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14. ABSTRACT

As the technology associated with Non-Lethal Weapons (NLWs) continues to mature there will be growing pressure to use NLWs in future combat operations. However, the use of NLWs in decisive combat operations provides little operational benefit and would likely increase overall risk to mission accomplishment. While the use of NLWs is appropriate at the lower end of the conflict spectrum, the use of NLWs in decisive combat operations would produce unrealistic expectations that the United States military will be unlikely to meet. Additionally, the temporary and reversible effects of NLWs will unnecessarily complicate combat operations, deplete friendly combat power and fail to convince the enemy that he is defeated.

To mitigate these operational drawbacks, commanders must not convey the notion that NLWs can produce a bloodless victory within the context of decisive combat operations. The nature of war has not changed and will not change—war will require lethal application of force. We must not be apologetic about our use of deadly force when the circumstances require it. We must prepare for the use of deadly force and promptly apply that lethal force in order to decisively defeat an adversary's capability and will to wage war.

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THE LIMITED UTILITY OF NON-LETHAL WEAPONS IN DECISIVE COMBAT: WAR STILL MEANS FIGHTING AND FIGHTING STILL MEANS KILLING

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A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College, the Department of the Air Force or the Department of the Navy.

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17 March 2005

Abstract

THE LIMITED UTILITY OF NON-LETHAL WEAPONS IN DECISIVE COMBAT: WAR STILL MEANS FIGHTING AND FIGHTING STILL MEANS KILLING

As the technology associated with Non-Lethal Weapons (NLWs) continues to mature there will be growing pressure to use NLWs in future combat operations. However, it is not abundantly clear that NLWs will provide an advantage in decisive combat operations. In fact, the use of NLWs in decisive combat operations provides little operational benefit and would likely increase overall risk to mission accomplishment. While the use of NLWs is appropriate at the lower end of the conflict spectrum, the use of NLWs in decisive combat operations would produce unrealistic expectations that the United States military will be unlikely to meet. Additionally, the temporary and reversible effects of NLWs will unnecessarily complicate combat operations, deplete friendly combat power and fail to convince the enemy that he is defeated.

To mitigate these operational drawbacks, senior commanders must not convey the notion that NLWs can produce a bloodless victory within the context of decisive combat operations. The nature of war has not changed and will not change—war will require lethal application of force. We must not be apologetic about our use of deadly force when the circumstances require it. We must prepare for the use of deadly force and promptly apply that lethal force in order to decisively defeat an adversary's capability and will to wage war.

War means fighting and fighting means killing.

—Lt Gen Nathan Bedford Forrest

Introduction

Over the last decade much has been written about the development and utility of Non-Lethal Weapons (NLWs) in military operations. The majority of the literature focuses on the need to develop and deploy a range of improved NLWs that provide strategic, operational and tactical commanders with options between lethal force and stalemate. While numerous research projects recommend expanded use of NLWs across the spectrum of conflict, most studies focus on the application of NLWs at the lower end of conflict, particularly Military Operations Other than War (MOOTW). Little has been written about the application of NLWs at the high end of conflict—what this paper will term as decisive combat operations. That which has been written either outright advocates their expanded use into decisive combat operations or strongly implies that since NLWs have a legitimate and useful role in MOOTW type operations, then by extension, NLWs can provide substantial operational benefit in decisive combat operations. Some authors have gone so far as to state that NLWs will change the nature of war. Researchers and experts seem to agree that as the technology of NLWs and their associated concepts mature, there will be growing pressure to use NLWs in future combat operations—across the conflict spectrum. However, there may also be legitimate opposition to their use, not only due to legal and ethical concerns, but it's also not abundantly clear that NLWs provide an advantage in decisive combat operations. Commanders must have a firm understanding of these issues and the attending arguments in order to make the best judgment as to the proper use -- or nonuse -- of NLWs in decisive combat operations.

