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The Police Canine Bite: Force, Injury, and Liability

by

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I. Introduction

The changing nature of American society generally and particularly the evolution of crime and criminals have caused changes in police tactics, weapons, equipment, policies, and training. The roles of the police in modern society have been subject to substantial change, debate, and analysis. However, no area of policing has received more attention than has the use of force.¹ Many scholars and practitioners have dichotomized police use of force into deadly force and non-lethal force, and into issues of discretion, attitude, technology, policy, training, supervision, and discipline.

At the expense of oversimplification consider that the police use of firearms is deadly force. Consider further that all other force options are non-deadly/less than lethal

¹See, e.g., Kenneth Adams, *Measuring the Prevalence of Police Abuse of Force*, in *And Justice for All: A National Agenda for Understanding and Controlling Police Abuse of Force* (William A. Geller & Hans Toch eds., 1995); Geoffrey P. Alpert & Roger G. Dunham, *The Force Factor: Measuring Police Use of Force Relative to Subject Resistance* (1997); David Bayley & James Garofalo, *Patrol Officer Effectiveness in Managing Conflict During Police-Citizen Encounters*, in Report to the New York State Commission on Criminal Justice and the Use of Force (NY 1987); Egon Bittner, *The Function of Police in Modern Society* (1980); Michael K. Brown, *Working the Street: Police Discretion and the Dilemmas of Reform* (1988); Jonathan K. Dorriety, *Police Service Dogs in the Use-of-Force Continuum*, 16(1) *Crim. Just. Pol'y Rev.* 88 (2005); James Fyfe, *The Split-Second Syndrome and Other Determinants of Police Violence*, in *Critical Issues in Policing* (Roger G. Dunham & Geoffrey P. Alpert eds., 1997); Edward R. Hickey & Peter B. Hoffman, *To Bite or Not to Bite: Canine Apprehensions in a Large Suburban Police Department*, 31 *J. Crim. Just.* 147 (2003); Robert E. Worden, *The "Causes" of Police Brutality: Theory and Evidence on Police Use of Force*, in *And Justice for All: Understanding and Controlling Police Abuse of Force* (William A. Geller & Hans Toch eds., 1995).

force. These non-deadly force options include physical contact, holding, hitting; use of pepper spray or mace—chemical weapons; the use of a baton—impact weapon; the use of a Taser or stun gun—electronic weapon; and the use of “bean bag impact projectile”—kinetic energy weapon. In addition to these weapons the police are equipped with other devices that have become considered, arguably, tools rather than weapons. These “tools” include flashlights, police cars, and barking police canines (the terms K-9, police dog, service dog, and patrol dog are used synonymously). However, the moment a police officer hits a person with a flashlight, rams a person or another vehicle with a police car, or causes a police dog to bite someone, these tools instantly become instrumentalities of force, even if one chooses not to use the term “weapon.”

Obviously, police dogs and police cars are quite different instrumentalities of force, yet ironically, they have something in common and provide a good example of the canine use of force dilemma. Neither is considered a weapon traditionally, but both can be used to apply force and even deadly force. In April 2007 the United States Supreme Court decided in *Scott v. Harris* that a police officer who stops a high-speed chase by ramming a fleeing suspect’s car does not violate the Fourth Amendment when the fleeing car poses an actual and imminent threat to others. The opinion weighed the need to prevent the harm the driver could have caused, against the high probability that the driver would be harmed by the officer’s use of force.²

This research addresses the use of force in police situations where the police instrument of force is a police canine. Of course these situations involve suspects on foot, who may be suspected of or who have committed a felony, a misdemeanor, or even a minor traffic violation, who may be armed or unarmed, and who may or may not be a

² *Scott v. Harris*, 127 S. Ct. 1769 (2007).

threat to others. However, they face a high probability of harm/injury from the police use of force by a deployed biting police canine.

This paper provides insights as to how much force a biting police canine applies, the seriousness of the injuries, where it fits in an officer's force options, and the attendant policy and liability issues. The authors have used hospital visitations as a result of the police use of force by baton, stun guns/Tasers (electronic restraint devices), impact projectiles and canines as comparative indicators of serious bodily injuries. The data suggest injurious non-death outcomes by police canine deployments are much more likely than injuries from batons, stun guns/Tasers, and impact projectiles. As such, serious injuries from police canine deployments are common and are to be expected. Although deaths from police canine encounters are not frequent, serious injuries and death are not unexpected consequences from such an instrumentality of force. Recognizing the police canine's potential for causing serious injuries and even death, its use and limitations as a force option, and obvious issues of liability are examined in this paper.

As a matter of policy, any weapon or instrumentality of force that cannot be incorporated in the use of force continuum or otherwise understood through training, that weapon or instrumentality of force should not be used against any suspect. With regard to police canines, police policymakers and canine handlers must understand just what a canine is and is not regardless of the methods and techniques used to impart that information.

In *Brandon v. Village of Maywood*, an officer's split-second decision to shoot (deadly force) a dog (someone's pet, not a police dog) of unknown propensity for

violence to avoid being injured was reasonable.³ The need to shoot the dog to avoid potential injury was reasonable.

Clearly, when the tables are turned and police officers are confronted with the potential of being attacked and seriously injured by a dog, deadly force against that dog is readily accepted as being reasonable. This indicates that the only level of force greater than a threatening dog is deadly force. In fact, the only justification for a police officer to shoot a threatening dog is the likelihood of serious injury by the dog to the officer or others.

The United States Police Canine Association offers the “police dog is an instrumentally of force, like a baton, to be judged according to the rules that apply to police use of force generally.”⁴ Mayo Clinic’s Presutti, states “The jaws of a large dog can exert pressure of 450 pounds per inch (psi), enough to penetrate light sheet metal. Resultant wounds consist of crush injury with tears, avulsions, punctures, and scratches.”⁵ However, Hutson reports that police canines are “trained to exert bite forces up to 1,500 psi.”⁶ Police canines typically are large dogs with the German Shepard being the breed of choice. Meade compared domestic and police dog bite force with related injuries. That study reported police dogs produce a bite force between 450 and 800 psi,

³ 157 F. Supp. 2d 917, 924-925, 934-935 (N.D. Ill. 2001).

