of-Force Continuum

Police officers across the United States are trained to use varying degrees of force depending on the particulars of the situation as well as the gender, size, age, and possible intoxication level of the individual (Roberg et al., 2005). Force may be viewed along a continuum, and there are varying *use-of-force continuums* used by law enforcement. For instance, the Federal Law Enforcement Training Center’s (FLETC) continuum contains five levels of force ranging from verbal commands to deadly force (Kedir, 2007). The more popular, however, is a seven-level continuum where the least amount of force is the mere presence of the uniformed officer and the highest level is deadly force (Roberg et al., 2005). In the middle of these diametrically opposed degrees of force exist many other options to either gain compliance or to incapacitate a person (see Table 1). *Verbal force* can be used to persuade a noncompliant individual to succumb to the wishes of police, but *command voice* is more likely used by police to strongly influence individuals to follow specific orders such as when police ask a person to “put their hands behind their back.” At times, however, police may be obliged to use *firm grips* which require making physical contact with the individual to help them comply with specific orders. This type of force is used when a person displays a minimal amount of resistance to police orders.

Table 1. Degrees of Force

Degrees of Force	Level	Example
Mere presence	1	Used to maintain order in public places
Verbal force	2	Used for minor violations with no apparent threat to officer or others
Command voice	3	Used when subject refuses to comply with requests
Firm grips	4	Used when subject fails to comply with directions and physical contact with subject is needed to gain compliance
Pain compliance	5	Used when there is minor physical resistance and officer is either in close proximity to the subject (e.g., pain-compliance techniques) or further away from the subject (e.g., TASER)
Impact techniques	6	Used when there is minor physical resistance and officer is further away from the subject (e.g., TASER, pepper spray)
Deadly force	7	Used in situations of imminent threat of death or serious physical injury to officer or others

Source: Roberg et al. (2005), p. 325.

If an individual does not acquiesce to the directives of the police using the above degrees of force, officers may choose to use pain-compliance techniques where pressure is applied to certain parts of the body (e.g., pressure points) to influence an individual to comply with police orders. Officers may also choose to use *impact techniques* such as TASERS, pepper spray, or flashlights and batons. These techniques are intended to incapacitate noncompliant individuals who have not responded to the lesser forms of force and who actively resist orders by police. Finally, if a subject

presents an immediate danger to the officer and/or community, officers are legally allowed to use deadly force (Roberg et al., 2005).

Justifying the Use of Force

Admittedly, the use of force in daily police work is an ever-present reality and possibility, but the use of physical force, such as firm grips, pain-compliance techniques, impact techniques, and deadly force is not commonly used by officers during the course of their routine patrol activities. Beginning in the 1960s, research shows that most police-citizen interactions do not involve physical force. Reiss (1967), for instance, found that of the approximately 5,000 face-to-face interactions with community members, police used force in less than 2% of cases. He also discovered that interactions with the public were cordial and conducted in a business-like manner. Reiss, nevertheless, also found that police cordiality was significantly linked to citizens' level of geniality. Sykes and Brent (1983) analyzed 2,000 police-citizen encounters and similarly found that police seldom use physical force; however, situational factors, such as noncompliance on the part of the citizen, may warrant the use of force, including physical force. Most recently, Terrill (2001) found that of 3,544 police-citizen interactions, verbal force was used in 60% of cases, and greater forms of force were used in approximately 5% of cases. This mirrors the findings of the National Institute of Justice (1999), which found that out of the nearly 45 million people who come into contact with police throughout the course of one year, only 1% or 500,000 persons are subjected to some force or threat of force by police. The Bureau of Justice Statistics (2001) also found that police use force in less than 20% of adult custodial arrests.

Despite research indicating the rarity of physical force, there are egregious examples of excessive force or police brutality such as that exemplified in the Rodney King case in Los Angeles (Lyman, 2005) and with Amadou Diallo in New York, who was shot 41 times as he reached for his wallet (Waldman, 1999). Just recently, New York City officers were accused of police brutality for the shooting of Sean Bell, who was unarmed and received about 25 of the 50 bullets fired at him from police (Baker, 2008). According to Carter (1994), "Force that does not support a legitimate police function" (p. 270) is considered excessive. In other words, force that is not necessary to accomplish or solve a lawful police function is unnecessary and may be considered abuse of authority and legally unjustifiable. Carter explains that abuse of authority can be classified into three typologies:

1. *Physical abuse/excessive force*: This may include more force than is needed to effect an arrest and/or the wanton use of any degree of physical force against another.
2. *Verbal/psychological abuse*: This may include incidents in which an officer ridicules or harasses others and/or an individual is placed in a situation where his or her esteem or self-image are threatened or diminished. It may also include the threat of physical harm or any harm that instills fear in the average person.
3. *Legal abuse/violation of civil rights*: This includes force that is more than necessary to accomplish a legitimate police mission. Legal abuse is defined as any violation of a person's constitutional rights or rights protected by state and/or federal law. (p. 273)

Justifying use of force, from the officer's standpoint, is highly dependent on the particulars of the encounter and is, thus, highly dependent on situational factors such as the gender, size, age, threat to officer safety, weapon possession, and possible intoxication level of the individual not to mention defiance of police directives. The use of force is subjective, at least from the standpoint of the officer as he or she attempts to gauge noncompliance, the above-mentioned situational factors, and whether the individual is a threat to officer safety or the safety of others (Roberg et al., 2005). As noted by Goldstein (1977), "the police function, if viewed from its broadest context, consists of making a diagnostic decision of sorts as to which alternative might be most appropriate in a given case (p. 41). The officer's subjectivity, however, will be judged by the courts as they try to objectively assess the totality of factors that justified the use of force.

In *Graham v. Connor* (1989), the U.S. Supreme Court outlined three factors used to assess use of force: (1) the severity of the crime committed by the individual to whom force was used to incapacitate his or her actions, (2) whether the individual posed a threat to the officer or others, and (3) whether the individual actively resisted arrest or attempted to evade arrest. In *Tennessee v. Garner* (1985), deadly force is reasonable only to prevent the escape of an individual who has threatened the officer with a weapon; when there is a threat of death or serious bodily injury to the officer or others; or if there is probable cause to believe that the suspect has committed a crime involving the infliction or threatened infliction of serious bodily injury and, when practical, some warning has been given by the officer.

The Fourth Amendment regulates an officer's use of force, and courts will utilize the mandates outlined by the amendment, and subsequent rulings in *Conner* and *Garner*, to rule whether the force was legally justified or excessive and unreasonable. The Fourth Amendment denotes that individuals have the "right . . . to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures." Accordingly, the amendment proscribes any seizure (or arrest) made with more force than is necessary to bring about the restriction of the individual's freedom to leave (see *California v. Hodari*, 1991, and *United States v. Mendenhall*, 1980). In general, courts, including the U.S. Supreme Court, have concurred that force may be used to accomplish the following:

- Protect an officer or others from danger
- Overcome resistance to an arrest and/or seizure
- Prevent escape

With respect to deadly force, it can be used only if

- the suspect threatens the officer with a weapon.
- the officer has probable cause to believe that the suspect committed a crime involving serious bodily harm and that his or her escape will endanger the public.

A totality of the circumstances approach will be taken by the court and/or jury to determine the reasonableness of forced used. Thus, they will look at the situational factors present at the time force was used, the officer's justification for force, and whether a "reasonable officer" would also have used force in the same situation. According to Fyfe (1989), however, the diagnostic expertise of officers or, more

precisely, their ability to process critical information about a crisis situation is flawed given that most decisions must be made in seconds. In defining the *split-second syndrome*, Fyfe opines that force is sometimes used based on the officer's perception of reality, or subjective assessment of reality, formed in a matter of seconds and under the most stressful conditions, thus leading to unnecessary violence.

Since most officers are afflicted with split-second syndrome (Fyfe, 1986), liability often ensues, for the officer, for his or her supervisor, and, at times, for the department and the municipality. The U.S. Constitution provides victims of police abuse of power, such as those subjected to excessive or unreasonable force, the opportunity to seek legal redress in the form of a criminal lawsuit and/or a civil lawsuit. Although criminal actions against the police are common, victims often also file civil lawsuits against police in state and/or federal court to obtain monetary compensation for their less than desirable treatment, and often injurious treatment, by police (del Carmen, Williamson, Bloss, & Coons, 2003). It is not uncommon for judgments in excess of one million dollars to be awarded to plaintiffs. For instance, Rodney King received 3.8 million dollars for his lawsuit against the police for brutality (Lyman, 2005). Fearful of liability as well as disparaging commentary in the media, not to mention pressure through case law and state legislation,¹ police departments around the country train officers on use of force, caution them about liability, and encourage them to use lesser forms of nonlethal force when the situation is not life threatening. Some departments even implemented their own policies, further limiting the use of force (Roberg et al., 2005).

Lesser Forms of Nonlethal Force and Liability Issues

As mentioned, there are various forms of nonlethal force that can be employed by officers to accomplish a legitimate police duty, such as a TASER, pepper spray, a flashlight, or a baton, which may involve temporarily incapacitating an individual (Roberg et al., 2005). A TASER, an acronym for Tom A. Swift Electronic Rifle,² is essentially a handheld stun gun. It fires two small probes, which are connected to the gun and can reach up to thirty feet at a speed of over 160 feet per second. Upon contact with an individual's body, a 50,000 volt of electrical energy is transmitted through the probes thereby quickly incapacitating the individual. The electrical current is generally administered for five seconds, though the officer may extend the duration of the electric current if necessary. For comparison purposes only and to put the use of electric volts on humans in context, Nebraska recently halted executions of its most violent offenders because of a concern that its electrocution protocol (the use of the electric chair), which requires the administration of a 20-second 2,450 volt followed by a second volt if needed, violates the Eighth Amendment's cruel and unusual punishment provision (Liptak, 2008). TASERs became popular among law enforcement during the 1990s, and over 11,000 departments have now purchased TASERs because they are considered to be safe and non-deadly when employed on noncompliant individuals (Seals, 2007).

Pepper spray, also known as oleoresin capsicum or OC spray, became part of the arsenal of nonlethal force used by police when tear gas and other strong chemical agents, such as chloroacetophenone (CN) and o-chlorobenzylidene malononitrile (CS), used since the 1960s, lost some support by police in the early 1990s because they caused too many respiratory problems for targeted individuals and subsequent lawsuits. As a result, OC gained popularity. OC is a chemical naturally found and derived from hot peppers that does not cause such problems but only causes swelling

of the eyes and breathing passages. It also works more rapidly than CN or CS, and OC canisters are lightweight and easy to use (Kaminski, Edwards, & Johnson, 1998).

Admittedly, flashlights are not normally considered weapons, but they have been used by police as impact devices on noncompliant individuals. The Los Angeles Sheriff's Department, for example, in a study conducted over a five-year span comparing the use of flashlights and batons, used flashlights two-thirds of 365 incidents involving only these two types of weapons (Roberg et al., 2005). Some police and sheriff's departments have banned the use of flashlights as weapons, but others have recognized that flashlights "may be needed in some circumstances . . . and when it is used, it will be considered a weapon and all requirements pertaining to the use of force . . . will be applicable" (McEwen, 1997, p. 51). The ambiguity surrounding flashlights dissipates when considering the use of batons as weapons. Batons have an extensive history of use by police, dating back to 1829, when Sir Robert Peel, the father of modern policing, advocated their use for the newly formed London Metropolitan Police. Considered by Peel as a more preferable weapon than a handgun and salient to the accomplishment of a community-oriented policing philosophy, he believed that batons, or nightsticks, would not undermine the mission of the police and would help mend relations between the police and the public since nightsticks are less intimidating than guns (Lyman, 2005). Today, almost every police officer in the country carries a baton, although it may vary in terms of specifications (e.g., ASP collapsible baton, Hybrid baton, Rapid Rotation baton).

When applying and ranking these various lesser forms of nonlethal force and looking at liability issues, all have the potential to reach level seven in the use-of-force continuum, which is deadly force, and all have been named as causes of injury and/or death in civil lawsuits. For instance, although most law enforcement agencies regard the use of a TASER as a weapon within the boundaries of level five or six on the use-of-force continuum (Seals, 2007), Amnesty International has linked this device with 114 deaths since 2001 (Burtka, 2006). When combining statistics from Canada, over 250 deaths have been associated with TASERs. Aside from fatalities, TASERs have also been known to cause serious health consequences such as internal injuries to soft body tissues, organs, muscles, ligaments, nerves, and joints. Secondary risk injuries include bone fractures as the result of falling to the ground after being shocked (Seals, 2007). Pepper spray, generally considered a level 6 use-of-force device, may also cause serious bodily injury or death because it causes breathing difficulties as well as temporary paralysis of the larynx, disorientation, anxiety, and panic (see *Headwaters Forest Defense v. County of Humboldt*, 2001). Flashlights and batons, also considered level 6 impact devices, have the potential to cause serious bodily injury or death (Roberg et al., 2005).

There has been an exponential increase in lawsuits against police for use of these ostensibly lesser forms of nonlethal force (Kedir, 2007). Although individuals subjected to force using any of these devices have the right to petition courts for criminal charges against police, individuals also have the right to file a civil suit. Generally, individuals will bring a civil claim under Title 42, *United States Code*, Section 1983, which provides civil redress for constitutional rights violations, particularly for violations of the Fourth Amendment (alleging excessive use of force) or the Eighth Amendment (alleging cruel and unusual punishment) (Kedir, 2007). It should be noted that none of these lesser forms of non-deadly force have been ruled unconstitutional per se, but there are court rulings that have found officers liable for excessive force when using these devices.

For instance, in *Chaney v. City of Orlando* (2007), a district court held that an officer is not allowed to use a TASER on an individual who is only passively and verbally challenging an arrest. With respect to pepper spray, a federal circuit court in California held that officers were liable when they applied pepper spray with a Q-tip to the eyelids of several protesters for trespassing on private property. The protesters were passively resisting arrest, and the court noted that they posed no threat to the officers (see *Headwaters Forest Defense v. County of Humboldt*, 2001). The use of flashlights to incapacitate individuals has also come under court scrutiny. In Detroit, courts found police officers criminally and civilly liable for beating a motorist to death using a flashlight (Peters & Brave, 2008). Finally, the Rodney King case presents an example of police liability for excessive force inflicted using a police baton (Lyman, 2005).

In sum, liability ensues when TASERs, pepper spray, flashlights, and/or batons are used for punitive reasons as opposed to quell a potentially dangerous situation. Thus, officers will be held responsible for retaliatory actions taken against others that serve no legitimate police function. Also, officers will be held accountable for imposing unnecessary pain on individuals who are only passively resisting orders and pose no safety threat to the officer or others. Further, supervisors and/or training academies and municipalities may be held accountable, under the principle of vicarious liability, for failure to adequately train officers on proper use of force and proper use of less-than-lethal force devices (del Carmen et al., 2003). As a result of liability, police agencies have turned to alternative forms of nonlethal force such as verbal judo.

Verbal Judo

Thompson and Jenkins (2004) define verbal judo as “the gentle art of gaining voluntary compliance through empathic persuasion” (p. 54). At a level one or two on the use-of-force continuum, verbal judo focuses on educating officers on interpersonal communication skills and/or conflict resolution skills to diffuse potentially volatile confrontations with members of the community. It also teaches officers to be empathetic, conduct themselves in a professional manner, and gain compliance through verbal appeals. Essentially, verbal judo is designed to redirect others’ behavior, or more precisely, others’ verbal expressions, which can be acrimonious and potentially violent during a police-citizen encounter. Since most of police work is made up of oral interaction with the community, Thompson and Jenkins argue that law enforcement personnel should be experts at communication, especially communication under inflammatory conditions.

Verbal judo contains three fundamental communication arts, the first of which is representation (Thompson & Jenkins, 2004). *Representation* is the officer’s ability to represent the spirit of the law enforcement organization, its policies, and philosophy. It is not for the officer to represent his or her own personal ego. *Translation*, the second component, is the officer’s ability to use the most proper, assertive, and influential words to possibly generate voluntary compliance; in other words, to use the right words at the right time with the right person. *Mediation*, the third component, is the ability to skillfully present options to an individual who may be noncompliant and/or to gain compliance by explaining to the individual what he or she stands to gain or lose as a result of his or her chosen course of action.

The core of verbal judo is similar to that of physical judo. Instead of attacking an opponent, one deflects the opponent’s blows and uses the power of the attacker

to carry him or her off balance. Thus, the officer gains control over the exchange by learning to use an opponent's words to diffuse a potentially volatile situation. The officer, however, must remain calm and focused while the opponent attacks and be self-disciplined, remain unemotional, and be highly cognizant of his or her purpose in the encounter with the individual.

Although learning to use the opponent's power is salient for verbal judo to be effective, the verbal and nonverbal messages of the officer need to be consistent. According to Thompson and Jenkins (2004), discrepancy between mind and mouth invites misunderstanding and facilitates conflict. The officer also needs to remain calm in the midst of chaos, deflect verbal abuse directed at him or her, and "offer empathy in the face of antagonism" (p. 67). Thompson and Jenkins believe "empathy is the most powerful concept in the English language" (p. 63). The word has Greek and Latin roots and means to see through the eyes of the other. It is the most essential skill in both physical and verbal judo.

The focused mental calm that officers must achieve and maintain during interactions with others is called *mushin* or *still center* in martial arts. It is the ability to stay calm, read the opponent, and attempt to redirect his or her aggression to a more positive outcome. While experiencing *mushin*, the officer has to imagine him- or herself in the opponent's shoes and understand where the opponent is "coming from." When that is achieved, the officer can speak with the opponent's perspective in mind. The officer can then gain rapport and help the person see the consequences of his or her actions or intended actions. Again, being calm in the face of insults and verbal abuse will require officers to be self-disciplined and to project themselves in a professional presence as they interact with citizens. The professional presence involves the capacity "to look good on the outside no matter what the officer may feel on the inside" (Thompson & Jenkins, 2004, p. 51). The facial expression and the demeanor of the officer are also important and they must be congruent with verbal commands.

Before giving verbal commands, however, the officer must learn to deflect the insults and abuse and move toward the goal of completing a legitimate law enforcement task. Thompson and Jenkins (2004) recommend "strip phrases" as one way to deflect insults. Strip phrases are just shortened versions of calm answers. Examples are "preciate that" (for I appreciate that) or "understan tat," (for I understand that). These terms are followed quickly with "but let me see your license, please" or "step out of the car, please." The words following the "but" are designed to accomplish the officer's task. The strip phrases are used to calm the person, demonstrate empathy, and persuade voluntary compliance. The basic principle behind the strip phrase is to allow the opponent to let off verbal steam while still getting him or her to cooperate. While the officer is deflecting verbal abuse, careful attention to the opponent's body language is essential. The officer must be able to gauge if the person's emotions are escalating or de-escalating.

Thompson and Jenkins (2004) insist that when practicing verbal judo, the officer must always treat the person with respect, even if she or he does not deserve it. If the officer insults or "puts down" the person, this is likely to increase conflict and may lead to a violent encounter. It is often necessary to interrupt a person who is upset and shouting irrational insults, but it is not effective to shout at them, "Calm down or I'll cuff ya!" Instead, proponents of verbal judo suggest that the law enforcement officer interrupt with a paraphrase. To paraphrase is to take what

a person has said, or has meant to say, and put it into the officer's own words. The officer can interrupt with something like, "Let me be sure I heard what you just said," and then paraphrase what the person said. There are many benefits to this technique, but one of the most beneficial ones is that it turns the situation into a dialog or conversation rather than a diatribe by one.

Thompson and Jenkins (2004) provided the following short-cut method, which they coined the "Five-Step Hand Style," to remember the basics of verbal judo:

1. Ask (Ethical Appeal)
2. Set Context (Reasonable Appeal)
3. Present Options (Practical Appeal)
4. Confirm (Practical Appeal)
5. Act (Determination of Appropriate Action)

They also use the acronym LEAPS to help remember and accomplish the five steps:

L = Listen
E = Empathize
A = Appeal
P = Paraphrase
S = Summary

In the five-step process, the officer begins by *asking* for compliance and for an explanation of the situation from the individual he or she has encountered. Next, the officer establishes the *context* of the interaction with the member of the community by stating reasons for the police-initiated encounter as well as policies and procedures related to the encounter. By setting context, the law enforcement officer establishes professionalism. This step is followed by the *presentation of options* and not threats. If cooperation is not forthcoming, the officer *confirms* there is resistance to the options with a sentence like, "Is there anything I can say or do at this time to earn your cooperation? I'd sure like to think there is." This sentence alerts other officers present that action is the next step and alerts them to appropriately prepare for that next step. If that confirming appeal fails, then the use of reasonable force can be employed.

In sum, verbal judo suggests that the law enforcement officer remains calm, deflects verbal abuse with strip phrases, and demonstrates empathy and respect. It also suggests paraphrases to interrupt the diatribe of the upset citizen. The use of paraphrases also demonstrates that the officer is actually listening to the person, which, in turn, helps to de-escalate a potentially volatile confrontation. Verbal judo is essentially a proactive technique that attempts to solve or work on the problem rather than simply reacting to it.

Verbal Judo's Suitability for Police Work

In the field of psychology, the communication skills and attitudinal set suggested by Thompson and Jenkins (2004) are fundamental tenets of good communication. Carl Rogers (1942), the famous American psychologist, made empathy, paraphrase, and respect (positive regard) cornerstones to his theory of change. Today, all psychological models now include them as foundational skills in building and bettering relationships

and in improving communication and understanding (Norcross, 2002). Over 70 years of psychological research has demonstrated the importance of empathy, paraphrase, and respect in interpersonal encounters (Lambert, 2004).

However, verbal judo differs in one key aspect from Rogerian theory. Rogers emphasized the genuineness of the psychologist. He believed what the psychologist expresses should be consistent and congruent with his or her internal experience (Rogers & Dymond, 1954). In verbal judo, the officer does not have to be *genuine*; he just must appear genuine and be received by the other as sincerely interested in resolving the conflict in a professional and respectful way. The officer must be able to present options in a way that is empathic with the person's interests and will allow the person to cooperate and save face. Internally, the officer may be experiencing a variety of effects incongruent with this outward appearance.

Arguably, police agencies that espouse the tenets of community policing encourage officers to be more genuine and empathic toward citizens and their concerns. Building trust with community members is essential to the success of this approach, and verbal judo's emphasized communication skills of listening and displaying empathy facilitate trust and alliance building. For this reason, verbal judo fits well into a community policing philosophy and can be easily incorporated into an officer's arsenal of lesser forms of nonlethal force. Courtesy and professionalism, which are also byproducts of verbal judo, underscore principles of community policing and, thus, verbal judo is a practical tool for building positive relations with the public.

Verbal judo or tactical communication has been well-received by the law enforcement community. The Los Angeles Police Department, for example, has employed Thompson as a trainer as have over 700 other police departments (Thompson & Jenkins, 2004). Additionally, articles have been written suggesting the utility of the method (Brown & Maggio, 1997; Johnson, 2004). Admittedly, verbal judo is consistent with the broader philosophy of community policing, which emphasizes problem solving and community involvement (Bureau of Justice Assistance, 1994) as well as officer empathy toward citizens' concerns and professionalism, but it may not be suitable for all police work. Although the latter two elements should be present during all citizen-police encounters, verbal judo may not be suitable in situations that require the use of force due to imminent danger. Thus, physical force, even deadly force, may be needed to quell a potentially dangerous situation and to protect the lives of officers and others. However, since most police work does not require the use of physical force, including deadly force, when encountering citizens (Reiss, 1967; Sykes & Brent, 1983; Terrill, 2001), verbal judo is appropriate for most police work and may even be appropriate in the fight against domestic terrorism.

After September 11, 2001, the federal government called for an increased role for the community in the form of community crime prevention programs such as Neighborhood Watch (National Crime Prevention Council, 2002) and for officers to be more vigilant during routine patrol activities as well as to gather much needed information and/or intelligence to prevent homeland terrorism. Verbal judo promotes all of these goals because it teaches officers to interact with citizens in a positive way, even when encounters do not have the potential to escalate into verbal abuse such as during Neighborhood Watch meetings, and teaches officers to actively listen to citizens (Johnson, 2004), which is essential in gathering information to prevent

any crime, including terrorism. A byproduct of positive interactions with citizens, according to Purpura (2001), is that they will be more inclined to aid police in crime prevention and, thus, more inclined to share and report information to police.

Aside from its utility in enhancing an agency's commitment for community policing and its suitability for most work police engage in during the course of their day, verbal judo does not carry the potential for liability when compared to other lesser forms on nonlethal force. Also, verbal judo can potentially shield the officer from harm as this technique attempts to diffuse volatile encounters with citizens. Some of the most unpredictable encounters with citizens occur when officers respond to domestic violence calls. Over the last decade, 81 officers have been killed while responding to such calls (National Law Enforcement Officer's Memorial Fund [NLEOMF], 2008). Also, officers are physically assaulted more often when responding to such calls. In 2005, for instance, 30% of the 57,546 assaults on officers occurred while responding to domestic disturbance incidents (NLEOMF, 2008). Some agencies have incorporated verbal judo as part of their officer training curriculum and have advocated its use during domestic violence calls because it promotes officer safety.

Conclusion

Police are bestowed with the authority to maintain order and peace in society. At times, the order-maintenance and peace-keeping duties of police require using various degrees of force, including deadly or lethal force. However, the use of force is not always justified in all situations, and officers, as well their superiors, may be liable for excessive use of force and/or liable for wrongful deaths due to unjustifiable use of fatal force. Accordingly, police agencies have turned to the use of lesser forms of nonlethal force, such as TASERS and pepper spray, to quell potentially volatile encounters with the public, but these ostensibly lesser forms of force also have the potential for causing serious bodily injury and/or death. Since legal accountability and responsibility remain plausible outcomes, some agencies have advocated that officers use verbal judo.

Verbal judo is the "gentle art of persuasion" and can be used by officers to diffuse potentially volatile situations. Admittedly, verbal judo may not be apt for all police-citizen encounters, but since most police work does not involve the use of physical force, verbal judo fits well within the parameters of routine tasks performed by police on a daily basis. Also, verbal judo complements the tenets of community policing and can be used in the fight against domestic terrorism as this technique encourages positive interactions with citizens and, as a result, encourages the public to report information to and share with the police. Additionally, verbal judo does not pose serious liability issues for the police and can shield officers from danger.

Endnotes

¹ Only Maryland, Massachusetts, Michigan, Ohio, Vermont, Virginia, and West Virginia do not have state statues detailing situations when officers are legally justified to use force. These states rely on common law to regulate officers' use of force.

² Tom Swift was a science-fiction character admired by John Cover, the developer of the modern TASER.

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Cumulative Force Factor: Examining Resultant Suspect and Officer Injuries

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Understanding Police Use of Force

To appreciate the complexity and diverse situations in which law enforcement personnel utilize force, force must be conceptualized not as a static concept but rather as a continuum of responses, ranging from verbal commands as a minor exertion of force to deadly force, the maximum amount of force possible to apply (Garner, Buchanan, Schade, & Hepburn, 1996; Garner, Schade, Hepburn, & Buchanan, 1995; Klinger, 1995).

Traditional use-of-force continuums rely on the concept of multiple categories of increasing officer perceptions of suspect resistance as linked to similar groupings of the officer's force-use response to those perceptions. As law enforcement officers are expected to make split-second decisions based on rapidly evolving situations, the incorporation of a use-of-force continuum into departmental policy provides guidance to officers in making force decisions. Figure 1 shows a generic use-of-force matrix, which incorporates acceptable officer responses to perceptions of use of force by subjects encountered (Mesloh & Wolf, 2008).

Figure 1. Generic Use-of-Force Matrix Example



Law enforcement officers incorporate these force continuums into preservice police academies and inservice training programs in order to be able to identify and place

varying levels of suspect resistance with a reasonable and appropriate use-of-force response. While use-of-force continuums within the policies of different law enforcement agencies are not universally standardized, they all rely on legally and publicly acceptable responses by the police (Garner et al., 1995). These continuums propose that officers should progressively examine and react to each situation, de-escalating uses of force once resistance has declined or stopped (Williams, 2002); they are an attempt to clarify what may be considered objectively legal and reasonable force.

It is also important to note that use-of-force matrices are not an accepted means of identifying force concepts by all law enforcement agencies. Many agencies that adopted continuums or force matrix policies in the 1990s have now moved away from these to protect from litigation (Williams, 2002). The following section addresses the current literature on the study of law enforcement use of force; its definitions, measurement, and analysis thereof; and less lethal uses of force.

Literature Review

Studies that examine police force do not “always specify clearly how force was defined or measured, and the definitions and measures of force tended to be unique to each study” (Garner, Maxwell, & Heraux, 2002, p. 712). Garner et al. (2002) explain that police use-of-force research, while expansive, has varying approaches that are each fraught with “limited strengths and substantial weaknesses” (p. 707). A review of the literature reveals that there are numerous accepted ways to gather information about police use of force. These include examinations of agency policy (Adang & Mensink, 2004; U.S. Government Accountability Office [USGAO], 2005), observational accounts of police force incidents (Klinger, 1995), analysis of official police records and use-of-force reports (Morabito & Doerner, 1997; Ross, 1999), citizen complaints about the use of force (Hickman, 2006), and surveys of police officers or arrested persons (Garner et al., 1996; Garner & Maxwell, 1999).

While each type of data collection has strengths and weaknesses, the review of police records may have certain advantages over other categories. Garner et al. (2002) explain that this type of review provides more organized data on use-of-force incidents than actual interpretations of police work through observations. Additionally, review of police report data provides a wider view of police behavior over the studied jurisdictions than can normally be captured through observational accounts. A flaw in examining law enforcement use of force from officer reports is obvious in that these reports may well suffer from certain subjectivity as biases provided by the officers who wrote the reports may be interjected. Garner et al. (2002) remark that this approach may be most suitable for interjurisdictional comparisons rather than intrajurisdictional comparisons.

Regardless of the research strategy employed, one constant finding is that law enforcement use of force is generally uncommon, and its improper use is moreso exceedingly rare (Garner et al., 1995, 1996; Klinger, 1995; National Institute of Justice, 1999; Reiss, 1971; Worden, Shepard, & Mastrofski, 1996). Conner (1991) found that 95 to 97% of all police-citizen contacts involve cooperative subjects, and Alpert and Dunham (1999) reported that 61% of the suspects who were being placed under arrest did not resist the officer at all, and 18% offered only slight resistance. Even though the vast majority of citizens that police interact with on a daily basis can be classified as cooperative, many, although

somewhat dated observational studies have found “disrespectful” or “uncooperative” citizens to be arrested more often (Friedrich, 1980; Petersen, 1972; Sherman, 1980).

Less Lethal Force

The terms *less lethal* and *nonlethal* are frequently and inappropriately used interchangeably as most police tools can become lethal if used improperly or if circumstances are extremely unlucky. In terms of less-than-lethal use of force, the court in *Graham v. Conner* (1986) addressed the use of less-lethal force in the context of the “objective reasonableness standard” by which questions regarding excessive use of force are to be judged from the perspective of a reasonable officer coping with a tense, fast-evolving situation. This revised standard alleviates some of the “Monday morning quarterbacking” that would otherwise result and respects that officers possess sound judgment skills.

In studies of less-lethal use of force, it is important to understand public perceptions; the American public, which has been raised on science fiction like *Star Trek*, has a high standard and expects phaser-like weapons that can incapacitate without causing permanent harm or death (Heal, 1999). This phenomena has created what Surette (1992) called a weapons cult within the entertainment media, “with weapons made increasingly more technical and sophisticated but less realistic” (p. 43). Furthermore, Surette adds, in displays of deadly force, evil criminals miss or inflict minor wounds, while heroes are incredibly accurate and kill painlessly and from great distances.

Less-lethal weapons in the entertainment arena can be viewed through a similar lens as their deadly weapon counterparts. The recipient is usually rendered unconscious from a single application and recovers almost immediately. This creates a massive discrepancy between reality and the portrayal of less-lethal weapons in popular media. In reality, they are, as their name reflects, less than lethal. While they have the potential to cause death or serious injury, these weapons are considerably less harmful than the projectiles fired from firearms.

In reviewing police officer use of force, it is important to acknowledge the premise that law enforcement officers select the right weapon and tactic based on the scenario. Officers are trained to react and to use the weapons and techniques they have acquired appropriately. Clearly, the most socially desirable outcome of conflicts between law enforcement and the public is one in which the disturbance is quelled and no one is injured. While officers must respond to situations appropriately, they must also act quickly. The reaction time of an officer can become a critical, life saving factor in fast-evolving use-of-force confrontations. This reaction time has been examined in the literature, and several studies have focused on the concept of the *reactionary gap*. This gap refers to the amount of time and frequently distance that an officer needs to have to react to a suspect’s advances. Officers are trained to control distance in relation to one or more subjects and, therefore, react to the subject’s actions by allowing enough time to deploy a less-lethal weapon, defensive tactic, or deadly force. Less-lethal weapons allow officers to increase their ability to react by having them at the ready prior to deployment.

This acknowledges that officers must first select a less-lethal weapon and that their decision must be appropriate or injury to the suspect or the officer may result. The decision on which weapon to choose may also be based on the fact that officers

are personally self-motivated to not be injured or face future liability should they use the inappropriate level of force. In addition to civil liability, officers who do not adhere exactly to their agency's policies and procedures may face disciplinary charges, reprimands, and possible termination (Williams, 2002).

As a result, with these factors at the forefront of their minds, it is not surprising that officers use the most effective tool that is ranked lowest on their agency's force continuum, ensuring that they are well within the scope of their employment and appropriate statutory law when quelling a disturbance or engaging a suspect. In confrontations, the burden of documentation falls upon the officer; the more intrusive the level of force, the more extensive the documentation.

Degree of Force and Potential for Injury

Scientifically, force is the mass of the object multiplied by its acceleration. The larger or heavier an object is and the faster that it is accelerating, the more force it generates. While a car and a baseball might both be traveling at identical speeds, there is an obvious difference in the force produced with this equation. Kinetic energy (KE), the energy which an object possesses due to its motion, also relates to force and can be computed by taking $\frac{1}{2}$ its mass and multiplying it by the square of its velocity ($KE = \frac{1}{2} m \times v^2$).

