

No. 12-17808

In The United States Court of Appeals For The Ninth Circuit

George K. Young Jr.

Plaintiff-Appellant,

v.

State of Hawaii et al.

Defendants-Appellees.

**Appeal from a Judgment of the United States District Court
For the District of Hawaii
Civ. No. 12-00336 HG BMK
The Honorable Judge Helen Gillmor
United States District Court Judge**

Appellant's Supplemental Brief

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Introduction

Mr. Young enters this memorandum to supplement his Opening Brief by clarifying the relief sought and adding additional arguments¹. He also presents an analytical model to aid this Court as it rules on this matter. Mr. Young would note that unless otherwise stated the definitions used in the model are his own albeit derived from definitions from computer programming or math.

An Analytical Framework for Defining a Class

In *Heller*, to get to the holding that a handgun is a class of protected arms it used the following logic. Handguns are a group of physical items (“items”) which all share a property. It then determined a handgun is group of items which fulfill the definition of arms because this property has self-defense value and is bearable upon the person. *District of Columbia v Heller*, 554 US 570; 128 S Ct 2783; 171 L Ed 2d 637 (2008), “arms” refer to “weapons of offence, or armour of defence,” or “anything that a man wears for his defence, or takes into his hands, or useth in wrath to cast at or strike another,” *Id* at 647 (quotation marks and citations omitted). Accordingly, arms must survive the bearable upon the person part of the *Heller* test

¹ Counsel would like to thank Jonathan Koppenhaver and Holly Unruh for taking the time to listen to Counsel’s verbal description of the proposed model in furtherance of counsel’s effort to make the model more palatable to individuals unfamiliar with the underlying academic discipline this model stems from.

at this stage. Here, was where handguns were determined to be a class of arms. Only then did the Court find a handgun qualified to be tested in order to determine whether it is protected by the Second Amendment by the remaining two portions of the three part *Heller* test (in common use by the militia and not unusually dangerous). As one of the issues before this Court is whether items that have self-defense value solely due to their association with a class of arms are protected by the Second Amendment. The first step in analyzing whether an item is protected by the Second Amendment is to determine whether binding case law holds it is protected. If there is no binding case law the Court should see whether an item has judicially noticeable self-defense value or evidence is presented of self-defense value on its own or based on its association with another item. If there is no indication of self-defense value then the analysis stops. If the item has self-defense value independent of another item then this Court should use the analytical tool titled arms analysis. If its self-defense value stems from association to an arm then this Court should use the analytical model titled associational arms.

Arms Analysis

Mr. Young uses switchblades in furtherance of this analysis. *Heller* ruled handguns were a class of arms. However, it did not give a definition of a class. Class should be defined as a set of objects (also referred to in this model as types) that all have the same self-defense property or properties. The intrinsic property

common to class knife is blade. The blade is the property which allows a knife to be used as a weapon of offense. In more complicated arms, multiple properties would be used. Class knife is used for that reason.

Handguns are a class of protected arms distinguishable from other firearms. Accordingly, the property or properties used to define that class would need to be one related to self-defense and also one that distinguishes it from other firearms.

As shown, knife is a class of arms. Switchblades are a type of class knife because it shares the self-defense property blade common to that class. The remaining portions of the *Heller* test are applied to determine whether they are protected by the Second Amendment. Knives are in common use and not unusually dangerous. Accordingly they are protected by the Second Amendment. As a type of class knife, switchblades are protected arms. The last stage is to determine what level of scrutiny to apply based on the restriction at issue. If the restriction at issue survives scrutiny then the statute survives. If not the restriction is struck down.

Associational Arms Analysis

Associational arms are independent classes of items that share a common method of utility to an arm which they associate with. While they fail the definition of an arm, they are protected as “the right to keep arms necessarily involves the right to . . . provide ammunition” for them. *Andrews v. State*, 50 Tenn. 165, 178

(1871). They are distinguishable from parts of an arm such as a firing pin because the protected arm it is associated are still complete items without them. All handguns have firing pins and removing a handgun's firing pin makes it an incomplete object. Accordingly, a firing pin is one of the properties common to class handgun. However, is not the property which handgun class is defined by as all firearms have a firing pin. It is one of the properties required to belong to the conjunacy class firearms as described below. Accordingly, associated arms are distinguishable from items such as a firing pin because they are not one of the properties which a type of protected arm is created from. They are independent classes all to themselves. As such, the wisdom of *Herrington* guides. The Second Amendment provides protections to ammunition which is "coextensive" to the Second Amendment's protection of arms. *Herrington v. United States*, 6A.3d 1237 (D.C. 2010).

Associational arms should be delineated into classes by what arm it is associated with as the Second Amendment protects them because they provide a method to utilize that arm. The first step is to ask what type of arm the item purports to be associated with. If that arm is already established as being protected by the Second Amendment then the item should be protected and defined as an associated class of arms. An associational arms class should be defined as a set of objects or items who share the same method utility to the arm they are associated

with. Per *Heller* handguns are protected by the Second Amendment. If the arm it claims to be associated with has not been defined as one by this Court or a higher one then this analysis would pause. Item which the purported associational arm claims to derive protection from must be put through the arms analysis above. If the arm qualifies as a protected arm then the analysis for the associated arm would proceed. If the item fails the arms analysis, associational arms analysis is mooted as there is no protected arm to derive protection from. All ammunition utilized by class handgun offers the same method of utility to a handgun. The method provided is the ability to project force against a target. An associational class called handgun ammunition class must exist to follow the mandate of *Heller*. There are some items that offer a method of utility to multiple classes of protected arms. Reversing this model proves allowing an item to contemporaneously derive protection from multiple arms would fail the mandate of *Heller*. This is shown below. The final stage of the analysis is to determine whether the restriction at issue survives the applicable level of scrutiny. If so, the statute survives constitutional muster. If not, the restriction must be struck down.

An Attenuation Analysis For Associated Arms

An attenuation analysis may be required for associational arms that are not absolutely vital to the use of a protected arm. As the levels of scrutiny applied by this Court are not quantifiable, Mr. Young urges this Court to use its discretion in

determining how much attenuation is required for a level of scrutiny to apply.

Magazines are associated to some classes of arms because they all offer the same method of utility as they store and feed ammunition into arms. Magazines provide a near vital method to utilize arms designed to be used with them. Accordingly, they should receive the same protection as ammunition.

However, it is possible to use a firearm without a magazine by chambering a round manually. Accordingly, Mr. Young presents an attenuation analysis to be used at the discretion of this Court. If needed Mr. Young urges this Court to apply a derivative of the two step analytical tool the Third, Fourth, Seventh, Tenth, and District of Columbia Circuits have adopted a two-step approach for evaluating Second Amendment challenges. The model in current use requires a court to determine whether the challenged law regulates activity that falls within the Second Amendment's scope.