⁴ Alec Campbell, Richard A. Berk, & James J. Fyfe, *Deployment of Violence: The Los Angeles Police Department’s Use of Dogs*, 22(4) *Evaluation Rev.* 535 (1998).

⁵ R. John Presutti, *Bite Wounds: Early Treatment and Prophylaxis Against Infectious Complications*, 101 *Post Graduate Medicine* 243 (1997).

⁶ H. Range Hutson, et al., *Law Enforcement Canine Bites: Injuries, Complications and Trends* 29(5) *Annals of Emergency Medicine* 638 (1997).

are trained to bite down hard, bite with full-mouth using all the teeth, bite multiple times/places, and hold until handler commands the dog to release.^{7, 8}

⁷ P.C. Meade, Police and Domestic Dog Bite Injuries: What are the differences? What are the Implications about Police Dog Bites? 37 (11) Injury Extra 395 (2006).

⁸ The disparity of the measures in the literature is attributed, in part, to the two physical concepts/terms used--bite force and bite pressure. Although the physical meanings of these two terms are used in the literature simultaneously, they are not synonymous. However, there is a connection between them. Pressure is measured as force per unit of area. Hence, the bite pressure of a dog is the bite force applied through the dog's teeth on a body divided by the contact surface area of the dog's teeth that are biting. As far as we know, there are no published scientific studies which report the direct measurement of dog biting pressures with "pounds per square inch (psi)" or similar pressure units, because of the technical difficulties involved in such a direct measurement.

However, a direct dog biting force measurement has been reported, with the help of an embedded force sensor. (D.L. Linder, et al., *Measurement of Bite Force in Dogs: A Pilot Study* 12(2) j Vet Dent.49 (1995)). The measured maximum dog bite force was 1,394 Newtons from 22 dogs of different sizes and breeds, equal to 313 pounds for the biting force. To the best of our knowledge, this is the most credible directly measured dog biting force. This value is also in agreement with another direct measurement of bite forces done by Dr. Brady Barr, National Geographic. Dr. Barr measured bite forces of domestic dogs, including German Shepherd, American Pit Bull Terrier, and Rottweiler using a bite sleeve equipped with a force sensor. The measured average bite force is 320 pounds from a large domestic dog. (<http://dogfacts.wordpress.com/2008/02/03/national-geographics-dr-brady-barrs-bite-pressure-tests/>)

The authors did a simple estimation of the dog biting pressure in terms of psi. Although there are some variations in breeds, most adult dogs have 42 teeth, with the upper jaw 20 teeth and the lower jaw 22 teeth. The total area covered under these teeth was calculated based on the cross section of each tooth. From a set of adult dog teeth we have, the total cross section formed is approximately 2.5 in² for both 20 upper jaw teeth and 22 lower jaw teeth. Hence the bite pressure estimated from the measured average bite force and the calculated total area is roughly 320 pounds/2.5 in² = 128 psi.

II. Theory

Black's Law Dictionary, Seventh Edition, defines force as "Power, violence or pressure directed against a person or thing." Generally, the need for force, not the injury inflicted, makes force lawful or unlawful. However, the need for force must be sufficient to justify the injury of a baton strike and a police canine bite, as examples. The use of force must be reasonably proportionate to the suspect's resistance and threat.

Clearly, force and the resulting pain and injury are linked to police control of a suspect. The purpose of the police using any force is to gain compliance from and control of a suspect. The need for force must be sufficient to justify the application of reasonable force and justify any injury suffered by the suspect.⁹ Desmedt (1984) states "the officer must resolve the confrontation with a minimum of injury to all parties concerned." When the injuries suffered are disproportionate to a suspect's crime, threat, and resistance it can be argued the force used was objectively unreasonable, unnecessary, and excessive. Therefore, law enforcement agencies and officers must not be indifferent to the likelihood of injury whether the force is a Taser/stun gun, baton, fists, pepper spray, canine, or firearm.

Deadly force is defined as "Force that creates a substantial risk of causing death or serious bodily injury."¹⁰ Although the courts have concluded the use of a police canine is not deadly force, a police canine routinely inflicts serious bite injuries to suspects. In this context, the authors approached the issue of force simplistically by

⁹ John C. Desmedt, *The Use of Force Paradigm for Law Enforcement*, 12(2) J. Police Sci. & Admin. 170 (1984).

¹⁰ Int'l Ass'n of Chiefs of Police, National Law Enforcement Policy Center, *Use of Force: Concepts and Issues* (2006).

excluding deadly force and asking which instrumentality of force results in the greatest likelihood of injury. To address this question, police use of force data, where injuries were reported, were collected and analyzed.

Although the courts have considered death resulting from police dog bites as extreme aberrations, this paper addresses the outcome and likelihood of serious injuries produced by a biting police canine. This is of particular importance since the use of force by police must be based on a standard of objective reasonableness, including the seriousness of the crime. Moreover, the police, in using force, need to consider the likelihood and degree of injury to suspects, since the degree of crime seriousness--felony and misdemeanor--must be considered.

With court decisions declaring that police canines do not constitute deadly force, segments of the law enforcement community have treated the police canine as a universal less-than-lethal "tool/weapon" widely used to bite merely suspicious persons and minor misdemeanor and non-violent offenders. It is apparent that police canine policies and training, as they relate to the use of force, are unclear and lack consensus.

The police canine has many valuable qualities including speed to outrun a fleeing suspect and extraordinary senses to track and locate drugs, explosives, dead bodies, and hiding suspects. However, the police canine's capacity to bite and seriously injure a suspect is of particular importance to understanding the police use of objectively reasonable force.