In use-of-force situations, the principles of force, mass, and motion apply to the various tools law enforcement utilize such as baton strikes, Electro Muscular Disruption Devices, and also other projectile weapons. As such, when velocity increases, the potential for injury increases exponentially and is known to be a primary factor in soft tissue damage from impact (Viano & Lau, 1988). This may be best understood by an example: Injury is relatively small if a person were to be hit in the arm with a baseball traveling less than one mile per hour; however, as the speed of the ball increases, more severe injury occurs to the soft tissue. The energy transfer from a less-lethal weapon onto a human causes either a dysfunction of that specific body part or compliance as the subject wishes to avoid further pain. As the amount of KE transferred increases, the potential for serious injury also rises (Hubbs & Klinger, 2004). Additionally, as the object increases in mass and density, higher injury rates result (DuBay & Bir, 2000).

In use-of-force deployments, the size of the area impacted by a less-lethal weapon is also related to the potential for injury. The same amount of force applied over a wider area causes less injury than if it were to be applied over a smaller area. This can be visualized by comparing the impact of a knife-edge to that of a baseball bat. Additionally, the edge of any moving object is more damaging than its flat side. This becomes important when considering the use of improvised impact weapons, such as flashlights or knives, where its end has the potential for creating a shearing force, particularly if used to strike the head (Cox, Buchholz, & Wolf, 1987).

Research Design and Methods

Data Collection from Use of Force Reports

Of specific interest to this project was an examination of how prior researchers have collected data to study this topic. As noted above, the Use of Force Report and accompanying arrest affidavit (if applicable) are the standards in acquiring

data on this subject matter. This method is not without its limitations; however, in terms of utility to the task, it is appropriate. The police Use of Force Report and accompanying documents provide a rich wealth of data. Agency policies and legal standards require that officers describe events when force is used in specific detail. This Use of Force Report, then, becomes part of court documents and is generally held as a document with integrity. The Use of Force Report is written specifically to explain the use of force; it inherently includes all the variables as observed and perceived by an officer in a temporal order. These forms identify the relationships between suspect actions and officer reactions, as well as the subsequent outcomes, categorized as type and severity of injury.

When officers are trained to use force, they are trained to interpret situational factors (variables) and respond in-kind with a level of force, which has been pre-determined by the agency, its legal department, case law, and interpretations of case law as reasonable. This action/reaction scenario is at the heart of the event-level confrontation. As the confrontation evolves, the officer and suspect may escalate and de-escalate up and down the force continuum in a temporal order that may be extremely fast. The data collected and coded in this project from Use of Force Reports were broken down to reflect how officers reacted to each subject action. While this may detail many derivations of escalations and de-escalations of force (referred to as *iterations* in this project), the models generally follow an escalation of force temporally. To follow these iterations of force, the researchers analyzed the Use of Force Reports and extracted the various level(s) of force used by the officer and the level(s) of resistance of the subject, over time (i.e., "Officer Force" Level 1, "Suspect Resistance" Level 1). Ultimately, the relationships between escalations of force and resultant injuries are explored for both suspects and officers.

Design

This project has utilized an accepted social science research methodology wherein existing data collected from archival records were coded and analyzed using *SPSS*. Key independent and dependent variables were identified by the extant literature review and developed into a data collection worksheet. The data collection sheets were filled out by coders and were then entered into *SPSS* for analysis.

Data Collection

Use of Force Reports are a regular tool that most, if not all, law enforcement agencies use in accounting for uses of force. This document captures much data and allows a research endeavor to begin at the event level. The data includes specific information regarding the type of force used in an encounter, whether less lethal or deadly, and also the type of resultant injuries. For this current study, data was collected from two major participating law enforcement agencies: the Orange County (Florida) Sheriff's Office (OSCO) and Orlando (Florida) Police Department (OPD).

The OCSO and OPD Use of Force Reports were obtained by a public records request at each respective agency. Agencies were requested to provide Use of Force Reports (defensive tactics form) and accompanying documentation to include arrest affidavits (charging affidavit) and offense reports dated from the year 2000 to the year 2005. Grant funding provided resources to comply with payment for the public records request. A total of approximately 40 banker boxes were collected, and all reports were coded onto code sheets and entered into *SPSS*, resulting in

4,303 nonduplicate reports. Of the 4,303 incidents that were compiled and reviewed, 57.2% ($n = 2,460$) were from the OCSO, and 42.8% ($n = 1,843$) were from OPD.

Measurement

The measures utilized in this research endeavor consist of nominal, ordinal, interval level, and several scaled variables. This allows for a variety of statistical techniques in predictive analysis. Researchers categorized use of force through suspect resistance and officer level of force. In developing the measures for these variables, the force continuum was utilized as a standard measure ordered from 1 (presence) to 6 (deadly force). If the confrontation was not brought to resolution, a second and third iteration captured this data. Other key variables of importance included "Officer Force" ranked from 0 (no force) to 14 (deadly force). This variable allows the determination of effectiveness for each less-lethal weapon or use of force. A complementary variable, "Suspect Force," was included and is ranked from 0 (no additional resistance) to 15 (vehicle).

Iterations of Force

The force used by the police in a police-subject encounter does not occur in a vacuum. Certainly, a review of the type of force used would explain little if the circumstances surrounding the incident were unknown. Klinger (1995) noted that prior attempts to study nonlethal force in police encounters failed to examine that multiple levels of force may be used within a single encounter.

This study decomposed confrontations at the event level into a series of iterations, representing a single suspect action and officer reaction. If the confrontation was not brought to resolution within the first iteration, it then progressed into second and third iterations.

Results

Over half of the suspects (55.6%) were subdued at the end of the first iteration, which allowed the researchers to examine 2,391 cases to determine which less-lethal weapons were most effective in bringing conflict to resolution. Slightly less than 30% (29.3%, $n = 1,264$) of the confrontations ended at the second iteration, while 15% ($n = 648$) ended in the third iteration. There were no confrontations that extended beyond three iterations of force, although there were some cases where the suspect escaped and could not be identified.

In cases that ended at the first iteration, it was possible to show linkage between the injury and the type of force. Of key interest to this study were the resulting injuries to both officers and suspects in their confrontations. It was difficult if not impossible to assign responsibility for an injury to a specific officer action, however, as in many cases multiple techniques or less-lethal weapons were used. It was possible for an officer to use a control technique in the first iteration, a chemical agent in the second, and an electronic control device in the third.

Suspect and Officer Injuries

From a macro-view, substantially more suspects sustained injury than law enforcement officers. Twenty-three percent (23%) of suspects were injured during force encounters

in comparison with only 3% of officers. Injuries to both suspects and officers tended to occur during traffic stops and disturbances, with the majority of injuries comprised of bruises and abrasions. A trend emerged when the data was deconstructed at the event level, however. Injuries to both suspects and officers increased in proportion to the length and duration of the confrontation. This in itself is not startling; it is reasonable to expect that more injuries would occur in longer confrontations. Force, wielded by either suspect or officer, is cumulative, and the use of more applications substantially increases the possibility of injury to either or both.

Suspects received injuries in 1,001 (23.3%) of the 4,303 cases. The most common type of injury was a bruise/abrasion (52%), followed by puncture wounds (29%). Although TASER deployments create small punctures, they were not coded as an injury in this analysis. Consequently, punctures coded herein were a result of canine bites or the suspect falling upon another object. It is important to note that almost all of the suspect injuries were the result of a fall during the course of forcible arrest.

Table 1. Suspect Injuries by Iteration

New Suspect Injury	Number of Levels (Count and % Within Number of Levels)			Total
	One Level	Two Levels	Three Levels	
Bruise/abrasion	237 50.5%	162 50.9%	122 57.0%	521 52.0%
Sprain/strain	8 1.7%	8 2.5%	1 0.5%	17 1.7%
Laceration	58 12.4%	47 14.8%	40 18.7%	145 14.5%
Puncture	160 34.1%	88 27.7%	43 20.1%	291 29.1%
Broken bone/fracture	6 1.3%	12 3.8%	8 3.7%	26 2.6%
Internal injury	0 0.0%	1 0.3%	0 0.0%	1 0.1%
Total	469 100.0%	318 100.0%	214 100.0%	1,001 100.0%

Note: Due to rounding, percentages may not total 100%.

As a suspect/officer confrontation continues from iteration to iteration, the likelihood of injury rises. In the first iteration, suspects were injured in 11% ($n = 469$) of the cases. This number rises to 25% ($n = 1,264$) in the second iteration, and 33% ($n = 648$) in the third and final iteration. In this study, the most frequent call types involving suspect injuries were traffic stops, disturbances, and burglaries. Injuries related to burglaries were primarily a result of a canine deployment into a building to locate a hidden suspect.

Officers were injured in 136 cases (3.2%), and the most common injury was a bruise/abrasion (65%). The next most likely injury was a laceration (16%). Similar to suspects, officers were likely to be injured from falls while attempting an apprehension. The most frequent call types resulting in officer injury were traffic stops and disturbances.

Table 2. Officer Injuries by Iteration

Officer Injury	Number of Levels (Count and % Within Number of Levels)			
	One Level	Two Levels	Three Levels	Total
Bruise/abrasion	18 75.0%	27 62.8%	43 62.3%	88 64.7%
Sprain/strain	1 4.2%	7 16.3%	4 5.8%	12 8.8%
Laceration	2 8.3%	4 9.3%	16 23.2%	22 16.2%
Bite	1 4.2%	3 7.0%	4 5.8%	8 5.9%
Puncture	0 0.0%	2 4.7%	0 0.0%	2 1.5%
Broken bone/ fracture	2 8.3%	0 0.0%	1 1.4%	3 2.2%
Internal injury	0 0.0%	0 0.0%	1 1.4%	1 0.7%
Total	24 100.0%	43 100.0%	69 100.0%	136 100.0%

Note: Due to rounding, percentages may not total 100%.

As shown in Table 2, it is clear that the largest number of officer injuries occur at the third iteration. As the suspect/officer conflict continues forward in time (temporally), officers tend to be injured more frequently. In the first iteration, officers were injured 24 times, creating an injury rate of 1%. In conflicts where use of force and resistance ended at the second iteration, a total of 43 officers were injured (3% injury rate). In officer/suspect confrontations which ended at the third iteration, 69 officers were injured (11% injury rate).

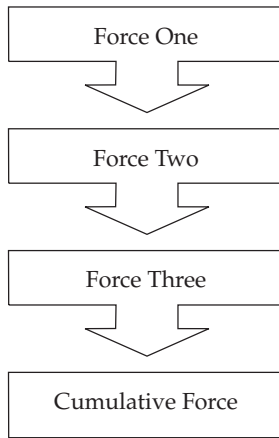
The overall percentage of injuries (number of uses of force per iteration) increases substantially as the suspect and officer encounter continues. Overwhelmingly, the majority of injuries in all iterations were bruises/abrasions. This is not surprising as conflicts in which the suspect and officers fight tend to mostly involve grappling, ground fighting, kicking, punching, biting, and blunt objects (i.e., sticks, bricks, and any other object that can be thrown or swung), and injuries most often sustained come from contacts from the aforementioned scenarios. In over half of the cases where an officer was injured, the suspect also received an injury.

Cumulative Force Factor

Law enforcement confrontations often have an ebb and a flow as suspect resistance increases or decreases, while officer force changes to meet that immediate threat. A force factor for each iteration was created and based upon the model created by Alpert and Dunham (1999), which measured the difference between suspect resistance and officer force. Differentiating this current study from theirs, however, the researchers based the model upon a standardized force continuum.

Based upon the force factors created for each iteration, a cumulative force coefficient for the entire event was created. Force factors from the three iterations were combined and range from a score of -9 to +5. This cumulative score represents an overall picture of the confrontation and views force used by and against the police as a cumulative concept. A single application of force may or may not cause injury, but repeated applications are much more likely to create an injury to either the suspect or officer.

Figure 2. Cumulative Force Model

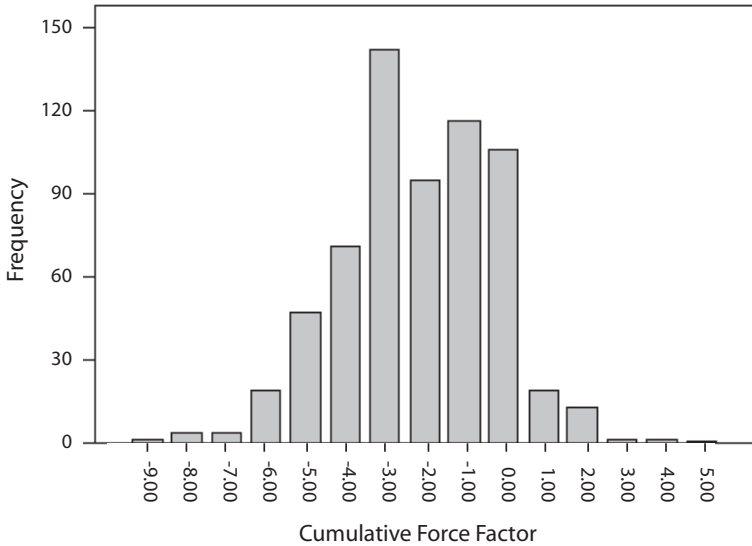


As such, the researchers utilized this concept and applied it in an aggregate manner in an attempt to capture the outcomes on injuries for suspects and officers at the end of an altercation—whether one, two, or three iterations. Cumulative Force is calculated by Force Factor 1 (+/-FF1) + Force Factor 2 (+/-FF2) + Force Factor 3 (+/-FF3) = Cumulative Force (CF). The concept of the Cumulative Force is detailed in Figure 2.

In this current study, the researchers found that overall it appeared that law enforcement officers are operating at a force deficit; the cumulative force factor in the cases examined was overall negative, indicating that consistently lower police levels of force (as standardized on the force matrix) are being used.

In Figure 3, Cumulative Force ranges from negative nine (-9) to positive five (+5). For example, a -9 score is evidence of a large cumulative difference in suspect and officer resistance, in this case indicative of police using far less force than authorized. A positive five score would indicate the contrary, when the officer used far more force than was authorized based on perceptions of the subject's actions. Over the course of the conflicts, officers used consistently less force than the suspect, which in later analysis is highly correlated with higher suspect and officer injury rates.

Figure 3. Cumulative Force Distribution



Additionally, the longer the conflicts continue from iteration to iteration, the more statistically significant the cumulative force factor becomes as a predictor for both suspect and officer injuries. Officers who consistently use less force than suspects therefore lead to longer confrontations and more injuries. Table 3 shows the difference in cumulative force factor of suspects and officers who are injured in the third iteration. An independent samples *t*-test was used to test the effects of force choices on outcomes. The researchers examined the differences in the force factor for officers who were injured ($M = -3.69$, $SD = 2.06$) or not injured ($M = -1.95$, $SD = 1.91$), which shows statistical significance, $t(641) = 7.07$, $p < 0.001$. The negative coefficient denotes a force deficit on the part of the officers. An initial finding from this research is that law enforcement officers in the agencies examined are operating at a use-of-force level that is below that of the suspects and it is a highly likely factor leading to their injuries.

Table 3. Cumulative Force Factor by Officer Injuries

Cumulative Force Factor	Officer Injured		<i>n</i>	Mean	SD
	Yes/No				
	No		574	-1.9582	1.91303
	Yes		69	-3.6957	2.06016

A second analysis conducted by the researchers examined force factor and suspect injuries. Similarly, a significant difference, $t(641) = 3.75$, $p < 0.001$, between suspects who were injured ($M = -2.57$, $SD = 2.16$) or not injured ($M = -1.93$, $SD = 1.88$) was found. This would appear to be counterintuitive: officers using a lower level of force causing more injuries. However, this same lower cumulative force level creates the need to use repetitive force in the form of iterations. When officers fail to subdue a suspect with a lesser form of force, they are again forced to respond to the suspect's resistance, which may cause some form of injury.

Table 4. Cumulative Force Factor by Suspect Injuries

	Suspect Injured Yes/No	<i>n</i>	Mean	SD
Cumulative Force Factor	No	429	-1.9277	1.87878
	Yes	214	-2.5794	2.16692

Conclusions and Implications

A law enforcement officer has discretionary power whenever he or she chooses how to respond to a situation (Langworthy & Travis, 2002). This discretion hinges on priorities at the time, evidence available, and the seriousness of the situation. Thus, it is the ability to properly choose between these options while weighing various factors that is at the heart of officer discretion. However, while the dynamics of the suspect/officer encounter and the law may constrain an officer's choices, they do not dictate the officer's response (Brown, 1981). Suspect behavior, on the other hand, significantly influences officer discretion and, consequently, the final outcome of a suspect/officer encounter. Also, generally, the use of force by the suspect is a significant predictor of the use of force by officers (Holmes, 1997), and the actions of the suspect may also determine the types of force that are used against them.

Prior research on use of force tends to examine the highest level of suspect resistance and officer force while frequently ignoring the varying interactions of the confrontation. This study has attempted to dissect these interactions by peeling them away layer by layer (iterations). As a result, it was possible to view the ebb and flow of suspect resistance and corresponding officer force at the event level. Further, this research in brief has also examined the view of officer use of force as being cumulative in nature. While a single application of force may or may not cause injury, repeated applications certainly are more likely to cause harm. This has certainly been true in this study as is supported by the data outcomes wherein the injuries of both suspects and officers rose correspondingly with the length of the confrontations.

This research has identified a phenomenon, which the researchers refer to as a Force Deficit. That is, in examining the Cumulative Force after three iterations, it appears as though the officers were consistently using less force than may be justifiable or necessary to subdue the suspect and end the confrontation. A tentative conclusion or solution may be that the use of decisive force early on in active suspect/officer confrontations may be the solution in ending the conflict quickly and thereby statistically reducing the likelihood of additional injuries whose rates increase as observed in the second and third iterations examined. While this is far from proving causality, it does provide one possible answer to a complicated issue.

Starting at the police academy, officers are told to use the least amount of force necessary to affect an arrest. As a result, officers are understandably hesitant to immediately move to the higher end of the acceptable response option(s) and may first try lower-level techniques. The unintended consequence of this choice is that many of these techniques do not have high success rates for ending a confrontation and may serve to aggravate this situation through an escalation in resistance by the suspect. Additionally, the confrontation may extend for longer periods of time, during which the likelihood of injury to both suspects and officers increases.

Consequently, it must be carefully stated that officers should be prepared to use decisive force at the point where verbal techniques of de-escalation have failed. This does not mean the deployment of a weapon against a passive suspect, but the preparation to use such a weapon if and when the situation calls for it.

Notes

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CEW as listed in Level 4 Officer's Response is the abbreviation for Conducted Energy Weapon, a category of weapons that includes electronic control devices or electromuscular devices such as the TASER and Stinger.

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Medical Aspects of Less-Lethal Weapons

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“Set Phasers on Stun!”

In an ideal world, the phaser is the perfect less-lethal weapon. It works every time; it doesn't hurt the individuals; and, let's face it, it looks cool. While phaser-type weapons were once in the realm of science fiction, we are now in an age when the use of less-lethal weapons has become a daily part of the continuum of force usage of many law enforcement jurisdictions. In fact, the public has come to expect the use of these devices in situations wherein deadly force may not be warranted or appears not to be warranted. These less-lethal weapons have great utility in certain tactical situations, however; though, none are completely without risk. The risks vary for each device, and it is important to those who deploy these devices to be aware of the potentially negative effects that they may have on the subjects for whom these devices are intended. The purpose of this article is to highlight for those in law enforcement the potential medical issues that may be faced when one of these devices is deployed. Keep in mind that there is much more to these than can practically be listed in a brief article, so always consult your local specialist or the literature when you have a specific issue. Many of the details regarding the specific research evidence have not been listed for the sake of brevity.

There is likely no truly 100% *nonlethal weapon*, and, therefore, this term has fallen out of favor. Early work on many of these devices incorrectly hailed them as such. Subsequently, the term *less than lethal* was used in reference to these devices. Again, this implied a certain safe nature to the weapons and gave individuals the impression that there was no way the devices could cause death. The more generally accepted term nowadays is simply *less lethal*. This conveys the sense that, while likely to be less injurious than lethal force, there is still some small possibility that death or serious injury may occur in the routine, expected use of these devices.

This article will focus on three main classifications of less-lethal weapons: (1) the blunt impact type projectiles such as the beanbag and flexible baton rounds; (2) the chemically based weapons such as mace, tear gas, and OC; and (3) the classification of devices commonly referred to as Conducted Energy Devices (CEDs).

A Word on Excited Delirium

By virtue of their combative, hallucinatory, and noncompliant presentations, many subjects using illicit drugs or having an untreated or undertreated psychiatric illness will be taken into custody with the assistance of one or more of these devices. Law enforcement officers should recognize that subjects with a history of cocaine, methamphetamine, or PCP use or an untreated psychiatric illness are possibly

suffering from excited delirium. The importance of suspecting excited delirium is that these persons need rapid medical evaluation and treatment, starting with early accessing of emergency medical services (EMS) for treatment and transport as these patients are at increased risk for sudden death syndrome. Treat them all as medical emergencies. Consideration should be given to calling for EMS prior to engagement whenever possible in this population of subjects.

Rubber Bullets

First used during the Hong Kong Riots of the 1950s and 1960s, initial projectiles were actually made of wood. Later, during the Northern Ireland and Israeli-Palestinian conflicts of the 1970s and 1980s, the projectiles evolved into a missile made of steel surrounded by glass and a hard rubber that had serious problems with accuracy; hits to the head, face, and chest were common. Later, these evolved into PVC type bullets, and in the current form include projectiles made of hard rubber as well as beanbag type rounds. Common scenarios for the deployment of these devices include dispersal of large crowds or during cell extractions.

The injuries that one can expect after the deployment of these devices depend on several factors: the distance from the muzzle, muzzle velocity, location where the projectile hits on the body, and age of the subject. Exact impact energy numbers are difficult to list since there are many different marketed projectiles, but many of them list impact energies of 100 to 200 Joules. Obviously, distance, wind conditions, and whether the impact was direct or ricocheted will affect these energies. The amount of energy discussed here is comparable with being hit by a fastball thrown by a professional baseball pitcher. Fortunately, most of the subjects on whom these devices are used tend to be young males with no significant medical problems, and so they tolerate the impacts better than older or debilitated subjects (Mahajna et al., 2002).

One of the main risks from the blunt projectiles stems from a direct blow to the chest inducing ventricular fibrillation, which, if untreated, rapidly will lead to sudden death. In the medical world, this is called *commotio cordis*. It usually occurs in young individuals during a sports activity such as baseball, lacrosse, and hockey. It is not difficult to see how this can occur in a subject shot by a blunt projectile in the chest as the energies are similar. Animal researchers have shown that during a certain period of the cardiac electrical cycle, the heart is particularly vulnerable to impact and will develop ventricular fibrillation. This is separate from a direct injury to the heart such as a contusion or heart muscle rupture (Zangwill & Strasburger, 2004). To date, there have been no cases reported describing *commotio cordis* from a flexible baton or beanbag rounds.

There are, however, cases of significant injury or death following blunt projectiles, usually resulting from head injury, blunt chest trauma, or blunt abdominal trauma (Chute & Smialek, 1998; Millar, Rutherford, Johnston, & Malhotra, 1975). Several studies have looked at the injury patterns from the use of plastic and rubber bullets. Millar et al. (1975), in a study of 90 patients who had sustained injuries to various parts of their bodies, concluded that the eyes, face, skull, bones, and brain are at risk of injury from rubber bullets. The distance at which the rubber bullets resulted in serious injury ranged from 17 to 25 meters. Another study noted that of 80 patients injured from rubber bullets, four died—three due to heart rhythm disturbances

from cardiac contusion and one from blunt chest injury leading to bleeding in the chest. Nineteen patients who required hospitalization had serious chest wounds. The authors postulated a mechanism of injury involving shock waves producing shearing stresses and compression to soft tissue and bony structures resulting in contusions and fractures. Based on their findings, they state that any injury to the chest from one of these devices should be regarded as serious and as requiring hospitalization (Ritchie & Gibbons, 1990).

There have also been cases reported of the beanbag projectiles actually penetrating the skin into the chest and abdominal cavities (Charles et al., 2002). These left rather benign appearing skin wounds but internally caused significant injury and damage. This was postulated to be due to the weapon being discharged at close range and, therefore, the beanbag failing to open properly. Some jurisdictions have abandoned these rounds in favor of the so-called super-sock round for this reason.

How to address one of these subjects? The evidence would seem to suggest that a subject who is struck in the head, chest, or abdomen should receive a medical evaluation at the earliest time possible to evaluate for the serious medical conditions listed above. This is often made more difficult as many of these subjects are under the influence of illicit drugs or alcohol, a factor that is common to all types of weapons used during subject/officer encounters. For some, that may mean transport to a hospital; for others, a quick medical screen by a trained professional may be all that is required. Medical comorbidities like blood thinner use or liver disease place these subjects at particular risk and necessitate an evaluation by a physician.

Tear Gas and Pepperballs

This class of compounds includes the tear gasses, maces, and pepper sprays. Common compounds with extensive experience include chloroacetophenone (CN), o-chlorobenzylidene malonitrile (CS), oleoresin capsicum (OC), and others. Medical professionals would be most concerned with the effects of these compounds on the skin, respiratory system, mucous membranes, and eyes.

These compounds are designed to work by causing a noxious stimulus in order to induce compliance. Whether launched toward a crowd of unruly individuals or sprayed directly in the face of a specific subject, they typically work by causing dilation of blood vessels and inducing pain, tearing, coughing, and the feeling of shortness of breath (Sanico et al., 1997). When it comes to OC, this has been shown to be mediated by a neurotransmitter called substance P. Aside from the effects of the compound, another device, the pepperball, and other similar products are designed to add an additional component of pain and shock from being hit by a projectile. This has its own unique medical concerns as will be shown.

The tear gasses are generally regarded as having a high safety index in proper use, and there is a great deal of experience with them. Interestingly, there are reports of the Chinese grinding up peppers and putting them in bags, which they then tossed at the invading Mongol hordes around 2,000 years ago. Now, we commonly associate these devices with crowd dispersal. The OC, or pepper sprays, are currently the most common compounds used in handheld sprays. OC

is more powerful in terms of scoville units (a measuring system of how strong a chili pepper is) than both CN or CS, but reportedly 14% of the population at large is not affected (Haas et al., 1997). Oleoresin capsicum is made up of a mixture of fat soluble phenols called capsinoids. Capsaicin typically makes up to 80 to 90% of these capsinoids and acts both as a direct irritant as well as affecting peripheral afferent sensory nerves to induce local release of substance P.

Skin Effects

With respect to skin exposures, this mostly relates to the tear gasses. Since the compounds as delivered can be at a basic pH, they can cause burns if applied in high concentration directly on the skin. The effects typically start within minutes of exposure and will continue as long as the person is exposed to the material. The degree of symptoms tends to worsen based on concentration and duration of exposure, with mild exposures having tearing, watery eyes; nasal discharge; and coughing. As the exposure increases, this can worsen to gagging and vomiting, increased skin and mucus membrane burning, and subjective tightness in the chest. The time course of the development of burns or blisters can be delayed up to several hours, but typically they develop in the first hour or so. These effects will improve as one is removed from the exposure and will gradually resolve over 30 to 60 minutes. Some symptoms, such as skin redness, may last up to several hours (Bestwick, Holland, & Kemp, 1972; Punte, Owens, & Gutentag, 1963).

For this reason, anyone on whom the compounds are used should be properly decontaminated as early as is practical. This not only reduces the risk of any burns to the skin, but also minimizes the chances that law enforcement will become a secondary victim from any material that may still be on the subject. Copious irrigation with water is all that is needed in most cases.

Mucous Membrane Effects

Exposure of the oral and nasal membranes to these compounds may cause tingling, coughing, gagging, and shortness of breath. Some reports of a transient laryngeal paralysis with associated inability to speak have also been reported, but this is transient and without the need for treatment (Steffee et al., 1995). Mucous membrane exposure, particularly the nose, will induce copious nasal discharge. There is not much that can be done about the mucous membrane symptoms other than removal from exposure. Most symptoms will resolve quickly.

Lungs

With the tear gasses, exposure to routine concentrations of the substances should not cause any lung injury. There have been reports of lung injury requiring treatment, even causing death, but these cases have been with exposures to much, much higher concentrations than typical irritating or incapacitating doses (Punte et al., 1963; Thomas et al., 2002). In someone with underlying chronic asthma or emphysema, there may be some worsening of the condition, though this is not clearcut. Hu and Christiani (1992) reported of a case of exposure in an asthmatic with development of semichronic symptoms of cough and shortness of breath for up to two years post exposure, though it is difficult to determine if her subjective symptoms of dyspnea were related to her underlying chronic asthma rather than

the exposure. With respect to capsaicin, some animal and *in-vitro* human tissue studies have suggested that it induces airway resistance and bronchoconstriction (Hansson, Wollmer, Dahlback, & Karlsson, 1992; Lundberg, Martling, & Saria, 1983); however, clinical studies with nebulized capsaicin are less definitive. Unlike capsaicin, there is only limited research on the human effects of OC spray (Ross & Siddle, 1996).

Chan et al. (2002) conducted a randomized, cross-over controlled trial in 35 volunteer human subjects who were exposed to either OC spray or the placebo propellant without the OC component, followed by a ten-minute period of being placed in either the sitting or prone maximal restraint position while pulmonary function tests were monitored and arterial blood gases checked. They concluded that OC exposure did not result in abnormal pulmonary function, hypoxemia, or hypoventilation when compared to the placebo in either the sitting or restraint positions. Eight subjects who either smoked, had asthma, or used an inhaler were included in their study.

Though severe symptoms are unlikely, anyone who after exposure to these substances begins to complain of significant respiratory symptoms should be transported to a medical facility for evaluation if they do not improve shortly after removal from the exposure.

Eyes

Ocular injuries have been reported with the use of tear gas, particularly when a tear gas cartridge is discharged at close range. In some cases, particles of agglomerated CS were driven into the eye tissue by force of the dispersion device, most often a blast. In these cases, chemical reaction damage was noted over the course of months to years. These injuries were considered different than blast injuries (Levine & Stahl, 1968). OC spray can cause direct irritating burning symptoms to the eyes, skin, and mucous membranes. Onset of symptoms is almost instantaneous, causing burning and tearing of the eyes as well as blepharospasm, ranging from involuntary blinking to sustained closure of the eyelids.

Corneal abrasions have been reported in up to 8.6% of cases of OC use by Watson, Stremel, and Westdorp (1996) and 7% by Brown, Takeuchi, and Challoner (2000). These findings have been noted as temporary and do not require any additional treatment beyond decontamination with water irrigation. This may be a direct result of the compounds themselves, but also has been theorized to be from the decrease in sensitivity that the compounds cause to the cornea that then makes them more susceptible to mechanical irritation.

Special Mention – OC Projectiles

As explained before, in addition to the effects of the OC in the pepperball, there is the added risk of the projectile nature of the pepperball itself. Its small size, about the size of a standard paintball, makes it possible for the projectile to cause direct eye injury with risk for loss of vision or blunt injury to superficial sensitive structures such as nerves and blood vessels. Though of different design than a pepperball in that it has a harder case and more mass, a projectile shot from the FN-303, manufactured by FN Herstal, caused the death of Victoria Snelgrove in

Boston in 2004 when it entered her brain through the eye socket. For this reason, anyone who sustains a hit to the eye, head, neck, or anywhere where superficial vital structures lie close to the surface requires special medical attention.

CEDs and Thomas A. Swift's Electric Rifle

Many agencies by now are either using, or have considered whether or not to use, some form of these devices. They represent one of the latest developments of widely used technology in the less-lethal realm. The devices most commonly in use in the United States are those manufactured by TASER International: the M-26 and X-26.

The following refers to those devices with probes spread wide enough to cause muscle tetany and incapacitation as well as pain. Such CEDs cause electro-physical involuntary contraction of skeletal muscles and override the nervous system, resulting in loss of motor control by the subject. This incapacitation occurs regardless of the subject's mental focus, training, size, or state of drug intoxication. This is as opposed to the stun gun or TASER use in a "drive-stun" mode, which is more likely to cause pain than gain control of the subject.

During activation of the CED, the subject is typically unable to voluntarily perform any motor task, yet remains conscious with full recall of the event. After the electrical discharge is halted, the subject is immediately able to perform at his or her cognitive and physical baseline, though some report mild fatigue and muscular soreness afterwards.

The effects of CEDs vary depending on the type of device being used, location, placement, and distance between the probes on the subject's body as well as the physical condition of the subject. If the probe spread on the body is less than 5 cm, there will be a lower degree of effectiveness than if the probes are spaced more widely apart, allowing the electrical discharge to affect a larger portion of the subject's musculature (Fish & Geddes, 2001). The effectiveness of CEDs has been anecdotally reported to increase with the duration of application in that prolonged activation may result in muscle fatigue after the discharge is halted (Robinson, Brooks, & Renshaw, 1990).

Published medical research on the health effects and safety of CEDs in humans has been limited and, until recently, most studies have been conducted in animal models. There have been a number of editorials, letters to the editor, and review papers, but these are not true scientific studies and really do not offer much to the knowledge base of the medical effects of TASERs, just opinion and conjecture (Bozeman, 2005; Fish & Geddes, 2001; Koscove, 1987; Robinson et al., 1990). The governmental regulatory approval of the original CED devices was not based on either human or animal studies, but "theoretical calculations of the physical effects of dampened sinusoidal pulses" (p. 587), from which the U.S. Consumer Product Safety Commission concluded that the TASER should not be lethal to a normal healthy person (O'Brien, 1991). Understanding of the anatomic and physiologic effects of CEDs is critical to understanding their safety.