This paper asserts that the use of NLWs in decisive combat operations would provide little operational benefit and would likely increase overall risk to mission accomplishment. The use of NLWs in decisive combat operations would have little operational utility primarily because of the lethal nature of war. While the use of NLWs is appropriate at the lower end of the conflict spectrum, the use of NLWs in decisive combat operations would produce unrealistic expectations; generate long-term legal implications on the use of both lethal weapons and NLWs; unnecessarily complicate combat operations and deplete combat power; and fail to convince the enemy that he is defeated, thus creating conditions for future conflict. This paper will not discuss in depth the many legal and ethical issues associated with the use of NLWs. It is assumed that United States commanders will only use legal weapons, and use them only in a legal manner. However, the paper will touch on the legal and ethical perceptions that others may have with regard to the use of NLWs and how the manifestations of these perceptions may impact the operational commander.

Finally, the nature of decisive combat operations is different than the nature of low end conflict, and therefore requires a different solution set. This difference generates special considerations for the operational commander in that before relying on the use of NLWs in decisive combat operations, the commander must first appreciate the nature of the given conflict and give due regard to the potential operational drawbacks and risks associated with the use of NLWs.

Unrealistic Expectations

Military conflict in the 1990s began with a powerful display of precision military might in the Gulf War. Many experts contend that the surprisingly small number of United States casualties in that war produced an expectation that future conflict would be similarly

benign.[1] Other United States military operations in the 1990s such as Haiti, Somalia and Bosnia were predominately humanitarian or peace enforcement and reinforced the notion that war should and could be as bloodless as possible and that MOOTW would be the predominant employment of military power for the foreseeable future. These limited scale operations demanded capabilities far different than the huge destructive forces that the United States had built up to defend against the Soviet Union.

The first widely publicized use of NLWs was during the withdrawal of United States military forces from Somalia in 1995. Based largely on that perceived successful use of NLWs, the United States military began developing its NLWs concepts and in 1996 the Office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict issued Department of Defense Directive 3000.3, Policy for Non-Lethal Weapons. This directive defined non-lethal weapons as those "explicitly designed and primarily employed so as to incapacitate personnel or material, while minimizing fatalities, permanent injury to personnel, and undesired damage to property and the environment."[2] Also in 1996, Congress created the Joint Non-Lethal Weapons Directorate and over time its annual budget has grown such that it is now approaching $60 million.[3] Periodic studies regularly document the trend towards increased reliance on NLWs.

Therefore the concept of using NLWs currently has strong momentum and the capabilities of these systems are growing rapidly. Yet, will the use of these technologies in decisive combat operations produce the desired operational benefit without a public backlash based on unrealized or unrealistic expectations? This question has several different aspects to it. First, the loudly touted, novel capabilities of NLWs may produce the expectation among the United States public and international community that future war can and should

be near bloodless. Secondly, and seemingly at odds with the first point, use of NLWs in combat will likely be perceived as torture within certain human rights groups. Thirdly, by developing a consistent pattern of using NLWs across the spectrum of conflict, the United States may be creating a customary law practice that obligates the United States to use NLWs in the future, when NLWs may not be the best capability for the situation. Finally, the use of NLWs could be interpreted by our enemy as a sign of weakness and exploited to our disadvantage.

In addressing the notion that the use of NLWs may produce the expectation that future war must be near bloodless, we quickly confront the current limitations of NLWs and many of the unknown effects these systems have on humans of various age, size and physical condition. Non-lethal weapons can be fatal.[4] DoD Directive 3000.3 acknowledges this fact by stating "Non-lethal weapons shall not be required to have a zero probability of producing fatalities or permanent injury."[5] While the specific effects of NLWs depend on the individual systems, they also depend on the individual person. Human effects have not been precisely determined; there is only a limited database on how these weapons affect the range of persons found in a given population.[6] A 2003 Naval Studies Board report states, "Well characterized effects and effectiveness are probably the most convincing means of gaining widespread acceptance and integration of NLWs into warfighting capabilities, yet such characterization is currently the weakest aspect of the overall non-lethal weapons program."[7]

This gap between what is believed about NLWs and what they actually produce on the battlefield could have serious operational consequences.[8] If the United States employs NLWs with the stated and obvious intent to severely limit enemy casualties and subsequently even a moderate number of enemy combatants are killed, we could likely be seen as failing

in our "obligation" and causing unnecessary suffering—we may be better off to state our intention to "destroy" the enemy and reap the benefits of a limited number of people *intentionally* killed by lethal means, vice a smaller number of *unintended* killed by non-lethal means.