If a challenged law does not regulate protected activity, the inquiry is complete. If the challenged law does regulate activity within the scope of the Second Amendment, a court must then determine whether it imposes an unconstitutional burden by applying a level of scrutiny higher than rational review. *See United States v. Marzzarella* , 614 F.3d 85, 89 (3d Cir. 2010), cert. denied , 131 S. Ct. 958 (2011); *Heller v. District of Columbia* , 670 F.3d 1244, 1256-58 (D.C. Cir. 2011); *Ezell v. City of Chicago*, 651 F.3d 702, 704 (7th Cir. 2011);

United States v. Chester , 628 F.3d 673, 680 (4th Cir. 2010); *United States v. Reese* , 627 F.3d 792, 800–01 (10th Cir. 2010). Magazines are almost essential to the use of an arm that requires them. Analogous to *Ezell* near strict scrutiny level applies to magazines where strict scrutiny would apply for the arm it is associated with.

As no item appropriate for further attenuation analysis is before this Court, it would be improper for Mr. Young to complete this analysis. Mr. Young does suggest restrictions on any tool, accessory, or other item which provides a method of utility to a protected arm must be survive some form of heightened scrutiny,

Reversing The Model Shows It Upholds The Mandate Of Heller

A model is only structurally sound if it can be reversed and the antecedent of the model's output is produced. Dick Heller had a specific type of handgun that he wished to register. Accordingly, the issue before the *Heller* Court was a type of handgun yet it came to the conclusion that that all handguns are part of a protected class of arms. Reversing the model shows it upholds the mandate of *Heller*. For the purposes of this exercise Mr. Young assumes the *Heller* Court ruled on a .38 caliber bullet and held .38 caliber bullets are an independent class of arms. Starting with that as the premise this model would produce a .38 caliber handgun is a protected independent class of associated arms which fails the mandate of *Heller*.

If the issue before the *Heller* Court was whether .38 caliber ammunition was protected by the Second Amendment it would have ruled handgun ammunition is a class of arms following the logic of the real *Heller* Court. Accordingly, handgun ammunition is an independent class of associated arms. As they are afforded the same level of protection as a protected arm, a categorical ban on a class of associated arms would fail any level of scrutiny. Here, the class of associated arms is handgun ammunition. A ban on .38 caliber ammunition would be a ban on a type of associated arm. A harsh restriction on this type of a protected arm and would still fail some form of heightened scrutiny unless it could be shown that there was a government interest that met that level of scrutiny. One might argue that under this model a depleted uranium round designed for use with a rifle is part of the protected class of associated arms rifle ammunition. That person would be right.

Mr. Young argues it is judicially noticeable that there is a compelling government interest to not exposing the public to radioactive material so a complete ban on the sale or ownership of this type of a protected class of associated arms would survive strict scrutiny. In theory, certain types of long prohibited types of associated arms would be protected by the Second Amendment. However, their prohibition would still be constitutional.

Reversing this model proves an associated class of arms must only be allowed to derive protection from one class of arm in order to uphold the mandate of *Heller*. Mr. Young assumes .38 caliber ammunition could be used in a rifle, shotgun and handgun. If this Court were to allow .38 caliber ammunition to claim association with a rifle, shotgun, and handgun this would produce a class of arms called firearms. However, *Heller* ruled a handgun is a class of protected arms. To fulfill the mandate of *Heller*, a class of associated arm must only be allowed to derive its protected status from one class of protected arm. There are items which have the potential to derive protection from multiple classes of arms. If a restriction exists on a class of associated arms, these items should be considered part of the class of associational arms least restricted. Otherwise, this would be a restriction on all classes of arms it provides a method of utility to. If that is the intent of the legislature then it should pass a law on all the classes of arms the item at issue could associate with.

As handguns, rifles and shotguns are all classes of arms, firearms are a conjugacy class. Conjugacy classes are a group of classes that share many properties such as a firing pint, but can be divided into classes by at least one unique self-defense attribute distinguishes it from the rest of the group. As reason must be our ultimate guide, established conjugacy classes such as firearms should be delineated by defined classes.

However, when an arm initially is implemented by the militia this Court should not delineate it into classes that they fail the common use test. The *Heller* Court made handguns a class in order to rebut the notion rifles and shotguns were sufficient for self-defense. *Heller* stands for the notion that individuals should have a choice in the manner that they exercise their rights. Delineating groups into smaller classes should be done to further that policy not hinder it as this would fail the mandate of *Heller*. Moreover, the common use test should have some malleability. Just as the life of the law has been experience not logic so has been the history of the Second Amendment. Arms which have near unique function especially in the infancy of their development should be allowed to breathe and grow.

Heller's policy objective of expanding choice should also be applied to associated arms. Coextensive to the right to choose what arms you bear is the right to choose what type of ammunition or other associated arm to use. Restrictions on a type of class of ammunition may survive scrutiny but to put one outside of constitutional scrutiny fails the mandate of *Heller*. Associational arms are protected by the Second Amendment. Just as the City of Chicago cannot force its citizens to choose a rifle over a handgun, neither can they require citizens to choose one type of ammunition over another unless that restriction survives some type of heightened scrutiny. Applying any other model fails the mandate of *Heller*.

Mr. Young submits this analytical model in the hopes that it will facilitate the Court decision making process in this and other cases. While Mr. Young concedes “a page of history is worth a volume of logic”. *New York Trust Co. v. Eisner*, 256 U.S. 345, 349 (1921). There simply is no history as to how you define what a class is within this area of law outside of the axiom this whole model is based on. That is a handgun is a protected class of arms.

H.R.S. 134 Prohibits Transport When There is No Government Interest

The H.R.S. bans the transport of unloaded firearms and ammunition to locations Defendants do not have an important governmental interest in prohibiting transport to. H.R.S. §§ 134-23,134-24,134-25,134-27 regulate the transport of firearms and ammunition and individually fail any heightened scrutiny for the same reason. Other than the 6 enumerated locations, transport is prohibited. Mr. Young faces criminal prosecution for transporting a firearm or ammunition to a friend’s house to show a friend his firearm or ammunition; a Mason lodge or other unorganized area to display or show. These are but a few of the many legitimate places excluded by Hawaii law. Mr. Young faces criminal prosecution if he as much transports an unloaded firearm or ammunition to a friend’s house to show it to him. As shown above rifle, shotgun and handgun ammunition are independent classes of associated arms protected by Second Amendment. These laws fail any heightened scrutiny.

H.R.S. § 134-8 Is a Complete Ban on Types of Protected Classes of Arms

As argued in the Opening Brief strict scrutiny must apply to complete bans on the ownership of a type (or object) of a protected class of arm. *See* Opening Brief at 35, 36. These definitions are used for the purposes of this model and Mr. Young urges this Court to adopt whatever syntax it feels best.

a. Hawaii's Ban the Ownership of Short Barrel Rifles Fails Strict Scrutiny

Short barrel rifles are a type of rifle. Accordingly, a complete ban on a type of rifle must survive strict scrutiny. The only concern is they are more concealable than a standard rifle. However, handguns are much easier to conceal and are not banned. Their shorter barrel actually adds to public safety and assists self-defense.