Muscular Effects

As previously described, CEDs create intense involuntary contractions of skeletal muscle causing the subject to lose the ability to directly control the actions of voluntary muscles. This incapacitation is due to an electrical effect and stops as soon as the electrical discharge is halted. Residual muscle soreness is occasionally reported, but there are no known permanent effects on the muscular system beyond injuries that may result from an associated fall. It is possible that extensive muscle activity as a result of agitation, struggle, or heavy exertion, along with the effect of a CED discharge on the muscles, could potentially increase the risk of rhabdomyolysis, which is muscle tissue breakdown that can lead to kidney failure and other complications. The contribution of a CED on the development of rhabdomyolysis is likely minimal, however, when limited cycles are given.

Skin Effects

CEDs will often leave a mark at the site of probe contact. These *signature marks* are of little medical consequence unless they hit an area of vital concern such as the face, eye, genitalia, finger, or breast. These marks are in addition to the small puncture wounds that occur from the barbs' penetration of the skin. Unless they occur in an area of anatomical concern near sensitive structures, there is little consequence from these barb penetrations. Attention must be paid to underlying structures as the barbs have the potential to cause penetrating injury as with any minor puncture wound.

Skeletal Effects

CEDs have not been shown to have any direct effect on the human skeletal system. However, arm and shoulder injuries as well as facial trauma have been reported as a result of falls of subjects from a standing height from CED applications. There have also been reported cases of vertebral compression fractures in volunteer subjects undergoing a CED shock application (Sloane, Chan, & Vilke, 2008). The proposed mechanism for these spinal fractures is related to the location of the barb contact points on the back of the subject across the relatively large paraspinal muscle groups. Forceful contraction of these large muscle groups of the torso can result in enough force to cause an acute compression fracture of the vertebral body. This is similar to the proposed mechanisms for compression fractures that have been reported after seizures (McCullen & Brown, 1994; Roohi & Fox, 2006; Takahashi et al., 2002).

Brain and Central Nervous System Effects

There are no reported adverse effects by the CED on the central nervous system. Subjects who have had CED activations remain awake and alert during the exposure and resume normal central nervous system function and control afterwards. In addition, subjects have full recall before, during and after the event. There is a very noxious pain associated with CED activation, and some individuals have reported residual tingling at the site of attachment of the barbs following the activation. There have been reports of CED probes penetrating through the skull, but no reported direct damage to the brain either by the probe or the associated electrical discharge. There have been no published reports of seizures induced by the use of CEDs.

Psychological Effects

There are no studies on humans evaluating the effect of CED activations on the psychological or emotional state of an individual. There has not been any case report published in the medical literature reporting permanent psychological or emotional changes from CED use.

Cardiac Effects

A little background is important in order to understand the potential cardiac effects of CEDs. Electrical current applied to the heart can alter the function of the heart muscle. As a result, devices such as defibrillators and pacemakers have been designed to direct electrical current to the heart for therapeutic purposes. Pacemakers direct an electrical impulse to the heart at a determined regular rate to help control the rate in an individual whose native rhythm-generating ability is not working correctly. The problems with these individuals typically are that the heart rate is too slow because the native electrical pacemaker of the heart is not functioning normally. The implanted pacemaker corrects for this problem.

Defibrillators apply electrical energy to the heart to “reset” the cardiac electrical activity. In essence, these devices put the heart into an asystolic state (no electrical rhythm for the heart) temporarily to allow the heart’s native electrical pacemaker to take over and resume normal functioning. There are two different types of defibrillators: internal and external. Internal defibrillators are implanted into a patient’s chest wall with a surgical procedure and have electrodes that connect directly into the heart muscle. These devices are typically for individuals who have had or are at risk for life-threatening irregular heartbeats. The defibrillator is designed to detect the irregular heartbeat, charge up an electrical defibrillation shock, reconfirm the irregular heartbeat, and then deliver the shock if indicated to “reset” the heart’s own native electrical activity. External defibrillators are the kind with pads that are placed onto the chest wall that are used by paramedics and emergency physicians to shock an unconscious patient who is in a life-threatening heart rhythm. Since the energy from external defibrillators must travel through the chest wall, including muscles, bone, and fat, to reach the heart muscle, the energy of external defibrillators is much greater than internal defibrillators.

Alternatively, electrical current applied to the heart can also cause abnormal electrical activity, including life-threatening dysrhythmias such as ventricular fibrillation (a chaotic, disorganized heart rhythm) and sustained asystole (flatline; no heart rhythm). This is the case with electrocution or lightning strikes.

For externally applied currents in humans, induction of ventricular fibrillation (VF) is believed to be a function of the duration, frequency, and magnitude of the current as well as the subject’s own body weight. For an externally applied 60 Hertz (Hz) frequency electrical output, the threshold current for inducing VF in men has been proposed to be 500 milliamps (mA) for shocks of less than 200-ms duration and 50 mA for shocks of more than two seconds (Koscove, 1987). The longer a current flows, the greater the chance a shock will occur during the early electrical recovery of the ventricles of the heart after contraction (ventricular repolarization), which is known as the electrically vulnerable part of the heart beat or cardiac cycle. Ventricular repolarization constitutes the initial component of the T-wave on the

electrocardiogram and lasts for 10 to 20% of the cardiac cycle (Forrest, Saunders, McSwinney, & Tooley, 1992).

Resistance determines how much current flows for a given voltage (Voltage = Current \times Resistance). The lower the resistance, the larger the current and the more likely VF may be induced. The total resistance of the body is the sum of internal resistance plus twice the skin resistance as current both enters and exits the body (Forrest et al., 1992). CEDs use very high frequency electricity, and when combined with associated changes in skin resistance, these electrical currents tend to stay near the surface of the conductor. Hence, the output of the CEDs is theorized to stay near the skin and muscle surface of the body rather than reaching internal organs such as the heart (Bleetman, Steyn, & Lee, 2004). Published studies evaluating the effect of CEDs on cardiac physiology are limited, though in the last two years there have been several that have begun to address this topic.

The early animal studies done on both dogs and pigs appeared to show that, while cardiac problems could be induced using electricity from these devices, the electrical current that would do this was far above the current delivered by the devices currently in use. These studies demonstrated that VF was indeed possible, but only at very high-energy outputs and when the electrical discharge occurred directly over or directly in contact with the heart (McDaniel et al., 2005; Roy & Podgorski, 1989).

In regards to humans, it does not appear that CED discharges can directly cause heart conduction problems in healthy volunteers. Levine et al. (2007) conducted a study electrocardiographically monitoring 105 human volunteers immediately before and after TASER shock during police training sessions. While mean heart rate increased by 15 beats per minute following the TASER shock, the investigators reported no change in cardiac rhythm or electrocardiographic intervals. Other studies suggest that there is no damage to cardiac muscle cells after a single short duration shock nor any changes in the conduction intervals of the electrical activity of the heart (Sloane et al., 2007; Vilke et al., 2008).

Respiratory Effects

The mechanics of breathing rely on the muscles of the diaphragm and chest wall to expand the chest cavity and the lungs on inspiration. There has been concern raised that a CED activation could effect these respiratory muscles, particularly the diaphragm, and result in inadequate respiration. In theory, this type of hypoventilation could result in lower blood oxygen levels (hypoxia), higher blood carbon dioxide levels (hypercapnea), and increased blood acid levels (acidosis from the increase in carbon dioxide). Concern has been raised that this respiratory acidosis could develop due to inhibition of respiratory function by repeated or prolonged CED activations. This effect could exacerbate any underlying metabolic acidosis from heavy exertion, drug use, or agitation associated with excited delirium. This could potentially precipitate cardiac irritability or abnormal heart function. Studies evaluating humans have demonstrated that people do breathe during CED activations (Ho et al., 2007; Vilke et al., 2007). In one study, the investigators reported that measures of ventilation actually increased during a prolonged 15-second CED discharge, indicating that subjects were not only able to breathe but actually increased their ventilatory and breathing efforts during the TASER activation (Ho et al., 2007).

So What to Do?

Recommendations presented by the Police Executive Research Forum (2007) in the text "Critical Issues in Policing Series: Strategies for Resolving Conflict and Minimizing Use of Force," state that "all persons who have been exposed to a CED activation should receive a medical evaluation" (p. 125). Options and considerations for this medical evaluation are briefly reviewed here.

In the case of a subject who had a CED activation and (1) becomes compliant, is alert, and acting appropriately and (2) had the CED darts impact nonmedically sensitive areas, many law enforcement agencies have policies and procedures to allow police officers to remove the darts. This seems reasonable if the officer has been specifically trained in the dart removal, utilizes universal precautions as the darts are considered a biohazard, and the dart is not located in a medically sensitive area, typically considered as the face, neck, female breast tissue, groin, hand, or genitalia. The subject should still obtain a medical evaluation that would include local wound care and updating tetanus status; however, this could potentially be performed by medical staff at a detention facility or by field paramedics. This practice will vary from jurisdiction to jurisdiction.

For logistical, training, or medico-legal reasons, some law enforcement agencies have opted not to train their officers to remove the CED darts. In these subjects, medical clearance by a physician with removal of the dart is often required prior to the subject being accepted for booking at the jail. The transport of the subject to the local emergency department by police for medical clearance can result in a long wait for the subject to be seen as a patient. There are often extensive numbers of patients in the waiting rooms, and the CED patients may get triaged as lower-level acuities, thus resulting in them being placed further down into the queue to be seen by the physician. These delays often result in frustration for the accompanying police officers as the delay keeps them off the streets.

Excited Delirium

For those with excited delirium, we recommend immediate evaluation by a physician and treatment in a hospital setting until the delirium has cleared.

Taser Probe in Sensitive Area

A subject that is struck by a TASER dart in a sensitive area of the body, such as the face, neck, genitalia, hand, or female breast tissue, is at higher risk for medical complications due to the underlying anatomic structures. For that reason, we recommend that removal of the darts be performed by a trained medical professional.

Cardiac Implantable Pacemakers and Defibrillators

There are no reports of damage to implantable pacemakers and defibrillators by a CED as these devices are designed to be able to withstand a shock from an external defibrillator, which has a much higher energy level. Patients with these devices usually have an underlying structural heart disease or other reason that resulted in the placement of the device in the first place that places them at higher risk from possible complications. Though this is a low likelihood event, we

would recommend that anyone with one of these devices who underwent a CED activation be considered for an evaluation at a medical facility.

Elderly

The elderly, by virtue of their more prevalent likelihood of certain diseases, most likely cardiac disease and osteoporosis whether or not silent or previously diagnosed, warrant certain caution. Though it would be difficult to set a defined age cut-off, realizing that the likelihood of potential complications rises with age, a medical evaluation seems prudent.

Children

As there are no controlled trials or experiments using the devices on children, or for those with small size and body mass, a medical evaluation should be considered.

Pregnancy

There is no clear consensus as to whether or not CEDs represent a threat to the unborn fetus. The case reports in the medical literature do not add much to our ability to clarify this further. Therefore, we would recommend that any pregnant woman, or suspected pregnant woman, be taken to a medical facility with the capability for fetal monitoring prior to incarceration.

Summary

Less-lethal weapons are criticized by some as inhumane and not without risk of injury or death to the subject. However, these agents hold an important role in the escalation of force continuum to maintain safety for law enforcement officers while offering the ability to incapacitate and mitigate individuals. These agents and weapons have saved countless lives by enabling law enforcement to avoid the need to use deadly force, and although not truly nonlethal, when used properly and with proper follow-up care, they appear to be well-worth the time and expense often required to safely deploy them.

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Scott v. Harris, Police Use of Force, and High-Speed Pursuits: Born to Run

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Introduction

Civil liability is an important concern for both criminal justice practitioners and managers. Much of the importance of this issue flows from the costs of litigation. Civil suits may have monetary as well as political costs for criminal justice organizations and personnel. The financial costs associated with civil suits flow from the cost of defense as well as from settlements or verdicts. Suits may also have political costs since litigation places a criminal justice organization under the scrutiny of the local media and citizenry. Such publicity may result in negative public attitudes toward the defendant agency, which could limit an agency's ability to implement new programs or to seek increased funding for its operation. If civil liability is associated with frequent police actions, the potential harms mentioned above increase in likelihood.

Recently, the Supreme Court decided the case of *Scott v. Harris* (2007). This case is of great import because it concerns the intersection of police liability and police practice. Specifically, the case considered what types of officer behaviors in a high-speed pursuit might sustain a lawsuit based upon a violation of the Fourth Amendment. Police pursuits are not uncommon. The International Association of Chiefs of Police reports that some 250,000 police pursuits occur nationally, resulting in about 500 deaths (Pape, 2006).

These pursuits are a potential danger to officers, to those who flee, and to innocent bystanders. The National Highway Traffic Safety Administration in an analysis of data from 1998 found that 314 people were killed during pursuits. Sadly, two were police officers. Of those killed, 198 were individuals being chased, but 114 were either occupants of unrelated vehicles or pedestrians (Hill, 2002). Over a nine-year period (1994 to 2002), data indicate that 2,654 fatal crashes occurred involving 3,965 vehicles and 3,146 fatalities and with 1,088 of the deaths to persons not in the fleeing vehicle (Rivara & Mack, 2004). Research indicates that approximately 350 lives are lost to pursuits each year and that just over 30% of those killed in police chases are individuals in vehicles not involved in the chase (Richey, 2007). In 2005, law enforcement in California was involved in 7,942 pursuits that resulted in more than 1,200 people being injured and 32 killed from collisions, 14 of them bystanders (Dearen, 2006). In the same year, Los Angeles experienced 602 police car chases, resulting in 254 collisions, 175 injured people, and three deaths (Glaister, 2006). In 2003, ten officers were killed in pursuits (Whitehead, 2003). In 2007 there were 81 traffic fatalities involving police officers, with seven of these killed in line-of-duty police chases ("Deadly Year . . .", 2007).

Police pursuits are also enjoying a rising political salience. In California, Mississippi, New Jersey, and Texas, public interest groups have lobbied for legal changes in the law surrounding pursuits (Alvord, 2003). For example, in California, a grassroots

movement called for legislation mandating a statewide pursuit policy that would bar chases unless the suspect put the public in immediate danger (Dearen, 2006). The states of Florida and Mississippi have enacted laws with increased penalties for drivers who flee the police (Emerling, 2005).

The precedent from *Scott v. Harris* (2007) will serve as a guide for future cases involving police pursuits and federal civil liability. The case may be an indication of the mindset of the Court toward the general area of suits based on federal law that are brought against the police. Additionally, the case may aid in understanding how the current court views the use of force by the police.

Use-of-Force Case Law

The Fourth Amendment, often implicated in encounters between the police and citizens, reads as follows:

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the person or things to be seized.

Commonly, the police seize or take control of property, but the police may also take control of an individual. When the police do seize a person, they must also comply with the Fourth Amendment. Whether the seizure by the authorities is of an object or a person, the Fourth Amendment requires that all such seizures be reasonable in nature. The determination of whether a seizure of a person is reasonable and thus legal depends upon the type of seizure, the amount of evidence an officer possesses, and the force used by the officer.

Several cases have provided a somewhat generalized view of the legal landscape regarding the use of force by police officers in the a seizure of a person. In *Tennessee v. Garner* (1985) a Memphis police officer responded to a prowler call. Upon arrival, a women told the officer that someone “[was] breaking in next door” (471 U.S. 1:3). The officer went behind the house and saw a person run across the backyard. The suspect stopped at a six-foot chain-link fence. The officer saw that the suspect (Garner) did not have a weapon in his hands. The officer yelled “police halt,” but Garner began to climb the fence. Fearing Garner would escape if he made it over the fence, the officer shot him. The bullet hit Garner in the back of the head and ultimately killed him. The officer was acting under a Tennessee State Statute that authorized the use of deadly force to stop a fleeing felon as well as a departmental policy that allowed deadly force to stop a burglar.

The Supreme Court decided that this was not a constitutional use of deadly force and articulated that deadly force in such situations may not be used unless the officer has probable cause to believe that the suspect poses a significant threat of death or serious physical injury to the officer or others.

In deciding this issue, the Court noted that the intrusiveness of such a seizure is unmatched. Balanced against such a seizure was the government’s interest in effective crime control. The opinion concluded that it was unreasonable to use

deadly force to prevent the escape of all felony suspects in all circumstances. The governmental need for effective crime control could not defeat the person's interest in life under these facts. Nevertheless, the opinion did note that all uses of deadly force were not always unreasonable. In situations "where the officer has probable cause to believe that the suspect poses a threat of serious physical harm to the officer or others, it is not constitutionally unreasonable to prevent escape by using deadly force. Thus, if the suspect threatens the officer with a weapon or there is probable cause to believe that he has committed a crime involving the infliction or threatened infliction of serious physical harm, deadly force may be used if necessary to prevent escape, and if, where feasible, some warning has been given" (471 U.S. 1:11-12).

The case of *Graham v. Connor* (1989) is the second major case decided by the Supreme Court concerning police use of force. In this case, Graham, a diabetic, felt the start of a diabetic attack. He quickly entered and exited a convenience store to get some orange juice. The officer saw the odd entry and exit and executed an investigatory stop. When the officer was told about the diabetic attack, he instructed Graham to wait while another officer went to see what happened in the store. During the interaction, Graham acted oddly. He ran around the area and passed out for a short time due to his medical crisis. Graham was placed on the hood of a car, and Graham's request that the officers look at a medical card was rejected. Graham was then thrown head first into the patrol car. After an officer learned that nothing had happened at the convenience store, Graham was released and driven home. Graham sustained a broken foot, cuts, an injured shoulder, and loud ringing in his ears. For these injuries, he sued the officers involved for excessive use of force.

This case determined that excessive force claims are properly analyzed under the Fourth Amendment's *objective reasonableness standard*. Such an analysis is fact-sensitive to each case and involves the examination of "the severity of the crime at issue, whether the suspect poses an immediate threat to the safety of officers or others, and whether he is actively resisting arrest or attempting to evade arrest by flight (490 U.S. 386:396).

The analysis dictated by the case also provides substantial deference to the officer on the scene. The case noted that a determination of reasonableness with regard to use of force was an objective process requiring the reviewing court to take the perspective of a reasonable officer in the same circumstances and not to review the application of force with the benefit of hindsight. Moreover, in determining reasonableness reviewing courts must appreciate the nature of the interaction in which the officer is engaged. Thus, reasonableness must be understood in light of the fact that officers must often make "split-second judgments in circumstances that are tense, uncertain, and rapidly evolving—about the amount of force that is necessary in a particular situation" (490 U.S. 386:396-397). Therefore, even if upon review it is found that the force deployed by the officer was, in fact, unnecessary, there is no constitutional violation if the government actor could have reasonably believed the force used was necessary. Last, the review is an objective non-intent-based evaluation—the question is whether the officers' actions are "objectively reasonable" in light of the facts and circumstances confronting them, without regard to their underlying intent or motivation. An officer's evil intentions will not make a Fourth Amendment violation of an objectively reasonable use of force, nor will an officer's good intentions make an objectively unreasonable use of force constitutional.

Saucier v. Katz (2001) opinion concerned police immunity from a civil suit based upon allegations of excessive force. Here, the plaintiff sued for injuries obtained through the forceful removal by military police during a protest on a military installation. *Saucier* involved the process for determining qualified immunity as compared to the process for finding a violation of the Fourth Amendment from an incident of police use of force. The specific issue in the case was “whether the requisite analysis to determine qualified immunity is so intertwined with the question of whether the officer used excessive force in the making the arrest that qualified immunity and constitutional violation issues should be treated as one question, to be decided by the trier of fact” (533 U.S. 194:197)? The Court held that the examination of qualified immunity and constitutional violation should not be merged into one question, specifically noting, “The ruling on qualified immunity requires an analysis not susceptible of fusion with the question of whether unreasonable force was used in making the arrest” (533 U.S. 194:197). Thus, the case stands for the idea that the reasonableness inquiry into claims of qualified immunity is not the same as the reasonableness inquiry on the merits of the excessive force claim.

The *Saucier* opinion examined prior case law on the relative similarity of the reasonableness test under the Fourth Amendment for excessive force and the examination of qualified immunity. The case noted that the required objective reasonableness test mandates the consideration of several factors (e.g., officers often must make quick decisions regarding the use of force in emotionally charged and protean situations; the reasonableness of officer’s belief as to the appropriate level of force should be judged from an on-scene perspective of a reasonable officer, not a viewpoint benefited by hindsight; the severity of the crime in question; the threat the suspect poses to the officer and others; and the level of resistance the suspect is manifesting) (*Saucier v. Katz*, 2001, citing *Graham v. Connor*, 1989, 490 U.S. 386:396).

The opinion then notes that the qualified immunity analysis “has a further dimension” above and beyond the reasonableness inquiry in *Graham* (*Saucier v. Katz*, 2001, 533 U.S. 194:2158). This added aspect concerns reasonable mistakes regarding “the legal constraints on particular police conduct” (533 U.S. 194:205). Justice Kennedy noted that “an officer might correctly perceive all the relevant facts but have a mistaken understanding as to whether a particular amount of force is legal in those circumstances. . . . [I]f the officer’s mistake as to what the law requires is reasonable. . . . [I]f the officer is entitled to the immunity defense”(533 U.S. 194:205). Therefore, the notion that the tests are indistinguishable was rejected.

In essence, the case holds that in excessive force claims, an officer receives two helpings of deference: the first regarding the core constitutional claim and the second regarding mistakes made by officers as to the legality of their actions (*Saucier v. Katz*, 2001).

In *Brosseau v. Haugen* (2004), the Court was given the opportunity to evaluate how much direction *Garner* and *Graham* provided to officers regarding the use of force. In this case, Rochelle Brosseau, a police officer, shot Haugen as he attempted to flee in his vehicle from law enforcement authorities. Brosseau had been searching for and then pursuing Haugen on foot. Haugen ran to his vehicle and locked himself inside. Brosseau feared that he was getting a weapon and commanded him to exit the vehicle. Haugen refused, started the car, and began to drive away. The officer

fired one shot, hitting Haugen in the back. Haugen sued, claiming that the shot was an excessive use of force.

The case came to the Court from a Ninth Circuit opinion that found the officer's actions were a violation of the Fourth Amendment and that the officer was not entitled to qualified immunity as the law in the area was clearly established. The Supreme Court opinion stated, "[W]e express no view as to the correctness of the Court of Appeals' decision on the constitutional question itself. We believe that, however that question is decided, the Court of Appeals was wrong on the issue of qualified immunity" (543 U.S. 194:197).

In the analysis, the opinion noted that for an officer to not have the protection of qualified immunity, the alleged right violated must have been clearly established at the time of the action in question. Specifically, the Court noted, "the focus is on whether the officer had fair notice that her conduct was unlawful, reasonableness is judged against the backdrop of the law at the time of the conduct. If the law at that time did not clearly establish that the officer's conduct would violate the Constitution, the officer should not be subject to liability or, indeed, even the burdens of litigation" (543 U.S. 194:198). The determination is based on "whether it would be clear to a reasonable officer that his conduct was unlawful in the situation he confronted" (543 U.S. 194:199).

The opinion then noted that the Appeals court mistakenly relied on more generalized tests for the use of deadly force that were articulated in *Garner* and *Graham*. The Majority felt that the generalized tests from these cases were not specific enough to state legally that the law was clearly established. Therefore, the officer was entitled to qualified immunity for her actions.

Pursuit Cases

The case of *Brower v. County of Inyo* (1989) involved the death of Brower, who was killed when he crashed into a police roadblock while fleeing in a stolen vehicle. The obstruction, an eighteen-wheeler parked across the road around a bend, was placed by the police. The issue in this case focused on when a seizure occurred for purposes of the Fourth Amendment. The opinion stated that a seizure of a person is properly found "when there is a governmental termination of freedom of movement through means intentionally applied" (489 U.S. 593:596-597). Prior to this case, several landmark Fourth Amendment cases had posited that a seizure could also occur upon the showing of police authority. In this case, for purposes of the Fourth Amendment, the collision with the roadblock was a seizure. Interestingly, the *Brower* opinion noted that a police pursuit ending with the suspect being stopped by a police officer's sideswiping of the vehicle is a Fourth Amendment seizure (489 U.S. 593).

In *County of Sacramento v. Lewis* (1998), the Supreme Court directly explored police liability in police chases under the Fourteenth Amendment. The case involved the police chase of two young men fleeing on a motorcycle. The pursuit ended when the motorcycle tipped as the result of an attempted sharp turn and skidded to a halt. One rider was thrown to safety with only minor injuries; however, Lewis was left in the roadway. The police officer in pursuit ran into Lewis at approximately 40 miles per hour. The resulting collision propelled Lewis seventy feet down the road

and produced fatal injuries. The parents of Lewis and his estate brought an action based on 42 U.S.C. Section 1983. This suit alleged that the defendants deprived Lewis of his Fourteenth Amendment substantive due process right to life.

In this case, the Court examined the question of what is “the standard of culpability on the part of a law enforcement officer for violating substantive due process in a pursuit case”? (*County of Sacramento v. Lewis*, 1998, 523 U.S. 833:839). The opinion held that in circumstances like those involved in this case, “only a purpose to cause harm unrelated to the legitimate object of arrest will satisfy the element of arbitrary conduct shocking to the conscience, necessary for a due process violation” (523 U.S. 833:839).

The selection of what type of conduct will violate the due process clause is of great importance because of the impact the specific test will have upon the likelihood of meeting a plaintiff’s burden of proof in a case. Specifically, due process clause violations are found where conduct of the state actor “shocks the conscience,” while Fourth Amendment search and seizure violations are analyzed by examining the reasonableness of the state actor’s conduct. In deciding what conduct will rise to a conscience shocking level in high-speed pursuits, the opinion noted that deliberately indifferent or grossly negligent conduct will not satisfy this standard. In effect, the due process analysis uses a more stringent test to find constitutional violations than does the Fourth Amendment analysis.

Scott v. Harris

The *Scott* case flows from events of March 29, 2001. Deputy Clinton Reynolds from Coweta County clocked Harris’s vehicle traveling at 73 miles per hour in a 55 mile an hour zone. The officer followed and flashed his blue lights, but Harris continued. The deputy decided to pursue Harris and followed him in an attempt to get him to stop. The deputy turned on both his lights and siren, which, in turn, activated his video camera. Harris did not stop but sped up instead, starting a high-speed pursuit. Harris drove at excessive speeds, crossed the double yellow line, and ran a red light. Despite this, Harris used his turn signals when passing or turning and maintained control over his vehicle. The deputy radioed to a dispatch center and reported the pursuit but did not report the underlying offense. Deputy Scott heard the radio traffic regarding the pursuit and unilaterally joined. During the pursuit, Harris slowed, signaled, and entered a drugstore parking lot. Deputy Scott attempted to stop Harris and drove into his path. Scott then attempted to remove his vehicle. Both vehicles came into contact and minor damage was sustained to his police car. Harris then drove onto a highway and continued to flee at high speed. Deputy Scott took over the lead in the chase. With no pedestrians or other vehicles in sight, Deputy Scott radioed and obtained permission to use the PIT Maneuver in order to end the chase. Other officers had blocked intersections to protect innocent third parties from the chase. Deputy Scott was granted permission to use the PIT Maneuver; however, due to Harris’s speed, Deputy Scott decided not to use the technique, electing instead to ram the back of Harris’s vehicle. Harris lost control, crashed, and was rendered a quadriplegic. In this instance, the policy of the department at the time left the decision to pursue a fleeing vehicle to the discretion of the officer and supervisor in the field.

Harris filed suit against Deputy Scott, Deputy Reynolds, and Supervisor Fenniger. He also sued the County of Coweta and the Sheriff. The suits were brought under 42 U.S.C. for violations of his Fourth and Fourteenth Amendment rights.¹ The defendants responded to the suit with a motion for summary judgment. The standard for granting a motion for summary judgment is the absence of a genuine issue as to a material fact. In such an instance, those seeking the motion should have it granted, and the case would be ended.

The district court first determined that Scott had been the subject of a seizure by a government actor. The court then had to determine if the seizure complied with the Fourth Amendment. Specifically, the court sought to determine if the seizure was reasonable in nature or if the seizure involved excessive force. It is upon the ability to determine this issue that the district court based its conclusion that there were issues of fact that were better left to a jury. The opinion stated, “a fact finder could conclude that when Scott rammed Harris’s vehicle . . . [he] did not present an immediate threat to the safety of others since the underlying crime was driving 73 miles per hour in a 55 miles-per-hour zone” (*Harris v. Coweta County*, 2003 U.S. Dist. LEXIS 27348:14-15). The last step for the district court was to determine the applicability of qualified immunity. The core issue for this determination focused on whether the right allegedly violated was clearly established in the law. That is, did the law give the reasonable officer sufficient notice that his actions in the case would be viewed as unreasonable and thus unconstitutional. The district court concluded that at the time of the seizure, the precedents of *Tennessee v. Garner* and *Graham v. Connor* clearly established the law regarding the use of deadly force for fleeing suspects.

The district court granted portions of the summary judgment motion but denied the motion for the Fourth Amendment claims against Scott and Supervisor Fenniger in their individual capacities, the claim for failure to train, and the negligence claim against the county. The defendants appealed to the Eleventh Circuit. The Eleventh Circuit upheld the lower court decision. The defendants moved for a motion to rehear the case *en banc*. The case was reheard but not *en banc*.

The circuit court reviewed the denial of summary judgment *de novo* (anew) but applied the same standard used by the district court—viewing the facts in the light that is most favorable to the non-moving party, is there a genuine issue of material fact and whether the moving party is entitled to judgment as a matter of law?

The Eleventh Circuit also stated that the denial of qualified immunity was an issue to be reviewed *de novo*. The circuit court again upheld the trial court’s denial of motion for summary judgment. The case was granted review and argued before the Supreme Court. During the arguments, the justices watched a video recorded by one of the pursuing officers.

The Supreme Court opinion framed the issue in two iterations. The first version asked “whether a law enforcement official can, consistent with the Fourth Amendment, attempt to stop a fleeing motorist from continuing his public-endangering flight by ramming the motorist’s car from behind” (1772)? The second version asked, “Can an officer take actions that place a fleeing motorist at risk of serious injury or death in order to stop the motorist’s flight from endangering the lives of innocent bystanders” (1772)? In answering these alternative framings,

the Court held that “A police officer’s attempt to terminate a dangerous high-speed car chase that threatens the lives of innocent bystanders does not violate the Fourth Amendment, even when it places the fleeing motorist at risk of serious injury or death” (1779).

The reasoning of the opinion by Justice Scalia may be divided into five parts. First, consistent with the determination of issues involving qualified immunity, the opinion first asks whether Deputy Scott’s actions violated the Fourth Amendment? In conducting this analysis, Justice Scalia’s opinion diverges sharply from the traditional rule of taking the facts in the light favorable to Harris. The reason for this divergence is the existence of a videotape of the pursuit recorded by a camera in the police officer’s vehicle. This video, in the majority’s opinion, directly contradicts the facts averred by Harris. Indeed, in their view, the video shows the danger this pursuit posed to other citizens on or near the road that night. The opinion noted that in conducting the summary judgment analysis “when opposing parties tell two different stories, one of which is blatantly contradicted by the record, so that no reasonable jury could believe it, a court should not adopt that version of the facts for purposes of ruling on a motion for summary judgment” (1776). The Majority asserted that the video manifested this level of proof regarding the facts of the case. Thus, due to the presence of the videotape and the light it shed upon the danger to human life, taking the facts as claimed by Harris was improper. Rather, the determination of the facts for the purpose of deciding the motion for summary judgment should be determined by the videotape.

Second, the opinion then sought to determine if the officer’s actions violated the Fourth Amendment. More specifically, the Court asked “whether Scott’s actions were objectively reasonable” (1776)? If the actions taken in light of the facts presented in the videotape were reasonable, then the actions did not violate the Fourth Amendment. In concluding that the officer clearly did not violate the Fourth Amendment, the opinion examined the *Garner* precedent, the relative culpability of the parties involved, and the dangers of a policy that would encourage flight.

Justice Scalia began the balancing analysis by distinguishing the *Garner* precedent. The opinion noted that *Garner* was a fact-based application of the Fourth Amendment reasonableness test rather than a generalizable rule to all instances of governmental use of deadly force. The factual differences between the police shooting in *Garner* and the high-speed pursuit involved in the case at bar were highlighted by the reasoning. Moreover, the opinion noted that the threat to the public from an unarmed fleeing burglar is substantially different from that of a person fleeing on the public roads at high speeds. Justice Scalia, in an interesting bit of *dicta*, stated that an “attempt to craft an easy-to-apply legal test in the Fourth Amendment context is admirable, [but] in the end we must still slosh our way through the fact-bound morass of ‘reasonableness.’” (1777-1778).²

With *Garner* distinguished and the reasonableness test established as the decision mechanism, Justice Scalia articulated the test. He stated, “We must balance the nature and quality of the intrusion on the individual’s Fourth Amendment interests against the importance of the governmental interests alleged to justify the intrusion” (*United States v. Place*, 462 U.S. 696, 703, 103 S. Ct. 2637, 77 L. Ed. 2d 110:1778).

Third, the opinion stated that the balancing test as applied to this case required determining whether Deputy Scott's actions were reasonable considering the risks of bodily harm that his actions posed to Harris in light of the threat to the public that the deputy was trying to eliminate. Relying on the video in the case, The Majority stated that Harris "posed an actual and imminent threat to the lives of any pedestrians who might have been present, to other civilian motorists, and to the officers involved in the chase" (1778). Justice Scalia noted that the officers' actions did pose a substantial risk of harm to Harris (though perhaps less of a risk than the use of a firearm).

Next, in deciding that Scott's actions were reasonable, the Court considered both the potential number of persons harmed and their "relative culpability." While citizens near the public roadway that night had no role in creating their risk, Harris elected to flee and to continue his flight.³ Because of Harris's culpability, the opinion found that Deputy Scott's actions were reasonable.⁴

Finally, Justice Scalia specifically addressed the danger of a rule that would require or encourage police to terminate pursuits. He stated that the Court is "loath to lay down a rule requiring the police to allow fleeing suspects to get away whenever they drive *so recklessly* that they put other people's lives in danger" (1779). Such a rule would foster flight and increase the risk to the public.