Opponents of the above position would likely contend that the United States has a legal and moral responsibility to do all things possible to reduce the killing and suffering during combat. This is certainly true to a point and is addressed within the concepts of military necessity and proportional response. Even with these limits on the use of force, a state still has the legitimate right to use lethal means during war. Conventional weapons have been refined to reduce collateral death and suffering. Non-lethal weapons have their legitimate place in urban conflict and operations on the lower end of the conflict spectrum. However, in decisive combat operations, NLWs will create expectations that at least in the near-to-mid term we will not be able to meet—and the ramifications of not meeting this expectation could have significant operational and strategic implications. Furthermore, even if we are able to effectively use NLWs in certain situations within decisive combat operations, if we should suddenly have to shift to overwhelming lethal force, that shift will be perceived as a failure on our part, and public and international support will likely be negatively impacted.

The United States military developed NLWs, at least in part, to address the "CNN effect." Specifically, NLWs would provide the means to "meet the scrutiny of the media" and preclude images of large-scale death and destruction from undermining public support deemed necessary for military operations.[9] Ironically, the very use of NLWs in combat will certainly draw widespread media attention and the resulting images could likely be perceived

as torture within certain groups around the world. Specific legal constraints aside, the use of NLWs that are based on chemical technologies have the strongest potential for "smack[ing] of chemical warfare."[10] Certain electromagnetic (microwave) and optics (laser) technologies, are also often cited as having the potential for being used as instruments of torture and are closely watched by several human rights groups such as Amnesty International, Human Rights Watch, and the International Committee of the Red Cross.[11] If the United States military were to use NLWs in such a prevalent manner under such widespread public scrutiny, it is quite possible that these groups could gain support for their opposition to NLWs and persuade world political leaders to second-guess or alter operational decisions. That reversal could place military commanders in a less advantageous position than if they would have used appropriate lethal force in the first instance.

Furthermore, these varying perceptions of NLWs as instruments of torture and somewhat "ambiguous status under broadly conceived international conventions" will almost certainly have implications on coalition warfare in the future.[12] Writing in the *Naval War College Review*, Lieutenant Colonel Coppernoll states that NLWs "can make multinational coalitions more cohesive, by lessening casualties and collateral damage, and they provide a measure of escalation control at all levels of armed conflict."[13] It may be a critical flaw to predict coalition acceptance of NLWs. First, NLW capabilities among potential coalition partners will certainly vary widely. This inequity will cause significant operational planning challenges that must be overcome. How do we effectively integrate coalition partners into combat operations if they only possess lethal means and we only intend to use non-lethal means? Additionally, "coalition members may offer different interpretations to international law relating to [NLWs] or have different doctrines regarding their use, which could further

complicate the situation."[14] Assuming these issues are properly dealt with, we next face the issue of how the use of NLWs will be perceived by the population within the respective coalition countries. As addressed earlier, if adverse pressure is brought to bear on coalition governments, we could see a fracture in a coalition based on perceived illegal, immoral use of NLWs. The consequences of such a rift could be strategically far-reaching and place the mission at great risk. Therefore, ironically, it may be that the world public may be more tolerable of a short, lethal war that definitively decides the issue rather than a long (or even short) conflict that is besieged with accusations of torturous conduct.

Operational commanders also run the risk that by using NLWs across the spectrum of conflict, a customary law practice is created that obligates the United States to use NLWs in the future, when NLWs may not be the best military tool. To illustrate the point, "following DESERT STORM the human rights organization Middle East Watch argued that since the United States had precision guided munitions, the use of "dumb bombs" was illegal."[15] A military lawyer, Lieutenant Colonel Duncan writes in the *Naval Law Review* that customary law changes over time and a rule can become part of customary international law "once a practice has obtained a degree of regularity and is accompanied by a belief among nations that it is obligatory."[16] So, an operational commander's decision to rely on NLWs in a decisive combat situation, that could otherwise be dealt with using lethal means, opens the future use of lethal means to legal scrutiny and potential international condemnation. The resultant restriction of freedom to choose the otherwise proper response to conflict could prove decidedly disadvantageous to the United States.