A shorter barrel decreases the velocity of a bullet as it leaves the rifle. This means short barrel rifles are less likely to penetrate a wall and injure an innocent bystander. They also are better for self-defense in the home because their short barrel makes them better for navigating the tight confines of a house. Their complete ban fails strict scrutiny.

b. Hawaii's Ban on Short Barrel Shotguns Fails Strict Scrutiny.

For many of the same reasons that short barrel rifles are better for self-defense in the home so are shotguns. *United States v. Miller* 307 U.S. 174 (1939) holds “in

the absence of any evidence tending to show that possession or use of a "shotgun having a barrel of less than eighteen inches in length" at this time has some reasonable relationship to the preservation or efficiency of a well-regulated militia, we cannot say that the Second Amendment guarantees the right to keep and bear such an instrument. Certainly it is not within judicial notice that this weapon is any part of the ordinary military equipment" *Id.* at 177.

Mr. Young submits *Army Law*. October 1997 at 16 "*Joint Service Combat Shotgun Program*", as evidence short barrel shotguns have been weapons of the militia since the Revolutionary War and continue to be used to this day. This article was already submitted to this Court in a Notice of Supplemental Authority dated March 27th, 2013. He attaches the same authority again for the convenience of this Court. As evidence has been presented *Miller* is not binding on this Court. Hawaii's complete ban on these types of shotguns must survive strict scrutiny and there is no compelling reason to ban their ownership.

c. Hawaii's complete ban on "assault pistols" fails strict scrutiny.

Hawaii bans the ownership of a type of handgun it calls assault pistols. This ban appears to be a poor copy of the 1994 Assault Weapons Ban applied to handguns. Mr. Young submits the Affidavit of Luke Barker and Declaration of Ryan Barbour to show the six attributes which H.R.S. 134-1 uses to classify an assault pistol have little bearing on lethality when applied to handguns. Some are nonsensical such as

the muzzle shroud attribute which purports to allow a person to place his hands on the shroud while firing. Handguns are held by their grip. H.R.S §134-8 is a poorly crafted and outdated statute. It fails strict scrutiny.

d. H.R.S § 134-8 Complete Ban on Handgun Magazines Over 10 Rounds Fails Strict Scrutiny.

Handgun magazines are independent class of associated arms which derive protection from handguns. This complete ban must survive strict or near strict scrutiny. There is no compelling reason that handgun magazines should be banned when rifle magazines are not. Furthermore, even if this Court finds this ban constitutional, magazines which can be used in rifles and handguns should not be affected by this law. There are AR-15 magazines which can be used in both handguns and rifles. If the Hawaii legislature wants to restrict rifle magazines then it should do so via enacting a law which explicitly states it is doing so.

Conclusion

For the reasons stated in the Opening Brief and in this supplemental brief Mr. Young requests that the judgment of the lower court be reversed and either remand this matter with instructions for the district court or preferably enter a directed verdict in favor of Mr. Young. Moreover, Mr. Young reiterates his request from the Opening Brief that HRS 134 be revised to allow some means to carry a

rifle and shotgun outside the home and for that method to take into account ammunition, magazines, short barrel shotguns and short barrel rifles. Ultimately, HRS 134 was last revised in 2006 before the Supreme Court held the Second Amendment confers an individual right to bear arms that is incorporated to the States in *McDonald v. Chicago*, 561 U.S. 3025 (2010). It needs to be revised again

CERTIFICATE OF SERVICE

On this, the 10th day of April, 2013, I served the foregoing pleading by electronically filing it with the Court's CM/ECF system, which generated a Notice of Filing and effects service upon counsel for all parties in the case. I declare under penalty of perjury that the foregoing is true and correct.

Executed this the 10th day of April, 2013

s/ Alan Beck
Alan Beck (HI Bar No. 9145)

ANNEX A

JOINT SERVICE COMBAT SHOTGUN PROGRAM

Joint Service Combat Shotgun Program

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Introduction

There is a long history of the use of shotguns in combat. But in the closing days of World War I, Germany objected to the U.S. use of shotguns, claiming their use violated the law of war. Although the German claim was promptly rejected by the United States, questions about the legality of shotguns persisted. This article¹ sets forth the history of the combat use of shotguns, the 1918 German protest and U.S. response, and an analysis of the issue in contemporary terms. The memorandum of law upon which this article is based was coordinated with the other services, Army and DOD General Counsel, and the Department of State, and it reaffirms the legality of the shotgun for combat use.

The Requirement for a Legal Review

Various regulations require a legal review for all weapons which will be procured to meet a military requirement of the armed forces of the United States.² The purpose of the legal review is to ensure that the intended use of each weapon, weapon system, or munition is consistent with customary international law and the international law obligations of the United States, including law of war treaties and arms control agreements to which the United States is a party. Accordingly, the commander of the United States Marine Corps Systems Command requested a joint legal review of the Joint Service Combat Shotgun program by the Offices of the Judge Advocate Generals of the Army, Navy, and Air Force.

The Program

The Joint Service Combat Shotgun (Combat Shotgun) is a joint program to select and field a lightweight, semiautomatic, 12-gauge shotgun to replace pump action shotguns currently in use by each of the military services. The Marine Corps is acting

as the lead service for the program, and the U.S. Army, Navy, Air Force, and Coast Guard are the participating services. The Joint Service Small Arms Program office conducts general oversight of the program and provides research, development, testing, and evaluation funding to support the procurement effort. The commander of the Marine Corps Systems Command has been designated as the Milestone Decision Authority for the program.

The Combat Shotgun to be procured and fielded will be required to satisfy the following operational and physical requirements described in the Joint Operational Requirement Document and further amplified in the contract Purchase Description:

- (1) Capable of semiautomatic operation.
- (2) Capable of firing both standard Department of Defense (DOD) 2.75-inch, 12-gauge No. 00 buckshot, No. 7 1/2 shot, No. 9 shot, and slug ammunition,³ and 3.0-inch 12-gauge commercial ammunition conforming to Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) standards without adjustment to the operating system. The Marine Corps Systems Command is unaware of any DOD acquisition programs to procure and type classify 3.0-inch, 12-gauge ammunition for use by DOD components.⁴
- (3) Have a maximum effective range of forty meters (fifty meters desired) with the DOD standard 2.75-inch No. 00 buckshot ammunition, and 100 meters (125 meters desired) with slug ammunition.
- (4) Have a length of 41.75 inches or less and be capable of being reconfigured to, and be operated at a length of, 36 inches or less.
- (5) Weigh no more than 8.5 pounds (six pounds desired) unloaded.

1. This article is derived from the author's legal review, dated 24 January 1997, of the Joint Service Combat Shotgun Program, which he wrote for The Judge Advocate General, U.S. Army.