It is universally accepted in law and public policy that law enforcement officers may use reasonable and necessary force to effect an arrest. Law enforcement officers are trained to use force to overcome a suspect's threat to the officer and his resistance to

arrest. However, an officer must not initiate force, but rather respond to a suspect's threat and/or resistance with a level of force that is appropriate and proportional to overcome that threat and/or resistance. The force options are the police techniques used to gain control and an individual's compliance, often through the deliberate and lawful infliction of pain. These include a continuum of force ranging from mere verbal commands and escalating to the application of pain through hand and arm control holds, pepper spray, stun gun/Taser, baton strikes, impact projectiles (Kinetic Energy Impact Projectiles), canines, police cars, and ultimately the use of deadly force.

A Force Continuum is one of the common police use of force training techniques used to translate the law and police policies to meaningful police procedures and practice. A force continuum is used to provide a structure for determining the appropriate amount of force an officer may use to control a subject in response to a subject's resistance. Since numerous variations of force continua are used by police agencies, the authors will use the "Confrontational Force Continuum" as a reference.

The "Confrontational Force Continuum" is an example of the models used to train police officers in the United States in the use of force. This model consists of seven steps. They are as follows:

Step I. Officer Presence

The officer assumes control of the situation or suspect through his announced and/or uniformed presence.

Step II. Verbal Command

Presence has failed; the officer now begins verbal persuasion/dialog and if needed command/warning mode to take control of the incident.

Step III. Open Hand

Where practical, the officer places his hand on the suspect and advises him that he is under arrest. All resistance beyond this point is unlawful and must be countered by the officer. This step often leads to a wrestling match, grabbing, and pushing.

Step IV. Pain Compliance

This is where officers may employ pressure point control or oleoresin capsicum (OC). Officers may utilize OC at Step III whenever an accelerated reaction using higher force is appropriate. The potential for weapons, considerable size difference, multiple suspects, combative behavior, the influence of alcohol, controlled substances, or other drugs could justify this greater force.

Step V. Mechanical Compliance

The usual methods of mechanical compliance include wristlocks, arm bar, or other “come along” techniques. These employ counter joint pressures and leverage. They may be applied utilizing handcuffs or the police baton (as a lever or hard object to body pressure point) [added, not in the original].

Step VI. Impact

It is only when mechanical control methods are ineffective or inappropriate that the force applied escalates to the use of impact weapons. When practical, blows should initially be directed to the soft tissue areas, such as the back of the legs or buttocks, prior to a strike at a joint or bone.

This is the intermediate step between hand-applied force and the ultimate force of firearms.

Step VII. Deadly Force

This ultimate step is appropriate only to protect yourself or another from death or serious injury, or to apprehend a forcible felon when you have exhausted all other reasonable means of apprehension and the suspect presents an imminent risk to the community if not immediately apprehended. Where practical, a verbal warning must be given.¹¹

Of significance to this paper is *Step VI. Impact*. It is here where police, generally may use batons, Taser/stun gun, and flexible and non-flexible impact projectiles (e.g., gun fired bean bags, rubber, and plastic projectiles) to the body (not to the neck or head) to overcome violent and active resistance. It is one step immediately below deadly force where impact weapons may be used to the head. Clearly, the point of impact is a use of force consideration because of the potential for serious injury or death. Using the IACP Model Policy, the police canine should be placed at *Step VI. Impact* on the Confrontational Force Continuum. Notice that the police canine is not mentioned in the Confrontational Force Continuum.

The IACP states, “On a continuum of force, deployment of a police canine should be considered a force option below that of deadly force and about equal to such less-lethal tools as the baton, stun gun, and carotid neck restraint.”¹² Likewise, IACP Model Policies, *Law Enforcement Canines* 1991 and 2001 state:

IV. PROCEDURES A. Team utilization for location.

¹¹ Ronald H. Traenkle, *Confrontational Force Continuum* (2004).

¹² Int’l Ass’n of Chiefs of Police, National Law Enforcement Policy Center, *Law Enforcement Canines: Concepts and Issue* (Paper 2, September 2001).

Apprehension of Suspects

1. The deployment of a police canine for the location and apprehension of a suspect is a use of force that must be consistent with this escalation of force.
2. Decisions to deploy a canine shall be based upon
 - a. the severity of the crime;
 - b. whether the suspect poses an immediate threat to the safety of the officers or others; and
 - c. whether the suspect is actively resisting arrest or attempting to evade arrest at the time.¹³

III. Law Enabling Officers to Use Force

State and federal criminal laws provide explicit provisions for the use of force in law enforcement. Section 508 of the Pennsylvania Crimes Code is an example of such a law.

§508. Use of Force in Law Enforcement.

- (a) Peace officer's use of force in making
arrest.

1. A peace officer, or any person whom he has summoned or directed to assist him, need not retreat or desist from efforts to make a lawful arrest because of resistance or threatened resistance to the arrest. He

¹³ Int'l Ass'n of Chiefs of Police Model Policies, *Law Enforcement Canines* (1991 and 2001).

is justified in the use of any force which he believes to be necessary to effect the arrest and of any force which he believes to be necessary to defend himself or another from bodily harm while making the arrest.

Clearly, statutory law does not provide meaningful operational guidelines for officers to follow as they make use of force decisions. Likewise, the law does not mention officers force options, only that they must be necessary and reasonable. As a result, law enforcement agencies must formulate written use of force policies and procedures to guide officers' performance in the use of force, consistent with the law. Further, to ensure officers understand both the law and agency policies, organizational training is conducted to translate policy to police procedures and ultimately to police practice.

It is the law that provides the foundation and need for law enforcement agencies' policies. Therefore, law enforcement agencies must formulate written use of force policies and procedures to guide officers' performance in the use of force, consistent with the law. Further, to ensure officers understand both the laws and agency policies, organizational training must be conducted to translate policy to police procedures and ultimately to police practice.