Finally, persistent reliance on the use of NLWs could be interpreted by our enemy as a sign of weakness and exploited to our disadvantage. Military analyst and author Ralph

Peters predicts, "We will face opponents for whom treachery is routine, and they will not be impressed by tepid shows of force with restrictive rules of engagement."[17] Another frequent author on military affairs, Martin Stanton, writes that NLWs "convey to our potential adversaries that we are too squeamish to hurt even our enemies…this conveys neither strength nor resolve, the two traits that gain the most respect in the anarchic world."[18] Possession of truly effective NLWs may blunt most of these criticisms, for in the end, if they help us accomplish the mission, then it doesn't matter if the enemy is impressed with us or not…or does it? This is a short-sighted view of the situation and does not consider the longer term implications for the "defeated" enemy and for the world's perception of our military power and willingness to use it.

NLW Effects Will Unnecessarily Complicate Combat Operations

By DoD definition, NLWs are to have "relatively reversible effects on personnel or material," and by DoD policy they should "temporarily disable equipment, facilities, and personnel."[19] In many instances within MOOTW the temporary and reversible aspects of NLWs will certainly be desirable and advantageous. However, in decisive combat those temporary and reversible effects could increase risk to the mission, limit freedom of action and deplete operational combat power that could otherwise be more effectively applied to the situation. For example, areas and facilities that are temporarily neutralized could be brought back on line and once again contribute to the enemy's combat effort. Furthermore, once a facility or group of equipment is immobilized, friendly intelligence assets or personnel will have to remain with it (or frequently visit it) in order to ensure that it remains out of the fight. Once known that these facilities are back on line, friendly forces would likely have to reengage them, thus expending additional resources, again exposing friendly troops to danger

and lengthening the time required to accomplish the given task.[20] This repetitive action will further strain the limited number of friendly assets available to conduct these missions and drive up the cost of such operations. The temporary, reversible nature of NLWs further complicates operational planning by requiring frequent reassessments of the status of previously addressed targets. This must be considered in the operational plan with its attending impact on time, space and force considerations.

With regard to anti-personnel NLWs, there are similar but more pressing complications. Additional friendly personnel, time, material and effort will be required to provide aid and keep control of those affected by the weapons. Obligations under international law require that "parties to the conflict must, after each engagement and without delay, take all possible measure to search for and collect the wounded and sick on the field of battle, protect them from harm, and ensure their care."[21] This could be a monumental effort if thousands of enemy troops are exposed to incapacitating agents and thereafter captured. To illustrate the magnitude of the effort, the U.S. Marine Corps estimates it takes "two friendly minders to manage every non-lethal casualty."[22] While many of these same obligations and attending complications exist with the use of lethal weapons, the scale is likely to be much larger if the major effort is based on non-lethal means vice lethal means. Specifically, enemy personnel killed in action require a lot less effort, time and resources on the part of friendly forces than do wounded or temporarily incapacitated enemy personnel.

An additional concern "is the potential for opposing forces to return to the battlefield to fight again."[23] It's not a certainty that NLWs would be employed in such a manner as to incapacitate the enemy until such time that the enemy may be captured and detained. It may be that NLWs are employed at such a distance and time that he may not be captured; the

enemy then has the potential to recover from the temporary effects of a NLW attack and then regain full combat power.

Only by precise Battlefield Damage Assessment (BDA) and accurate intelligence will friendly forces know the outcome of a non-lethal attack and what further actions might be necessary to "restrain" the combatants or incapacitate the enemy facilities or equipment. While accurate BDA is also useful following a lethal attack, BDA following a non-lethal attack has more far reaching implications. With today's precision lethal munitions, we can be fairly certain that we've accomplished some level of destruction and those effects are likely to be more lasting. Because of the temporary and reversible effects of NLWs, we must quickly determine the effects of our attack because we neither know nor can we assume the results without taking the risk that we are completely wrong. Without accurate BDA, we just don't know what we don't know.