2. U.S. DEP'T OF DEFENSE, DIR. 5000.1, DEFENSE ACQUISITION (15 Mar. 1996) [hereinafter DOD DIR. 5000.1]; U.S. DEP'T OF ARMY, REG. 27-53, REVIEW OF LEGALITY OF WEAPONS UNDER INTERNATIONAL LAW (1 Jan. 1979); U.S. DEP'T OF NAVY, SECRETARY OF THE NAVY INSTR. 5711.8A, REVIEW OF LEGALITY OF WEAPONS UNDER INTERNATIONAL LAW (29 Jan. 1988); U.S. DEP'T OF AIR FORCE, INSTR. 51-402, WEAPONS REVIEW (13 May 1994).

3. The 12-gauge door-breaching cartridge was the subject of a coordinated review that approved that round. Shotgun slug ammunition, an antimateriel munition, will be the subject of a separate review.

4. Memorandum, Commander, Marine Corps Systems Command, subject: Joint Service Combat Shotgun Program, Request for Legal Review (13 Sept. 1996).

(6) Be equipped with Low Light Level iron sights and a standard U.S. Military accessory mounting rail integral to the upper receiver, to permit use of other sight enhancement devices.

The Combat Shotgun will be employed by personnel in each of the armed services in international armed conflict, internal armed conflict, and military operations other than war and will be used for missions to include the execution of security/interior guard operations, rear area security operations, guarding prisoners of war, raids, ambushes, military operations in urban terrain, and selected special operations.

History⁵

As history constitutes State practice, consideration of the legality of the Combat Shotgun requires a summary of the history of the military use of shotguns and related legal issues.

The military history of the shotgun dates to the middle of the sixteenth century, when the blunderbuss was invented in Germany and the smoothbore Birding Piece or Long Fowler was developed in England. While the latter was developed for hunting, the former was a close-range, antipersonnel weapon from the outset. The dual use—for hunting and personal protection—and greater range of the Long Fowler caused it to survive and to flourish as the blunderbuss began to wane in the first quarter of the nineteenth century.

The blunderbuss saw considerable use by British, European, and American military forces before its ultimate demise. Austrian, Prussian, and British regiments were equipped with the blunderbuss; for example, British General Sir John Burgoyne raised a Light Dragoon Regiment in 1781 equipped with the blunderbuss. Navies employed the blunderbuss as a weapon for repelling boarding parties. The blunderbuss and the shotgun established the character of the modern military shotgun: a multiple-projectile weapon for close-range combat. Development of the high-velocity, small-caliber rifle which possesses greater range and accuracy, resulted in an initial decline in the use of the shotgun in combat, a trend which began to reverse in World War I. There is no known evidence that shotgun use in combat diminished because of a question as to its legality.⁶

The combat shotgun or military rifle with a shotgun-type munition continued to be used in the United States. In the American Revolution, General George Washington encouraged his troops to load their muskets with “buck and ball,” a load

consisting of one standard musket ball and three to six buckshot, in order to increase the probability of achieving a hit. In the subsequent Seminole Indian Wars in Florida (1815-1845), buck-and-ball was standard issue for military muskets.

As the buck-and-ball round slowly succumbed to improvements in small arms technology that brought greater rifle accuracy, the shotgun remained in military use. Texans made effective use of the shotgun in their unsuccessful defense of the Alamo (6 March 1836) and their defeat of the Mexican Army forces of General Santa Anna in the battle of San Jacinto six weeks later. In the subsequent war with Mexico in 1846, Marine Corps Major Levi Twiggs employed a shotgun, reportedly with good effect, during the Marine Corps’ march from Vera Cruz to Mexico City. During the American Civil War, .58- and .69-caliber smoothbore rifles using buck-and-ball, and shotguns, were used in combat by Union and Confederate forces, primarily by cavalry units. For example, the shotgun was a preferred weapon for the Confederate cavalry commanded by General Nathan Bedford Forrest, who readily saw its value for close-quarter combat. United States Cavalry units subsequently employed shotguns during the Indian wars between 1866 and 1891.

Shotguns were employed by United States Army and Marine Corps units during the insurrection that raged in the Philippines from 1899 to 1914, and by Brigadier General John Pershing in the 1916 punitive expedition into Mexico in pursuit of Pancho Villa. When World War I entered its stalemated trench warfare phase, both French and British High Commands considered, but rejected, the use of double-barreled shotguns in trench defense. The rejection of their use was not due to any questions as to their legality, but was due to the perceived ineffectiveness of their light bird shot loads and, undoubtedly, the requirement for and difficulty of frequent, quick reloading of a double-barreled shotgun in close combat. When the United States entered World War I in 1917, General Pershing was placed in command of the American Expeditionary Forces (AEF). General Pershing’s forces employed 12-gauge repeating (pump action) shotguns, loaded with six No. 00 buckshot shells, for close-range defensive fires against enemy infantry assaults, trench raids, and assaults on enemy trenches and machine gun positions.

The highly-effective use of the shotgun by United States forces had a telling effect on the morale of front-line German troops. On 19 September 1918, the German government issued a diplomatic protest against the American use of shotguns, alleging that the shotgun was prohibited by the law of war.⁷ After careful consideration and review of the applicable law by The Judge Advocate General of the Army, Secretary of State

5. The primary source for this historical section is Thomas F. Swearingen’s authoritative source on the subject. THOMAS F. SWEARENGEN, *THE WORLD’S FIGHTING SHOTGUNS* (1978); see also Paul B. Jenkins, *Trench Shotguns of the AEF*, *THE AM. RIFLEMAN*, Nov. 1935, at 14-15, 22; Howard M. Madaus, *The Use of the Percussion Shotgun in Texas Prior to and During the American Civil War, 1861-1865*, *ARMAX*, at 133-172 (1995).

6. The 1918 German protest and the language of its present law of war manual are discussed *infra*.

7. The German protest and U.S. response are discussed in greater detail *infra*.

Robert Lansing rejected the German protest in a formal note. This is the only known occasion in which the legality of actual combat use of the shotgun has been raised.

Shotguns were employed by Allied-supported partisans and guerrillas in Europe and Asia during World War II, and by the United States Army and Marine Corps in the Pacific and China-Burma-India (CBI) theaters. The short range of the shotgun made it of limited value for conventional forces in the open European battlefields, but its close-range effectiveness made it invaluable in the dense jungle battlefields of the Pacific and CBI theaters. Shotguns were employed in combat in the Korean War, primarily for command post security and close-range protection for machine-gun positions. Human-wave attacks by North Korean and Chinese forces led to the development of the Claymore mine, a multiple-fragmentation antipersonnel munition that performs like a shotgun in its directed dispersion of fragments.