IV. Case Law Regarding the Police

Canine as a Use of Force

The Supreme Court in *Tennessee V. Garner* decided (a) “Apprehension by the use of deadly force is a seizure subject to Fourth Amendment’s reasonableness requirement. To determine whether such a seizure is reasonable, the extent of the intrusion on the suspect’s right under that Amendment must be balanced against the governmental interests in effective law enforcement.”¹⁴ Further, the Court held in *Graham*:

All claims that law enforcement officials have used excessive force--deadly or not--in the course of an arrest, investigatory stop, or other “seizure” of a free citizen are properly analyzed under the Fourth Amendment’s “objective reasonableness” standard, rather than under a substantive due process standard.¹⁵

(a) The notion that all excessive force claims brought under § 1983 are governed by a single generic standard is rejected. Instead, courts must identify the specific constitutional right allegedly infringed by the challenged application of force, and then judge the claim by reference to the specific constitutional standard which governs that right.¹⁶

(b) Claims that law enforcement officials have used excessive force in the course of an arrest, investigatory stop, or other “seizure” of a free citizen are most properly characterized as invoking the protections of the Fourth Amendment, which guarantees citizens the right “to be secure in their persons . . . against

¹⁴ 471 U.S. 1, 7-12 (1985)

¹⁵ 490 U.S. 386, 392-399 (1989)

¹⁶ 490 U.S. 386, 393-394 (1989)

unreasonable seizures,” and must be judged by reference to the Fourth Amendment’s “reasonableness” standard.¹⁷

- (c) The Fourth Amendment “reasonableness” inquiry 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. The “reasonableness” of a particular use of force must be judged from the perspective of a reasonable officer on the scene, and its calculus must embody an allowance for the fact that police officers are often forced to make split-second decisions about the amount of force necessary in a particular situation.¹⁸

In a recent police vehicle pursuit for traffic violations, Sheriff’s Deputy Scott used his patrol car, with his supervisor’s authorization, to ram Harris’ vehicle while evading at high-speed resulting in Harris crashing and rendering him a quadriplegic. The Eleventh Circuit concluded that Scott’s actions could constitute “deadly force” under *Tennessee v. Garner*. On appeal, the Supreme Court employed a balancing test that finds its origins in *Graham*.

In determining the reasonableness of the manner in which a seizure is effected, “[w]e 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.”¹⁹ Scott defends his actions by pointing to the paramount governmental interest in ensuring public safety, and respondent nowhere suggests this

¹⁷ 490 U.S. 386, 394-395 (1989)

¹⁸ 490 U.S. 386, 396-397 (1989)

¹⁹ *United States v. Place*, 462 U.S. 696, 703; 103 S. Ct. 2637, 77 L.Ed.2d 110 (1983)

was not the purpose motivating Scott's behavior. Thus, in judging whether Scott's actions were reasonable, we must consider the risk of bodily harm that Scott's actions posed to respondent in light of the threat to the public that Scott was trying to eliminate So how does a court go about weighing the perhaps lesser probability of injuring or killing numerous bystanders against the perhaps larger probability of injuring or killing numerous bystanders against the perhaps larger probability of injuring or killing a single person? We think it appropriate in this process to take into account not only the number of lives at risk."²⁰ The Court, having benefit of reviewing the actual pursuit from the police car videotape, concluded Scott's actions were reasonable.

Regardless of the instrument of force used or the resulting harm, *Graham* makes it clear that excessive force may or may not be deadly and it is analyzed by an objectively reasonableness test. "The reasonableness inquiry in an excessive force case is an objective one: the question is whether the officers' actions are objectively reasonable in light of the facts and circumstances confronting them, without regard to their underlying motivation or intent."²¹

Although a police canine is capable of killing a suspect, it was determined in *Robinette v. Barnes* that the deployment of the police canine did not rise to the level of deadly force because the outcome was "an extreme aberration."²² In *Robinette*, a police dog was used to find an unsearched, hidden, burglary suspect and as result of the injuries of the police dog bite to his neck, Robinette died. However, in *Mendoza v. Block* the

²⁰ *Scott v. Harris*, 179 S.Ct. 1769

²¹ 490 U.S. 386, 395-397 (1989)

²² 854 F.2d 990 (6th Cir. 1988).

court held that no particular case law is necessary for a police officer to know that excessive force has been used when an officer sics a canine on a handcuffed arrestee who has fully surrendered and is completely under control.²³ Further, in *Watkins v. City of Oakland*, the court held that “in some circumstances, the use of such a ‘weapon’ might be unlawful,” and that use of a police dog is subject to excessive force analysis.²⁴

In *Marley v. City of Allentown*, the court held that a fleeing, unarmed misdemeanor could not be attacked by a police dog because the suspect posed no threat to the officer.²⁵ The Eleventh Circuit Court held in *Kerr v. City of West Palm Beach*, that using a police dog in a minor misdemeanor offense was unreasonable.²⁶ Likewise, in *Chew v. Gates*, the Ninth Circuit Court considered whether releasing a canine upon a misdemeanor traffic violator, who had outstanding felony warrants, who was unarmed, non-resisting, non-threatening, but who fled and hid, was severe and unreasonable under *Graham* standards.²⁷ The Circuit Court made a distinction that is highly relevant. The trial judge “concentrated on the issue of whether the force involve--the use of police dogs to seize and bite people--is deadly force, while I would approach the issue more broadly by examining the question whether the force was excessive--deadly or not.”²⁸ However, under the circumstances the court decided the police use of the dog did not infringe on the plaintiff’s constitutional rights.

²³ 27 F.3d 1357, 1362 (9th Cir. 1994).

²⁴ 145 F. 3d 1087, 1093 (9th Cir. 1998).