The Enemy Lives to Fight Again

Finally, the use of NLWs may not convince the enemy that he is defeated. He may simply feel that he has been inconvenienced and temporarily prevented from accomplishing his military and political objectives, but retains the will to seek those objectives once circumstances again permit him to try. When the United States commits combat troops to decisive combat operations (vice MOOTW), these troops must be empowered to not only defeat the enemy's capacity for waging war but also remove his will to wage war. If we only temporarily remove his capacity for waging war, without addressing his passionate intentions for war, then we in effect only prevent him from doing what he otherwise still desires to do. We then face the risk that the enemy will simply wait until he can regain the capability we have temporarily withheld from him and reengage at his earliest opportunity. Thus, combat

forces must not only address the enemy's capability but also his will in a more permanent manner than NLWs permit. By doing so, we provide a more lasting degree of deterrence from future adverse action because the enemy better understands that we operate from a position of strength and he operates from a position of weakness.

It may be that overwhelming, lethal violence is the key to impressing on the enemy civilian leadership the futility of further aggression and impressing on the military leadership the bare fact they truly have no capacity to continue. If the enemy only suffers a low, temporary price for defeat, his hostile will may not have been eliminated and he will conclude that the potential price of future failure is worth another attempt at attaining his goals. Conversely, if he pays a substantially higher price through the application of lethal vice non-lethal means, he may be far more reluctant (and less capable) to pursue his goals. As Ralph Peters bluntly states, "Only the shedding of their blood defeats resolute enemies."[24]

The Unchanging Nature of War

While head of the Department of Defense's Office of Force Transformation, Admiral Arthur Cebrowski stated that the introduction of NLWs into combat "will change the character of war."[25] While possibly true taken in the context of MOOTW and operations at the low end of conflict, this is a dramatic overstatement if applied to potential decisive combat operations. Non-lethal weapons certainly will have their place in warfare, but in many circumstances they will not supplant the basic need for lethal force. A view that NLWs will change the character of war is not so much a forward-thinking concept as a backwards-thinking concept; it's refighting the MOOTW-type conflicts of the 1990s. However, we should not assume that all future conflict will closely resemble those past conflicts. One could foresee armed conflict waged between traditional military forces in a

number of areas around the world today. The United States maintains security obligations in Korea, the Taiwan Straits and Europe and growing ties and interests in Central Asia and the Middle East. Many potential adversaries in these regions have sophisticated, and increasingly modern and lethal, militaries that might not easily succumb to the use of NLWs.[26]

True war will still be a bloody contest of forces. We may have become enamored with technology, but it provides only tools for which we can more effectively accomplish our military and political objectives on the battlefield. "The nature of warfare never changes—only its superficial manifestations."[27] Our adversaries will not likely be so smitten with gadgets that do not produce decisive outcomes on the battlefields. We must be capable and willing to match their ferocity on the battlefield or face defeat—a bloody, violent and lethal defeat.

On the other hand, other nations will undoubtedly develop NLWs and as they do, the need for lethality will again become clear. As new NLW technology expands and becomes integrated into other nations' capabilities, the attending countermeasures will also be developed. While not negating the use of NLWs, these countermeasures will offset much of their utility and force militaries to again rely on the basic nature of war—destruction and killing.

The assumption once was that if the United States had the capabilities to fight a Major Theater War then we could also accomplish any "lesser included" task. That assumption proved to be false. Similarly, if we now assume that we must equip and train our people to conduct MOOTW-like operations that do not require lethal force and then somehow apply those same tools to decisive operations, that too will be proven false. It

would, as Carl Von Clausewitz stated, be a grave error to "mistake the kind of war one is embarking on," likewise "to turn it into something that is alien to its nature."[28]

Recommendations

Commanders must carefully consider the immediate, near-term and long-term implications of their use of NLWs and ensure that their use is consistent with the nature of the situation and not a substitute for means that would more effectively accomplish the mission and retain freedom of action for future conflict. Just because the United States has non-lethal capabilities doesn't mean they should always be used. In decisive combat operations, the preponderance of kinetic action should be lethal because that is the manner in which forces are able to meet military objectives more quickly, with less cost and at less operational risk.