Justices Ginsberg and Breyer concurred in the case. Generally, they shared three concerns. First, they noted concerns over the interpretation of the case at bar in articulating a *per se* rule for officer behavior in high-speed pursuits. Second, they indicated concerns regarding the requirements of the process as established by the precedent of *Saucier v. Katz*. Third, both justices noted the impact of the videotape upon the Court's decision. Justice Stevens dissented in the case. He fundamentally disagreed with the Majority's usurpation of the lower courts interpretations of the facts, the view of the video as showing substantial dangers to the public, and the Court denying the jury the role of fact finder in cases in which police use deadly force.

Policy Implications

The case of *Scott v. Harris* has various legal and practical implications. Clearly, the case established a new legal precedent. The holding that "a police officer's attempt to terminate a dangerous high-speed car chase that threatens the lives of innocent bystanders does not violate the Fourth Amendment, even when it places the fleeing motorist at risk of serious injury or death" clarifies an important legal issue surrounding a significant police practice (1779). The case does not, however, establish enforceable precedent for constitutional issues surrounding the deaths of third parties not involved in police pursuits.

What the case means for police officers, managers, and organizations are open empirical questions. In an effort to explore this topic, informal discussions were conducted with a group of about 60 mid-level police managers from across the United States who were attending a prestigious residential training program. Their remarks reveal some potential, albeit anecdotal, ideas. While many of the managers had heard of the case, few were clear on its specific holding or potential impact. Indeed, several expressed the opinion that pursuit policies were in a seemingly constant state of change. Managers also noted a recent increase in the desire for and attention to cruiser cameras and their operation. Most did not, however, feel this

was related to the case. Some managers indicated an increased focus on the role of supervisors in police pursuits. Specifically, they perceived an increased interest in the training of supervisors in how to respond to active pursuits as well as in how to evaluate and track pursuits after their conclusion. Last, those managers from jurisdictions where the PIT Maneuver is used did not indicate any change as to the acceptability of the tactic.

Future researchers may wish to systematically explore the ideas expressed by these mid-level police managers. A systematic national survey of police departments would greatly bolster any conclusions regarding these issues. Researchers may also wish to examine national data regarding police driver training. While not a likely outcome from this case, the political salience of pursuits may result in changes to police pursuit training. Specifically, basic training may be retooled or expanded, and some form of periodic qualification (like that associated with handguns) may be introduced.

It appears that police pursuits have salience with the courts, the citizenry, and police organizations. Perhaps the most important implication from this case is the impact that technology can and likely will have on the legal review of police decisionmaking. As the ability to capture and save citizen/police interactions becomes easier to do and becomes more inexpensive, it is likely that more interactions will be recorded. These active records may become the primary basis of review by police organizations and the courts to determine the appropriateness and liability surrounding police actions. Those who manage and work in police organizations, as well as actors in the criminal and civil justice system would be wise to understand the issues associated with this type of evidence.

Endnotes

- ¹ He also sued under state tort theories.
- ² This seems to indicate that case-by-case analysis for use-of-force cases will continue in the future and runs contrary to other articulations for “bright line police rules.”
- ³ Interestingly, the Court did not note the decision of the officers to pursue and assume the risk of that discretionary decision.
- ⁴ The opinion dismisses the contention that a unilateral decision by the police to end the pursuit would end the danger to the public. Justice Scalia averred that such an action would have an uncertain impact upon the conduct of Harris. Whereas, the ramming of Harris’s car was certain to end the risk to the public.

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Analyzing Detainee Resistance and Detention Officer Use of Force in Michigan Jails

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Introduction

The history of the American jail has traditionally been one of neglect, both in physical and societal terms. Even in modern times, several critics of jails describe them as being in a state of crisis (Allinson, 1982; Thompson & Mays, 1988). In light of the dehumanizing conditions in many jails across the country, several commentators have characterized jails as “crucibles of crimes” (Fishman, 1923, p. 46), the “cloacal region” of the criminal justice system (Mattick, 1974, p. 120), the “ultimate ghetto” (Goldfarb, 1975, p. 33), “the cesspools of crime” (Silberman, 1978, p. 58), the “temporary asylum of the mentally ill” (Steadman et al., 1984, p. 110), and an instrument for managing the underclass and the rabble of society (Irwin, 1985, p. 9). Bowker (1982) observed that “idleness, overcrowding, deteriorating physical facilities, inadequate medical and psychiatric treatment, and the psychological stress associated with rapid changes in status all contribute to the instability and negative social climate existing in jails” (p. 30).

Jails are complex community detention facilities which confine a diverse, transient, and unhealthy population. Since 1994, the average daily population in America’s 3,300 jails was over 550,000 detainees, admitting from 12 to 13 million annually. Nationally, at the time of admission, 60% of jail detainees are under the influence of a chemical substance, over 25% have a blood alcohol content within a range of 0.12 to 0.22%, 45% are admitted with a drug abuse problem, 41% are admitted with a psychological impairment, 70% are taking medication, 36% are admitted for a violent offense, and 31% are admitted for a drug offense (Bureau of Justice Statistics [BJS], 2005). The overall operational environment of the jail is impacted by local, state, federal, and legal entities.

Although old and diverse problems still exist within many contemporary jails, over the last 20 years, jails across the country have made progress in shedding the aforementioned characterizations. For example, many U.S. jails have (1) become accredited through professional entities, (2) established professional standards, (3) instituted preservice academy and inservice detention officer training, (4) instituted field officer training after the academy, (5) built new facilities paralleling direct supervision models, (6) provide ongoing healthcare services to prisoners, (7) provide educational and rehabilitation services, and (8) increased security measures through progressive technological advances.

Detention facilities can be coercive organizations, and even routine interactions between officers and prisoners take place with an environment of structured conflict (Marquart, 1986). Given an officer’s need to maintain control over detainees, the use or threatened use of force by detention officers is a routine

part of daily operations. While officers use various methods in accomplishing their daily custodial tasks, the threatened use of force and the actual use-of-force measures emerge as an essential component to working in an environment that is taxing, stressful, and frequently dangerous (Griffin, 1999; Ross, 1996). Griffin (1999) found that the perception of the jail climate directly impacted the use of force, and that the climate variables such as authority, fear of victimization, quality of supervision, and role ambiguity significantly impact the officer's readiness to use force.

According to the Criminal Justice Institute (2003), from 1990 to 2002, the annual average number of detainee assaults on officers is 10,000, which marks about ten officer assaults per detainee. The average number of detainee-on-detainee assaults amounted to over 17,000, accounting for about 20 detainee assaults per 100 detainees. The National Institute of Justice (NIJ) (1999) ranked the job of correction/detention officer as the fourth most dangerous occupation in the United States, behind police officers, taxi cab drivers, and security personnel.

Due to the nature of a detention officer's job, the types of detainees confined within the facility, and the degree of dangerousness and volatility of the confinement setting, the need to use force control techniques and equipment is a critical job component. In fact, research analyzing the primary job tasks of detention officers rank the ability to use force measures as a *core job task*. While detention officers are trained to apply plausible methods for gaining prisoner compliance, officers must resort to force measures with some frequency. Force used by detention officers may be employed to break up a prisoner fight, in self-defense or defense of another officer/staff person, to prevent self-harm, to prevent an escape, to overcome unlawful resistance, to quell a disturbance, and to prevent the commission of a crime.

Purpose of the Study

The purpose of this study was to perform an assessment of the nature of use of force and detainee resistance in 15 Michigan jails. The study was undertaken to learn more about the nature of the detainee resistance situations detention officers face while performing their custodial duties. Empirical knowledge is needed to update officers in their safety considerations when approaching detainee resistance and dangerous situations. The study provides insights into the nature of the use-of-force encounters officers face, which has not been widely studied. The study is most useful in providing information on detention officer safety and occupational risk reduction by examining common types of detainee resistance situations officers confront with regularity. The study's findings have identified what types of conditions assaults occur in and whether detainees use weapons in these encounters.

Due to a lack of research on the subject, a study is needed to assist policymakers, administrators, and trainers in making important decisions regarding detention officer use of force. Of equal importance, research regarding detainee resistance can aid in enhancing officer safety. Encountering dangerous detainees and force situations requires officers to possess current information about their job in order to help make the job less dangerous and to respond with appropriate control measures as warranted. By studying the circumstances in which various types of resistance occur, detention personnel can improve their awareness and response.

Training is an integral component in enhancing officer performance and safety. In accordance with the *City of Canton, OH v. Harris* (1989) decision, federal courts have held agencies liable for being deliberately indifferent to the training needs of their personnel. Research of this nature can assist in revising training curriculum, making it job specific. Use-of-force incidents are high-profile situations, and academy and inservice training is an important risk management/loss prevention technique in addressing this problem.

Previous Research

The use of force by detention personnel is an important subject matter for the detention officer, the administrator, and the use-of-force instructor (Griffin, 1999; Maahs, Pratt, & Hemmens, 1999). In 1999, jail administrators responded to a national survey and reported that officer use of force ranked as the fifth most important concern for them in operating the jail and in their training needs (NIJ, 1999). In two separate studies, the researcher examined the win/loss trends of Section 1983 prisoner claims alleging the use of excessive force (Ross, 2001, 2004). In 2001, the researcher performed a study for the Michigan Municipal Risk Management Authority and assessed the trends of jail litigation within the State of Michigan from 1994 through 1999 (58 counties/jails). That study revealed that use of force was the seventh most frequent claim made by detainees (out of 20), rarely closed with a loss payment, but the average cost paid out was \$63,000 per claim. The frequency and severity of the claims were observed as high to moderate.

In 2004, the researcher performed a seven-year (1995 to 2002) review of published Section 1983 court decisions on the use of force used exclusively by detention officers. Overall, he found that officers prevailed in 78% of the total cases studied ($n = 500$). The analysis revealed that officers prevailed in 68% of physical force applications, 79% of restraint cases, 70% of cases involving an aerosol, 85% of cases pertaining to special response teams, 89% of cases involving the use of batons, 70% of taser/stun gun cases, and 100% of lethal cases. The courts found in favor of the defendants in 63% of the litigation when claims of failure to train were asserted.

Little empirical research has actually been undertaken to examine detainee resistance behaviors while confined in jail. Researchers have measured the likelihood of detainee violence in jails by studying the architectural design of the facility. Historically, jails have been built based on the linear design where detainee cells are aligned side by side in a long hallway and are designed to hold one detainee or multiple detainees. The more contemporary jail has been categorized as the *new generation jail* and is designed in a podular direct supervision, podular indirect supervision, and a combination of the two. These designs allow more direct contact and supervision of the detainees. The structure of these jails is designed to reduce the violent environment of the facility as well.

Wener and Olsen (1980) and Wener, Frazier, and Farbstein (1985) found in separate studies that new generation jails were at least as secure as linear jails and provided a higher level of safety for both officers and detainees. The National Institute of Corrections (1983) found in their study that four of the five direct supervision facilities that they reviewed had lower detainee assaults against other detainees and officers, while nondirect supervision facilities had slightly higher assault rates. Zupan (1987) found in a study of five direct supervision jails that there was

a substantial reduction in detainee assaults on other detainees, assaults on officers, and a reduction in detainee suicides.

Tartaro (2001) surveyed 646 jails in 47 states to determine the violence levels experienced in these facilities. Linear jails made up about 28% of the jails, while podular or a combination of podular/linear facilities accounted for the remaining 72%. She found that when jail design was considered, podular-designed jails had slightly lower rates of most assaults and of violence in general. The exception was of detainee-on-detainee assaults with a weapon, where linear jails had fewer detainee assaults. She found that the levels of violence were only negligible, and overall support was not found for the efficacy of one type of jail design over the other. What made the most significant difference was the level of overcrowding, programs and services available, correctional philosophy, training of officers, and the professional supervision of detainees by detention officers.

McManimon (2004), using 1993 jail data from one jail in the Northeast, examined the correlates of 115 violent rule infractions. The jail confined an average daily population of 521, and the infractions comprised 20% of all disciplinary infractions within the facility. He found that 90% of the infractions occurred within the housing units, 76% of the detainees were under the age of 30, 78% had at least one prior infraction, and 70% were either confined in maximum or medium custody at the time of the infraction. Housing unit officers' age averaged 31 years old, while the average age of officers at the facility was 37 years old. McManimon found that detainees charged with a less serious infraction were seven times more likely to possess a weapon; infractions were more likely by detainees in situations where fewer officers were assigned; the more infractions a detainee had accumulated, the less likely he was to be involved in a fight; none of the correlates were associated in an assault by the use of a weapon; detainees involved in previous infractions were 44% more likely to be involved in an assault without a weapon; a majority of assaults without a weapon occurred in the housing unit; and a history of past infractions increased the likelihood that the detainee would be involved in an assault by 49%. The "only" conclusion drawn by the researcher was that more research was needed into the operation of jails.

Given the limited number of published empirical studies on the nature of detainee resistance and detention officers' use of force, a study which specifically analyzes these encounters is timely. A study is needed to assist policymakers, administrators, and trainers in making important decisions regarding detention officer use of force. Examining the circumstances in which various types of resistance occur, detention personnel can improve their awareness, response, and safety.

Study Methodology

Participating Agencies

The Michigan Municipal Risk Management Authority (MMRMA) located in Livonia, Michigan, a private insurance entity, awarded a grant to study the use of force and detainee resistance in Michigan jails. MMRMA has provided risk management services to over 150 law enforcement and sheriff departments in Michigan for 20 years. This article reports on the selected significant findings of the study.

Of the 59 Michigan county sheriff departments to which MMRMA provides risk management services, 15 voluntarily participated in the study (25%). These jails represent small, medium, and large jails spread throughout the state. The agencies were categorized by detainee population size: six were categorized as a large detention facility (500 to 1,000 detainees), five were classified as medium-sized (101 to 499), and four agencies were categorized as small, with less than 100 detainees. The average daily detainee population for these jails was 505 detainees. These detention facilities were primarily characterized as a linear-designed facility (50%); 40% are a combination of linear/podular design with direct supervision; while 10% were a combination of linear, podular, and dormitory style.

Research Instrument and Statistics

This study applied a research design recommended by Garner et al. (1996) and Alpert and Smith (1999) used in researching police use of force. There are four types of research methods used in studying police use of force: (1) officer incident reports, (2) surveys, (3) observational research, and (4) examining citizen complaints. While these methods have their limitations, incident reports have been recommended as the more valid and preferred method and is the method employed in this research project.

Using a longitudinal approach, use-of-force incident reports were analyzed for three years from 2003 to 2005. The researcher modeled the "Detention Use of Force Inventory" from Garner and Maxfield's (1999) police use-of-force study as there was no research instrument previously designed to capture the information pertaining to this study. The inventory was structured around 15 research questions, and a total of 175 variables were examined. A force continuum designed by Siddle (1986) for the Pressure Point Control Tactics Management Systems was integrated into the inventory and was used to identify the types of resistance behaviors illustrated by detainees. Force continua are used by many law enforcement agencies and serve as a framework for officers in recognizing varying degrees of detainee resistance and directing them with recommended force options based on the detainees' perceived behaviors (McLaughlin, 1992; Terrill, 2005). The types of use of force applied by officers in response to detainee types of resistance were also examined.

Detainee resistance was identified by using the six subject behaviors categorized from the PPCT force continuum as follows: (1) *Psychological intimidation*—includes nonverbal behavior cues, appearance, and body language indicating physical readiness; (2) *Verbal noncompliance*—verbal expressions indicating the detainee's unwillingness to comply with an officer's commands; (3) *Passive resistance*—physical actions that do not prevent an officer's attempt of control (dead weight, limp); (4) *Defensive resistance*—physical actions that attempt to prevent an officer's control without harming the officer (e.g., pulling/twisting away from officer; escaping grip/control); (5) *Active aggression*—physical actions of assault with the intent of harming the officer (e.g., personal weapons assaults); and (6) *Aggravated active aggression*—actions intended to cause serious bodily harm or death to the officer.

A supervisor from each agency transferred information from the incident report to the research instrument and forwarded it to the researcher for data analysis. Descriptive statistics, combined with univariate, bivariate, and crosstabulations, were used to analyze the variables. Chi-square was employed as well as Pearson's

Correlation to further measure the relationships among the variables. The agency coder reported information relevant to factors pertinent to the individual agency, transferring information from officer incident reports. Respondents submitted 949 inventories usable for statistical analysis.

Limitations

Using incident reports is the preferred method for examining the use of force in detention facilities. It is, however, acknowledged that some officers submitting the reports may not have reported the incident thoroughly or in detail. Reports are records of the perception of an officer, and in some reports, important facts may have been left out or may have been reported in a biased manner. Additionally, the individual at the participating agency who was assigned to transfer incident information to the research instrument may have omitted important information. Therefore, the findings reflect reported use-of-force incidents based on the officer's perception of the incident, the reporting accuracy of the officer(s), and the level of accuracy ensured by the individual entering the information.

Findings Regarding Detainee Resistance

Resistance Location, Shift, and Day of the Week

The majority of incidents in which officers encounter detainee resistance occurred in the booking area (40%). Additional locations include a general population cell (15%), a holding cell (16%), day room/exercise area (10%), an administrative cell (6%), a hallway (7%), the sally-port (5%), and the observation cell (1%). Other locations where a force confrontation occurred less than one percent of the time included the courtroom, an office, areas where rehabilitation programs are provided, a work assignment, or outside the facility. Respondents indicated that the afternoon and midnight shifts accounted for 82% of the incidents. Combining Saturday through Monday accounted for 45% of the incidents, while Friday through Sunday accounted for 43%.

Common Circumstances in Which Detention Officers Encounter Detainee Resistance

Common circumstances in which resistance was encountered requiring officers to use a degree of force include attempt to control a detainee (30%), during booking (29%), enforcing rules (28%), conducting a personal search (24%), during a prisoner disturbance (20%), during an escort of the detainee (inside the jail, 14%), during a forced cell move (14%), during a cell transfer/move of a detainee (13%), giving an order (13%), locking a prisoner in a cell (7%), and in self-defense (7%). Other circumstances included the following: breaking up a prisoner fight (6%), during a suicide attempt (5%), in defense of another (4%), attempting to handcuff a detainee (4%), during a cell search (3%), while protecting property (3%), providing medical intervention (3%), during an outside transport (2%), during a mealtime (2%), while counseling a prisoner (1%), and during a hostage situation (1%). Distributions totaled more than 100% as circumstances generally comprised varying combinations.

Selected Characteristics of Detainees

Almost half (45%) of the detainees were “emotionally upset” at the time they were resisting or assaulting the officer. Detainees were under the influence of alcohol in 32% of the incidents, with an average blood alcohol content of 0.20. Only 5% were thought to be under the influence of a chemical drug. Mentally impaired detainees accounted for 24% of the incidents. Detainees averaged 29 years of age, ranging from 15 to 70 years old. Resisting detainees were commonly male (83%), were White (61%), African-American (30%), Hispanic (5%), and other (2%). Officers were likely to encounter only one resisting detainee per incident.

Respondents indicated that detainees were confined in jail on approximately 189 various charges. These charges were categorized into four primary areas: (1) property crimes (44%), (2) violent crimes (35%), (3) substance abuse (15%), and (4) other charges (6%). Categories identified as “Other Charges” included crimes of prostitution, resisting and obstructing, operating under the influence of liquor (OUIL), parole/probation violation, jail escape, home invasion, disorderly, traffic, trespassing, and in the jail on a writ or a warrant. Detainees were charged with two charges in 40% of the incidents and three or more charges in 30% of the incidents. Detainees were considered under the following confinement classification at the time of the incident: unclassified (44%), medium (23%), maximum (20%), special classification (10%), minimum (2%), and juvenile maximum (1%).

Common Injuries Sustained by the Resisting Detainee

Detainees did not sustain an injury in a vast majority of the incidents (84%). Of the remaining injuries, prisoners sustained a muscle strain (6%), a bruise/contusion (5%), a cut (1%), a fracture (1%), or a dislocation. Detainees were provided medical treatment for these injuries at the jail in 87% of the cases and treated at the hospital and released in 13% of the cases.

Findings of the Significant Relationships Among Variables

Types of Detainee Resistance

A majority of incidents involved combinations of resistance. The primary type of detainee resistance is verbal resistance (69%). Forms of verbal resistance included yelling/screaming (45%) and threatening an officer (41%). Officers also encountered a detainee threatening another detainee in 6% of the incidents. Verbal resistance, however, accompanied physical forms of force in 64% of the incidents.

Physical forms of resistance encountered include defensive resistance (62%), intimidating the officer (28%), and passive resistance (22%). Other forms of physical resistance include punching, kicking, spitting, grabbing, pushing, slapping, head-butting, and throwing an object/liquid at officers (55%) and wrestling with the officer (21%). Officers encountered lethal force in 5% of the incidents by confronting an edged weapon (4%) and a detainee choking another detainee (1%).

Between these three general variable headings, there was a possibility of over 300 combinations and 79 subvariables which could be assessed. The analysis showed consistency and also redundancy in the relationship patterns. Therefore, only the

most significant patterns are presented of the top eight force circumstances in which detainee resistance is encountered and include (1) attempting to control a detainee (30%), (2) during the booking phase (29%), (3) enforcing rules (28%), (4) while conducting a personal search (24%), (5) a prisoner disturbance (20%), (6) during a forced cell move (14%), (7) performing a cell transfer/moving a detainee (13%), and (8) escorting a prisoner (14%). These percentages total over 100% as more than one circumstance may be involved during the incident altercation. For example, an officer may be enforcing a rule and giving an order to the detainee while attempting to control the detainee.

Chi-square statistical analysis and Pearson's Correlation were used to measure the relationship between two or more variables. Based on the number of incidents, an expected count is determined by the statistical program. For the purposes of this paper, only those incidents which occurred with common frequency are presented. Only that data which showed a strong association is presented. The cut-off statistical value for a significant relationship was 0.060 or lower. The general rule is that the closer the statistical value is to 0, the stronger the degree of association. The value in the parentheses represents the actual number of incidents for that variable, and the statistic value shows the statistical significance for the variables.

Combinations of Detainee Resistance

Regardless of the type of force circumstance, several patterns of combinations of detainee resistance were encountered by officers. Verbal resistance occurred in over two-thirds of the incidents. Types of verbal resistance included yelling, screaming, threatening an officer, and threatening another detainee. Verbal resistance was combined with passive actions such as a detainee refusing to move off a bench or gripping cell bars or another object. Passive resistance can include actions which require an officer to use a physical control technique.

Verbal resistance combined with defensive resistance occurred in 50% of the incidents. Verbal resistance was accompanied by defensive actions and physical actions of assault in 38% of the encounters. Examples of physical actions of assault may include wrestling with the officer, and punching, pushing, kicking, grabbing, slapping, head-butting, and throwing an object at the officer. Lethal force types of assaults against an officer accounted for 5% of the incidents and included choking the officer and an edged weapon assault. Verbal resistance accompanied lethal force attacks in 97% of the incidents.

While detainee resistance can occur at any time, under any circumstance, and in a variety of forms, six general patterns of resistance progressed as follows: (1) verbal resistance by itself; (2) verbal and defensive resistance; (3) verbal resistance, defensive resistance, and active aggression; (4) verbal resistance and passive resistance; (5) verbal resistance and active aggression, and (6) verbal resistance and lethal force. In a significant number of incidents, verbal resistance, defensive resistance, and active aggression were the primary combinations of resistance associated with the force circumstance. Interpretation of these patterns of resistance, however, must be done with caution as detainee resistance may follow any path of progression, depending upon the totality of the circumstances.

Table 1 shows the various associations between the detainee resistance circumstance of attempting to control by the type of force used and the type of detainee resistance. This type of resistance is the most common form of resistance officers encounter. Significant associations show that detainees are more likely to use verbal resistance followed by defensive, physical, and passive actions. Detainees are more likely to intimidate the officer than yell during this circumstance. Detainees commonly resist through defensive actions such as wrestling and attempting to break free from the officer. Detainees primarily used kicking, punching, and slapping officers in the use of physical actions. In two incidents, officers encountered an edged weapon, and one officer was choked by the detainee in a separate incident. The use of an aerosol and restraints were used when a detainee threatened the officer, and/or in higher forms of detainee resistance. Mentally ill detainees accounted for 18% of the incidents.

Table 1. Attempt to Control by Force Type and by Resistance Type

Force Type	Verbal Resist.	Intimidate	Yelling	Threaten Officer	Passive	Defensive	Physical Actions
Verbal	(85) 0.003	(71) 0.000	(31) 0.031	(22) 0.050	(29) 0.030	(70) 0.023	(38) 0.051
Multiple officers	(88) 0.010	(72) 0.010	(28) 0.020	(61) 0.019	--	(75) 0.001	(30) 0.012
Control hold	--	(72) 0.000	--	--	(49) 0.046	(77) 0.002	(20) 0.002
Wristlock	--	--	--	--	--	(25) 0.001	(19) 0.022
Pressure point	--	--	--	--	(18) 0.045	(24) 0.034	--
Takedown	--	--	--	(15) 0.045	--	(15) 0.045	(14) 0.051
Handcuffs	--	(15) 0.020	--	--	--	(15) 0.014	--
Aerosol	--	--	--	(10) 0.041	--	(10) 0.039	(10) 0.051
Leg restraints	--	--	--	--	--	--	(10) 0.059
Restraint chair	--	--	--	--	--	--	(10) 0.058

Further, multiple officers (two or more) are more likely to respond. These officers are more likely to use or attempt to use verbal control, a control hold, and a pressure point control technique. Officers used wristlocks, takedown techniques, restraints, and an aerosol less frequently, but when they did apply these techniques, they were in response to detainee threats and defensive and/or physical actions of resistance.

Table 2 shows the relationships between detainee disturbances by the detainees' level of resistance type and the types of force officers used. Officers are likely to encounter verbal resistance, including yelling and threatening remarks. Due to the nature of the circumstance, the detainee is more likely to offer defensive and physical actions of resistance. Wrestling, kicking, and punching the officer were used with some frequency. Some of the incidents involved the detainee kicking the cell door, trying to destroy the cell, fighting with another detainee, flooding the cell for medical intervention purposes, and creating a disturbance in the recreational area/dayroom. In several incidents a detainee attempted suicide in the cell. In one incident a detainee held an employee hostage and used an "edged" weapon. In two other incidents, an officer was choked and in one other incident officers encountered an edged weapon. Detainees were under the influence of a chemical substance in 40% or mentally impaired in 22% of the incidents.

Table 2. Detainee Disturbance by Force Type and by Resistance Type

Force Type	Verbal Resist.	Intimidate	Yelling	Threaten Officer	Passive	Defensive	Physical Actions
Verbal	(61) 0.041	(31) 0.051	(45) 0.021	(10) 0.039	(14) 0.059	(81) 0.022	(42) 0.035
Multiple officers	(61) 0.056	--	(44) 0.043	--	--	(55) 0.015	(39) 0.059
Control hold	(67) 0.001	--	(65) 0.011	(38) 0.031	(19) 0.022	(48) 0.001	(39) 0.021
Wristlock	(40) 0.014	(27) 0.007	(30) 0.033	(10) 0.045	--	(39) 0.043	(11) 0.045
Pressure point	(30) 0.013	--	--	(20) 0.040	--	(20) 0.045	--
Takedown	--	--	--	--	--	(40) 0.054	(22) 0.057
Handcuffs/leg restraints	--	--	--	(15) 0.058	--	(10) 0.059	(10) 0.051
Aerosol	--	--	(10) 0.035	(10) 0.044	--	(10) 0.039	--
Restraint chair	--	--	--	--	--	(10) 0.049	(10) 0.050

Multiple officers who use or attempt to use verbal control are more likely to respond to this type of resistance; and in a limited number of incidents, a special response team was deployed to quell the disturbance. Such a team was used in the hostage incident. Further, officers are more likely to use control holds, wristlocks, and pressure point techniques. Takedown techniques are used when the detainee offers defensive and physical actions of resistance. Restraints, including the restraint chair and an aerosol, were less likely to be used by officers. Although infrequently used, an aerosol was used when a detainee was offering verbal and physical resistance.

Table 3 shows the significant associations between performing the booking process, detainee resistance types, and officers' use of force. This type of resistance circumstance accounts for the second most common circumstance type (29%). Verbal resistance, including yelling and psychological intimidation of the officer, is likely to occur. While not included in the table, officers will commonly encounter a detainee under the influence of a chemical substance at the time of booking (55%). This can obviously be associated with the verbal resistance and physical forms of resistance. Officers met resistance in the forms of wrestling, the detainee attempting to break away from their grip, kicking, and punching. Passive resistance is moderately associated with performing booking duties.

Table 3. Booking by Force Type and Resistance Type

Force Type	Verbal Resist.	Intimidate	Yelling	Threaten Officer	Passive	Defensive	Physical Actions
Verbal	(46) 0.034	(51) 0.000	(25) 0.005	--	(37) 0.001	--	--
Multiple officers	(98) 0.005	(56) 0.025	(75) 0.001	(67) 0.048	--	(30) 0.028	(29) 0.049
Control hold	--	(56) 0.001	--	--	(39) 0.000	--	--
Wristlock	--	--	--	(22) 0.049	--	(45) 0.032	(19) 0.059
Pressure point	--	--	--	--	--	(65) 0.020	(12) 0.056
Takedown	--	--	--	--	--	(40) 0.005	--
Handcuffs	--	--	--	(12) 0.001	(10) 0.001	(11) 0.021	--
Aerosol	--	--	(12) 0.053	--	--	(12) 0.056	--
Leg restraints	(30) 0.005	(25) 0.004	--	--	--	--	--
Restraint chair	--	--	--	--	--	--	(10) 0.045

Multiple officers were more likely to respond to the detainee’s levels of resistance and more likely to use verbal control, control holds, wristlocks, and pressure point techniques. While officers applied an aerosol and restraints, including the restraint chair, they are less likely to be used. An aerosol was used when a detainee yelled and/or offered defensive resistance.

Officers encountered detainee resistance while enforcing rules in 28% of the incidents. Table 4 shows the patterns of correlations for this circumstance. Verbal resistance, including yelling and intimidating the officer, occurred in a significant number of incidents. Psychological intimidation was also significantly associated. Defensive resistance was encountered significantly more frequently than physical actions and included running from, breaking from the officer’s grip, and wrestling with the officer. Physical actions included kicking, punching, head-butting, and spitting at officers. In a small number of incidents, the detainee grabbed the officer, and in two incidents the detainee applied a chokehold on the officer.

As seen in Table 4, multiple officers were more likely to use control holds and handcuffs with more regularity. Control holds were more likely to be used, while takedown techniques, wristlocks, and pressure points were less likely to be used. An aerosol was more likely to be used in instances of verbal resistance and in response to defensive resistance. Officers applied handcuffs and the restraint chair significantly less frequently.

Table 4. Enforcing Rules by Force Type and Resistance Type

Force Type	Verbal Resist.	Intimidate	Yelling	Threaten Officer	Passive	Defensive	Physical Actions
Verbal	(80) 0.0541	(68) 0.045	(70) 0.059	(66) 0.059	--	(74) 0.051	--
Multiple officers	--	(78) 0.059	(71) 0.031	--	--	(80) 0.590	(26) 0.017
Control hold	--	(73) 0.002	(70) 0.003	(73) 0.001	--	(80) 0.001	(25) 0.008
Wristlock	--	--	--	--	--	(30) 0.034	--
Pressure point	--	--	--	--	--	(21) 0.045	(15) 0.033
Takedown	--	--	--	(31) 0.018	--	--	(20) 0.002
Handcuffs	--	(23) 0.002	(29) 0.060	--	(12) 0.001	(28) 0.002	--
Aerosol	(19) 0.058	--	--	(10) 0.020	--	(10) 0.001	--
Restraint chair	--	--	(15) 0.059	--	--	(10) 0.036	--

Table 5 shows detainee resistance is significantly more likely to occur while one officer is performing a search. Defensive resistance was more likely to be accompanied by verbal resistance. Passive resistance and psychological intimidation are weakly associated with performing a personal search. The officer significantly used verbal control first, and then a control hold when the detainee offered verbal resistance and threatened the officer. The officer also used a wristlock, a takedown technique, and a pressure point control technique when faced with defensive resistance and physical actions of assault. The use of handcuffs is weakly related to performing a personal search.

Table 5. Conducting a Personal Search by Force Type and Resistance Type

Force Type	Verbal Resist.	Intimidate	Yelling	Threaten Officer	Passive	Defensive	Physical Actions
Verbal	(100) 0.050	(24) 0.023	(51) 0.088	(56) 0.043	(10) 0.059	(74) 0.060	--
Multiple officers	(20) 0.019	--	--	--	--	(25) 0.014	--
Control hold	(87) 0.017	--	--	(27) 0.026	--	(15) 0.010	--
Wristlock	--	--	--	(48) 0.021	--	(94) 0.015	(12) 0.048
Pressure point	--	--	--	--	--	(39) 0.054	--
Takedown	--	--	--	--	--	(54) 0.059	--
Handcuffs	--	--	--	--	--	(10) 0.001	--

Respondents indicated that they encountered detainee resistance when conducting a forced cell extraction in 14% of the incidents. Table 6 reveals the significant patterns which exist between the variables. By its nature, and the data also support this, a forced cell extraction may evolve out of a detainee disturbance and involves verbal resistance, yelling, and threats made to the officer. Passive actions by the detainee and psychological intimidation were only slightly associated with a cell extraction. Accompanying verbal resistance are the significant associations of defensive resistance (primarily wrestling) and higher forms of physical actions, including kicking, punching, spitting, head-butting, and slapping the officer. While weakly associated, officers met lethal force actions by encountering a detainee with an edged weapon in more than any other type of resistance circumstance. A moderate number of detainees were under the influence of a chemical substance or mentally impaired.