In the post-World War II insurgency/counterinsurgency era, shotguns were employed by guerrilla and military forces in virtually every conflict in sub-Saharan Africa, Latin and South America, and Southeast Asia. In their successful counterinsurgency campaign in Malaya (1948-1959), British forces employed shotguns in jungle operations, as did British, Australian, and New Zealand special operations forces in their 1963-1966 Borneo campaign. Shotguns were employed by Viet Minh and French forces in the Indochina War (1946-1954) and by the Viet Cong against the military forces of the Government of the Republic of South Vietnam (1956-1975). United States, Australian, and New Zealand units employed shotguns in their operations against Viet Cong guerrillas and North Vietnamese military forces in the Republic of Vietnam (1965-1972). They also used the Claymore mine and a shotgun round for the M79 grenade launcher. United States Marine Corps personnel employed shotguns in the recapture from Cambodian forces of the container ship *Mayaguez* on 12 May 1975. United States Air Force security police employed shotguns in base security operations in Saudi Arabia during Operations Desert Shield and Desert Storm (1990-91) to protect them from attack by terrorists or Iraqi military units, and some personnel in British armored units were armed with shotguns as individual weapons during that conflict.

The history of combat use of the shotgun reveals that it is a limited range but highly effective close-range, specialized weapon. Although recorded use has been primarily by United States and British military forces and their close allies, the shotgun has been employed in combat by the militaries of other nations and guerrilla or partisan forces where its use was of value for a specific mission, or in a particular conflict where its close-range effectiveness provided a military advantage. There

is substantial State practice of shotgun use in combat over more than two centuries. In contrast, there is no known evidence that shotgun use in combat has been curtailed by any nation due to concerns as to its inconsistency with the law of war.

Legal Considerations and Analysis

The Combat Shotgun raises two issues with regard to its legality. First, does a weapon capable of inflicting multiple wounds upon a single enemy combatant cause *superfluous injury*, as prohibited by Article 23(e) of the Annex to the Hague Convention IV Respecting the Laws and Customs of War on Land of 18 October 1907? Second, does the No. 00 buckshot projectile, or other smaller buckshot projectiles, expand or flatten easily, in violation of the Hague Declaration Concerning Expanding Bullets of 29 July 1899? Each of these questions will be addressed in the analysis that follows.

Does a Weapon Capable of Inflicting Multiple Wounds upon a Single Enemy Combatant Cause Superfluous Injury, as Prohibited by the Law of War?

Treaty Law

The principal treaty provision to which the United States is a party relating to the legality of weapons is contained in Article 23(e) of the Annex to Hague Convention IV Respecting the Laws and Customs of War on Land of 18 October 1907,⁸ which prohibits the employment of “arms, projectiles, or material calculated to cause unnecessary suffering.”⁹ In some texts, the term *superfluous injury* is used in lieu of *unnecessary suffering*. While the two terms often are regarded as synonymous, the former is the more accurate translation from the authentic French text—“*propres a causer des maux superflus*.”¹⁰

Neither superfluous injury nor unnecessary suffering has been defined. In determining whether a weapon causes superfluous injury, a balancing test is applied between the force dictated by military necessity to achieve a legitimate objective vis-a-vis injury that may be considered superfluous to the achievement of the stated or intended objective (in other words, whether the suffering caused is out of proportion to the military advantage to be gained). The test is not easily applied; a weapon that can incapacitate or wound lethally at, for example, 300 meters or longer ranges may result in a greater degree of incapacitation or greater lethality at lesser ranges. For this reason, the degree of “superfluous” injury must be clearly disproportionate to the intended objective(s) for development of the weapon (that is, the suffering must outweigh substantially the military necessity for the weapon).

8. Hague Convention IV Respecting the Laws and Customs of War on Land, Oct. 18, 1907, annex, art. 23e, 36 Stat. 2277.

9. *Id.*

10. *Id.*

The fact that a weapon causes injury or death does not lead to the conclusion that the weapon causes superfluous injury, or is illegal *per se*. Military necessity recognizes that weapons of war lead to death, injury, and destruction; the act of combatants killing or wounding enemy combatants in battle is a legitimate act under the law of war. That the law of war prohibits *unnecessary* suffering is an acknowledgment that the law of war recognizes as legitimate *necessary* suffering in combat. Deadly force also may be used lawfully against persons who are committing or threatening to commit crimes of violence who are not protected by the law of war, such as terrorists.

What is prohibited is the design or modification and employment of a weapon for the purpose of causing suffering beyond that required by military necessity. In conducting the balancing test necessary to determine a weapon's legality, the effects of a weapon cannot be weighed in isolation. They must be examined against comparable weapons in use on the modern battlefield and the military necessity for the weapon under consideration.

*The 1918 German Protest*¹¹

On 19 September 1918, the Government of Switzerland, representing German interests in the United States, presented to the U.S. Secretary of State a cablegram received by the Swiss Foreign Office containing the following diplomatic protest by the Government of Germany:

The German Government protests against the use of shotguns by the American Army and calls attention to the fact that according to the law of war (*Kriegsrecht*) every [U.S.] prisoner [of war] found to have in his possession such guns or ammunition belonging thereto forfeits his life. This protest is based upon article 23(e) of the Hague convention [sic] respecting the laws and customs of war on land. Reply by cable is required before October 1, 1918.

The German protest was precipitated in part by the capture in the Baccarat Sector (Lorraine) of France, on 21 July 1918, of a U.S. soldier from the 307th Infantry Regiment, 154th Infantry Brigade, 77th Division, AEF, who was armed with a 12-gauge Winchester Model 97 repeating trench (shot) gun, and a second, similarly-armed AEF soldier from the 6th Infantry Regiment, 10th Infantry Brigade, 5th Division, on 11 September 1918 in the Villers-en-Haye Sector. Each presumably possessed issue ammunition, which was the Winchester "Repeater" shell, containing nine No. 00 buckshot.

The German protest was forwarded by the Department of State to the War Department, which sought the advice of The Judge Advocate General of the Army. Brigadier General Samuel T. Ansell, Acting Judge Advocate General, responded by lengthy memorandum dated 26 September 1918. Addressing the German protest, General Ansell stated:

Article 23(e) simply calls for comparison between the injury or suffering caused and the necessities of warfare. It is legitimate to kill the enemy and as many of them, and as quickly, as possible It is to be condemned only when it wounds, or does not kill immediately, in such a way as to produce suffering that has no reasonable relation to the killing or placing the man out of action for an effective period.

The shotgun, although an ancient weapon, finds its class or analogy, as to purpose and effect, in many modern weapons. The dispersion of the shotgun [pellets] . . . is adapted to the necessary purpose of putting out of action more than one of the charging enemy with each shot of the gun; and in this respect it is exactly analogous to shrapnel shell discharging a multitude of small [fragments] or a machine gun discharging a spray of . . . bullets.

The diameter of the bullet is scarcely greater than that of a rifle or machine gun. The weight of it is very much less. And, in both size and weight, it is less than the . . . [fragments] of a shrapnel shell Obviously a pellet the size of a .32-caliber bullet, weighing only enough to be effective at short ranges, does not exceed the limit necessary for putting a man immediately *hors de combat*.