²⁵ 774 F. Supp. 343 (E.D. Pa. 1991).

²⁶ 875 F. 2d 1546 (11th Cir. 1989).

²⁷ 27 F.3d 1432 (9th Cir. 1994).

²⁸ 27 F.3d fn. 8, 1436 (9th Cir.1994).

The decision to deploy a police canine must be based on a fact-specific three-pronged test established under *Graham*.²⁹ The three prongs are:

- a. The severity of the crime;
- b. Whether the suspect poses an immediate threat to the safety of officers or others; and,
- c. Whether the suspect is actively resisting arrest or attempting to evade arrest at the time.³⁰

In *Sharrar v. Felsing*, the Third Circuit expanded the factors considered in *Graham* and offered that a reasonable officer must consider among other factors, “[Whether] the physical force applied was of such an extent as to lead to injury.”³¹ This research addresses the extent to which the deployment of a biting police canine leads to injury, which in turn is a critical factor in assessing objective reasonableness.

Under some circumstances the use of beanbag rounds, tasers, flash-bang devices have under some circumstances been found to constitute excessive force.³²

The use of the instrumentalities other than firearms may constitute the deployment of deadly force. Police cars have been held to instruments of force.

The lower federal court have split on the question of whether police dogs

²⁹ See, e.g., *Smith v. City of Hemet*, 394 F.3d 689, 700 (9th Cir. 2005); *Dennan v. City of Duluth*, 350 F.2d 785 (8th Cir. 2003); *Vathekan v. Prince George’s County, Maryland*, 154 F.3d 173 (4th Cir. 1998); *Kopf v. Wing*, 942 F.2d 265 (4th Cir. 1991).

³⁰ See 490 U.S. at 396.

³¹ 128 F.3d 810 (3^d Cir. 2005).

³² Michael Avery, David Rudovosky, & Karen Blum. *Police Misconduct: Law and Litigation* (3rd ed.) (2007: 100-101).

constitute deadly force. Depending upon the circumstances, the use of so-called “Less Lethal” weapons may constitute deadly force.³³

The need for research to better understand the extent physical force applied by a police canine can and, in fact, does result in injury, is essential for this developing area of law. Moreover, knowledge and understanding of the dynamics of police canine bites and the likely known extent of injuries will play an important role in the assessment of present and development of future police policies, corresponding training, and police canine operations.

V. Police Use of Force Policy

A review of more than 90 law enforcement agencies’ force and canine policies, found that the majority of agencies do not include or specifically mention canines in the agencies’ use of force policies. Likewise, many agencies follow the IACP model and do not include a force continuum in its use of force or canine policies.

For example, the Iowa City and Pittsburgh Police Departments,³⁴ and other agencies agree and treat the police canine as a use of force, one step below deadly force; while many agencies consider the canine as a lower level of force and many more, such as the Federal Law Enforcement Training Center do not mention the police canine at all

³³ Michael Avery, David Rudovsky, & Karen Blum, *Police Misconduct: Law and Litigation* (3rd ed.) (2007: 112-113).

³⁴ See, e.g., Iowa City Police Department’s *General Order 99-05 Use of Force* and *General Order 00-03 Less Lethal/Impact Munitions*, place the police canine, baton strikes, and impact projectiles at the highest level of non-lethal force, which is one step immediately below deadly force; Pittsburgh Police Bureau, Order No. 12-8, 3.1.4.3 Continuum of Control.

in their use of force training.³⁵ Bostain questions whether use of force continuums are necessary.³⁶ Given the complexity of use of force decisions, especially those involving police dogs, discontinuance of continuums is being considered with caution.

The ambiguity of the police canine as an instrument of force, lies at the heart of much of the legal, policy, and training controversies. Peters states, “according to the Department of Justice, a force continuum should include all types of force used by an agency, including firearms, pepper spray, batons, and canines.”³⁷ Since the law does not provide adequate operational guidance for police officers using force, and particularly police canine officers deploying dogs to apprehend suspects, law enforcement agencies and professional organizations must. The International Association of Chiefs of Police Model Policy, *Use of Force*, February 2006, is consistent with current constitutional law and is used to guide police agency policies, training, and ultimately police officer performance. The Model Policy states:

It is the policy of this law enforcement agency that officers use only the force that reasonably appears necessary to effectively bring an incident under control, while protecting the lives of the officer and others. It must be stressed that the use of force is not left to the unfettered discretion of the involved officer. This is not a subjective determination. The use of force must be objectively reasonable. The officer must only use that force which a reasonably prudent officer would use under the same or similar circumstances.

³⁵ FLETC, Confrontation Force Continuum (n.d.)

³⁶ John Bostain, *Use of Force: Are Continuums Still Necessary?*, FLETC Journal (2006, Fall).

³⁷ John G. Peters, Jr., *Force Continuums: Three Questions*, Police Chief, 9 (January 2006); See also, Greg J. Connor, *Use of Force Continuum: Phase II*, Law and Order, 30 (March 1991).

Deadly force: Force that creates a substantial risk of causing death or serious bodily injury.

Objectively Reasonable: This term means that, in determining the necessity for force and the appropriate level of force, officers shall evaluate each situation in light of the known circumstances, including, but not limited to, the seriousness of the crime, the level of threat or resistance presented by the subject, and the danger to the community.

No empirical data, before this study, have been found that considers the comparative potential for injury/harm by police canines, batons, stun guns/Tasers, and impact projectiles. Therefore, any claim as to the police canine's level of force or where it should be considered on the force continuum, as compared to other instruments of force has questionable meaning.