Table 6. Forced Cell Extraction by Force Type and Resistance Type

Force Type	Verbal Resist.	Intimidate	Yelling	Threaten Officer	Passive	Defensive	Physical Actions
Verbal	(89) 0.006	(35) 0.040	(56) 0.026	(26) 0.041	--	--	--
Multiple officers	(41) 0.007	--	(25) 0.032	--	--	--	--
Control hold	(33) 0.013	--	--	(34) 0.054	--	(50) 0.020	(51) 0.046
Wristlock	(22) 0.025	--	--	--	--	(49) 0.001	--
Pressure point	--	--	--	--	--	(37) 0.034	(20) 0.023
Takedown	--	--	--	--	--	(59) 0.045	(49) 0.033
Handcuffs	--	--	--	--	--	(34) 0.015	(30) 0.005
Aerosol	--	--	--	--	--	(10) 0.034	(15) 0.051
Restraint chair	(10) 0.019	--	--	--	--	(15) 0.005	(19) 0.056
Leg restraints	--	--	--	--	--	(15) 0.045	(21) 0.046

Multiple officer response is moderately associated with conducting this type of function, and officers are more likely to use control holds, followed with more moderate uses of pressure point techniques, wristlocks, and takedown techniques. The use of an aerosol, handcuffs, leg restraints, and the restraint chair are only slightly associated with this resistance incident. One agency reported that a special response team performed the cell extraction.

Table 7 shows the significant relationships when an officer performs an escort of the detainee while in the facility. Officers encountered this type of circumstance in 14% of the incidents. Verbal and defensive resistance were significantly associated, moderately associated with passive resistance, and slightly associated with physical actions of resistance (pushing or slapping the officer). Verbal resistance was not

as common in this circumstance as in former types of resistance circumstances. Detainees were more likely to pull away from the escorting officer, attempt to run, or break away from the officer's grip. Multiple officers were moderately associated with performing this assignment, but significantly used verbal control. Officers primarily used control holds and pressure point control techniques. Officers were less likely to use takedown techniques, an aerosol, and did not use handcuffs.

Table 7. Escort Detainee by Force Type and Resistance Type

Force Type	Verbal Resist.	Intimidate	Yelling	Threaten Officer	Passive	Defensive	Physical Actions
Verbal	(30) 0.010	--	(14) 0.056	(30) 0.010	(45) 0.055	(10) 0.060	--
Multiple officers	(45) 0.003	--	--	(27) 0.059	--	(40) 0.017	(15) 0.014
Control hold	(45) 0.059	--	--	--	--	(33) 0.001	--
Wristlock	--	--	--	--	--	(42) 0.015	--
Pressure point	--	--	--	--	(39) 0.045	(39) 0.020	--
Takedown	--	--	--	--	--	--	(25) 0.031
Handcuffs	--	--	--	--	--	--	--
Aerosol	--	--	--	(15) 0.056	--	--	--

The correlates of detainee resistance, officers' use of force, and performing a cell transfer/move are shown in Table 8. This type of circumstance occurred in 13% of the incidents. Cell moves may occur for a number of reasons such as rule infraction, closer supervision, fight with another detainee, threatening an officer, suicide attempt, escape attempt, escape risk, and medical intervention, to mention a few. Verbal resistance was accompanied by strong associations with defensive resistance and moderate forms of physical resistance. Psychological intimidation and passive actions are only slightly associated with a cell transfer/move.

Table 8. Cell Transfer/Move by Force Type and Resistance Type

Force Type	Verbal Resist.	Intimidate	Yelling	Threaten Officer	Passive	Defensive	Physical Actions
Verbal	(65) 0.030	--	(42) 0.021	(59) 0.025	--	(40) 0.049	--
Multiple officers	(55) 0.057	(14) 0.054	(39) 0.038	--	--	(45) 0.018	--
Control hold	(53) 0.005	(12) 0.045	(38) 0.001	--	--	(59) 0.026	(27) 0.019
Wristlock	(18) 0.060	--	--	--	--	--	--
Pressure point	--	--	--	--	(28) 0.040	(39) 0.060	(31) 0.034
Takedown	--	--	--	--	--	(25) 0.050	--
Handcuffs	--	--	(16) 0.003	--	--	(26) 0.043	--
Aerosol	(20) 0.010	--	--	--	--	(10) 0.056	--

Multiple officer response is significantly associated with verbal control and control holds. Pressure point control tactics are moderately related, and the use of a wristlock is slightly related. The use of an aerosol, handcuffs, and a takedown technique are slightly related to this type of resistance circumstance.

Other Factors Associated with Detainee Resistance

Officers encounter resistance from a detainee who is under the influence of a chemical substance in slightly over one-third of the incidents (37%). Verbal resistance

comprises 80% of the resistance, including yelling, screaming, and threatening officers. Verbal resistance is strongly associated with defensive resistance (61%), moderately associated with physical aggression (32%), and slightly associated with passive resistance (6%). In one incident, a detainee attacked an officer with an edged weapon and in a separate incident, a detainee choked the officer.

Officers met resistance from a detainee under the influence while performing booking duties in 55% of the incidents. While performing booking duties, officers were attempting to conduct a personal search, enforce a rule/give an order, control the detainee, handle a detainee disturbance, escort the detainee to a cell, or respond in self-defense, and they met resistance in 45% of the incidents. In a minimal number of incidents, officers met resistance from a detainee under the influence and used force in response to defending another detainee, for medical intervention purposes, and in response to an attempted suicide of a detainee (10%).

Of the resisting detainees, 24% were considered to be mentally impaired. Officers were more likely to encounter a resisting mentally impaired detainee during the following common circumstances: (1) attempt to control (20%), (2) detainee disturbance (20%), (3) suicide attempt (50%), (4) enforce rules/give an order (25%), (5) booking (30%), (5) a forced cell move (45%), and (6) during a personal search (20%).

Detainee Injury by Circumstances, Types of Resistance, and Force Applied by an Officer

Detainees were more likely to sustain an injury when they exhibited the following types of resistance: wrestling with an officer and defensive resistance such as punching, kicking, and head-butting an officer. Detainees were more likely to incur an injury during the following circumstances: attempting to control the detainee, a detainee disturbance, during a personal search, during enforcing a rule, during booking, and during a forced cell move. The type of force used by the responding officers in which an injury occurred predominantly involved a control hold, a takedown technique, a wristlock, applying handcuffs, and the use of the restraint chair. Injuries were not reported in the use of an aerosol. The mental state or condition of the detainee did not make a difference regarding whether the detainee incurred an injury.

Injury Sustained by Officers

Like detainees, officers rarely sustained an injury from responding to a force altercation with a resisting detainee. First, officers were more likely to receive an injury when they confronted resistance from the following: when the altercation ended up in a wrestling scenario, when being punched and/or pushed, when kicked, when head-butted, when choked, and when encountering an edged weapon. Second, common circumstances in which injuries were sustained by officers included conducting a personal search, while performing booking duties, in self-defense, during a forced cell extraction, during a cell transfer/escort, during the enforcement of rules, and when breaking up a detainee fight. Third, officers were more likely to incur an injury when they used the following types of force measures: when applying a control hold or a takedown technique, and while applying handcuffs or leg restraints. Fourth, analysis revealed that officers were less likely to receive an injury from using an aerosol and/or when using a pressure point control technique.

Discussion

Confining detainees in the detention facility requires detention officers and their supervisors to make numerous decisions about the care and welfare of those in their charge. Balancing the need to use a level of force and deciding the most appropriate amount of force to use in a given situation can be problematic. Recognizing assault cues and varying types of detainee resistance is a paramount responsibility when selecting force techniques and or force equipment. Applying appropriate force measures is a critical decision and task for the contemporary officer.

Data analysis reveals several observations and common findings noteworthy of discussion. The discussion places emphasis on key findings only. Not all findings or points made perhaps reflect every agency's experience. The findings of this study should be compared with what occurs at a particular agency and as deficiencies are noted, changes should be made as necessary.

Size of the Detention Facility and the Types of Detainee Resistance

Analysis did not show any significant associations between the size of the facility, facility design, and the types of detainee resistance. As would be expected, larger-sized agencies experienced more incidents of detainee resistance. There was no statistical difference in the types of detainee resistance and the degree of force officers used. The only exception to this finding is that one larger agency deployed a special response team to perform forced cell extractions.

Detainee Resistance

The data indicate common types of detainee resistance and significant associations of the types of force officers use. Officers routinely encounter six forms/types of detainee resistance. Slightly less than 75% of all detainee resistance comprises three forms of resistance: (1) verbal, (2) defensive, and (3) physical actions of assault. Only 5% of the resisting incidents involved lethal force, and a majority included verbal resistance. Officers confronted two forms of lethal force attacks: (1) edged weapons and (2) the detainee choking the officer. Hence, officers are significantly more likely to confront a detainee who attempts to break free from their grip.

A consistent finding showed that detainees engage in wrestling with the officer with some frequency. This appears to be associated with two levels of physical altercations. First, defensive resistance may be encountered, which escalates into aggressive physical actions of resistance, where the detainee ends up on the floor on top of the officer in a wrestling scenario. Second, the officer may encounter an assault whereby the detainee kicks, pushes, or punches the officer, resulting in a loss of balance and the officer(s) and detainee ending up on the floor, again in a wrestling position. Both situations place the officer in a vulnerable position. Officers should be aware that this scenario occurred with regular frequency, and training should address how an officer can protect him- or herself if placed in this situation.

In a majority of the incidents, officers are more likely to confront a detainee who has displayed verbal resistance toward the officer's authority or instructions. Combined with verbal resistance, the detainee escalated his behavior to defensive resistance. This primarily occurs as the officer may initially respond with a soft-empty hand

control technique (a control hold) and the detainee may attempt to break free from the officer. A combination of verbal and defensive resistance comprises the majority of resistance in officer encounters. In a significant number of incidents, however, detainees escalated their resistance to more aggressive physical actions against the officer(s). A significant number of these incidents commonly involved wrestling with the officer(s) as well as kicking, punching, slapping, and pushing the officer(s). Psychological intimidation behaviors were moderately associated with verbal resistance in several detainee resistance circumstances.

Officers are cautioned not to “lock on” or become “myopic” about the progression of detainee resistance to the extent that they avoid being totally prepared to confront any type of resistance. Becoming indifferent during a resistance situation is the time a detainee decides to alter his behaviors and launch a lethal force attack against the officer, increasing the potential of the officer’s injury or death. While the findings showed a natural progression for resisting circumstances, officers must still be prepared in each resisting situation to respond to the dynamics of the changing variables associated with the confrontation. Officers should be prepared to apply the principle of escalation and/or de-escalation based on the actions/inactions of the detainee.

In approximately 50% of the incidents, resistance altercations involved an emotionally upset detainee, while officers confronted a detainee who is mentally impaired or under the influence in the remaining incidents. This underscores the fact that a sober but emotionally distraught detainee is as likely to exhibit resistance as a detainee who is under the influence or who is mentally impaired. This also underscores the fact that the officers must attend to resistive behaviors or assault cues of detainee body language and actual verbal comments made which may indicate the potential actions of the detainee, regardless of their state of mind.

Officers are likely to confront resistance from a mentally impaired detainee (24%) in aggressive physical forms of confrontations. Officers should be prepared for the unpredictable and for assaultive actions which can accompany a confrontation with an irrational or psychotic detainee. Further, review of how to respond to a violent mentally impaired detainee and how to employ intervention strategies should be addressed by detention personnel.

While it is important to understand the varying dimensions of human behavior, such as irrational or psychotic behaviors, and/or behaviors associated with being under the influence of a chemical substance, it also is important to understand that “resistance is still resistance.” This means that a detention officer should not focus his or her decision to use force solely on the detainee’s mental condition but, rather, on the manifested behaviors which may be harmful to the officer, the detainee, others, and the security of the detention facility. The key, therefore, to gauging a justifiable decision in using a degree of force should be predicated on articulable detainee resistance behaviors and not on an officer attempting to clinically diagnose what may be the *underlying cause* of the resistance or assault.

Correlations of Resistance

What are other associations with detainee resistance? Being under the influence of a chemical substance is an important factor which can contribute to the detainee’s behavior. In slightly under 40% of the incidents, the detainee was under the influence of

either alcohol or another substance. Officers can anticipate verbal, defensive resistance, and aggressive physical actions from this detainee. These three types of resistance were more likely to occur than passive resistance or psychological intimidation. In other words, the detainee who is under the influence will more likely resist verbal instructions and more likely be physically aggressive with the officer as opposed to being a “passive drunk.” Such resistance is more likely to occur at time of booking.

While detainees may resist or assault an officer in any location of the jail or during any type of escort within or outside the detention facility, three locations were significantly more associated with resistance. Analysis revealed that detainee resistance occurred with more frequency within the detention facility in the following areas: the booking area, cells (including general population, holding, adjustment, and observation cells), and recreational/dayroom areas. These three areas comprise 78% of the total locations. Respondents reported that detainee resistance could occur outside the facility during a transport to court, to the hospital, in court, or to another transport location but were least likely to occur at these locations. A stronger likelihood of the frequency of occurrence of resistance is within the facility itself. Transporting a detainee, however, implies security risks that should not be ignored when performing the duty.

This research underscores that officers cannot become complacent in performing their custodial duties. Detainee resistance has some degree of predictability to it; it is not commonly a spontaneous, unpredictable, out-of-control detainee who unexpectedly creeps upon the unsuspecting officer and assaults him or her. Rather, resistance requiring a force response occurs when officers engage in responsibilities where resistance can be expected. For example, resistance while conducting a personal search occurred more commonly than using force in self-defense. Conducting the search places the officer in a high degree of closeness to the detainee and can certainly place the officer in a more vulnerable situation. An officer must pay attention to how he or she approaches the detainee and cue into potential assault cues that may be harmful to the officer. Performing booking tasks and executing a forced cell extraction are two other resistance circumstances where officers can predict resistance with high certainty. These findings also emphasize the importance of officers being diligent in enhancing their personal safety no matter what task they may be performing.

The location and circumstances of detainee resistance produced several consistent themes. Performing the booking function in the booking area with a detainee under the influence produces a common pattern. Over 40% of the resisting detainees were categorized as *unclassified*, which would be associated with being newly admitted into the facility. The arrest or the arrestable charge is commonly associated with property, violent crimes, and substance abuse violations. Performing booking procedures is difficult at best with a person under the influence. An added dimension to the detainee’s level of resistance at the time of booking is how the detainee was treated at the time of the arrest, during transport by the arresting officer, and/or how he or she is treated by the admitting officer(s). Hence, knowing that a significant association exists between a detainee’s resistance under the influence at the time of booking should cause detention officers to be mindful of their safety, prepare for resistance, and work toward reducing the risk of a force circumstance. Ensuring that a sufficient number of officers and the necessary force equipment is accessible in the booking area is an important consideration during admittance and booking.

Responding to a detainee disturbance and performing a forced cell extraction provide other significant findings regarding the correlations between the use-of-force measures and the resistance circumstances. These types of assignments are among the most dangerous tasks an officer is asked to perform. While the findings show that performing these functions occurred in 34% of the resistance incidents (20% disturbance; 14% cell extraction), the data reveal that it is more likely that an officer will sustain an injury, particularly a back injury. In fact, the data showed that officers were more likely to encounter defensive and physical actions of resistance, and they were more likely to encounter an edged weapon than in other incidents of detainee resistance. Multiple officers responded to this task with moderate frequency, and only one agency reported that they had developed a special response team to perform these types of functions. An aerosol and physical control techniques were more likely to be used along with restraints and the restraint chair. Because of the unpredictability, dangerousness, and safety concerns of these incidents, detention agencies should review and revise their procedures and practices of responding to these types of scenarios as warranted. Consideration should be directed toward developing special training for responding to these types of incidents and ensuring that officers have the necessary safety gear and equipment in order to maximize their safety.

Recommendations

The primary purpose of this study was to examine the types of detainee resistance, the types of force techniques that officers employed in response, and what relationships emerged between varying research variables. This study has fulfilled a major risk management function for all detention agency personnel. The findings have identified the major locations and circumstances where detainee resistance is highly likely to occur. The study has also identified the types of force officers use with regularity and the significant associations that exist between key variables. This research has provided the astute manager with key information in order to make administrative decisions and with information to work toward risk reduction in managing the use of force within the detention facility. The following recommendations are suggested.

Developing a Use-of-Force Tracking System

Administrators should develop an internal tracking mechanism for tracking and assessing all use-of-force incidents. It allows the manager, supervisors, and officers to know how frequently force is used within the facility; the type of force equipment that is used with frequency; and the type of resistance, circumstances, and locations where force is applied with frequency. As a primary objective, these trends are useful for training purposes; deploying personnel; and increasing officer safety, facility security, and management of the detainee population. It is recommended that managers document the associated variables of using force and structure an annual report which reveals the patterns and trends respective of the individual agency. Adopting a tracking system can assist in researching the use of force more efficiently.

As a secondary objective, the tracking system can be used to monitor the proper implementation of policy and provide information for policy revision. A third objective of the tracking system can be useful as an evaluatory tool to identify officers who may need closer supervisory attention. Tracking the use of force has assisted in serving as an early warning system which can provide information pertinent to an individual officer who may need further training or counseling in using

appropriate force measures. Initiating this process and maintaining it is a proactive risk management objective fulfilling an important management function.

Policy

In light of the findings, administrators are encouraged to review their use-of-force policy and revise it as warranted. Once the policy has been revised, all supervisors and officers should receive their own copy and training as to its contents. Training should be conducted on an ongoing basis, consistent with the language in the *Canton* decision. Training in the policy allows for clarification and specification of critical policy components. It also provides a forum for personnel to ask questions on sections which need further clarification. Testing on the policy contents is recommended. Principles of escalation and de-escalation should also be reviewed.

Keeping the policy current, reflecting the philosophy of the agency and authorizing various force techniques and force equipment, requires officers to submit a report after each incident, and also requires supervisory review of all use-of-force reports, adhering to a proactive risk management perspective. Agency policy should be framed within state and constitutional standards, and tailored to the unique needs of the agency. Agency officers and supervisors should receive training in the policy in order to respond to force incidents appropriately.

Use-of-Force Training

Administrators are responsible for providing their officers with ongoing training for job tasks which they encounter on a frequent basis. The U.S. Supreme Court's decision in the *Canton* case applies to use-of-force training. This research has not only shown the types of detainee resistance officers encounter, but it also has shown the circumstances, locations, and frequency of its occurrence. Ensuring that all personnel receive the requisite training to perform their job is essential. Such training should be ongoing and address the realities of the incidents officers confront. Periodic training should be provided in order for officers to more competently and confidently execute their custodial duties and should include verbal intervention strategies; physical control, force equipment, and restraints/restraint chair techniques; policies and procedures; and appropriate responses to healthcare situations.

Liability Issues

All personnel should receive training on the legal standards and responsibilities pertinent to the use of force in jails. Training should be provided at two levels. First, supervisors need training on the legal parameters of using force and their responsibility for supervising officers who have to use force. Such training should address how the agency can place the officers in the best defensible position to defend a claim of excessive force. Second, officers should receive training regarding their own responsibilities when deciding to use a particular level of force. Training should address how the courts review cases of excessive force and how they apply state and constitutional standards to claims of excessive force.

Officer Safety and Force Techniques

Based on the nature of detainee resistance, officers should receive ongoing training in enhancing their skills for cuing into human behaviors. The findings show that

encounters follow common patterns. Continuing to study these patterns and associated human behaviors can assist officers in enhancing their personal safety. Further, having the ability to cue into nonphysical and/or physical behaviors of resistance can enhance decisionmaking regarding when to use verbal intervention strategies and how to approach an agitated detainee. Personal safety training issues, such as the following, should be addressed: reactionary gap and reaction time, response to the chemically and mentally impaired, assault behavior cues, how to conduct escorts inside and outside of the facility, forced cell extraction protocols, use of verbal intervention, and de-escalation intervention strategies. Officers should continue to be diligent in maximizing their safety when confronted with a volatile situation.

Additional training should be directed toward keeping appropriate physical control skills and competency in the use of force equipment sharp. Dynamic scenario-based training designed around the types of detainee resistance, the circumstances, and the locations wherein such resistance is common, should be provided on a regular basis.

Further Research

Future research should continue to focus on the transactional nature of the detainee/officer encounter. Research which addresses the success of using verbal strategies and the use of multiple officers to de-escalate a situation should be conducted. Research which also identifies best practices of responding to the chemically and mentally impaired in jails should also be performed.

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A Survey of the Research on Human Factors Related to Lethal Force Encounters: Implications for Law Enforcement Training, Tactics, and Testimony

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To effectively train and fairly evaluate the performance of an officer in a tactical environment, we must first fully understand how the brain perceives and processes information. This article will begin with an exploration of how the brain/mind processes routine information, followed by a discussion of the research on the effects of stress on perception. The *brain* refers to the actual organ contained in the skull that coordinates sensation and intellect, while the *mind* refers to consciousness/thought or intellect/memory. For our purposes, however, the terms will be used interchangeably. Common perceptual distortions and *mistakes of fact* will be identified, and their effect on reaction time will be discussed, taking into consideration the scientific and practical limitations governing human performance. Training recommendations designed to reduce both the rate and range of perceptual and processing errors while decreasing response lag time, or the time it takes to initiate a response, will also be proposed. Finally, improved methods for mining memory will be offered with the goal of increasing the accuracy of incident recall. The information will be presented as objectively as possible. It will be up to the reader to weigh the research, including potential organizational and/or political ramifications, and the pros and cons of any proposed changes to policies or practices.

To truly understand and explain human behavior, we must first make sense of the workings of the human mind. How information is perceived and processed ultimately determines both the level of performance and the subsequent memory of the event. The mind processes information from both internal sources (i.e., thoughts and feelings) as well as external sources (i.e., the senses such as visual and auditory). It is important for the reader to know that it doesn't matter where the information comes from; it is neither perceived nor processed in a vacuum. This is because both perception and memory are active processes. For example, each of us has a set of schemas and expectations that both color and form our view of our world and have significant potential to distort our perception and then recollection of a critical incident. The influence of this is so strong it literally means *perception is reality*. It is also important to remember that traumatic incidents, by their very nature, will result in some degree of perceptual distortion and memory impairment as an accompanying feature—usually, the greater the stress the greater their occurrence (Grossman & Siddle, 2005). This means that any two witnesses viewing the exact same incident can, and often do, have widely different perceptions of the event (Loftus, 1979). Their subsequent accounts of and responses

to the incident are also then likely to vary. The same is true of law enforcement personnel involved in a tactical situation. Heightened levels of stress, combined with increased elements of both focused attention and distraction, further magnify this effect (Morgan, 2004).

Characteristically, two types of errors exist that are related to perception and that subsequently effect both performance and memory. Type I errors, or false negatives, result from rejecting something that should have been accepted. An example would be failing to identify a suspect who does, in fact, have a firearm, resulting in actions or lack of actions on the part of the officer that may lead to that officer subsequently being shot or at least missing important clues. Research suggests the typical, false negative rate for officers is approximately 4% in a high-stress and rapidly unfolding situation such as a shooting (Lewinski & Hudson, 2003). A Type II error, or false positive, occurs, for example, when an officer incorrectly perceives that a suspect has a gun and, hence, responds with deadly force only to find that no gun exists. The false positive rate for such incidents averages 9% based in laboratory research (Lewinski & Hudson, 2003). Recent research just completed by Aveni et al. and still being analyzed indicates that in simulation testing, Type II errors, depending upon the department and the training and experience of the officer, may be as high as 30 to 40+%. Both types of error are inevitable and are inversely related; as the probability of one goes up, the probability of the other comes down. Subsequently, efforts to mitigate one type of error necessarily result in an increase in the probability of the other type of error.

Lessons Learned

- Perceptions and recollections are colored by prior expectations.
- The greater the trauma, generally, the greater the risk of perceptual distortion and memory impairment.
- Two types of error are inevitable and inversely related: reducing *false negatives* (Type 1 error) (e.g., failing to identify a weapon when one exists) automatically results in an increase in *false positives* (Type 2 error) (e.g., seeing a weapon when none exists).

The Science of the Mind

The three critical components of memory are often identified as the three “Rs”: receive, retain, and recall. Information must first be *received* to be remembered. *Attention* is the primary process that undergirds and determines what we will receive, retain, and recall. The brain does not have an infinite capacity to observe, and so it normally picks and chooses what to attend to and then simply ignores the rest. Can the reader imagine how quickly they would experience a system overload if they were to attend to each and every blade of grass, leaf, or insect in their immediate environment? This process of selection is generally survival based, having been formed in earlier times when our ancestors’ ability to observe critical aspects of their environment truly meant the difference between life and death. But, like everything else, the system is not perfect. Generally, information cannot be simultaneously attended to and processed from two different sources much less from competing senses (Lewinski & Hudson, 2003; Shomstein & Yantis, 2004; Strayer, Drews & Johnston, 2003). Increased focus on a visual cue, for example, automatically reduces the ability to attend to either a competing visual cue or auditory stimuli. At any

given moment, we can see either the forest or the trees but not both at the same time. This perceptual phenomenon is also related to and referred to as *figure-ground perception*. Readers familiar with Introductory Psychology texts will identify the “Vase/Two Faces” figure as an illustration of this phenomenon. It is difficult to see both the vase and the two faces at the same time. To identify both percepts requires the viewer to shift back and forth between the vase and the two faces.

Figure 1. Vase/Two Faces



In law enforcement, officers are still human and cannot perceive two elements of equally high significance at the same time. However, an officer’s training and experience will provide for greater visual or auditory attention and acuity. The experienced officer will pay varying levels of attention to the elements in the encounter, depending on the situation at the moment and the officer’s assessment of the relative importance of each cue to their basic survival (Hsieh, 2002; Shomstein & Yantis, 2004). This characteristic of the brain’s functioning has often been referred to as tunneling. The more technical name for this phenomenon is *selective attention*. One consequence of this *tunneling* is that while the brain is attending to a particular internal or environmental cue, it may fail to observe another, theoretically equally important piece of information. The reason for this is that during selective attention, while the person is intently focused on one element in the environment, the perceptual system not only ignores other elements but also actively works to suppress their interference in distracting the person from what they were primarily focused on. Selective attention explains how an officer can fail to see or hear something occurring directly within his or her field of vision or range of sound (Rumar, 1990; Simons, 2003; Strayer et al., 2003; Strayer & Johnston, 2001; Summala, Pasanen, Räsänen, & Sievänen, 1996). In everyday circumstances, it also explains how someone “listening” to the radio, while otherwise engaged in thought while driving to work, can find themselves suddenly unaware of the content of

the broadcast that they allegedly just “heard” (Brown, Tickner & Simmonds, 1969; McCarley et al., 2001).

If this selective attention can occur under even the most mundane low stress conditions, imagine its effect under high-stress conditions in which the reader’s life or the life of someone else is “on the line”! Research has found that the impact of intense stress before, during, and after an event affects what an officer remembers and how he or she remembers it (Grossman & Siddle, 2004; Lewinski, 2002; Morgan, 2004; Welford, 1980). This then means that information subconsciously deemed unrelated to the perceived threat will have a low rate of recall as attention will have been focused predominantly on the threat and/or on personal survival. Officers, then, because of their *focused or selective attention* under these circumstances will *fixate*, or intently focus, on some element of the incident, resulting in a very specific and vivid, though not necessarily accurate, memory for a particular aspect of the incident while limiting their recollection of other facts (Bacon, 1974; Hockey, 1970; Mandler, 1982).

An important fact in relation to memory is that information is more readily *recognized* than *recalled* (Morgan, 2004). *Recognition* allows for comparison of new information against old information. It may be as simple as a yes or no query such as when someone is taking a multiple-choice examination. The mere presentation of the relevant information may itself stimulate the memory trace and allow for further recollections. *Recall* requires the individual to re-create the memory from scratch, a much more challenging task, which the reader would recognize as the process they would use when writing an essay exam. Recall memory, while more difficult to use, is less subject to contamination, suggesting that when investigating an incident, the officer should first ask individuals to provide a basic narration of an incident with as much detail included as possible (recall), followed by specific queries or comparisons (recognition). One type of memory can be used to stimulate another. For example, after a shooting, a walk-through would stimulate recognition memory, which would then facilitate recall memory and provide a more accurate and thorough report of the incident by the officer.

The second, and equally important, component of memory refers to the processing of information and how that information is *retained*. Not all information observed is retained. Just as it has limited capacity to *receive* or attend to information, the brain also has limited capacity to *retain* or store information. Can the reader imagine the clutter of our minds if we were to retain each and every observation, either internally or externally generated? We would never be able to sort through the frivolous to find the truly relevant information! To help us sort through the clutter and not remember too much, the brain utilizes both temporary and permanent storage areas. The most temporary of the short-term memory storage areas is reserved for information deemed only immediately relevant with no long-term utility. An example would be an anticipated one-time use phone number obtained with the intent of immediately dialing the call. This storage area has limited capacity, an average of only seven items. Absent reinforcement, the ability to recall this type of information is limited to approximately 30 seconds or less. We have all had the experience of remembering a phone number just long enough to dial it only to encounter a busy signal on the other end and then find ourselves unable to recall the number to redial it again!

The next level of short-term memory is reserved for information deemed slightly more relevant but not significant enough to be stored in long-term memory. These memories will fade and disappear on their own over time, with the exact amount of time affected by such factors as repetition, significance, or relevance to an existing memory. Long-term memories take much longer to acquire and, once retained, they are retained for life. In fact, long-term memories, once stored, can also be located and accessed by stimulating various parts of the physical brain. Long-term memories may actually be *hard wired* in the brain. Long-term memories include experiences, training, and education and involve information for which meaning and/or emotion have been attached and understanding has occurred. The problem with long-term memory is not one of capacity but of accessibility. Like a large expanse filled with filing cabinets, the problem becomes more an issue of retrieval than storage. It should be noted that most of this processing occurs automatically at a subconscious level, though various conscious interventions can be implemented to impact the end result. For example, by connecting current information to information previously learned, we enhance our ability to recall both sets of information. Strong emotion also increases memory for specific details, though this may reduce the capacity to recall competing information.

Lessons Learned

- The three “Rs” of memory are *receive*, *retain*, and *recall*.
- The brain is capable of attending to only one source of information at a time. This is referred to as selective attention.
- Not all information is perceived and/or retained for later recall.
- Strong emotion increases memory for specific details though at the price of recall for competing information.
- Comparison or recognition tasks can enhance memory recall.
- Basic narration of an incident should be the first step in any investigative interview since recall is less susceptible to contamination than techniques that involve specific queries or comparisons.
- *Memories* are just as likely to be inaccurate as accurate. Level of confidence in the accuracy of the recall is not a reliable determiner of actual accuracy.

The Effect of Stress on Perception and Memory

Physiological arousal from stress has long been known to interfere with perception and memory at all levels, including the ability to accurately receive, retain, and recall information (Broadbent, 1971; Horowitz, 1976; Janis & Mann, 1977; Morgan, 2004; Welford, 1980). This effect results from among other factors, a chemical reaction occurring within our bodies due, most notably, to the effect of adrenaline and other hormones that mobilize us to fight, flee, or freeze. The fight, flight, or freeze response characteristic of arousal in high-stress conditions harkens back to an earlier day and time in our development as a species. This very primitive but effective survival response produces both positive and negative effects on both perception and performance in a modern society. The typical survival stress response results in a release of increased adrenaline and hydrocortisone, which produces an upsurge in heart rate, blood pressure, breathing rate, pupil size, perspiration, and muscle tension, resulting in improved blood flow to the brain, heart, and large muscles. Fine motor skills that require hand/eye coordination

begin to deteriorate as resources are allocated elsewhere toward the utilization of gross motor facilities that are more effective for running or fighting.

The eye and the brain work together to help us pay attention to information that is important to us. When stress levels are low, the mind can maintain a *soft* attentional focus across many senses and many elements within each sense as well as on internal thoughts and self-talk. However, as the level of stress increases and/or the task becomes more complex, the brain automatically narrows our focus and excludes and then suppresses information that is deemed not important (McCarley, et al., 2001; Strayer et al., 2003). Attention in particular focuses on the areas of the expected hazard at the expense of awareness toward less likely hazards (Rumar, 1990; Summala et al., 1996) or even those hazards with a sudden onset, which had previously been thought to capture attention automatically (Yantis, 1993; Yantis & Jonides, 1990). Besides high levels of stress narrowing the attentional processes and limiting the officer's ability to perceive and then remember all the elements in the encounter, research has also shown that the more complex the environment (i.e., the more distractions), the more pronounced will be the effect of stress on perception and memory (Langham, Hole, Edwards, & O'Neil, 2002; Strayer et al., 2003). Further, in complex circumstances, our response time slows (Broadbent, 1971; Miller & Low, 2001; Welford, 1980).

High levels of physiological arousal also characteristically lead to a phenomenon called *inattentional blindness*. Inattentional blindness occurs across all senses, but, for a visual example, it is a failure to see what is obviously directly in a line of vision due to an attentional focus on a competing visual input. This results in the unconscious rejection of information even from a single sensory modality in favor of an increased focus on something within that modality that is assessed to be more important at the time (Strayer et al., 2003; Strayer & Johnston, 2001). An illustration of this type of attentional process is the "figure-ground perception or selective attention referred to previously. Auditory exclusion or selective attention in the auditory sense also begins to occur with an increase in stress as attention is then focused on the perceived threat. Under these circumstances, information deemed not relevant to the primary task at hand is simply filtered out. An illustration of this is a mother who would recognize not only the voice of her child but also the location of her child over the noise and melee of a crowd.

Interestingly, the process of selection and attention occurs in the brain itself and not in the senses. For example, research has shown that subjects may view a scene, and then the resulting sensory information is reported to the brain. The brain then selects from the senses what it needs and actively rejects and/or suppresses the rest of the information, thus failing to create a durable, explicit memory of that information (Rumar, 1990; Strayer et al., 2003). Selection is determined in line with assessed survival priorities or even simply the importance of the information to the person. Peripheral information or information deemed at the time to be of little value is even more likely to suffer from factors of selective attention and be unconsciously rejected. This means that an officer in a life-threatening or a high-stress situation can be looking directly at something and literally be blind to it (Simons, 2003). This selective attention is not restricted to a particular sensory modality but can occur across the full range of senses (Simons & Chabris, 1999). Subsequently, an officer's perceptions and memories are, in fact, influenced more

by what his or her attention is focused on during the incident than by what actually passes before the senses.