The only instances even where a shotgun projectile causes more injury to any one enemy soldier than would a hit by a rifle bullet are instances where the enemy soldier has approached so close to the shooter that he is struck by more than one of the nine . . . [No. 00 buckshot projectiles] contained in the cartridge. This, like the effect of the dispersing of . . . [fragments] from a shrapnel shell, is permissible either in behalf of greater effectiveness or as an unavoidable incident of the use of small scattering projectiles for the nec-

11. See U.S. DEP'T OF STATE, PAPERS RELATING TO THE FOREIGN RELATIONS OF THE UNITED STATES, 1918, Supp. 2 (*The World War*), at 785-86 (1933). This summary is based upon official correspondence contained in this and related official documents.

essary purpose of increasing [the] likelihood of killing a number of enemies.

General Ansell concluded his memorandum with the statement that "The protest is without legal merit."

Acting Secretary of War Benedict Crowell endorsed General Ansell's memorandum of law and forwarded it to the Secretary of State that same day. Secretary of State Robert Lansing provided the following reply to the Government of Germany two days later:

[T]he . . . provision of the Hague convention, cited in the protest, does not . . . forbid the use of this . . . weapon [I]n view of the history of the shotgun as a weapon of warfare, and in view of the well-known effects of its present use, and in the light of a comparison of it with other weapons approved in warfare, the shotgun . . . cannot be the subject of legitimate or reasonable protest.

. . . .

The Government of the United States notes the threat of the German Government to execute every prisoner of war found to have in his possession shotguns or shotgun ammunition. Inasmuch as the weapon is lawful and may be rightfully used, its use will not be abandoned by the American Army [I]f the German Government should carry out its threat in a single instance, it will be the right and duty of the . . . United States to make such reprisals as will best protect the American forces, and notice is hereby given of the intention of the . . . United States to make such reprisals.

World War I ended six weeks later, without reply by Germany to the United States response. There is no record of any subsequent capture by German forces of any U.S. soldier or marine armed with a shotgun or possessing shotgun ammunition, or of Germany carrying out its threat against the U.S. soldiers it captured earlier.

The position of the United States as to the legality of shotguns remains unchanged from that stated in the opinion of Brigadier General Ansell and the Secretary of State's 28 September 1918 reply to the government of Germany.

*Further Consideration of the Article 23(e)
Prohibition on Superfluous Injury*

As the memorandum from which this article is derived is the first legal review of the combat shotgun since the institution of the Department of Defense program for such reviews,¹² the issue of whether a shotgun causes superfluous injury in violation of Article 23(e) of the Annex to the 1907 Hague Convention IV merits fresh examination.

Shotguns and shotgun cartridges are designed or chosen to produce a desired projectile pattern at a specific distance. Their military purpose is the simultaneous projection in the direction of a close-range target of a number of projectiles in order to increase the probability of striking the intended target. This objective has been borne out in combat. British examination of its Malaya experience determined that, to a range of thirty yards (27.4 meters), the probability of hitting a man-sized target with a shotgun was superior to that of all other weapons. The probability of hitting the intended target with an assault rifle was one in eleven. It was one in eight with a submachine gun firing a five-round burst. Shotguns had a hit probability ratio twice as good as rifles. A 1952 British study by the Commander of British Security Forces, compiled from combat action reports, tests, and other studies (including medical), reconfirmed the previous finding that the shotgun was a highly-effective combat weapon at ranges out to seventy-five yards (68.6 meters).¹³ Traveling at velocities one-third to one-half that of a modern military rifle bullet, with a poor ballistic coefficient (particularly when compared to the good ballistic coefficient of modern military rifle bullets), shotgun buckshot also diminish risk of injury from projectile over-penetration (through walls or doors) to civilians who are not taking a direct part in the hostilities or to friendly force combatants during military operations in urban terrain. These reasons confirm the military necessity for shotguns.

The second issue is whether wounding by a shotgun constitutes superfluous injury, that is, that the wounds it causes are disproportionate when compared to its military necessity or to comparable wounding mechanisms to which a soldier may be exposed on the battlefield. The proposed transition from a pump (manually-operated slide) action to a semiautomatic action poses no law of war issues, but simply follows the military weapons evolution that began at the beginning of this century with military pistols and rifles.

Whether a shotgun creates wounds that are excessive to its military necessity will be addressed, in part, later in the discussion of shotgun ammunition. In the general sense, it is addressed here in terms of the fact that the use of a shotgun at close range increases the probability that targeted enemy combatants may be struck by more than a single projectile; the present question is whether multiple wounding is contrary to

12. The program commenced with a DOD Instruction. U.S. DEP'T OF DEFENSE, INSTRUCTION 5500.15 (16 Oct. 1974). The successor to that DOD Instruction was implemented in 1996. DOD DIR. 5000.1, *supra* note 2.

13. Swearingen, *supra* note 5, at 15.

the prohibition on superfluous injury. It is not, and State practice is substantially to the contrary. Wounding by more than one projectile is extremely common on the battlefield due to the various lawful fragmentation munitions in use, such as antipersonnel landmines, artillery and mortar fragments, canister rounds, Claymore mines,¹⁴ and hand or rifle grenades, as well as the extensive projection towards an enemy force of automatic and semiautomatic small arms fire.

A corollary question is whether shotgun projectiles as such inflict wounds greater than those imposed by comparable wounding mechanisms in use on the modern battlefield. Although it can result in fatal wounds, shotgun wounds appear substantially less significant than those inflicted by weapons such as artillery fragments, incendiary weapons, and antipersonnel landmines.¹⁵

For the foregoing reasons, the possibility that an enemy combatant may suffer multiple wounds as the result of the battlefield use of a shotgun as such does not contravene the prohibition on superfluous injury contained in Article 23(e) of the Annex to the 1907 Hague Declaration IV.

Other Initiatives Relevant to the Question

In August 1992, the Government of Germany issued a new law of war manual.¹⁶ Paragraph 407 of the manual states: "It is prohibited to use bullets which expand or flatten easily in the human body (e.g., dum-dum bullets) (Hague Decl 1899). This also applies to the use of shotguns, since shot causes similar suffering unjustified¹⁷ from the military point of view. . . ."¹⁸

The issue of whether shotgun buckshot violates the prohibition contained in the Hague Declaration Concerning Expanding Bullets of 29 July 1899¹⁹ is addressed later in this article. Since the German manual's objection to the shotgun relies upon the

1899 Hague Declaration Concerning Expanding Bullets, it can be assumed that the Government of Germany no longer regards the combat use of shotguns as a violation of the general prohibition of weapons causing superfluous injury, contained in Article 23(e) of the Annex to Hague Convention IV of 18 October 1907, as previously asserted in its diplomatic note of 23 September 1918.