VI. The Study

Initially, this study began as an effort to determine how much physical force a police canine delivers in comparison to a baton strike, a Taser/stun gun charge, and impact projectiles. An interdisciplinary team was assembled including a forensic criminologist, statistician, emergency room physician, veterinarian, physicist, and a research methodologist to examine these issues. However, comparing the force dynamics of a police dog bite to a baton impact, Taser charge, and impact projectiles to determine the likelihood and degree of resulting harm/injury to the human subject became methodologically problematic for several reasons. The most critical problems were the variability and randomness of a police dog bite situation. The size and weight of the dog and the suspect, the motion of the dog and subject, where the dog bites the suspect,

canine/handler training, sequence of tactical events at the bite encounter, suspect's clothing, and a host of other variables became apparent and were considered.

Because of the complications posed by these variable and random factors the authors decided to examine the result of force, i.e., hospital visitations as a result of police use of force with batons, Tasers/stun guns, canines, and projectile weapons. This approach was adopted since medical record privacy issues prevented matching police use of force reports to specific injury victims/patients.

During May and June 2006, a survey instrument was designed and sent to 29 law enforcement agencies, in the United States and Canada, identified as using all of the previously mentioned weapons. From the initial response a general lack of injury data caused by the police use of force was apparent. Therefore, a second mailing was sent to the police departments/services in the four largest cities in each of the 50 states and the 50 largest cities in Canada. The combined two mailings of 279 surveys resulted in a return of 69 with 30 usable surveys. Selected telephone follow-up calls were made to 30 non-responding police departments/services with each stating they did not respond to the survey because they either did not collect or were unable to retrieve police canine and use of force data with related injuries.

VII. Analysis and Findings

The first research question involves looking at all police departments with or without a Mandatory Hospital Visitation Policy over all types of "Use of Force." What proportion of "Use of Force" incidents result in a "Medical/Emergency Room/Hospital Visitation" for all departments?

The overall picture is that in non-mandated Medical/ Emergency Room/Hospital Visitation policy departments the rate is 21.8% of all reported incidents (See Table 1). The visitation rate for Mandated departments is 58.0% of all reported incidents. The difference between these two is statistically significant at the $\alpha = .05$ level ($\chi^2 = 551.0$, $df = 1$, $p < 0.001$). It is clear that the visitation rate is substantially higher in mandated departments (although it is still quite far from 100%).

Table 1

Use of Force Visitation Mandate Status Comparison with Hospital Visitation for All

Departments

Mandate Status	Medical/Emergency Room/Hospital Visitation				Total
	Yes		No		
	n	Row %	n	Row %	
Non-Mandate	617	21.8 ^a	2216	78.2	2833
Mandate	814	58.0 ^a	589	42.0	1403
Total	1431	33.8	2805	66.2	4236

Note. a – $\chi^2 = 551.0$, $df = 1$, $p < 0.001$.

The second research question involves looking at all departments with or without a Mandatory Hospital Visitation Policy over all categories of “Force Type.” What are the proportions of “Use of Force” incidents that result in a “Medical/Emergency Room/Hospital Visitation” for each of the different “Force Type” categories?

Another overall view shows that in police canine departments the Medical/Emergency Room/Hospital Visitation rate is 66.7% of all reported incidents (See Table 2). The visitation rate of all reported incidents for Taser/Stun gun departments is 30.5%, Baton departments is 25.2%, and Impact projectiles departments is 28.4%. The difference among these is statistically significant at the $\alpha = .05$ level ($\chi^2 = 258.0$, $df = 3$, $p < 0.001$). It is clear that the visitation rate is substantially higher in canine departments than the others (although it is still short of 100%).

Table 2

Force Type Categories Comparison with Hospital Visitation

for All Departments

Force Type	Medical/Emergency Room/Hospital Visitation				Total
	Yes		No		
	n	Row %	n	Row %	
Canine	309	66.7 ^a	154	33.3	463
Taser/Stun Gun	969	30.5 ^a	2209	69.5	3178
Baton	126	25.2 ^a	374	74.8	500
Impact Projectiles	27	28.4 ^a	68	71.6	95
Total	2805	66.2	1431	33.8	4236

Note. a – $\chi^2 = 258.0$, $df = 3$, $p < 0.001$

A state or provincial mandate or a local policy to have police dog bite victims examined by medical services obviously affects the reported medical visitation rate. Therefore, the third research question involves looking at only those departments without a Mandatory Hospital Visitation Policy over all categories of “Force Type.” What are the proportions of “Use of Force” incidents that result in a “Medical/Emergency Room/Hospital Visitation” for each of the different “Force Type” categories when examining only those departments for which no mandate or policy exists?

In departments where no mandate or policy exists, the Canine Force Type resulted in a Medical/Emergency Room/ Hospital Visitation rate of 67.5% of all reported incidents (See Table 3). The visitation rate of all reported incidents for Taser/Stun gun Force Type is 14.6%, Baton Force Type is 22.0%, and Impact projectiles Force Type is 44.7%. The difference among these is statistically significant at the $\alpha = .05$ level ($\chi^2 = 446.0$, $df = 3$, $p < 0.001$). It is clear that the visitation rate is substantially higher for canine Force Type than the others (although it is still short of 100%).

Table 3

Force Type Categories Comparison with Hospital Visitation

Only for Non-Mandated Departments

Force Type	Medical/Emergency Room/Hospital Visitation				Total
	Yes		No		
	n	Row %	n	Row %	
Canine	212	67.5 ^a	102	32.5	314
Taser/Stun Gun	315	14.6 ^a	1844	85.4	2159
Baton	69	22.0 ^a	244	78.0	313
Impact Projectiles	21	44.7 ^a	26	55.3	47
Total	617	21.8	2216	78.2	2833

Note. a – $\chi^2 = 258.0$, $df = 3$, $p < 0.001$

The clear overall finding is that the Canine Force Type results in a higher proportion of hospital visitations than any other Force Type category. This leads to the recommendation that, although biting police canines are non-lethal force, they are much more likely to result in medical service visitation than other less than lethal weapons/devices considered in this research. Therefore, police canines that are trained to bite, rather than to bark-and-circle, should be considered at a level of force immediately below deadly force and deployed accordingly.