When confronted with a life-threatening incident, the body prepares itself to physically respond. The reader will be familiar with the characteristic sympathetic stress reactions of fight, flight, or freeze. This occurs because all of the stress response system's resources are allocated to the primary task of survival, and one of these responses in a life-threatening encounter will become the default option and will usually lead to survival. The increased blood flow to the heart and large muscles prepares the body for this physical response. As noted previously, one of the stress responses is an increased blood flow to the brain as the body prepares to respond to the life-threatening encounter. The brain prepares for this by not only narrowing perception and attention to focus on the life-threatening event, but also by changing the very way it processes information and makes decisions. While humans appear to be able to simultaneously think and perform various tasks, the brain does not give equal attention to those tasks—even in a non-stress situation. Two demanding tasks cannot be equally shared (Alm & Nilsson, 1995; Briem & Hedman, 1995; Hsieh, 2002). In reality, people switch between tasks versus actually doing them simultaneously. Since cognition and critical decisionmaking under high stress is also typically the least practiced and yet critical skill an officer needs, the officer's ability to accurately perceive and process information in the heat of battle is therefore further impaired through this lack of practice.

Under high stress, the focus and processes of the brain shifts from one of *thinking* to one of *reacting*. The focus of operation shifts from the *new brain* and the hippocampus to the amygdala, also known as the *old brain*. The adrenaline surge accompanying a high-stress encounter results in increased cortisol, which combines with a decrease in hippocampus functioning and an increase in amygdala functioning to improve the speed of our survival response. The hippocampus and other higher-level brain processes commonly referred to as our *thinking brain* begin to shut down (McGaugh, 1990). Phrased in another way, 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. Reactions are enhanced, but decisionmaking speed and ability are reduced as is our ability to make judgments. Cognitive processing deteriorates. Learning and memory becomes less of a priority (Squire, 1986). These higher, new brain functions, while having the potential to increase the accuracy and appropriateness of the response (Schweitzer, 2001), tend also to slow the response, potentially endangering both individual survival and survival of the species in events that are of a sudden onset and, thus, rapidly unfold and are of a life-threatening nature (Lewinski & Hudson, 2003).

Lessons Learned

- When stress levels are low, the mind maintains a *soft* focus across the senses as well as on internal thoughts and feelings.
- Failure to perceive what would otherwise appear to be obvious is caused by inattentive blindness and auditory exclusion.
- Physiological arousal interferes with perception and memory at all levels, including the ability to receive, retain, and recall information. This is particularly true of information that is deemed “unimportant.”

- The system is predisposed to focus all of its resources on responding to the detriment of conscious thought.
- The ability to accurately perceive and process information is a perishable skill.
- The ability to turn off the adrenaline response is critical to maintaining conscious thought and control.
- Emotion activates the amygdala or old brain, increasing recall of central details at the expense of peripheral details.

Common Perceptual and Informational “Errors”

Under conditions of high stress or threat, a variety of perceptual and informational errors are to be expected. The first of these to be addressed is vision.

Vision

Central vision increases at the expense of *peripheral vision* and *depth perception*. This is true even for the typical officer involved in a shooting at high noon under a bright sky. Central vision relies on the cones of the eye, which then leads to both high visual acuity for areas of primary attention and the ability to see color. Improved ability to see objects at *optical infinity*, 20 feet and beyond, occurs, though, at the expense of near vision (Brebner & Welford, 1980). Vasoconstriction of the blood vessels on the periphery of the retina contribute to *peripheral narrowing* or *tunnel vision*, with up to 70% narrowing of the visual field (Breedlove, 1995, cited in Siddle, 1995; Easterbrook, 1959). As a result, an officer will likely be unable to accurately identify individuals or objects next to them or in their periphery under these conditions. These circumstances might even be a factor in deadly crossfire situations, which can result when involved personnel are seemingly unaware that a fellow officer is directly within their line of fire. They can also result in an officer having such a narrow visual and attentional focus that the officer sees and reacts to one shooter when there may actually be two or more.

Low-light conditions, on the other hand, activate the rods of the eye and facilitate peripheral vision. The rods see only in black and white and are responsible for *night vision*. Rods are very sensitive to motion. They are the reason why people see “something” out of the corner of their eye. They are responsible for helping us do a variety of things, including judging speed and time to target, which are important elements in sports like soccer or baseball. Distance, or farsightedness, now becomes the main focus of concern as our night vision rods are not very effective at distance judgments or at judgments regarding depth of field. The officer, operating under these conditions, may fail to accurately identify individuals or objects in close proximity and will be more vulnerable to respond to *furtive movements*. An irony in the law enforcement world is that statistically more officer-involved shootings occur at night or in low-light conditions, while law enforcement training typically occurs under static daylight conditions.

Perspective

This factor in perceptual and informational distortions can either be defined in terms of an individual’s physical location in space and, hence, their actual vantage point, or more generally, an individual’s philosophical view of the world. *Environmental conditions*, including such factors as lighting, distance, and visibility, as well as

an individual's internal environment or *psychological condition*, including issues of fear, anxiety, and stress, all have the potential to cause perceptual distortions. In a study of more than 900 officers involved in shootings, 89% reported experiencing some perceptual distortions (Honig & Sultan, 2004) and that only accounts for the distortions that they were aware of!

Also, people naturally vary in their ability to perceive, process, and respond to their environment (Lewinski & Hudson, 2003). *Personal needs or biases and prejudices*, inherent in all of us, can subconsciously impact perceptions and, hence, performance (Bartlett, 1932). *Biases* are unspoken assumptions, while *prejudices* are basic stereotypes. Both biases and prejudices are frequently relied upon as a means of simplifying the world.

Attention

In addition to the problems noted above, both perceptions and memory are subject to a variety of alterations. These factors of distortion can occur at any point in the process, including the initial observation or attention phase (i.e., whether and/or how accurately the information is received), the transfer of information stage where information is re-coded from short- to long-term memory (i.e., the information is deemed significant enough to retain), or the act of information retrieval (i.e., the ability to accurately recall the stored information). To further compound the problem, an officer's belief or level of confidence in his or her perceptions and/or memory is unrelated to the accuracy of that information (Morgan, 2004). This is true of information that an officer might remember during an interview or that he or she may independently recall at some later point.

Experts in athletics are known for their facility with processing information, making decisions, and reacting in a rapidly unfolding environment. For example, great tennis players do not necessarily *react* to just the ball coming at them over the net. They often are reading the zones of coverage, the body dynamics, the positioning of the opposing player, and the swing of that opponent as factors that contribute to the speed and direction of the ball. This instant pre-assessment of the elements of each shot facilitates their ability to respond and control the play of the game. Factors these athletes are using, such as *selectivity*, which causes us to focus in on some things to the exclusion of others, and *expectation*, which allows us to compare this situation with its similarities to others, gives us the ability to generalize from previous experience and learning, thereby allowing us to quickly assess situations and decrease our reaction time. However, when we do this, we risk increased errors because we may "skip over" critical information. To explain this in terms that we have used already, selective attention can interact with selectivity and expectation to serve to focus our attention on where it is most needed, so we can understand and react to these rapidly evolving situations; however, inattentive blindness can create literal blind spots in our perceptual and attentional processes and, subsequently, lead to errors in our perception and judgment. Depending upon the situation, these processes can either enhance or impair performance in a high-stress situation, sometimes even leading to deadly crossfire situations.

Contextual Cues

These are cues that allow us to generalize from previous experiences to this incident. They arise from information that we acquire about an event before we encounter it or that we learn about as an event unfolds. These cues help us to compare the situation we are in to others that we have been in and facilitate both our understanding and analysis of new or unknown situations as well as speed up our reaction time to threats that might occur in that incident. Contextual cues mostly lead to accurate interpretations of an incident—which is why we have come to rely on them—but sometimes they lead to inaccurate judgments about an incident or the behavior perceived. Since these cues typically stem from personal experience, they also may include personal biases and prejudices. Subsequently, while they are intended to significantly speed response rates, they can also increase the possibility of an “error in judgment.”

The brain also processes different types of information differently, and the various senses rarely operate in isolation. For instance, auditory cues or sounds are processed faster than visual cues, with visual cues taking longer to reach the brain and to be processed (Brebner & Welford, 1980; Sanders, 1998; Welford, 1980). Touch is the next fastest, and the detection of smell, though not the ability to discriminate its source, is the fastest of all the senses. In terms of auditory stimuli, frequency is processed before direction, and perceived directionality can be affected by environmental factors. Motion is perceived before color, and color is processed before shape. The color yellow is processed faster than other colors. These factors, in just the right combination, contribute in some fashion, with the other factors we have discussed, to the majority of *mistake of fact* shootings. This is particularly true for those involving *furtive movements* wherein the officer perceives the suspect's motion, sees a dark-colored object of unidentified shape, and based on his or her prior experience, expectation, and contextual cues, *perceives* a handgun and responds accordingly. It should be noted that all of this is occurring in milliseconds without the luxury of time, additional perspective, and hindsight that Monday morning quarterbacking affords.

The effect of *contextual cues* is enhanced by the brain's innate ability to *recognize patterns* and compare these patterns against existing sets of patterns in our brains. The recognition of patterns relates to information processed by every sense and includes everything from rhythm and physical movement patterns to social patterns. These patterns are embedded in our brains in the form of *schematics* (called *schemas*) so that we do not need to see everything and process everything before we recognize what we are processing. Instead, the evolving information from an incident is rapidly compared to the schematics that we have about similar situations. We then build our reaction on a brief comparison with the schematic. Schemas evolved as a time-saving mechanism meant to enhance analysis and reaction by building on existing information. This same propensity, however, can also result in incorrectly anticipating or seeing a pattern and, hence, responding, when such a response may be unwarranted. Someone walking along a jungle path and hearing the rustling of the underbrush and the soft cough of a leopard does not need to process more information before they begin to flee. If they are correct and they flee, they may survive. If they are incorrect and they flee, they have only wasted energy. Compare these possibilities to the opposite situation wherein the person walking the jungle path ignores the information comparison and hangs

around to confirm that what they heard really was a leopard and ends up as lunch for the leopard. The problems generated by our use of schemas has been further identified and researched. One of the most important problems for law enforcement is *pattern correction/completion*. Pattern correction/completion refers to a tendency to subconsciously correct for errors and omissions, often never even registering the fact that an error, omission, or even an addition occurred.

Confabulation

Confabulation means the tendency of the subconscious mind to “fill in the blanks” in an effort to make sense of our actions; it is a close cousin to pattern correction/completion. Human beings have a need to make sense of their world and both understand and explain their actions—not only to others, but to themselves as well (Hobson, 1988). Officers may even have difficulty returning to the streets, especially if they fear facing a similar dangerous encounter, if they cannot make sense of their behavior. When answers are not readily available, and they are desperately needed, the tendency is to fill in the blanks with assumptions based on a combination of prior experience and the situation at hand. These false memories are often spontaneous productions of events or facts that did not occur or memories of events that are displaced in space and time. They can be quite precise and elaborate, but they are not real, and, forensically, the evidence at a scene might directly and convincingly show that the officers’ report of what happened did not in fact occur. Therefore it is important to note that confabulations are not lying. They are not deliberate attempts to mislead. In fact, the officers are generally unaware that their memories are inaccurate and may argue strenuously that they are telling the truth. Confabulations occur at a subconscious level and cannot be totally avoided, especially in very high-stress situations such as a sudden, rapidly unfolding, dynamic, complex, and life-threatening situation in which the officer is scrambling to save his or her life or the life of a fellow officer or citizen.

Contamination

This is the unintended influence of new information on a prior recollection, subconsciously altering the prior recollection to again create a memory that “makes sense.” *Contamination* is inherent in recall. Memories are vulnerable to *post-event information*. When information gathered at the time of an actual experience is combined with new information acquired later, a smooth, seamless memory may be formed. Quickly, it becomes very difficult to tell which facts came from which time. Post-event information can do more than alter memory for specific details; it can create entirely false memories. Psychological studies have shown that it is virtually impossible to tell the difference between a real memory and one that is the product of imagination or some other process (Loftus, 2002).

Lessons Learned

- Perceptual distortions can occur at any point (e.g., when the information is received, retained, or recalled).
- The mind will see what it expects to see and miss or misinterpret other potentially significant details.

- Tunnel vision or narrowing of the visual field under stress results in loss of peripheral and depth or distance perception causing visual blind spots to occur.
- Heightened situational awareness reduces tunnel vision.
- Sound is perceived before sight; motion is perceived before color; and color is perceived before shape. This difference in perception and processing time can profoundly affect the decisionmaking process and, hence, the resulting action taken.
- Confabulation occurs when the subconscious mind “fills in the blanks.” Confabulation can never be totally eliminated.
- Contamination is the unintended influence of new information on a prior recollection. Contamination can never be totally eliminated.

Reaction Time

Arousal level is critical to perception, response time, and performance. Too much or too little arousal impairs performance. Fatigue slows reaction time, particularly for complex tasks (Welford, 1980). *Mental fatigue* has the greatest effect on reducing reaction time. Response speed slows after error, and for a variety of reasons, error begets further error (Sanders, 1998). This can translate into poorly placed rounds on a target frequently being followed by additional “misses.” Positive practice, on the other hand, increases response time through improving both motor memory and mental processing (Ando, Kida, & Oda, 2002; Ethyre & Kinugasa, 2002; Sanders, 1998).

Distractions increase cognitive processing and, hence, reaction time by forcing an officer to discern the essential from the unimportant. Physical fitness speeds reaction time by improving the speed of motor contraction (Welford, 1980). In general, reaction time becomes more variable with age (Hultsch, MacDonald, & Dixon, 2002). Advancing age leads to slower reaction times, with the initial effect beginning in the mid to late 20s and becoming more apparent after age 50 (Jevas & Yan, 2001). Sensory integration, or the ability to take information from different sources and combine it, decreases with increasing age, while physical reaction time in response to a stimulus increases.

Anticipation of an event improves reaction time by 20%, but only if the warning occurs right before the presentation of the stimulus. This directed foci, however, could also increase error as discussed previously. Hyper-vigilance can only be maintained for a few minutes, and prolonged hyper-vigilance can negatively impact both response speed and accuracy (Lewinski & Hudson, 2003).

Numerous factors, in addition to those already mentioned above, can affect performance in general as well as reaction time specifically. For example, the weaker the stimulus, the longer the reaction time. Faint light and shadows take longer to process thereby increasing reaction time while at the same time reducing performance accuracy (Luce, 1986). The perception of distance is often miscalculated, and both motion and shadows are frequently mistakenly seen. The perception of any of the three can also be affected by a number of environmental variables.

Finally, gender has an effect. Males tend to react faster than females, while females tend to be more accurate than males (Adam et al., 1999; Barral & Debu, 2004). These differences are most likely the result of the greater reliance on metacognitive skills such as *self talk* and *thinking about thinking* by females (Botwinick & Thompson, 1966). As noted previously, there tends to be an inverse relationship between reaction time and accuracy, at least in part due to decisionmaking as a moderating variable. As one goes up, the other goes down.

Scientific and practical limitations governing human performance must be taken into account when evaluating an officer's performance. Reaction time includes both the processing of information as well as the time it takes to physically respond. In a shooting scenario, processing takes about four times longer than the actual response phase (Lewinski, 2000). This applies to both the initial processing of information that ultimately drives the officer's actions as well as the processing of any change in information intended to cease the officer's current course of action. Research has found that the speed of reaction can be increased by practice (Lewinski, 2002).

To react, an officer must first perceive a threat, which will typically result from *processing* the actions of the suspect and then determining the appropriate response. The suspect, however, will by then already have moved in to the shorter response phase (e.g., pulling the trigger), resulting in *action* always being faster than *reaction*. The greater the intensity of focus on a prior stimulus at the time of stimulus change, the longer it will take the officer to notice and respond to the change, including ceasing fire. Increasing the complexity of the scenario further increases the response lag. In practical terms, this will frequently result in it being physically impossible for an officer to immediately cease fire upon cessation of a threat (Lewinski & Hudson, 2003). In general, slowing the actual response allows for increased accuracy, including increased ability to respond to a change in the environment. As with most things, practice responding to change can improve performance, though, again, within the practical limitations governing human performance. Given these factors, tactical planning and positioning are critical to minimizing deadly force encounters (Lewinski, 2000).

Lessons Learned

- Action is faster than reaction.
- Distance is often miscalculated, and both motion and shadows are frequently mistakenly seen.
- In general, increasing the speed of response increases the probability of error.
- Positive practice increases response time and accuracy by improving motor memory and mental processing skills.
- Too much or too little arousal impairs performance.
- Information processing takes four times longer than the actual time to respond. This also applies to information intended to cease action.
- The greater the intensity of focus, the longer it will take to notice and respond to change.
- Scientific and practical limitations governing human performance must be taken into account when evaluating performance.

Memory: Fact or Fiction?

Two types of amnesia have been found to occur following a traumatic event. *Retrograde amnesia* refers to the loss of memory for events that occur up to two minutes prior to the traumatic event. *Hyper amnesia* refers to the fact that memory for emotionally charged events tends to improve over time. High arousal typically interferes with recall of *peripheral details* or those deemed to be less important, while recall of *central details* or those perceived most critical to survival increases under conditions of high arousal. An officer involved in a highly stressful event may be unable to accurately recall many of their own actions, much less those of other officers, even those in close physical proximity. This is particularly true of actions taken just prior to the shooting or other highly stressful event.

The passage of time, in and of itself, generally has a positive effect on memory recall and consolidation. Research has found that within 24 hours, approximately 30% of information will be recalled, with 50% recalled after 48 hours and 75 to 95% recalled after 72 to 100 hours (Grossman & Siddle, 2005). This appears to result from both a general reduction in arousal combined with the memory consolidating effects of sleep (Anderson & Pichert, 1978; Hasher & Zachs, 1984; Kihlstrom et al., 1990). Sleep, particularly the REM or dreaming cycle, is normally the time when information from the day is processed and consolidated in with existing schema (Cartwright et al., 1975; Tilly & Empson, 1978; Pearlman, 1982; Schoen & Badia, 1984; Scrima, 1982). Over time, a *personal narrative* or story develops to tie the incident information together. The officer attempts to integrate this current experience into existing mental schema to make sense of his or her actions. Twenty to forty percent of officers involved in a shooting report loss of memory for at least some significant aspect of the incident (Artwohl, 2002; Honig & Roland, 1998; Honig & Sultan, 2004). The true effect is likely significantly greater as most officers would be unaware of the full range of details for which they cannot account.

Memory is an active, constructive process that is susceptible to being altered by associated prior experiences and the emotional state of the officer at the time of recall. *Cognitive dissonance*, the internal conflict that arises when confronted with choosing between various options or points of view, produces *blind spots* for information that does not fit within the *accepted* recalled scenario. Conflicting information is ignored to avoid the associated discomfort. It should be noted that this process, like so many of the processes previously discussed, occurs *automatically* on a subconscious level.

Returning to the incident site commonly referred to as a *walk through* and discussing the incident with other involved parties can have a positive effect on stimulating the memory trace. On the other hand, it is also at this point that the officer is most subject to factors of contamination and confabulation. Emotions generated by re-creating the experience can help in recalling accurate memories as long as the officer has had time to both reduce his or her overall state of arousal and begin the process of memory consolidation (Blaney, 1986; Bower, 1981; Chang, 1986; Clark, Milberg & Erber, 1987; Teasdale & Fogerty, 1979). Research has found that not only does participation in a realistic training scenario deliver close to the same emotional and physiological arousal as would be expected from an actual incident but that both internally replaying and externally recounting the incident produces essentially the same effect (Lewinski, 2006).

Both confabulation and contamination, combined with the normal process of deterioration of the memory trace over time, will inevitably lead to at least some distortions and errors in recall. The process of ultimately recounting information subsequently hardens the memory against further contamination (Loftus, 1977; Loftus, Miller & Burns, 1978). As stated previously, this increased level of confidence, however, does not necessarily mean the recalled information is any more accurate.

Lessons Learned

- Memory for specific emotionally charged events improves over time. This is referred to as hyper amnesia.
- Memory loss frequently occurs for up to two minutes prior to a traumatic event. This is referred to as retrograde amnesia.
- Twenty to forty percent of officers involved in a shooting report loss of memory for at least some significant aspect of the incident. This is likely an underestimate of the true effect.
- An officer involved in a highly stressful event may be unable to accurately recall many of their own actions, much less those of other officers, even those in close physical proximity.
- Reducing arousal increases memory recall.
- Sleep combined with the development of a personal narrative to tie incident information together speeds memory consolidation and facilitates recall.
- Re-creating the emotions generated by the incident, including returning to the site and discussing the incident with other involved parties, can increase recall. This must be balanced, however, against the risks of contamination and confabulation.

Implications for Training and Tactics

Many of the natural physiological propensities described above contribute to the generally low “hit ratio” of officer-involved shootings, typically no better than 25%, experienced by most law enforcement agencies. Highly perishable skills that in some sense require an officer to perform in a manner counter to what natural selection originally designed requires many more realistic training opportunities than the vast majority of agencies provide. Critical to performance under stress is the ability to quickly control the stress reaction and, hence, reduce the release and effect of adrenaline on the system. In fact, one difference between a novice and an expert is the level of physiological and psychological arousal and activity experienced by each before, during, and after an incident, including the expert’s improved ability to more quickly return to baseline or normal functioning condition.

Inoculation training helps an officer compensate and respond under conditions of physiological and psychological arousal. While it is unrealistic to expect that all perceptual distortions can be prevented, practiced efforts to maintain activation of the *thinking brain* and, hence, cognition and critical decisionmaking under stress can increase an officer’s ability to simultaneously respond and remain in action mode and at the same time perceive and process incoming information in the heat of battle. Focusing on decisionmaking as a specific skill will, at least temporarily, result in a reduction in speed of response, though a concomitant gain in the quality

of the response should be achieved. Performance under stress becomes a calculated, planned reaction rather than solely an automatic, autonomic action.

Realistic, complex scenario-based training that includes the full range of physical and mental tasks an officer is required to perform in a deadly confrontation, up to and including the recall and reporting of critical scenario details, is essential to improving an officer's performance and resiliency following such encounters. Repetition, then, further increases motor memory and mental processing as well as provides for positive practice of these critical perishable skills. Realistic training, which includes the unexpected, also reduces an officer's tendency to overanticipate and preemptively react with a pre-programmed response when a novel response may be more appropriate, thereby enhancing mental, interpersonal, and physical adaptability (U.S. Army Research Institute for the Behavioral and Social Sciences, 2005a, 2005b).

Metacognitive skills, such as positive self-talk and the playing out in one's mind of potential scenario sequences of action/ reaction, can improve focus and increase the officer's response repertoire, allowing for a more seamless transition to "Plan B" if needed. This ability, in fact, is a critical determiner of expert status. While the novice must first consciously evaluate and decide the appropriate course of action prior to initiating a response when presented with a situation that is contrary to his or her initial expectations, the expert automatically moves between a range of "Plan B" responses while simultaneously evaluating incoming information.

Personal feedback, provided both visually through the use of video as well as verbally to the involved officer(s), completes the loop. All elements of an officer's performance, from the manual to the mental, including both perceptual and decisionmaking components, benefit from this comprehensive training approach. Initial implementation of any new training should be both gradual and stepwise, with all skills developed to the level of proficiency prior to the introduction of new skills.

Lessons Learned

- Short-circuiting the adrenaline response is critical to enhancing physical and psychological performance.
- Realistic, complex, multi-tasking training scenarios produce the same physiological and emotional arousal as an actual incident, both inoculating and reinforcing highly perishable skills.
- Repetition increases motor memory, mental processing, and intuitive decisionmaking under stress.
- Good decisionmaking requires analysis, synthesis, and evaluation of information.
- Rote training instills quick response based upon expected cues. Conversely, novelty in training encourages intuitive decisionmaking and the ability to innovate under pressure. Both are essential.
- Recurrent training maximizes skill proficiency and officer confidence.
- Personal feedback provided both visually and verbally is critical.

Interviewing and Incident Recall

Striving for perfection in the total recall of an officer after an incident, particularly in the areas of perceptual processing and memories of performance, may be a worthy ideal; however, as a practical goal, it is not achievable. Error can never be entirely eliminated. The goal of the interview is to find the truth; it is as simple and as complex as that. Officers, investigators, and the police executives who evaluate performance must have a basic understanding of the critical factors that affect both perception and performance under stress. Efforts to maximize opportunities for the integration of the most reliable information (e.g., event narration, viewing videotapes of the incident, doing a walk through of the scene, discussing the incident with other officers on scene) while at the same time reducing contamination from outside sources (e.g., the media, uninvolved peers, etc.) can enhance accurate recall (Loftus, 1979; Loftus & Green, 1980; Loftus et al., 1978; Marshall, 1978). However, these same techniques, in addition to guided imagery, context reinstatement, mild social pressure, and encouraging repeated attempts to recover the memory, are also the ones most at risk of eliciting a false memory (Loftus, 2002). Ultimately, the risk of contamination and confabulation, deliberate or not, must be weighed against the benefits of improved recall.

While there are officers who, for any number of reasons, may intentionally fabricate the facts of an incident, skilled interviewing by an investigator familiar with the research related to perception and performance, combined with a solid forensic assessment of the scene, should provide ample opportunity to differentiate mistakes of fact from conscious attempts at manipulation of the evidence (Fisher & Geiselman, 1992). Memory for stressful events must be understood in terms of complex interactions between the types of event (emotional versus neutral), the type of detail (central versus peripheral), time of interview (immediate versus delayed), and retrieval conditions.

Interventions, including removing the officer from the scene to a lower stress environment, recommending exercise to burn off excess adrenaline, providing the opportunity for a normal sleep cycle, and allowing for the passage of time prior to participation in a detailed interview to mitigate the need for the officer to “fill in the blanks,” can minimize the risk of confabulation. The resulting personal narrative that is critical to traumatic incident recall, while not perfect, will likely be more reflective of the true facts of the incident. Admonitions to the officer to avoid outside influences, including participation in discussions of incident details with family and friends or colleagues, as well as to avoid viewing media reports prior to the initial interview, should also occur. If a detailed interview must be immediately conducted following a critical incident, a follow-up interview should occur the next day with the understanding that additional and potentially conflicting information may result as a normal part of the memory consolidation process and cannot be automatically assumed to be indicative of lying.

Lessons Learned

- Error can never be eliminated entirely.
- Memory enhancing techniques work to maximize accurate recall but also increase the risk of eliciting false memories.

- Discrepancies should not automatically be assumed to be the result of conscious deception but, rather, a function of the memory consolidation process.
- Utilization of state-of-the-art interviewing techniques is critical to maximizing accurate incident recall while minimizing the effects of contamination and confabulation.
- Following involvement in a traumatic incident, affected officers should be removed to a low-stress environment to reduce the negative impact of heightened physiological and emotional arousal.
- The officer should then be provided with the opportunity to give a basic, detailed incident narration with specific questioning to occur at a later time. Admonitions to avoid contamination from outside information sources relative to the incident should be given and the officer should be sent home to sleep. Memory consolidation and the development of a personal narrative will further enhance recall. The officer should then be re-interviewed the next day, first with an opportunity to provide additional, unsolicited information followed by utilization of accepted memory enhancing interviewing techniques, including context reinstatement, guided imagery, and specific queries as well as an opportunity to participate in a walk-through. A subsequent interview should then be conducted within a few days. This protocol maximizes the quantity and quality of the information obtained. Some variations in reported information will naturally occur as a side effect of the memory consolidation process.

Implications/Recommendations

An understanding of the various factors that contribute to errors in perception, mistakes of fact, performance deficits, and inaccurate incident recall is essential to the modern-day law enforcement executive and should serve to guide a department in effectively training and fairly evaluating the actions of its personnel. A large body of research reflects how common these phenomena really are. An understanding of the science of human factors in force encounters needs to become an integral part of the investigation. Expectations that officers can defy the laws of science and exceed the limits of human performance are unrealistic. Therefore, law enforcement agencies and the public must come to understand that it is unrealistic to expect infallible judgment, flawless performance, and comprehensive recall from every officer in every circumstance wherein the officer is tasked with making split-second decisions involving life or death.

A given organization must weigh the relative risk and liability that the organization wishes to assume for, for example, failing to shoot an armed combatant, potentially resulting in the death of an officer, versus accidentally shooting an unarmed suspect. Likewise, the benefits of enhanced incident recall must be weighed against the risk of intentional falsification of evidence by involved personnel. These should be conscious decisions made in line with an organization's mission and core values, and clearly articulated to all its constituents. Life and death encounters involve difficult decisions with significant ramifications. It is a mathematical reality that error cannot be completely avoided and, in fact, efforts to reduce the likelihood of one type of error will automatically result in an increase in the opposite type of error. Agencies must decide the acceptable level of risk and liability and provide appropriate training to their personnel in line with that risk.

Corrective action plans emphasizing retraining and remediation versus discipline and punishment are more appropriate in response to officers who make mistakes, have misjudgments, or err in making these split-second decisions. Law enforcement personnel at every level need to increase their sophistication and understanding of the scientific research that defines the limits of human performance; focus on improving the training of all personnel, including investigators; and use this opportunity to enhance public dialog with the intent of minimizing conflict resulting from unrealistic expectations of officer performance. Public trust can be maintained through thorough education and investigations with serious discipline for those rare officers who betray the public trust by willfully manipulating the details of a critical incident.

Lessons Learned

- There are no “superhuman” people. Physical and mental limitations are the same for everyone. No exceptions.
- An understanding of the factors that contribute to errors in perception, performance, and inaccurate incident recall is essential for the modern-day law enforcement officer, investigator, supervisor, manager, and executive.
- Agencies must analyze their own use-of-force patterns and develop training scenarios that mimic lighting, distraction, movement (predominantly lateral) by both the officer and the suspect, and task complexity (pursuit followed by a shooting, hand-to-hand struggle followed by a shooting), including comparable physical and emotional exhaustion levels.
- Training must occur on a repetitive basis so that the officers develop a high level of proficiency and confidence in their performance. The exact frequency of training will vary based on a combination of individual characteristics, prior experience, and job demands.
- The scenario training should be videotaped and include the officer recounting verbally and in writing the incident details in a manner similar to what would occur following an actual incident. This will provide the officer first-hand experience of the factors affecting perception, performance, and memory recall and provide the necessary feedback loop to further refine performance.
- Scientific and practical limitations governing human performance must be taken into account when evaluating performance.
- Corrective action plans in response to mistakes and misjudgments made as a result of split-second decisions should emphasize retraining and remediation.

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Addressing Police Officer-Initiated Domestic Violence: An Inservice Training Program for Primary Prevention

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Introduction

Increasing attention has been focused on problems involving domestic violence in America. Domestic violence is defined as “control by one partner over another in a dating, marital or live-in relationship [which can] include physical, sexual, emotional and economic abuse, threats and isolation” (American Psychiatric Association, 2005). Domestic violence takes a heavy toll on individual victims in terms of negative physical and emotional consequences. According to the U.S. Department of Justice’s Office for Victims of Crime (as reported in Catalano, 2006), in 2005 alone, 389,100 women and 78,180 men were victimized by an intimate partner; victims experienced 191,670 incidents of rape and sexual assault; and 24% of all violent crime incidents were committed by an armed offender. In addition, a recent national survey on violence against women revealed that 22% of women in the U.S. are likely to be victims of physical assault by a partner or date during their lifetime, and about 5.3 million partner victimizations of women ages 18 and older occur annually, producing two million injuries and 1,300 deaths (APA, 2005). Furthermore, over one million women and nearly 400,000 men are stalked annually in the U.S. (Tjaden & Thoennes, 2000). The adverse effects of domestic violence are also reflected in a continuing increase in associated costs. For example, the National Association of Crime Victim Compensation Boards (2005) reported that, in 2004, victim compensation programs paid \$16.8 million dollars for forensic sexual assault exams, while domestic violence victims made up 20% of all adult victims and 34% of all assault victims compensated by these programs.

While the above statistics clearly indicate that domestic violence is a major problem in the general population, less attention has been given to domestic violence issues within the law enforcement community. Ironically, while frequently called upon by victims of domestic violence seeking protection and safety, police officers, themselves, are increasingly becoming both perpetrators and victims of domestic violence. Unlike documentation of domestic violence in the general population, however, reliable statistics on the incidence of domestic violence involvement among police officers are not widely available or disseminated. Some estimates have suggested that police officer-initiated domestic violence may be as great

as two to four times that of the general population, and more than one-third of police officer families experience some form of domestic violence (Johnson, 1991; Neidig, Russell, & Seng, 1992). Despite the lack of reliable data, there is growing awareness of domestic violence as an issue within the law enforcement community. For example, organizations such as the Feminist Majority Foundation's National Center for Women and Policing have been established to increase awareness and monitor cases of police officer-initiated domestic violence while serving as an advocate for women, who tend to more often be the victims. In addition, the International Association of Chiefs of Police (IACP) (2003) has recognized the issue by developing a model policy emphasizing zero-tolerance of police officer-initiated domestic violence. An integral aspect of the IACP policy focuses on the need for police departments to establish prevention and training activities. Although some police departments have begun to address this need, the National Center for Women and Policing has argued that "there is no evidence that police departments across the country are doing anything other than simply including the policy in their manuals" (Feminist Majority Foundation's National Center for Women and Policing, 2001-2005). Regardless of whether this statement accurately reflects the current experiences of police departments in establishing specific programs to implement the IACP domestic violence policy, there is clearly a need to address the issue by developing and making available domestic violence prevention and intervention services to police officers and other law enforcement personnel within police departments.

The purpose of this paper is to give further stimulus to police departments' efforts to develop and implement programmatic actions aimed at preventing domestic violence among police officers. Our specific objective is to present a series of prevention modules to be implemented as part of preservice and/or inservice training for police officers in addressing the risks of police-initiated domestic violence. Before presenting the proposed training modules aimed at preventing police officer-initiated domestic violence, we shall, first, provide a review of the literature related to domestic violence.