As previously indicated, the United States developed the M18 (later the M18A1) Claymore mine following the Korean War. The M18A1 is an antipersonnel directed fragmentation device containing 760 10.5-grain steel balls which, on detonation, are dispersed in a sixty-degree arc extending fifty meters at a maximum height of two meters in front of the mine. It is employed with obstacles or on the approaches, forward edges, flanks, and rear edges of protective minefields as close-in protection against a dismounted infantry attack. Although initially developed to address human-wave attacks, the Claymore can be, and has been, employed as a perimeter-security weapon against individual enemy combatants. The Claymore subsequently has been manufactured by several nations, and it is in the military inventory of many nations, including Germany.²⁰

On 10 October 1980, following two years of negotiations, the United Nations Conference on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects adopted a convention bearing the same name (UNCCW). Protocol II of the UNCCW regulates the employment of landmines, booby traps, and other devices.

On 3 May 1996, the United Nations concluded its first review conference for the UNCCW. A primary objective of that review conference was the amendment of Protocol II of the UNCCW to address the indiscriminate effect of the irresponsible use of landmines. In the course of those negotiations, the

14. As indicated herein, a Claymore mine projects 760 steel fragments. In contrast, a No. 00 buckshot shotgun round projects nine. The comparable wounding effect on an enemy combatant at the same distance is apparent.

15. See, e.g., William W. Tribby, MD, Examination of 1,000 American Casualties Killed in Italy, in *WOUND BALLISTICS* 437-471 (Wash., D.C.: Office of the Surgeon General of the Army, 1962) [hereinafter *WOUND BALLISTICS*] (containing a narrative and photographs of the extent of battlefield wounds); see also Amended Protocol II on Mines, Booby Traps, and Other Devices to the 1980 Conventional Weapons Convention, May 3, 1996, 1997 WL 49691 (restricting the employment of antipersonnel landmines (APL) in order to protect civilians not taking a direct part in the hostilities). The Amended Protocol did not conclude that APL are illegal per se or prohibit their use against enemy combatants. *Id.* Current proposals for a worldwide ban on APL have as their basis the indiscriminate effect of their irresponsible and illegal use in a limited number of conflicts and the concomitant, adverse effect on the civilian population, rather than their effect in injuring combatants.

16. HUMANITARIAN LAW IN ARMED CONFLICTS—MANUAL (DSK VV207320067) (August 1992) [hereinafter *MANUAL*].

17. The German manual's use of the term unjustified suffering is not explained. It is not a standard recognized in the law of war. It also apparently is a standard with which the Government of Germany no longer agrees, given its endorsement of the legality of the Claymore mine, discussed *infra*, and German military possession of shotguns and Claymore mines as part of its Table of Equipment.

18. *MANUAL*, *supra* note 16.

19. The Hague Declaration Concerning Expanding Bullets, July 29, 1899, 1 A.J.I.L. 157-59 (Supp.). See also *THE LAWS OF ARMED CONFLICTS* 109-111 (Dietrich Schindler & Jiri Toman eds., 3d ed. 1988); *DOCUMENTS ON THE LAWS OF WAR* 39-42 (Adam Roberts & Richard Guelff eds., 2d ed. 1989).

20. Following reunification on 3 October 1990, the German Army redesignated the landmine as the DM-51 and retained the former East German Army MON-50, which is the USSR copy of the U.S. M18A1 Claymore mine.

States Parties drafted and adopted the following language in paragraph 6, Article 5 of Protocol II:

Weapons to which this Article applies which propel fragments in a horizontal arc of less than 90 degrees and which are placed on or above the ground may be used without the measures provided for in subparagraph 2(a) of this Article for a maximum period of 72 hours, if:

(a) they are located in immediate proximity to the military unit that emplaced them; and

(b) the area is monitored by military personnel to ensure the effective exclusion of civilians.

This provision was written expressly to exclude Claymore mines from the requirements for the employment of antipersonnel landmines when employed in the manner stated. It was adopted by the consensus of the participating States Parties,²¹ including Germany. In promulgating this provision, the States Parties expressly confirmed the legality of the Claymore mine, which (as previously noted) performs like a shotgun, and with far more devastating effect on enemy personnel. This acknowledgment of the legality of the Claymore mine also serves to reconfirm the legality of the potential multiple-wounding characteristic of the shotgun.

Conclusion as to the First Legal Issue

As evidenced by the customary practice of nations and a review of applicable treaty law, the possible multiple-wounding characteristic of the combat shotgun does not violate the law of war prohibition of superfluous injury.

Does the No. 00 Buckshot Projectile, or do Other Smaller Buckshot Projectiles, Expand or Flatten Easily, in Violation of the Hague Declaration Concerning Expanding Bullets of 29 July 1899?

Description

21. The participating States Parties were: Australia, Argentina, Austria, Belarus, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Cuba, Cyprus, the Czech Republic, Denmark, Ecuador, Finland, France, Germany, Greece, Guatemala, Hungary, India, Ireland, Israel, Italy, Japan, Laos, Liechtenstein, Malta, Mexico, Mongolia, the Netherlands, New Zealand, Norway, Pakistan, Romania, the Russian Federation, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Ukraine, the United Kingdom, the United States, and Uruguay.

22. U.S. DEP'T OF NAVY, NAVSEA SWO10-AD-GTP-010, TECHNICAL MANUAL, SMALL ARMS AND SPECIAL WARFARE AMMUNITION 4-13 (1 May 1995). The requirements document for the Combat Shotgun also lists No. 7 1/2 shot and No. 9 shot, while the Navy M257 round contains No. 4 shot. Each is substantially smaller than No. 00 buckshot, and even less likely to deform on impact with soft tissue, hence the focus on the No. 00 buckshot round.

23. See *supra* note 19.

24. U.S. DEP'T OF ARMY, FIELD MANUAL 27-10, THE LAW OF ARMED CONFLICT, para. 34 (1956).

Historically and currently, the primary antipersonnel round used in a combat shotgun is loaded with nine No. 00 buckshot (.33 inch diameter (.8382 cm.)) projectiles, with a propellant charge of approximately twenty-six grains (1.68 grams) of smokeless powder.²² The projectiles are lead and contain two to four percent antimony.

Treaty law

In addition to the law of war prohibition on superfluous injury, there exists the Hague Declaration Concerning Expanding Bullets of 29 July 1899.²³ This treaty prohibits the use in international armed conflict "of bullets which expand or flatten easily in the human body, such as bullets with a hard envelope which does not entirely cover the core or is pierced with incisions."

The United States is not a party to this declaration, which was intended to prohibit the so-called "dum-dum" projectile manufactured as the Mark IV caliber .303 round in the late Nineteenth Century by the British at its arsenal near Calcutta. The United States has, however, taken the position that it will adhere to the terms of the declaration to the extent that its application is consistent with the object and purpose of the prohibition on superfluous injury contained in Article 23(e) of the Annex to the 1907 Hague Convention IV.

As discussed earlier, the shotgun, with its capability for inflicting multiple wounds, does not violate the prohibition on superfluous injury. A separate question is whether buckshot projectiles violate the prohibition contained in the 1899 Hague Declaration and, if so, whether the United States would be legally obligated to refrain from their use.