Because of the limited data available for this study, it is recommended that law enforcement agencies and medical facilities develop methods and structures to better collect and analyze police use of force related injuries while at the same time protecting patient/victim privacy. With this improved data, the replication of this study is still encouraged.

The police canine is a unique instrumentality of force and its use results in injuries requiring hospital visitations significantly more frequently than injuries from police batons, Tasers/stun guns, and projectile weapon encounters. Based on these data, the authors conclude the police canine, as a use of force, is a greater force than impacts from batons and projectile weapons. Furthermore, the police canine is a different kind of instrumentality of force resulting in different kinds of injuries, typically not associated with other use of force options. However, any objective analysis, as in *Sharrar*, would conclude that a reasonable officer would know that the physical force applied by a police dog is of such an extent as to lead to serious injury.

VIII. The Police Canine Re-Conceptualized

Although, the police dog, at law, is not considered deadly force, it does create a substantial risk of causing serious bodily harm. Based on the research findings, the authors suggest the police canine needs to be reconceptualized as the physical equivalent of a police baton with spikes three centimeters in length, the approximate length of German Shepherd teeth (i.e., a spiked impact weapon capable of sustained puncturing, compression-pressure, pulling, and tearing).

If police officers were issued a baton with three centimeter spikes when would its use be objectively reasonable, where would it fall on the use of force continuum, and what policy limitations and restrictions would be placed on its use? Of course, it can be argued rationally that the police should not be issued a spiked baton. Can it then not be argued rationally that the police should not be issued a spiked/toothed canine? Clearly, the police dog has unique characteristics useful to law enforcement other than as an instrumentality of force, which requires careful consideration.

IX. A Calculus of Liability

Lawsuits (state and federal) are a frequent consequence of police dog bite incidents. Police policymakers must consider basically two choices: preventing lawsuits before they are filed and winning lawsuits after they are filed.

As with police vehicle pursuit policies, law enforcement agencies are struggling with the question of banning the use of police patrol canines generally or restricting their use for violent felonies or training the canines to “bark and circle.” Advocates of restrictive policies often cite risk management as the primary reason. Opponents of

restrictive canine policies argue that banning or restricting police canine use (and vehicle pursuits) will promote lawlessness.

In its simplest form the use of police canine liability calculus has two elements: the initiating event and the resulting injury sustained by the citizen/suspect. On one side of the equation are the *Graham* factors (seriousness of the crime, level of threat, and degree of resistance). On the other side of the equation is the type and degree of injury suffered by the citizen/suspect.

In this calculus, the police handler and canine have control over the initiating event. Once the canine is engaged, the part of the suspect's body the canine will bite is random and not under the control of the handler. The handler has control to call-off the engagement; however, the canine may or may not always respond immediately to the call-off. Further, the research findings herein provide some basis for assessing the need to use force by police canines in light of the resulting injury of that force. It is this calculus that makes restrictive canine policies attractive.

Agencies who want to reduce injury to citizens and in turn reduce the risk of lawsuits will adopt restrictive canine policies, including training options that limit biting. Such policies will eliminate citizen injuries from police canines that were initiated for minor crimes, non-violent felonies, and where the suspect was not threatening and resisting.

The Supreme Court, in *City of Canton, Ohio v. Harris* stated,³⁸

The inadequacy of police training may serve as the basis for 1983 liability only where the failure to train in a relevant respect amounts to deliberate indifference

³⁸ 489 U.S. 378, 388 (1989).

to the constitutional rights of persons with whom the police come into contact.

(...) Only where a failure to training reflects a “deliberate” or “conscious” choice by the municipality can the failure be properly thought of as an actionable city “policy.”

Moreover, the identified deficiency in the training program must be closely related to the ultimate injury.

This research may be of value as future questions and arguments are advanced regarding police canine training and whether a municipality’s training of police dogs to bite rather than to bark rises to a constitutional issue.

The issue of excessive force asks, when is the force applied by a police canine, which is likely to produce serious injury, unnecessary or clearly excessive force? By viewing the police canine as a baton with three centimeter spikes, the *Graham* test and the legal standards of objective reasonableness, totality of circumstances, necessary force, excessive force, and liability gain clarity and take on a new dimension.

Recognizing this research found that police canine engagements are substantially more likely to result in a hospital visitation than baton strikes or impact projectile, law enforcement needs to rethink police canine policy, training, and deployment as a use of force. This is especially important when considering the potential for harm and subsequent liability.

IX. Police Canine Policy and Training Options

The need to have a police canine outrun a fleeing suspect is understandable and readily acceptable. However, what the canine does when it overtakes or finds a hidden suspect is at issue. Canine training to “bark and circle/ find and bark” and alternatively

“bite and hold” are two options, but the latter must satisfy the *Graham* test, because the authors argue it is the highest level of non-lethal force with a very high likelihood of serious injury to a suspect.

The Use of Force Continuum, as a training device and with its acknowledged shortcomings, provides a fundamental and reasonable methodology to graphically represent the amount of force a police officer may use in response to a subject’s resistance. It is critical that law enforcement policies and training, including any use of force continuum used, incorporate every instrumentality/tool/weapon of force issued to and authorized by the law enforcement agency.

Also, it is not surprising that a review of federal and state lawsuits emanating from police canine bites include claims of significant and permanent physical disfigurement and injuries to bones, blood vessels, nerves, breasts, testicles, faces, arms, legs, ears, noses, and eyes (blindness). In spite of such facts, the idea that a biting police canine is “like a baton,” has gained rather wide acceptance in law, police and public policies, and training. The authors’ research findings refute this basic proposition.