Domestic Violence: A Review of the Literature

The etiology of domestic violence is multifaceted. Theoretical explanations of domestic violence have been grouped into three areas: (1) social-cultural, (2) interpersonal, and (3) intrapersonal (Feldman & Ridley, 1995). *Social-cultural explanations* focus on social and cultural factors that provide a context for domestic violence. For example, long-held societal norms related to the unequal distribution of power between the sexes and culturally embraced stereotypes emphasizing male superiority and acceptable male aggressiveness produce a context conducive to fostering domestic violence between male-female intimate partners (Bryant, 1994; Stordeur & Stille, 1989). Social-cultural contexts can aid in sparking the occurrence of abuse. For example, the social learning explanation of domestic violence posits that children learn through direct experience by watching parents or others involved in abusive relationships or by being victims of maltreatment themselves (Bevin & Higgins, 2002). Some social-cultural contexts are conducive for the development of environmental stress, which can lead individuals to initiate domestic violence (He, Zhao, & Archbold, 2002). Environmental stress-induced domestic violence results from constant exposure to stressors that affect emotional and cognitive functioning. Other social structural factors, such as unemployment

and financial distress, may also play a role in the environmental stress-induced domestic violence process.

Interpersonal explanations involve interaction between individuals during which domestic violence can occur as a product of relationship issues. For example, Neidig and Freidman (1984) explain physical abuse between intimate partners by drawing upon two types of violence that can take place in relationships: (1) expressive and (2) instrumental. They argue that an individual could be located at any point between these two extremes. *Expressive violence* is the result of escalating conflict between partners, in situations in which it is easy to identify the precipitating event and both partners are involved in the escalation. *Instrumental violence* is the deliberate use of violence as a tool to punish or control the behavior of the other partner. The feminist perspective supports the notion of instrumental violence as being the major form that domestic violence takes in relationships involving partner abuse.

Intrapersonal explanations of domestic violence focus on *psychological impairment* of individuals as the primary reason that behavior involving domestic violence occurs. From this perspective, domestic violence can occur when one or both intimate partners exhibit underlying psychopathological problems such as attachment issues, personality dysfunctions, impulse control, and negative cognitions (Hastings & Hamberger, 1988). Most prevalent among the psychopathological disorders associated with domestic violence are post-traumatic stress, borderline personality, and antisocial personality disorders (Hamberger & Hastings, 1986).

Much of the research literature on domestic violence has focused on the male batterer and factors that place women at risk for domestic violence (Gelles, 1997, 2000; Gelles, Lackner, & Wolfner, 1994; Gelles & Straus, 1988; Holtzworth-Munroe & Stuart, 1994; Straus & Gelles, 1990). For example, Gelles et al. (1994) identified 11 risk factors for future perpetration of domestic violence: (1) previous involvement in domestic violence, (2) unemployment, (3) substance abuse, (4) difference in religious backgrounds of intimates, (5) a history of parental abuse, (6) cohabitation without marriage, (7) blue-collar occupational status, (8) nongraduation from high school, (9) age range of 18 to 30, (10) severe violence toward children, and (11) income below the poverty level. Homes with two risk factors have twice the violence of those where none of these factors are present; and in homes with seven or more of the risk factors, violence is 40 times more likely than in homes without any. The overall conclusion is that the single underlying factor in domestic violence is one partner's need to feel that he or she absolutely controls the other.

Other studies have reported similarly consistent findings. For example, Walker (1989) found that initiators of domestic violence react abnormally to stress and tend to be compulsive drinkers. Jacobson and Gottman (1998) found that once an argument begins, the initiators of domestic violence are unable to concede anything to their partners, such as admit that their partner made a good point, or to display the coping skills that they would need to identify when it is appropriate to take a break, calm down, compromise, or take other steps to stop the argument (Jacobson & Gottman, 1998). Hamberger and Hastings (1988) note that alcohol may modulate psychopathology by interacting with existing situational and deeply rooted personality factors, thus, further aggravating domestic violence disputes. A particularly strong relationship has been found between male marital

violence and substance abuse problems (Quigley & Leonard, 2000). Alcohol use has been reported in 25 to 85% of incidents of domestic violence (Kantor & Strauss, 1990). Kantor and Strauss further note that the drinking pattern of males, particularly binge drinking, is associated with domestic violence across all ethnic and social classes. Dobash and Dobash (1992) argue that alcohol can interact with a male's need for power, which elicits violence. In acute intoxication, alcohol may contribute to domestic violence via the neuropharmacologic effects of heavy drinking such as hangovers, sleep deprivation, hypoglycemia, withdrawal, and cognitive impairment (Leonard & Roberts, 1996).

In summary, the literature on domestic violence in the general population reveals that initiators of domestic violence tend to share a number of common psychological traits, background factors, and behavioral patterns. The primary goal of the abuser is for power and control over his or her partner. Men involved in domestic violence disputes often hold traditionally conservative ideas about sex roles and male superiority while adhering to such male gender stereotypes as viewing expressions of nondominant emotions as an indication of weakness. Initiators of domestic violence often have alcohol or other substance abuse problems as well as mental or personality disorders such as depression, general hostility, and feelings of victimization (Berry, 2000). In addition, many initiators of domestic violence have poor self-image and self-esteem and react abnormally in stressful situations (Walker, 1989).

Police Officer-Initiated Domestic Violence

Law enforcement has often been characterized as an occupation which can be highly stressful (Anderson, Litzenger, & Plecas, 2002; Ellison & Genz, 1978; He et al., 2002; Reiser & Geiger, 1984; Roberts, 1977). While stresses associated with occupational pursuits can lead to involvement in domestic violence, police officers involved in domestic violence disputes are more often viewed in their capacity of intervening to settle such disputes among others. In actuality, police officers themselves may face a higher risk than the general population of becoming involved in domestic violence in their personal lives (Neidig et al., 1992). While reliable data on the incidence of police officer-initiated domestic violence are not widely available, growing public awareness of police domestic violence and recognition of the problem within the police community have led to greater efforts to address this issue. Much of the attention given to this issue has been generated by incidents reported in the mass media involving male police officers who initiate domestic violence with their current or former intimate partner, their wife, or with close family members as their primary victims ("APD Cop Kills Son," 2004; "Profiles of Domestic Violence Cases," 2003; "Tacoma Confidential," 2003). For example, the case of David Brame in 2003 generated widespread public awareness of the complexity involved in addressing the issue of police-initiated domestic violence. In this case, Brame, who was the chief of police in the city of Tacoma, Washington, murdered his wife, Crystal, and also took his own life. Crystal had endured many years of domestic abuse but, until the period leading up to her murder, had refrained from seeking intervention from law enforcement in Tacoma given her husband's status as police chief ("Tacoma Confidential," 2003). While such media accounts can be cited as anecdotal evidence of police officer-initiated domestic violence, further insight into the issue can be gained through examination of referrals that are made by police chiefs for police officers to undergo psychological fitness-for-duty (FFD) evaluations. For example, Stone (1995)

reported that the most frequent circumstances giving rise for an FFD evaluation are concerns of excessive aggressiveness involving use of force and domestic violence. Stone further estimated that nearly 10% of FFD referrals are related to domestic violence, wherein the referred officer was either the perpetrator or the victim. Since police departments must adhere to strict confidentiality guidelines to observe privacy protection rights of individuals in the FFD process, the actual statistics on FFD referrals in specific police departments are not released publicly. However, an analysis of aggregate FFD referral data by a police department internally (which does not violate such protections) may be useful in guiding efforts to develop effective programs for prevention and treatment of police domestic violence and related issues (Dawkins, Dawkins, Reyes, & Griffin, 2007).

In 2003, the IACP developed a policy to affirm its position of zero tolerance on the issue of police officer-initiated domestic violence. The IACP model policy defines police-involved domestic violence as “an act or pattern of violence perpetrated by a police officer upon his or her intimate partner not done in defense of self or others” (p. 1). The IACP model policy gives examples of acts included under this policy such as bodily injury or threat of imminent bodily injury, sexual battery, physical restraint, property crime directed at the victim, stalking, violation of a court order of protection or similar injunction, death threats, or death. The policy also identifies steps for police departments to follow in addressing domestic violence in terms of developing prevention techniques and training for police officers and implementing other provisions to ensure the safety and protection of victims.

Addressing Officer-Initiated Domestic Violence: A Training Program

Although the IACP (2003) model policy provides a clear statement of the stance that police departments should take on the issue of police involvement in domestic violence (as perpetrator or victim) and identifies steps to follow for prevention and intervention, some evidence indicates that the response by police departments across the nation in terms of developing policies and programs to address this issue has been uneven. For example, Lonsway (2006) conducted a national survey of 78 large police departments (100 or more officers) to determine the prevalence of policies and provisions to address police officer domestic violence and found that only 23 (29%) had policies specifically addressing police officer-involved domestic violence. Furthermore, in 18 of these 23 police agencies, the policy provision required that a supervisor must be notified and respond to the scene of a police officer-initiated domestic violence dispute, and in 12 of the 23 agencies, it was the duty of police officers to report being named in a protective or restraining order. While only three of the police departments’ policy provisions called for collaborations with community advocacy organizations to address the training of sworn officers in addressing the needs of victims, none of these collaborative efforts addressed the need to offer programs related to the prevention of police officer-initiated domestic violence. There is clearly a continuing need for police departments across the nation to make greater strides toward developing and implementing programs to address the issue of police officer-initiated domestic violence. The proposed program described here is a response to this need and can be offered as a part of a police department’s regular inservice training for preservice officers. This program consists of a series of primary prevention modules to address the issue of police officer-initiated domestic violence. This

training program, which includes seven modules, is designed for police officers and other law enforcement personnel to assist them in dealing with potential risks and in reinforcing protection against domestic violence involvement in their personal lives. The following are the seven training modules:

Module I: Introduction and Building Rapport

Module II: Understanding the Development and Consequences of Domestic Violence

Module III: Addressing Power and Control

Module IV: Addressing Learned Helplessness

Module V: Addressing Stress: Coping and Relaxation Training

Module VI: Cognitive Restructuring

Module VII: Review, Debriefing, and Feedback

A brief description of the topics and training provided in each module is presented below.

Module I: Introduction and Building Rapport

The first module introduces the topic and is designed primarily to build rapport among the participants and group facilitators. The facilitators highlight aspects of police psychology, focusing on the uniqueness and difficulties of the job of a police officer. A brief instrument is administered to participants to assess their level of knowledge and awareness of facts about domestic violence and related issues. Commonalities between the experiences of police officers and victims of domestic violence are reviewed following the training approach suggested by Huisman, Martinez, and Wilson (2005). The idea behind this approach is to gain an empathetic stance for victims of domestic violence, increasing motivation to step up and become an anti-domestic violence advocate. The aim is for police officers to acquire a deeper personal understanding of experiences faced by victims of abuse. For example, battered women, like police officers, often face fearful and dangerous encounters on a daily basis. Both must attempt to de-escalate violence directed toward them or others, and both are subjected to derogatory remarks and negative stereotypes. This is intended to invoke a display of empathy and understanding and, ultimately, to lower any elevated defensive posture. The intent of extensive, controlled, safe, and realistic training on common police experiences is to reduce stress during police trauma experiences and increase successful performance (Kelly, 2002). This session's focus on the different sources of stress, those specific to law enforcement as well as those in their personal lives, contributes to establishing a positive and attentive atmosphere for participants. Other topics covered in this module are the stress response, specific mental and physiological responses to stressors, and individual stress response patterns.

Module II: Understanding the Development and Consequences of Domestic Violence

The second module focuses on providing background information related to domestic violence in general, including statistics on victims, perpetrators, and institutional costs. Participants are provided with a working definition of domestic violence and an opportunity to discuss commonly held, including stereotypical, viewpoints about domestic violence. This module also examines the role of

culture, society, and gender in domestic violence, including the intergenerational transmission process.

Module III: Addressing Power and Control

Module III focuses on the power and control wheel and the equality wheel designed by the Duluth (Minnesota) Domestic Abuse Intervention Project (Pence & Paymar, 1993). The power and control wheel addresses the tactics employed by a male intimate partner to exert physical and sexual violence over a female victim, including the use of coercion and threats, intimidation, emotional abuse, isolation, minimization, the act of denying and blaming, assertion of male privilege and control over children, and economic abuse. The equality wheel identifies factors that are important in fostering nonviolence and the eradication of domestic violence in intimate partner relationships, including respect, trust and support, honesty and accountability, responsible parenting, shared responsibility, economic partnership, negotiation and fairness, and nonthreatening behavior. This discussion includes the cycle of violence with an emphasis on helping police officers “turn off” their power and control tactics when not on the job. Johnson, Todd, and Subramanian (2005) suggest that police officers may be overexposed to job-related violence, which can lead to burnout and authoritarian spillover, thus, increasing the likelihood of involvement in domestic violence in their personal lives. Therefore, if effective change in incidents of domestic violence is to occur, then external burnout and authoritarian spillover must be addressed. Through open discussion, participants are allotted time to process how to confront burnout and authoritarian spillover and to understand what these concepts might mean to them in their personal lives and in the fulfillment of their police duties and responsibilities.

Module IV: Addressing Learned Helplessness

The fourth module begins with a comprehensive overview of the concept of *learned helplessness*. This term was coined by Martin Seligman (1975) and characterizes helplessness as a learned state produced by calamitous, unpleasant situations in which the victim perceives that there is no possibility of escape or avoidance. The session addresses learned helplessness as it relates to victims of domestic violence. Previously discussed stressors of police work and the associated behavioral responses are examined in the context of their relationship to domestic violence victimization. Thus, the focus of this module is on identifying prospective victims of domestic violence and the need to increase awareness of behavioral responses to stressors among police officers as potential perpetrators of domestic violence.

Module IV also examines anger as an underlying emotion in response to stressors. Attention is given to how other emotions, such as hurt, humiliation, shame, depression, inadequacy, and weakness, can be expressed as anger. Applying techniques of group dynamics, the session demonstrates how anger is often a secondary emotion used to mask other emotions. Participants are, thus, able to experience how such emotions as impulsiveness, aggression, and violence can be the consequences of unaddressed anger.

Module V: Addressing Stress: Coping and Relaxation Training

This session for Module V addresses what to do after stress responses become activated. After discussing inappropriate coping in response to stress (e.g., excessive use of alcohol, tobacco, pain killers, and medical leave), the central focus of the module is on appropriate coping mechanisms. The technique of stress awareness training is employed to demonstrate how effective coping strategies can become a part of one's daily routine. This technique has been employed successfully with police officers (Kelly, 2002) and focuses on using personal or *self-coping* strategies to produce a normalization of responses to stress. According to Zeitlin (1980), the goal is to develop self-coping efficacy, which is the psychological component of emotional adaptability achieved by an individual in response to a stressful situation. Since coping includes active, behaviorally oriented, adaptive processes to manage a specific environment, successful coping under stress must also reflect active, adaptive behavior in which an individual employs strategies to manage a specific environment (Band & Manuele, 1987). The goal is to assess the level of competence in adaptability, both psychologically and behaviorally, that an individual must achieve in responding to stressful events.

Module VI: Cognitive Restructuring

The focus of Module VI is cognitive restructuring. More specifically, this module introduces cognitive therapy skills as a means of dealing with stress. Cognitive restructuring involves developing the skill to identify, monitor, and modify what Hamberger and Hastings (1988) refer to as "self-talk." The "self-talk" process enables an individual to react effectively in stressful situations associated with intense negative emotional arousal through self-produced verbal instructions not to respond violently. Through the acquisition of thought-switching skills, the individual learns the connection between his or her own self-produced cognitive, emotional, and behavioral responses. Specific assertive responses will be introduced, including expressions of feelings, appropriate requests, mutual problem solving, conflict resolution, and active empathetic listening. Hamberger and Hastings point out that the overriding principle that guides intervention, and, thus, preventive strategies is that violence is unacceptable; the individual is personally responsible; and nonviolent options, including cognitive approaches, are available to cope with general stress and relationship issues. Facilitators apply techniques of group dynamics to involve participants in activities that demonstrate how the cognitive restructuring process can be used as a skill in relation to domestic violence prevention.

Module VII: Review, Debriefing, and Feedback

Module VII presents an overview of all the modules, with an emphasis on making sure participants have a basic understanding of the modules' contents. Participants have the opportunity to discuss any aspect of the training and to provide feedback. Time is also allotted for questions, comments, and observations.

After a brief review of the main concepts, themes, and major points of each module, participants are administered a brief instrument to be used in assessing the amount of knowledge gained as a result of their participation in the program.

Participants are also administered an evaluation instrument, which is used to identify any areas of improvement needed in the training modules.

The participants receive a list of resources in their locale for individual and family counseling and other services. They are also given a reading list and information available from Internet sources for follow-up materials on topics presented in the training program. Certificates of successful completion of the program are distributed to participants, and a copy of the certificate is placed in their personnel files.

Conclusion

Domestic violence is a major issue that adversely impacts many individuals, families, and communities. Although police officers are frequently the first respondents to calls of domestic violence disputes, more attention is now being focused on police officers' involvement in domestic violence as perpetrators and victims. Although the actual incidence of domestic violence among police officers has not been confirmed, some estimates have suggested that the incidence may be as great as two to four times that of the general population. Increasing awareness of the domestic violence issue has generated much public scrutiny and media coverage, especially when the perpetrator is a male police officer and the victim a woman. Women advocacy groups, both in the general population and the law enforcement community, have also increased their focus on the prevention of domestic violence. In 2003, the International Association of Chiefs of Police developed a model policy on domestic violence among police officers to affirm its position of zero tolerance and to outline strategies for police departments to follow in addressing the issue. As more police departments recognize the need to take proactive measures toward preventing domestic violence within the police community, they will increase opportunities for officers to participate in preservice and inservice training programs. In this paper, we have described a domestic violence prevention program designed for law enforcement personnel. This program consists of seven modules and is grounded in existing research and practical knowledge related to domestic violence, police psychology, and stress theory. The program modules focus on providing police officers with information and strategies to develop effective methods of coping with the demands of police work and addressing issues that can potentially lead to domestic violence in their personal lives. The focus of this program is primary prevention with the aim of assisting police officers in handling stressful events, both on and off duty, thereby, minimizing risks that they will resort to violence against significant others.

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Law Enforcement Officers' Knowledge and Perception of Family Violence

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Introduction

Family violence remains a significant problem in today's society (Kilpatrick, 2004). In fact, "[a]ccording to the National Centers for Disease Control, more women are treated in emergency rooms for battering injuries than for muggings, rapes, and traffic accidents combined" (Berry, 1996, p. 7). Dating and spousal violence is noted as the single most prevalent "cause of physical injury to women in the United States" (Sgarzi & McDevitt, 2003, p. 119). It is estimated that in the United States alone a woman is beaten once every 12 to 15 seconds by her intimate partner and one in three women will become victims of family violence at least once during their lifetime (Bledsoe, 2000; Sgarzi & McDevitt, 2003; Texas Council on Family Violence, 2003b; Wallace, 2005).

"In 1998, American women suffered 876,340 incidents of violent crime at the hands of their current or former spouses or boyfriends" (Anderson, 2003, p. 93), and many incidents of family violence are never reported to law enforcement (Buzawa & Buzawa, 2003). Some scholars suggest that, "one in six assaults is reported to police" (Dutton, 1988, p. 125), while other scholars reflect "that only 25% of all physical assaults against females by intimates were reported to the police" (Buzawa & Buzawa, 2003, p. 18). For this reason, it is difficult for any researcher to measure the essence of the substantiality of family violence in American homes today. Statistics often only reflect the number of incidents reported to law enforcement. Many times, victims of family violence refuse to involve law enforcement for various reasons, ranging from fear of the criminal justice system due to past experiences, fear of law enforcement not believing their story, or fear of retaliation from the batterer (Buzawa & Buzawa, 2003).

Historically, husbands beating their wives has not been criminalized (Barnett, Miller-Perrin, & Perrin, 2005). A true shift in the criminal justice system's response to family violence started to be felt in the 1970s (Buzawa & Buzawa, 1996; Mignon, Larson, & Holmes, 2002). Buzawa and Buzawa (1996) describe this shift as "from maintaining social order and a family ideal to explicit protection for victims, with the recognition of women as entitled to legal redress despite traditional male dominance in American social institutions" (p. 244). Family violence victims have seen the most changes in the criminal justice system's response in the past 25 years (Berry, 1996; Danis, 2003). Arguably, the criminal justice system has made significant strides during this time to hold batterers more accountable for their behavior (Berry, 1996).

When law enforcement is contacted, whether by a neighbor, a child in the home, or the victims, police officers often set a precedent with regards to the victim's perception of the criminal justice system (Buzawa & Buzawa, 2003; Klein, 2004). Some scholars have focused on the victim's perception of law enforcement, the criminal justice system, and the services available to victims. This research has shown that if the victim is treated fairly and with respect, she is more likely to report future incidents of family violence and more likely to cooperate with the investigation and prosecution of the case (Hickman & Simpson, 2003).

Oftentimes, the officers who are the first responders will be the only contact that a victim of family violence has with the criminal justice system or any helping agency for that matter (Danis, 2003; Dutton, 1988). During this interaction, officers have the opportunity to educate victims about the tools and resources available to them (Buzawa & Buzawa, 2003). It is certainly possible that officers' knowledge and perceptions of family violence might influence their treatment of family violence victims, at least to some extent. However, there has been limited research that has focused on the officers' perceptions of family violence victims and their knowledge about services available to victims. Therefore, the purpose of this study is to examine law enforcement officers' perceptions and knowledge of family violence. Specifically, the officers' perceptions toward family violence and its victims, the services available to such victims, and the effectiveness of law enforcement in dealing with the problem of family violence will be examined. In addition, the impact of both gender and years of service are explored as they pertain to the officers' knowledge and perceptions of family violence. The study was conducted within a police department that serves a mid-size metropolitan city in Texas in the summer of 2005.

Literature Review

Even though the criminal justice system as a whole has shown significant progress since the 1980s in its response to protect and enforce the rights of victims and specifically family violence victims, individual officer's attitudes have not been so quick to change (Buzawa & Buzawa, 2003; Klein, 2004). Family violence is still often viewed even today as a "private matter," both by individuals in society and in the criminal justice system (Buzawa & Buzawa, 2003; Wallace, 2005). The traditional attitude from officers responding to a "family fight" was that it was not the place of the "state" to get involved in resolving such matters. If any law enforcement intervention was provided, it was usually in the form of counseling or sending one party to "cool down" (Buzawa & Buzawa, 2003).

Furthermore, oftentimes officers would threaten that if additional action was needed, both parties would go to jail (Kingsnorth & MacIntosh, 2004; Klein, 2004; Sgarzi & McDevitt, 2003). This *traditional response* in effect reinforced the abuser's behavior as normal, and the victim perceived "that society offer(ed) no recourse and in effect tacitly condone(ed) the abuse" (Buzawa & Buzawa, 2003, p. 86).

Current Trends in Law Enforcement's Response

Most recently, victim advocacy groups have been successful in lobbying for new trends to be set with regards to the way law enforcement responds to a scene involving family violence. Such trends include mandatory arrest laws, protective orders, notice to adult victims of family violence, and law enforcement-based victim services programs (Buzawa & Buzawa, 2003; Klein, 2005; Wallace, 2005).

Roberts (2002) reports that, “As of 2001, all 50 states had implemented warrantless arrest policies” (p. 9). These new laws allow law enforcement officers to make arrests on misdemeanor violations without having to obtain a warrant. Many states have gone one step further and enacted mandatory arrest laws (Klein, 2005). These laws take the responsibility of prosecution off of the victim, which one could argue places her in less danger while holding the batterer accountable for his actions (Buzawa & Buzawa, 2003). Prior to these laws, police could not arrest without a warrant on a misdemeanor offense that did not occur in the officer’s presence (Klein, 2005). Thus, they relied on the victim to follow-through with charges, which often did not occur. These new laws were not necessarily viewed as positive change by everyone, however (Buzawa & Buzawa, 2003).

Most officers found solace in the policies and procedures prior to the enactment of warrantless arrests. The previous protocol allowed officers the convenient excuse that the recourse for misdemeanor family violence violations committed outside of their view was out of the officers’ control. Law enforcement has traditionally had an aversion to responding to family violence scenes (Buzawa & Buzawa, 2003). Buerger (2003) reports that when responding to a “domestic” scene, “. . . ‘handle the call’—quiet the dispute—‘and get out’ (to be ready for calls considered more important) was the performance standard expected of officers” (p. 350). Furthermore, even with the new laws in place, studies showed that even when probable cause was met, chances were great that officers would not make an arrest (Buerger, 2003; Wallace, 2005).

Protective orders, otherwise known as *stay away orders* or *restraining orders* in some states, are also an effective tools that law enforcement has available to protect a victim (Buzawa & Buzawa, 2003). According to the Women’s Advocacy Project (2004), “Protective orders are the most basic legal remedy against family violence, and have been shown to reduce the incidence of family violence in communities where they are readily available to victims” (p. 1). The National Center for Victims of Crime (2004) reports “a study of battered women found that women who had permanent protection orders in place were 80 percent less likely to be physically assaulted by their partners in the year after their attack than are women without protection orders.”

In the state of Texas, a victim has the right to request a Magistrate’s Order of Emergency Protection (MOEP), otherwise known as an Emergency Protective Order (EPO), when an arrest is made for the commission of a family violence offense. Even though the process varies from county to county, the request must be made to the magistrate prior to the offender’s arraignment. EPOs can remain in effect up to a period of 61 days after the date that it was issued (Texas Code of Criminal Procedure, 2004b).

In Texas, law enforcement, officers are required to inform victims of family violence of their right to request an MOEP in the form of a “Notice to Adult Victims of Family Violence.” This notice, as mandated under the Texas Code of Criminal Procedure (2004a), also informs victims of family violence of local emergency shelters and programs designated to assist them. The law further states that the notice should be distributed in both English and Spanish (Chapter 5, Article 5.04).

This notice is crucial to inform family violence victims of their rights to further protection and about the programs that are available to assist them. Family

violence programs pursue outreach efforts to make victims aware of their services. However, the notice that law enforcement officers provide on-scene remains an integral way that victims are able to learn about and seek services (Buzawa & Buzawa, 2003). Further, information that the victim receives from a police officer may be the only knowledge she has received regarding her rights (Klein, 2005). Research shows that victims of family violence “have little knowledge about their rights” (Costantino, 1981, p. 458).

Police officers are the “eyes and ears” of the community. Some scholars contend that integral factors as to whether victims will report future violence to law enforcement is the treatment that they receive from officers and the outcome of the officers’ involvement (Apsler, Cummins, & Carl, 2003; Klein, 2005). If the victim feels that they were not believed by law enforcement, or if the situation was not handled in a manner that the victim found satisfactory, then the chances that a victim will report future incidents of violence decreases (Buzawa & Buzawa, 2003). However, if the victim felt that the officer was fair and handled the situation in an effective way, then a victim is more likely to report future victimization (Sparks, Genn, & Dodd, 1977). Furthermore, studies on the batterer’s perception of fair procedures when dealing with law enforcement demonstrate a decrease in subsequent violence from the batterer (Paternoster, Bachman, & Sherman, 1997).

The perception that officers have regarding family violence victim services could influence whether or not a victim seeks services. The officers’ knowledge, or lack thereof, regarding the services available to family violence victims could impact the victims’ risk of revictimization (Danis, 2003; Dutton, 1988). Some research indicates that the gender of the officer may influence the experience of the victims of domestic violence. Research conducted regarding the perception of victims of family violence of male versus female officers has demonstrated that in situations where victims had at least one female officer respond they “were more likely to have perceived the police response as helpful” (Homant & Kennedy, 1985, p. 30). Further findings suggest that “they [victims] were also significantly more likely to perceive policewomen as ‘capable,’ and to prefer that at least one policewoman respond should they need help in the future” (p. 30).

Police Attitudes Toward Family Violence

Logan, Shannon, and Walker (2006) noted that the attitudes of police officers responding to family violence calls may influence the outcome of such calls as well as what happens with the victim in the future. Not only can these attitudes influence the response an officer chooses to have to the situation, but they can also influence the perception of the victim toward the police and the criminal justice system. Although the attitudes of the police officer should be less important where mandatory arrest policies exist, it is still the case that the knowledge and perceptions of police officers can influence the action that is taken after the situation has been assessed. When asked about the most appropriate response for domestic violence, police officers in the Logan et al. study found that officers were more likely to report that domestic violence, unlike other violent crimes, should be handled through treatment options. Although the officers were more punitive for domestic violence involving substance abuse than for domestic violence not involving substance abuse, overall their responses for domestic violence were more similar

for nonviolent offenses and DUI than for other violent crimes. Gender differences were examined in this study, but none were found significant.

Stalans and Finn (2006) examined the response of law enforcement officers and non-officers to hypothetical domestic violence cases. Separating law enforcement officers by length of service, they found that rookies were more similar to non-officers than they were to experienced officers. For cases in which there was no visible injury to the victim, experienced officers were most likely to report that they would separate the couple for the night. Rookie officers and non-officers, however, were more likely to report that they would offer informal advice to the couple. For cases in which there was moderately severe injury to the victim, experienced officers were more likely than both rookies and non-officers to report that they would arrest the offender. Experienced officers were also more likely than the other groups to report that they would institute a dual arrest, especially if both parties had been drinking.

Feder (1997) examined law enforcement officers' attitudes toward police involvement in domestic violence cases. The majority of officers in this study reported that domestic violence calls were a legitimate part of their job and supported the use of arrest in such cases. Most of the officers also supported the department's mandatory arrest policy. Officers with more traditional views toward women, however, were less supportive of law enforcement intervention in domestic violence cases and to report that such cases were beyond their role as police officers. There were no significant differences by gender or years on the force in this study.

Gender Differences

Previous research has found gender difference in the perception of family violence among non-officers. Women are generally more supportive of harsher formal responses to family violence than are men (Edwards, 1987; Perrott, Miller, & Delaney, 1997; Robinson, 1999; Stalans & Lurigio, 1995). In addition, women rate family violence as more serious and are more likely to blame offenders for the violence (Locke & Richman, 1999). Research examining gender differences among law enforcement officers regarding family violence, however, has shown that women and men report similar arrest rates for hypothetical family violence scenarios.

The research that has been conducted focuses mainly on the differences in male and female officers' arrest decisions in cases involving family violence (Buzawa & Buzawa, 2003). Buzawa and Buzawa report, "The preponderance of research suggests that female officers, although not necessarily more likely to arrest, are reported by victims as being more understanding, showing more concern, and providing more information about legal rights and shelters for victims" (p. 152). Further, research shows that, in fact, "Women and men (do) not differ on arrest rates" (Stalans & Finn, 2000, p. 1). However, the same researchers reiterated the notion that "women (officers) were more likely to recommend battered shelters and less likely to recommend marriage counseling" (p. 1).

Additional research has focused on male and female officers' perceptions regarding gender differences and specifically how female officers respond to family violence (Buzawa & Buzawa, 2003; Homant & Kennedy, 1985). Examining the attitudes of law enforcement officers by gender, Homant and Kennedy (1985) found that women in policing had a "different set of values and goals for dealing with family

fighters” (p. 42). In particular, the items that most strongly differentiated women from men in this study were the importance of the officer showing empathy and concern for the victim and the importance of the officer making sure the victim knows about shelters and ensuring that she is able to get to one.

Belknap (1996) observed the opinions of both men and women in policing regarding who they think is best suited to handle domestic violence cases overall, to handle domestic violence offenders, and to handle domestic violence victims. Most of the officers in her study reported that a combination of men and women were best suited to handle such cases in general. Although only 2% of her sample reported that policewomen were best suited to handle such cases overall, almost half reported that policewomen were best suited to deal with the victims of domestic violence. When asked about dealing with domestic violence offenders, the vast majority of the respondents in this study reported that policemen were best suited to do so, with a very small minority (1.3%) reporting that policewomen were best suited for this duty. Belknap found a tendency for men and women to report a preference for their own sex in dealing with these cases, but this was more pronounced for male officers than for female. Belknap concluded that “belief in gender-specific roles for law enforcement officers seems to be prevalent among the officers in this study” (p. 230).

The limited research that has been conducted concerning gender differences in law enforcement’s response to family violence has focused predominantly on the actual response (i.e., arrests) with little attention given to the individual officer’s perception and knowledge of family violence. This study seeks to contribute to the current literature regarding law enforcement officers’ overall perceptions and knowledge of family violence, with the specific focus of identifying what, if any, gender differences exist among law enforcement officers in this regard.

Methodology

Sample

A non-probability convenience sample was chosen. The subject pool consisted of commissioned law enforcement officers employed with the City of Arlen, Texas (this is a fictional city name). Officers from all ranks and assignments were eligible to complete the survey; however, the surveys were administered in daily shift change briefings, thereby resulting in a sample that is predominantly patrol officers (91.9%).

The Arlen Police Department (APD) serves a city whose population in 2004 was estimated at 359,467 (U.S. Census Bureau, 2005). According to a report secured from the APD, as of August 2005, the sworn personnel consists of 16.79% female and 83.21% male. The commissioned officers employed by the department are comprised of 11.75% Black, 11.75% Hispanic, 70.52% White, and 5.98% other ethnicities respectively.

The Texas Department of Public Safety’s (2005) *2004 Crime in Texas* document states that the APD cited that 3,305 offense reports of family violence were taken for 2004. The APD has a *no drop policy* in effect with cases involving family violence. A no drop policy infers that the department will follow through with charges with or without the victim’s cooperation or consent.

Survey Instrument

A self-administered survey instrument was created to collect information regarding officers' perceptions and knowledge of family violence and victim services. There were 20 5-point Likert Scale items on the instrument, four designed to measure knowledge of victim services and the requirements of law enforcement regarding domestic violence situations, six designed to measure the officer's perception of the effectiveness and appropriateness of a law enforcement response to domestic violence, and ten designed to measure perceptions of family violence in general. In addition, select demographic information was also collected, including gender, race/ethnicity, rank, current assignment, years of service, education, age, and marital status.