Historical Statements

Comments on the legality of shotguns in manuals and opinions of the armed services have supported the intent of the 1899 Hague Declaration. An Army field manual from 1956 states that the prohibition on superfluous injury in Article 23(e) of the Annex to the 1907 Hague Declaration and State usage "has . . . established the illegality of . . . the scoring of the surface or the filing off of the ends of the hard cases of bullets."²⁴ In further interpretation, a 1960 opinion of The Judge Advocate General stated that:

[T]he legality of the use of shotguns depends upon the nature of the shot employed and its effect on a soft target The use of shotgun projectiles sufficiently jacketed to prevent expansion or flattening upon penetration of a human body and shot cartridges with chilled shot²⁵ regular in shape would not constitute violations of the laws of war.²⁶

This statement was reaffirmed in opinions of The Judge Advocate General in 1961²⁷ and 1964,²⁸ and is repeated in *Department of the Army Pamphlet (DA Pam) 27-161-2*.²⁹

While clearly stated, the statement apparently has resulted in some misunderstanding. The language previously quoted from the German law of war manual, which relied upon the language of *DA Pam 27-161-2*, suggests that its author incorrectly assumed that any No. 00 buck shot projectile would deform easily,³⁰ performing in a manner similar to the dum-dum bullet prohibited by the 1899 Hague Declaration. The issue is how No. 00 buckshot projectiles perform on impact in soft tissue and whether their performance is consistent with the law of war obligations of the United States, as enunciated in previous opinions of The Judge Advocate General.

Characteristics and Wound Ballistic Performance of 00 Buck Projectiles

A pure lead No. 00 buckshot projectile has not been used by the United States military for more than three decades, if at all. Tests conducted at Frankford Arsenal in 1962 to improve military shotgun ammunition determined that soft lead shot deformed during setback as the shell fired, flattening on one or more sides. It suffered further flattening and deformation as it accelerated down the barrel, resulting in a worsened ballistic

coefficient, erratic ballistic flight paths, increased dispersion, poor pattern uniformity, and excessive velocity loss. The deformation of soft lead projectiles also causes a reduction in the penetration of soft tissue.³¹

Through the addition of two to four percent antimony, the undesirable ballistics of pure lead projectiles are reduced, shot dispersion is decreased, the shot is more evenly distributed throughout the pattern, and the shot has a higher terminal velocity. Long range accuracy and terminal performance are enhanced by maintaining spherical shot shape. The question is whether lead-and-antimony buckshot expands or flattens easily in a manner inconsistent with the prohibition contained in the 1899 Hague Declaration and previous opinions of The Judge Advocate General.

Wound ballistics has advanced substantially over the past fifteen years, and a clearer picture exists today than may have been possible previously. Wound ballistics tests conducted over the past decade establish that lead-and-antimony buckshot may deform mildly upon impact with soft tissue at close range, but it does not expand or flatten easily. Some deformation is likely with any lawful military rifle projectile, including full-metal jacketed bullets.³² Lead-and-antimony shotgun buckshot (or shot) do not mushroom in the way the dum-dum bullet performed.

The prohibition in the 1899 Hague Declaration on projectiles that “flatten or deform *easily*” constitutes acknowledgment of the inevitability of some deformation, and it does not prohibit projectiles that may deform mildly in limited circumstances. Unlike the dum-dum bullet, the lead-and-antimony No. 00 buckshot does not rely upon expansion to increase its wounding effect and, as explained, has been developed to minimize any change in its spherical shape to increase perfor-

25. There is no industry-wide or international law definition for “chilled shot.” It commonly is used to refer to hardened shot. Shot are hardened by a lead-and-antimony mixture to reduce deformation.

26. Op. OTJAG, Army, JAGW 1960/1305 (4 Jan. 1961) [hereinafter JAGW 1960/1305].

27. Use of Shotguns in Conventional or Unconventional Warfare, Op. OTJAG, Army, JAGW 1961/1210 (11 Sept. 1961).

28. Op. OTJAG, Army, JAGW 1964/1333 (19 Aug. 1964).

29. U.S. DEP’T OF ARMY, PAM. 27-161-2, INTERNATIONAL LAW, VOLUME II (Oct. 1962).

30. This statement is based on the author’s correspondence with the author of the German manual. It also was determined that its author erroneously relied upon the statement in *Department of the Army Pamphlet 27-161-2* that “the United States Army does not now issue shotguns to troops for combat use” as evidence of lack of justification for their combat use. See *id.*; JAGW 1960/1305, *supra* note 26. As United States forces were not engaged in armed conflict at the time that opinion was prepared, the statement is a *non sequitur*. As the history of combat shotgun use indicates, shotguns are issued on a mission-specific, as-needed basis. Lack of issue of shotguns in 1961 was not based upon an assumption by the United States that combat shotgun use was either unlawful or unjustified. In 1961, the United States Army was performing deterrence missions in Europe and Korea against threats by the conventional forces of the Warsaw Pact and North Korea, respectively, and shotguns would have been of limited effect. As the historical summary explains, United States forces were equipped with shotguns upon conventional force entry into Vietnam in 1965.

31. See Swearngen, *supra* note 5, at 459; Gus Cotey, Jr., *Number 1 Buckshot, The Number 1 Choice*, WOUND BALLISTICS REV. 10-18 (1996); Duncan MacPherson, *Technical Comment on Buckshot Loads*, WOUND BALLISTICS REV. 19-21 (1996).

32. See, e.g., Ashley W. Oughterson et al., Study of Wound Ballistics—Bouganville Campaign, in WOUND BALLISTICS, *supra* note 15, at 383, 396, figs. 190, 204; Martin L. Fackler, MD, *Wounding Patterns for Military Bullets*, INT’L DEF. REV. 55-64 (Jan. 1989).

mance, range, and target penetration. Wound profiles and recovered buckshot confirm the nominal change in shape that may occur. The change is insignificant, and a No. 00 buckshot projectile is unlikely to result in a wound as severe as that caused at the same range by, for example, 5.45 x 45mm AK-74; 5.56 x 45mm M855; 7.62 x 39mm AK-47; or 7.62 x 51mm full-metal jacket projectiles, today's commonly-used military small-caliber projectiles.³³

Conclusion as to the Second Legal Issue

Lead-and-antimony buckshot does not "expand or flatten easily," and therefore violates neither the 1899 Hague Declaration nor the criteria for legality previously articulated in opinions of The Judge Advocate General, United States Army.

Conclusion

The combat shotgun and its lead-and-antimony buckshot (or shot) ammunition are consistent with the law of war obligations of the United States.

The memorandum from which this article is derived was coordinated with the offices of the Judge Advocates General of the Air Force and Navy; Army General Counsel; the Staff Judge Advocate to the Commandant of the Marine Corps; the Office of the General Counsel, Department of Defense; and the Office of the Legal Adviser, Department of State, each of whom concurred with its analysis and conclusions.

33. See NATO, EMERGENCY WAR SURGERY 23-25, 29, 31 (2d United States revision, 1988) (providing wound profiles for projectiles); Cotey, *supra* note 31, at 14 (illustrating recovered buckshot).