With police canines being capable of producing approximately 128 psi bite pressure and randomly biting places on the body, the likelihood of serious injuries is significant. Anatomically, nerves, blood vessels, and tendons lie superficially (less than 1 cm depth from surface) in hands, arms, and legs. Thus police canines with three centimeter long teeth are highly likely to cause neuro-vascular, tendon, and other soft tissue injuries in addition to possible bone injury.³⁹

³⁹ Henry Gray, *Anatomy of the Human Body* (1918), available at www.bartleby.com/107/.

It is apparent the police canine is a different kind of force instrumentality. It is one member of a two member team (dog and handler). It can be projected out and recalled (the dog is not always responsive to commands), unlike a bullet that cannot be recalled after it has been fired. It can impact, compress, penetrate, pull, and tear a subject's body and its deployment against an armed felon may reduce the need for the use of deadly force by officers. Because of these unique characteristics it has been argued the police canine is so special it should be considered a tool and should not be considered a weapon. Others have differentiated the police canine as a "biological" and "mechanical" tool and/or weapon and offered the police canine is so special that its use should be covered by its own policies and procedures and not governed by the policies that guide the use of force in the agency.

The police canine has numerous roles in contemporary law enforcement and it can be most effective. Dorriety argues that the placement of the police canine on the force continuum should be determined by the canine's training, i.e., if the dog is trained to "bite and hold" or "bark and circle."⁴⁰

A police canine trained to "find and bark" or "bark and circle" has no physical contact with a suspect and therefore does not result in injuries, unless the suspect acts out against the police dog, at which time the dog is trained to and will bite the suspect. The use of a police canine trained to "bite and circle" commonly results in serious dog bite injuries. Hutson, et al. found when the Los Angeles Police Department changed its police canine policy and training from "bite and hold" to "find and bark" [bark and

⁴⁰ See Dorriety, *supra* note 1.

circle] police deployments “resulted in a sharp decline in the number of injuries, complications, and hospitalizations.”⁴¹ [Added for clarification]

The reality is police canine training determines the canine’s utility, limitations, and restrictions. Because police canines are not trained to bite softly; do not bite with carefully adjustable pressure, depending on the circumstances; do not have smooth, soft mouths; may not always obey commands to “bark and circle” without biting or to release the suspect from a bite; and are not capable of merely applying a “come-along hold” or a “pressure point maneuver” equivalent to lower steps/levels of force in the previous force continuum, the police canine is not a general purpose, less-than-lethal instrumentality of force.

Police department canine policies and training raise operational, political, and legal issues which have been formulated, largely on subjective information. As a result, the limitations of the police canine have been unclear and in dispute. The general disagreement and uncertainty among law enforcement officials, academics, and the courts, as to the amount of force a police dog delivers, is readily apparent when attempts are made to place the police canine on a Use of Force Continuum.

Much of the problem has been a lack of information, knowledge, and understanding about basic mechanical and anatomical principles and dynamics of the dog bite and human subject. Moreover, the numerous situational variables, many random, associated with the deployment of the dog and the moment of the bite, obfuscate the problem further.

⁴¹ See Hutson, et al., *supra* note 23.

XIII. Conclusions

In this paper, the authors reexamined the definitions of the dog biting pressure. Also, we estimated the dog biting pressure, for the first time, based on the directly measured dog biting force with the biting area formed by the teeth.

Acknowledging the scarcity of the data, the research findings reasonably suggest the police canine bite encounter is highly likely to result in injuries, as evidenced by medical facility visitations. Therefore, the police canine is not a universal non-lethal instrument of force to be deployed on all suspects under all circumstances. The courts and police policy makers need to revisit the police dog as an instrumentality of force because the police canine creates a substantial risk of causing serious bodily injury. The arguments that a police canine bite is mere pain compliance or the equivalent of a hard hand or even baton strike is inconsistent with the evidence presented herein.

Injury is an element of the definition of force as currently understood and generally accepted by law enforcement. Furthermore, some courts require officers to consider, whether the physical force applied is of such an extent as to lead to serious injury.

Accepting the prevailing legal standard that the police canine is not deadly force but an application of non-deadly force, it is clear from this research that a biting police canine is not the equivalent of a baton impact or impact projectile because the potential for serious injury is substantially greater. The police canine is less than *Step VII: Deadly Force* on the force continuum but it must be considered at the highest level of less than deadly force, i.e., the level of force immediately below deadly force as reflected in Iowa City and Pittsburgh's use of force policies. The police canine's capacity to inflict serious

injuries approaches deadly force, certainly to the extent that if a police officer were confronted by a similar dog the officer would be justified in using deadly force against that dog because of the threat of serious injury or death to the officer.

Police canine policies and corresponding training set the limitations and utility of a police canine. Canines trained to “bark and circle” have greater flexibility and utility because of the reduced likelihood of serious injury to a suspect.

However, police policy makers should be prepared to make concessions when canines are trained to “bite and circle.” These canines should have the most restrictions and police policies and training should limit their deployment to clearly and actively resisting and violent felons who are posing a threat of injury to officers or others (the *Graham* test). Perhaps, a better approach is to return to the idea of the spiked police baton. Under what circumstances would an officer be justified, by agency policy, to use such an instrument of force?

The failure to include the police canine in police use of force policies and training, including use of force continua, may well reflect an organization’s deliberate indifference to train and to ensure the safety and well-being of citizens in arrest situations. This study is offered as an effort to assist the law enforcement and legal communities to better assess the limitations and utility of the police canine.

Finally, this research found generally, that United States police departments surveyed did not keep records of injury seriousness as a result of officers’ use of force. Beyond merely keeping count of use of force incidents, there was virtually a complete void of readily available and useable police data regarding the degree of harm suffered by citizens who have been subjected to all forms of police use of force. It is suggested that

law enforcement agencies collect, consistent with law, and analyze force-injury relevant data better to understand force, its appropriateness, necessity, and liability.

Information is the foundation of knowledge and knowledge is the essence of enlightened public police policy. Police use of force and canine policies are too important, and the consequences too serious, to be based in ignorance.