Survey Implementation

Permission was obtained from the Chief of Police of the APD to implement the survey instrument to commissioned officers employed within the department. Surveys were distributed to the three districts that comprise the APD: North, East, and West. Officers are equally distributed throughout the three districts. Administrative assistants and sergeants from each district were asked to distribute the surveys at briefings. Upon completion of the surveys at each respective briefing, the completed instruments were placed in an envelope and returned to the administrative assistant. The survey was available to officers for completion at shift change briefings during a time period of approximately two weeks beginning at the end of July 2005 and ending mid-August 2005.

To examine gender differences in the responses, independent *t*-tests were performed to determine whether a statistically significant difference exists between male and female officers in regards to the means for each item.

Sample Size

Information obtained from the APD's *Sworn Position Control Report*, shows that the department employed 565 commissioned officers at the end of July 2005. Of these 565 officers, 321 were assigned to patrol. As mentioned earlier, surveys were distributed at shift change briefings, which meant that patrol officers had the greatest opportunity to complete the survey. The researcher received 61 completed surveys. According to Cohen's *power sampling*, a minimum of 44 are needed if participants are treated to only one exposure, with Cohen's recommendation of a power level of 0.80 (Keppel, Saufley, & Tokunaga, 1992). Thus, the sample obtained satisfies Cohen's power sampling requirement and is therefore believed to be adequate for the purposes of this study.

Findings

Demographics

The demographic characteristics of the total sample are presented in Table 1 as are the demographic characteristics of the two subsamples divided by sex. The overall sample of survey participants consisted of 80.3% males and 19.7% females. The majority of the respondents were White (67.7%), while 19.4% were Black, 6.5% were Hispanic, and 6.4% were identified as another race or ethnicity. With regards

to rank, 83.6% were officers, 6.6% were Corporals, and 9.8% were Sergeants. The majority of the participants were assigned to patrol duty (91.9%). The other assignments represented included Criminal Investigation Division (CID) (4.8%) and Geographic Investigations (3.2%). In terms of years of service, almost 40% of the sample reported 0 to 5 years, 26.2% reported 6 to 11 years, and 34.4% reported 12 or more years. While current standards of the APD require a Bachelor's degree, just over 11% of the respondents had less education than that due to being grandfathered in after the degree requirement was adopted. The majority of the respondents had completed a Bachelor's degree (80.6%) and approximately 8% had earned a Master's degree. In terms of age, 31.2% of the respondents were between the ages of 21 and 30, 39.4% were 31 to 40, and 29.5% were 41 and older. The majority of the respondents were married (72.1%).

Table 1. Demographic Information of Sample

Variable	Attribute	Total Sample	Male Subsample	Female Subsample
Sex	Male	80.3%	100.0%	0.0%
	Female	19.7%	0.0%	100.0%
Race/Ethnicity	White	67.7%	65.3%	75.0%
	Black	19.4%	18.4%	25.0%
	Hispanic	6.5%	8.2%	0.0%
	Other	6.4%	8.1%	0.0%
Rank	Officer	83.6%	81.3%	100.0%
	Corporal	6.6%	6.3%	0.0%
	Sergeant	9.8%	12.5%	0.0%
Assignment	Patrol	91.9%	91.8%	91.7%
	Other	8.1%	8.2%	8.3%
Years of service	2 years or less	4.9%	6.3%	0.0%
	3 to 5 years	34.4%	29.2%	58.3%
	6 to 8 years	16.4%	20.8%	0.0%
	9 to 11 years	9.8%	8.3%	16.7%
	12 years or more	34.4%	35.4%	25.0%
Education	H.S./GED	3.2%	2.0%	8.3%
	Some college	8.1%	6.1%	8.3%
	Bachelor's	80.6%	87.8%	58.3%
	Master's	8.1%	4.1%	25.0%
Age	21 to 25	3.3%	4.2%	0.0%
	26 to 30	27.9%	27.1%	33.3%
	31 to 35	23.0%	22.9%	25.0%
	36 to 40	16.4%	18.8%	8.3%
	41 to 45	16.4%	10.4%	33.3%
	46 to 50	6.6%	8.3%	0.0%
	51 to 55	4.9%	6.3%	0.0%
	56 and over	1.6%	2.1%	0.0%
Marital status	Married	72.1%	79.2%	41.7%
	Not married	27.9%	20.8%	58.3%
		<i>n</i> = 61	<i>n</i> = 49	<i>n</i> = 12

Mean Differences by Gender

In order to examine differences by gender, *t*-tests were performed to examine mean differences that might exist for each item. The results for the *t*-tests for the items measuring knowledge of law enforcement policies and services are presented in the top half of Table 2. As shown, there were no differences by gender for any of these items. Further, for each item, both male and female officers answered in the “correct” direction, indicating that they were generally aware of the services available to victims of family violence. The results regarding the perceptions of the effectiveness of law enforcement in dealing with family violence are presented in the bottom half of Table 2. Again, there were no significant differences by gender. There is some indication that female officers may be more supportive of arrest as a means to deter future violence, but the difference is not significant. Interestingly, both male and female officers were rather neutral regarding the ability of the police to deter family violence.

Table 2. Gender and Knowledge and Perceptions of Law Enforcement Response to Family Violence

Variable	Females Mean (SD)	Males Mean (SD)	<i>t</i> -value (2-Tailed)
Knowledge			
It is my understanding that Crime Victims Compensation effectively assists victims of family violence in relocating to a safe place.	2.42 (0.90)	2.76 (0.99)	1.079
I am aware that law enforcement officers must distribute a “Notice to Adult Victims of Family Violence” material to each victim providing information about services available to them.	1.42 (0.52)	1.51 (0.55)	0.538
It is my understanding that protective orders are completely free to victims of family violence through the District Attorney’s office.	1.83 (0.39)	2.16 (1.09)	1.030
It is my understanding that Victim Assistance cannot respond to scenes involving family violence unless an actual offense has occurred.	4.33 (0.65)	4.04 (0.91)	-1.045
Perceptions			
I believe that arrests deter acts of family violence in the immediate future.	1.92 (0.79)	2.37 (0.95)	1.515
I believe that protective orders are effective tools to prevent future incidents of family violence from occurring.	2.75 (1.22)	2.78 (1.14)	0.690
It is my opinion that the police cannot do much to deter family violence.	3.42 (1.17)	3.10 (1.05)	-0.914
Making a “dual arrest” is better than not arresting at all.	2.67 (0.89)	2.51 (0.98)	-0.504
I believe that services available to victims of family violence are useful.	2.00 (0.60)	2.00 (0.63)	0.000
An officer’s most important duty with regards to family violence is to ensure the safety of the victim.	1.75 (0.75)	1.82 (0.73)	0.281

The results for the *t*-tests examining the perceptions of family violence are presented in Table 3. There were significant differences for six of the ten items. Female officers more strongly disagreed that family violence only occurs among lower socioeconomic families and that family violence is not a significant problem. For both items, male officers also disagreed, but not as strongly. Female officers

more strongly agreed that abusive relationships are based on power and control, that victims are at risk when they leave an abusive relationship, and that verbal and emotional abuse can be as damaging as physical abuse. Again, the perceptions of male officers were in the same direction as the female officers on all of these items, but not as strongly. Male officers tended to agree that most family violence does not involve serious injury whereas female officers tended to slightly disagree with this statement.

Table 3. Gender and Perceptions of Family Violence

Variable	Females Mean (SD)	Males Mean (SD)	t-Value (2-Tailed)
Alcohol and drugs are primary causes of family violence.	2.55 (1.13)	2.96 (1.14)	1.093
I believe that family violence only occurs among lower socioeconomic families.	4.67 (0.49)	4.00 (1.08)	-2.076**
I am familiar with the <i>learned helplessness</i> that victims of family violence develop after being in abusive relationships.	2.00 (0.85)	2.22 (0.99)	0.725
It is my understanding that abusive relationships are based on power and control.	1.58 (0.52)	2.02 (0.72)	1.973*
I believe that the victim is in the highest safety risk when she leaves an abusive relationship.	1.83 (1.19)	2.60 (1.13)	2.098**
A victim's verbal and emotional abuse can be as equally damaging as physical abuse.	1.42 (0.67)	2.22 (1.03)	2.587**
Family violence is not a significant problem.	4.67 (0.49)	4.27 (0.79)	-1.686*
I think that most incidents of family violence do not result in serious injury.	3.45 (1.13)	2.47 (0.96)	-2.980***
I believe that there are valid reasons why victims of family violence stay in a relationship.	2.83 (0.94)	2.88 (0.97)	0.142
I am aware that the cycle of violence is comprised of two phases: the honeymoon phase and the acute battering incident.	2.50 (1.09)	2.86 (1.28)	0.893

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Mean Differences by Years of Service

The results examining mean differences by years of service for the knowledge of law enforcement policies and services are shown in the top half of Table 4. Although the level of agreement with these items generally decreases as years of service increases, there are no significant differences across the three categories of years of service. Regardless of years of service, officers generally agreed with the first three items and generally disagreed with the fourth item. Again, the responses were in the correct direction, indicating that officers in the sample were generally knowledgeable about these items.

Officers' perceptions of effectiveness of law enforcement in dealing with family violence are presented in the bottom half of Table 4. Officers of all experience levels generally agreed that arrests deter family violence in the immediate future, that protective orders are effective, that services available to victims are useful, and

that the most important duty of the officer is to ensure the victim’s safety. They were more neutral in their perception that the police can deter family violence. There were no significant differences for any of these items. There is no evidence here, then, that years on the force makes officers more cynical regarding the effectiveness of law enforcement in dealing with family violence.

Table 4. Years of Service and Knowledge and Perceptions of Law Enforcement Response to Family Violence

Variable	0 to 5 Years	6 to 11 Years	12 or More Years	F
	Mean (SD)	Mean (SD)	Mean (SD)	
Knowledge				
It is my understanding that Crime Victims Compensation effectively assists victims of family violence in relocating to a safe place.	2.58 (1.06)	2.63 (0.96)	2.90 (0.89)	0.678
I am aware that law enforcement officers must distribute a “Notice to Adult Victims of Family Violence” material to each victim providing information about services available to them.	1.38 (0.50)	1.50 (0.63)	1.62 (0.50)	1.169
It is my understanding that protective orders are completely free to victims of family violence through the District Attorney’s office.	1.83 (0.64)	2.13 (1.03)	2.38 (1.24)	1.746
It is my understanding that Victim Assistance cannot respond to scenes involving family violence unless an actual offense has occurred.	4.13 (1.04)	4.00 (0.89)	4.14 (0.66)	0.137
Perceptions				
I believe that arrests deter acts of family violence in the immediate future.	2.13 (0.85)	2.19 (0.75)	2.52 (1.12)	1.131
I believe that protective orders are effective tools to prevent future incidents of family violence from occurring.	2.71 (1.12)	2.75 (1.24)	2.86 (1.15)	0.095
It is my opinion that the police cannot do much to deter family violence.	3.04 (1.16)	3.25 (1.07)	3.14 (1.01)	0.178
Making a “dual arrest” is better than not arresting at all.	2.50 (1.02)	2.81 (0.91)	2.40 (0.94)	0.863
I believe that services available to victims of family violence are useful.	2.00 (0.59)	1.93 (0.80)	2.05 (0.52)	0.150
An officer’s most important duty with regards to family violence is to ensure the safety of the victim.	1.79 (0.78)	1.88 (0.81)	1.76 (0.63)	0.112

The mean differences by years of service for the items measuring perceptions of family violence are shown in Table 5. There are significant differences for three of the ten items. Officers with 0 to 5 years of service were more familiar with the concept of learned helplessness and most strongly agreed that victims are at risk when leaving an abusive relationship and that there are valid reasons why victims remain in the relationship.

Table 5. Years of Service and Perceptions of Family Violence

Variable	0 to 5 Years	6 to 11 Years	12 or More Years	F
	Mean (SD)	Mean (SD)	Mean (SD)	
Alcohol and drugs are primary causes of family violence.	3.04 (1.19)	2.63 (1.15)	2.90 (1.09)	0.638
I believe that family violence only occurs among lower socioeconomic families.	4.08 (1.25)	3.94 (0.85)	4.29 (0.85)	0.542
I am familiar with the <i>learned helplessness</i> that victims of family violence develop after being in abusive relationships.	1.88 (0.80)	2.69 (1.08)	2.19 (0.93)	3.729**
It is my understanding that abusive relationships are based on power and control.	1.83 (0.82)	1.88 (0.62)	2.10 (0.63)	0.848
I believe that the victim is in the highest safety risk when she leaves an abusive relationship.	2.08 (1.14)	2.93 (1.34)	2.48 (0.98)	2.591*
A victim's verbal and emotional abuse can be as equally damaging as physical abuse.	2.08 (1.06)	2.00 (1.10)	2.10 (0.94)	0.450
Family violence is not a significant problem.	4.46 (0.59)	4.25 (0.68)	4.24 (0.94)	0.597
I think that most incidents of family violence do not result in serious injury.	2.70 (0.88)	2.69 (1.20)	2.52 (1.17)	0.169
I believe that there are valid reasons why victims of family violence stay in a relationship.	2.54 (0.88)	2.94 (1.00)	3.24 (0.94)	3.141*
I am aware that the cycle of violence is comprised of two phases: the honeymoon phase and the acute battering incident.	2.83 (1.31)	3.19 (1.28)	2.52 (1.03)	1.367

Note: * $p < 0.10$; ** $p < 0.05$

Discussion

The principle focus of this study was to assess the perceptions and knowledge of officers concerning family violence victims and victim services while controlling for gender and years of service. Some statistically significant differences with regards to gender and years of service were found. However, there were no significant differences with regard to knowledge of law enforcement policies and services or in the perception of the effectiveness of law enforcement in dealing with family violence for gender or years of service.

The previous research that has been conducted concerning gender differences has demonstrated that family violence victims perceive female officers as overall being more helpful and more knowledgeable (Buzawa & Buzawa, 2003; Homant & Kennedy, 2000). The findings presented in this study concur with this notion by producing results that demonstrate female officers may have a better understanding of the dynamics of family violence.

Buzawa and Buzawa (2003) presented research that indicated that female officers viewed themselves as being more concerned with family violence than their male counterparts. Findings from this study agree with this concept. The study found that female officers may have a better understanding of the prevalence and scope of family violence.

Additionally, as is evident in the literature review, the majority of research that has focused on gender differences has been with regards to arrests (Buzawa & Buzawa, 2003). Previous research has shown that there is no difference in family violence arrest rates for male versus female officers. However, in this study it was found that female officers significantly agreed more strongly to the statement, "I believe that arrests deter acts of family violence in the immediate future" than male officers, which may imply that females would be more likely to arrest in family violence cases.

With regards to variables that measured perception, it appears that females may be more sensitive to victims of family violence. This is evidenced by the fact that females significantly agreed more than males to variables such as "I believe that the victim is in the highest safety risk when she leaves an abusive relationship" and "A victim's verbal and emotional abuse can be as equally damaging as physical abuse." This study coincides with past research that has demonstrated that female officers view themselves as being more patient and understanding with victims of family violence (Homant & Kenedy, 1985). Furthermore victims of family violence have also reported that they felt that female officers showed more concern (Buzawa & Buzawa, 2003).

Also, with regards to the seriousness of injuries that victims sustain as a result of family violence, the study found that females were significantly less likely to agree with the notion that most incidents did not result in serious injury. However, male officers tended to significantly agree with this concept. This finding, coupled with the fact that females significantly disagreed with the idea that family violence is not a serious problem, may mean that male officers minimize the prevalence of family violence overall and the real possibility of homicide.

The findings in this study regarding an officer's years of service may demonstrate that continued training after the academy has been effective in teaching experienced officers the latest policies and procedures concerning domestic violence victims. Thus, there were no significant differences with regards to knowledge or perception of services. However, the statistically significant differences pertaining to perceptions of family violence may be a result of lack of training on the dynamics of an abusive relationship.

Officers are mandated to attend continued training on domestic violence annually to ensure their compliance with their commission. The findings related to perception may mean that the trainings are focused more on policies and legislative updates than on helping officers understand the essence of the biological, psychological, and sociological effects that an abusive relationship can have on a victim. In contrast, officers with fewer years of service may have been exposed to these dynamics in their academy.

Conclusion

This study shows that male and female officers may differ with regards to their perception of family violence dynamics. Moreover, it could be argued that sensitivity and awareness of family violence is more prevalent among female officers. Further, past research has demonstrated that victims preferred a female officer as a first responder (Homant & Kennedy, 1985). Therefore, the authors

contend that female officers may respond to the needs of family violence victims more effectively. In turn, police departments may want to adopt policies that, if at all possible, a female officer responds to calls involving family violence.

Buzawa and Buzawa (2003) discussed previous research concerning gender differences in officer's response to family violence:

The extent of a male-female dichotomy has been questioned by several feminist authors (Ferraro, 1989a; Radford, 1989; Stanko, 1989) who believe that to work in a male-dominated organization, female officers behave similarly to men because of occupational socialization or simply to fit in. This theory is generally unproven by empirical research. (p. 152)

Due to the differences found in this study, it could be argued that, in fact, female officers may identify as a female first and as an officer second.

The study's findings may present implications concerning gender with regards to training. For example, police departments and training academies may find it necessary to improve the training of male officers or specifically to create curricula catered to train male officers about family violence.

With regards to years of service, it appears that more experienced officers may not be familiar with the dynamics of domestic violence, including why victims stay in abusive relationships. A more comprehensive understanding of these dynamics may affect the way that officers interact with victims. For example, the Stalans and Finn (2006) study found that experienced officers were more likely to separate a couple for the night if there was no visible injury to the victim. However, if an experienced officer had a more comprehensive understanding of concepts like learned helplessness, the officer may attempt to intervene. This intervention might make a difference in whether a victim attempts to leave a violent relationship. Therefore, experienced officers may benefit from an inclusive training comprised of policies and procedures and the dynamics of domestic violence.

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The Problem of Policing Economic Crime in Russia

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In the past decade, many transitional countries, especially Russia, have experienced the merging of criminals, state officials, businesspersons, and law enforcement into a network for mutual financial and economic benefits. Their operations led to the fundamentally new phenomenon—the organized crime network (OCN)—a symbiosis of the developed forms of corruption at all administrative levels of organized and economic crimes.

Analyzing crime data from law enforcement and business experts, this study examines the trends of organized crime and corruption in Russia. It examines the responses of the Ministry of the Interior experts, the Chief Directorate of Fight Organized Crime (MVD R.F.), and entrepreneurs in three dimensions: (1) types of enterprises controlled by criminal network groups; (2) circumstances facilitating the expansion of their control over territories and the economy; and (3) the methods and forms of such control. Throughout this report, this analysis helps to assess the scale and danger of economic crime and corruption in Russia and assess the problems law enforcement faces and its efficiency in dealing with those crimes.

Russia's post-transition economic crime is a complex system of social and economic relations for illegal profit extractions through a corruption network. Organizing such a network involves the professional activity of a criminal organization or groups consolidated within the region (territory), a strict hierarchical structure, and allocation of functions for profit extraction. These groups infiltrate into legitimate businesses, state authorities, and law enforcement, using violence, corruption, and monopoly on illegal goods and services to maintain their antisocial activity and obtain immunity from exposure through conspiracy. Criminal activity within the network has increasingly become instrumental in dividing and monopolizing markets, and in securing market share and higher profits. OCN(s) penetrated businesses and state-run enterprises to a degree unheard of anywhere in the Western world, a fact that start-up firms soon discover. Moreover, its reach in the business realm extends throughout the former Soviet Union (Burton & Burges, 2007).

According to the Ministry of the Interior (OBR [operational investigation bureau])¹ experts' study on OCNs infiltrating the national economy,² 10% of law enforcement is convinced that organized crime supervises all legal and illegal economic activities nationwide. The majority of those experts (65%) believe that the OCN is one of the important elements, rendering a negative influence on the criminal situation in the economy; 23% recognize OCNs as a second tier of the whole economy; and the rest do not see any significant influence on the criminal situation in the economy (Larichev, 2002).

Contemporary Russian economic crime is more integrated than ever before. Leaders of OCNs, aiming at strengthening their growing organizations and expanding their spheres of influences, have united all capital under the most authoritative

leaders. Criminal associations began using violence to apply pressure on different players of the developing market, aspiring to key positions in the emerging economy. There are more than 28 large businesses in industrial centers, among them Moscow, St. Petersburg, Krasnoyarsk, Norilsk, Irkutsk, Rostov, and Togliatti, that are controlled by criminal groups.

In the past five years, the Ministry of the Interior experts recognized a tendency for criminal integration into business. In particular, in regards to the most criminal areas, 21% of law enforcement agencies have pointed to those operated within intraregional administrative borders, 18% have specified all territory of a region, and 3% have indicated that an entire region is a part of the interregional criminal community (Larichev, 2003b).

As to the source for such contemplation, 32% of law enforcement agencies have specified the intelligence data, 19% the analysis of criminal statistics, and 21% the financial and economic parameters of economic activities. According to the same study, 69% of the law enforcement agencies have the insider's information that criminal groups totally control the enterprises' activities, and only 29% of experts did not believe this. In respect to the economy's criminal subdivision, 34% of law enforcement agencies have investigated such cases, and 56% have denied such possibilities (Larichev, 2003a). Consequently, enterprises and a small subdivision of the economy are the most controlled by the criminal network group.

The same conclusion confirms the opinions of the enterprises' employees. In particular, as to whether there is a criminal network group at the enterprise where they work or in the city and region where they live, 61% have answered yes, 24% responded negatively, and the others have refrained from answering.

Law enforcement agencies have even suggested using the term *criminalized objects* for enterprises connected with or controlled by the OCN. As to the cause for such criminalization, 52% of law enforcement agencies observed that there was a raise in economic crime in general, 34% associated it with mass unemployment, and 23% believed that regions rich in natural resources attract criminal activity (Shkolov, 2007).

On the question "What scale of organized crime networks are operating in your region?" 47% of law enforcement agencies have indicated local groups, 31% regional, and 17% of an interregional level (Statistika, 2006).

Regarding the scale of OCN activity, experts of the Ministry of the Interior presented different information: 19% believe that it is limited to a region, 60% have specified interregional character, 6% presume it is carried out within the Commonwealth of Independent States (CIS), and 14% indicated that it was on an international scale (Statistika, 2006). These differences in evaluating the OCN scale of operations come with divergence of the function of law enforcement agencies in various regions. Moreover, in the second case, law enforcement agencies from the Main Anti-Organized Crime Directorate (Glavnoe Upravlenie po Borbe s Organizovannoi Prestupnostyu [GUBOP]) of the Ministry of the Interior most likely are fully informed on the scale of OCN activity. Therefore, there is a reason to believe that the experts of the Ministry of the Interior are more informed about the realities and, thus, the most widespread scale of OCN activity is interregional.

Thus, the Ministry of the Interior experts have specified that 2% of the OCN integrated into the homogeneous criminal community with one executive center within the boundaries of a region. Smaller criminal groups that operate independently within a large criminal community compose about 19%. Those independently operating in various spheres of the economy and that are cooperating with others on a consultation basis for tactical operations only are 54%. Additionally, 24% operate completely independently (Regional Department for the Fight Against Organized Crime, 2007).

Therefore, in most cases, criminal groups autonomously carry out their enterprises in various spheres of the economy, cooperating with others only on a tactical decisionmaking level. Other groups operate independently within the boundaries of a larger criminal community and often do not cooperate. Almost 33% of the Ministry of the Interior experts have noted that each criminal group supervises a specific sphere (branch) of the region's economy; and 32% estimate that various criminal groups specialize in joint control over one sector of the economy. At the same time, 13% believe that there are some OCNs, which specialize and supervise various spheres (branches) of the Russian economy (Larichev, 2002). Hence, in most cases, various criminal groups maintain a distributive character of control over the economy. With little more than extortion in mind, they were bound to defend and even look after their past victims to survive violent competition. In creating a set of tricks that allowed them to embezzle huge amounts of cash, they were able to work out a system of guarantees to secure the transactions of their clients. Previously demonstrating their absolute disrespect for the law, accounting, and public opinion, they ultimately found themselves hiring lawyers, accountants, public relations professionals, and even police units to protect and manage their assets (Volkov, 2002). Among those, law enforcement agencies estimate that about 54% of the economists, 39% of commercial and state-run bank employees, 28% of the federal customs officers, 43% of the financial inspectors and tax police, 22% of the computer technology experts (e.g., system administrators and hackers), and 14% from other branches work for the OCN. In addition, by bribing officials, the OCNs create a corruption network: 64% in the institutions of local government, 24% in representative bodies of the Russian Federation, 41% in the executive bodies of the Russian Federation, 17% in the territorial and federal governments, and 28% in law enforcement agencies (King & Cheloukine, 2007). Hence, corruption networks have been formed and maintained at the local and regional levels.

Law Enforcement Agencies' Assessment on Types and Forms of OCN Controls Over Enterprises and the Economy

The liberalization and privatization of the state enterprises in the Russian economy have legalized organized crime groups and illegal economy entrepreneurs' capital and made them legitimate businesspersons. Under this process, the OCN directly took many enterprises under its control or made them dependent on a commercial structure created by organized crime groups. Seven criminal groups, for example, controlled the Russian car manufacturer *Lada* (Auto-Vaz), with about 800 members. They control the process of car manufacturing, assemblage, and retail, with annual criminal income between \$600 and \$800 million (Kak delili Auto-Vaz, 2000). Other OCNs have power over more than 40,000 enterprises with various ownerships, including 1,500 state enterprises, 4,000 joint-stock companies, over 500 joint ventures, 550 banks, and 700 wholesale and retail markets (Grib, 2001).

Regarding the types of enterprises and businesses controlled by the OCNs, both law enforcement agencies and business entrepreneurs remain unanimous on what the most criminalized sectors of the economy are (Larichev, 2002). These are the enterprises of fuel and energy, 53 and 46%, respectively; enterprises and associations of the consumer market, 47%; and foreign trade, 24%.

Unlike at the beginning of the transitional period in the 1990s, current economic and financial activities of legal enterprises are concentrated in the industrial sphere and, therefore, organized crime has been inclined to take them under their control. In order to impose such control, the OCNs cooperate closely and, more often, merge with regional financial and industrial groups under the leadership of the *avtoritetnyi predprinimatel*³ of a large criminal group. The OCNs, then, are forced to carry out the criminal group's policies against competitors. They organize illegal operations in loans and banking transactions, real estate, and securities, which, in turn, become an untraceable form of money laundering.

By degree of OCN activities, the most vigorous areas of organized crime operations are in fuel, energy, bootlegging, and tobacco enterprises. Next are the enterprises of the consumer market, foreign trade, jewelry manufacture and use of precious metals, and the state funds. The third place in the hierarchy of OCN preferences are intellectual piracy, banking, and the forced bankruptcy of various enterprises of the Russian economy.

High profits in fuel and energy draw the steadfast attention of criminal organizations to control those sectors. The OCN launches firm-intermediaries and buyers of oil, allocation of raw materials and processed products, as well as dictating retail prices. In so doing, the transaction costs of oil and minerals are artificially set very high by including charges that have not been associated with purchase, transportation, and retail. The oil-producing companies physically transfer a part of the extracted oil to a regional administration as a part of its debt repayment or for outstanding taxes. Some officials, being a part of the OCN, transfer oil and energy products to commercial structures set up by organized crime to sell and wire the profit to a foreign bank. In the majority of such cases, the defining factors of the oil-extracting companies' criminalization are the lack of legal regulations at the registration, licensing, and taxation levels.

Organized crime activity has also increased in the sphere of illegal manufacture and distribution of alcoholic beverages. Criminalization of this highly profitable area was a result of the privatization of the state monopoly in the manufacture and retail of liquor. The OCN is involved in the manufacture of forged and nonlicensed alcoholic beverages, collecting extra profits by distributing such products with obtained state-preferential tax and exempt customs duties. Profit from the illegal alcoholic beverages market in 2004 was about 220 to 230 million dollars annually, which is practically half of the illegally produced and sold alcohol. Licenses to newly created enterprises were issued without examining the region's demand for alcoholic beverages or even the enterprise's production capacity. More than ever, these licenses were obtained by bribery.

Law enforcement and businesspersons have similar observations on the circumstances facilitating the expansion of the OCN's control over the territories and the economy. Thus, both law enforcement and businesspersons have put the

corruption of government officials (50 and 72%, respectively) as the first level. The most typical techniques of corruption network maintenance are bribes; free services; and favorable conditions in financing, low or no rent housing, and personal favors. Government officials maintain ongoing contacts with the businesspersons at all levels of the economy. Alongside this connection are weak governmental regulations, unresponsiveness of power authorities to citizens' needs, and the concurrence of criminal leaders' interests with entrepreneurs of the shadow economy. Consequently, both law enforcement and businesspersons (29 and 34%, respectively) consider enterprise directors to have been corrupted by members of the OCN by means of various transactions with commercial structures controlled by OCN, using laundered money to buy shares or even the enterprise itself, and conducting illegal financial operations through OCN-created fictitious enterprises.

At the same time, experts disagree as to the forms of control of money, natural resources, or extortions from the enterprise managers and directors (9 and 25%, respectively), and the control-management of the municipal institutions and law enforcement agencies through government officials (17 and 40%, respectively). Divergence in evaluating the form of control, on the one hand, is understood as the unwillingness of the enterprise directors to report on the facts of their encounters with the OCN and, thus, the majority of law enforcement agencies consider such phenomena practically nonexistent. However, on the other hand, it is impossible to exclude that the extortion tactics has changed. The OCN does not demand money directly, but veils it under rendering to the enterprises' security and other services. A considerably small percentage of law enforcement agencies (17%) are unwilling to specify to the question of OCN control over government authorities and law enforcement agencies because they (might) participate in such criminal activities.

In 2002, the results of the continuing study were quite different (Larichev, 2002). Organized crime, in order to have control over the enterprises, began buying controlling shares. About 25% of criminal groups (in economically developed regions almost 50%) launder criminal profits throughout legally operating commercial structures by purchasing real estate and enterprise shares, and by investing in various businesses. More often, they began to use legal bankruptcy procedures and other schemes to change the proprietor and the enterprise administrative personnel. Violence and intimidation and the forceful placement of OCN's people into enterprise management's key positions are also common practices, as well as forcing managers to commit transactions through controlled commercial structures. The OCN applies all the tricks possible to establish control over commercial banks and insurance companies. According to the Ministry of Interior data, 550 banks (more than 50% of those that are officially licensed) are under criminal manipulation and control (Shkolov, 2007). If in previous years an attempt to establish control over bank officials was carried out through security services or blackmail (even physical violence), now there are economic methods such as buying up shares or management.

At the first stage, the bank that encounters financial difficulties (artificially provoked by plunders in proceeded loans) will be forced to sell its shares and controlling package and, subsequently, individuals loyal to the OCN would be placed into the bank's executive board. Using laundered money through controlled commercial structures, the bank quickly increases its authorized capital, conducting all types

of contracts on behalf of the bank. Through this process, the OCN carries on a massive financial fraud.

For example, in 1991, the OCN plundered \$125,000 from the Russian Foreign Trade and Investment Bank, and in September 1993, it perpetrated an electronic swindle for more than 68 billion rubles from the Central Bank. In 1995 alone, Russian Central Bank's Money Laundering Department investigated more than 300 attempts of illegal transactions of stalling or laundering money (Alekseev & Demidov, 1997). As for commercial banks, it is practically impossible to estimate damages of possible plunders of securities and the stock exchange, though one example is remarkable. The Dagestan's commercial bank employee "*Khasavyurt*," through different schemes, illegally appropriated 670 million dollars and 130 million Euros of the bank customers.⁴

In order to establish control over highly profitable enterprises and banks, the OCN carries out the following operations:

- Controls enterprise property by buying shares or supplying desperate enterprises with criminal cash
- Uses forced bankruptcy procedures and other schemes to change the proprietor and the administrative personnel
- By violence or deceit, inculcates enterprise and government key positions into people loyal to the OCN to privatize profit
- Forces managers or directors of the enterprises to perform all financial transactions with commercial structures under the OCN's control

To carry out such actions, the OCN actively bribes representatives of the government, law enforcement, and private security structures. Such practice is typical only for the highest criminal elite seeking to enlarge their businesses as well as to ensure immunity in potential charges.

Conclusion

While the state is persistently reorganizing law enforcement, the actual reform that would improve their performance has not occurred. Police may still arrest a group of criminals caught in illicit acts, but the lack of conspiracy laws means police cannot arrest the leaders as long as they were not directly involved in the crimes. Existing laws offer no means to seize records of fraudulent companies or ways to check the criminal provenance of bank accounts.

Organized crime strives to increase and legalize its income by infiltrating into economic and financial systems. Criminal associations attempt to acquire packages of enterprises and banks by controlling shares and infiltrating the international trading structures. By creating an extensive network of controlled commercial and financial enterprises, they invest in profitable industries with various forms of property. Export-import transactions and legal enterprise activity serve as convenient cover-ups to conduct large-scale frauds with uncontrolled profit, a major part of which is transferred to foreign bank accounts and assists in money laundering.

Endnotes

- ¹ The RUBOP (the Russian acronym for “regional department for the fight against organized crime”) and KFKM (federal criminal police committee) were replaced by OBRs “operational investigation bureaus”—one for each of the country’s seven federal districts. These bureaus coordinate the activities of the districts’ anti-organized crime, anti-economic crime, and antinarcotics units.
- ² Russian law enforcement does not differentiate (as well as does not use the term *corruption network*) between economic crime committed by organized crime groups, white collar groups, and the corruption network. The Russian Ministry of the Interior experts include in the category “Economic Crime” such crimes as bribes, extortion, counterfeiting, counterfeit products, illegal financial transactions and contracts, and more.
- ³ Authoritative businessperson who used to be either *vor v zakone* or authoritative (*avtoritet*) criminal boss.
- ⁴ The Ministry of Interior RF. (2007). Interfax.

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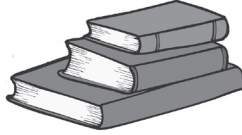
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