The combatant commanders should support the Services' efforts to develop and field non-lethal technologies, but not at the expense of modernizing and fielding lethal capabilities. Some researches advocate a seven-fold increase in the level of funding and effort to field new and improved non-lethal technologies.[29] In today's declining budget environment, this drain from conventional force modernization would be a mistake. Combatant commanders must ensure that we retain a force that is fully capable of lethal combat. While developing and fielding non-lethal technologies will greatly assist our military efforts on the lower end of the conflict spectrum, they will do little to meet our requirements in decisive combat operations. This lethal force should be the basis that operational planners use to develop operational design and phase III, decisive operations.

Combatant commanders must be careful (through word and deed) not to raise the public's expectations that decisive combat operations can be won quickly and with little

bloodshed. While acknowledging the need and obligation to reduce collateral damage, commanders must refrain from promoting the notion that warfare can be quickly won with no one (but perhaps a few of the enemy) getting hurt. Proponents of NLWs often tout them as a "genuine technological breakthrough for military strategy and warfare in the twenty-first century."[30] Statements of this type only serve to raise the public's expectations that the nature of war has changed and technology will somehow provide victory without bloodshed. When commenting about potential military operations, commanders must temper their comments with the expected nature of the conflict. When commenting about the expected capabilities and application of NLWs, commanders should temper their comments so that if expectations are not met, public and international backlash can be minimized.

If contemplating the potential use of NLWs in decisive combat operations, senior commanders must clearly communicate their concept of operations concerning NLWs with coalition partners. Commanders must understand the general position each country takes with respect to the use of NLWs and factor that into its operational campaign design. It may be that a particular coalition partner may want to be far removed from United States forces that might employ NLWs, or it might be that they have capabilities that would enhance (or detract) from the use of NLWs. Commanders must understand that while NLWs may provide a greater range of capabilities, they also generate a wide range of other issues that must be considered; NLWs are not just another routine piece of military equipment.

Conclusion

Non-lethal weapons certainly provide commanders with a wider range of options to operate across the spectrum of conflict. They can effectively bridge the gap between lethal action and stalemate when neither of those options may be appropriate for the situation.

However, NLWs are not a substitute for lethal action when lethal action is what is required. Such is the case in decisive combat operations. Decisive combat operations are fundamentally different than operations at the lower end of the conflict spectrum. Decisive combat operations require different planning assumptions, different force composition, and different combat skill sets than do other operations; therefore, they require a different solution set than do other operations. That different solution set must be based on the deliberate application of lethal vice non-lethal force. To confuse these two operating environments is to misunderstand the nature of war which could lead to a dangerous misapplication of the wrong type of force. To rely on NLWs in decisive operations is to introduce them into a situation that is alien to their capabilities and would not produce the desired operational benefit while simultaneously increasing risk to the mission.

The public can easily understand the need to use NLWs in a peacekeeping-type operation, but to introduce NLWs into decisive combat operations is to unwisely raise the public's expectations that war can be made bloodless. The United States military will not be able to meet those expectations and the backlash could be severe enough to have operational and strategic consequences.

Quite the opposite expectations are likely to occur among our potential coalition partners. Due to differing views of legal and moral obligations related to NLWs, our future partners could view the use of NLWs as torture and thus fracture our efforts to build unity against a common enemy.

Furthermore, a persistent use of NLWs in all manner of conflict across the spectrum could eventually shift the perception of what our obligations are under customary law and produce the expectation and obligation that we must use non-lethal means as a first response

in all circumstances. This outcome should be avoided. We must preserve our freedom of action by using lethal means where warranted and non-lethal means were appropriate.

The temporary and reversible effects of NLWs produce substantially complicating factors for the operational commander. Instead of simplifying the situation, NLWs in decisive combat operations will deplete combat power and require commanders at all levels to plan for and execute a wider range of actions that otherwise would not be necessary—and all for little gain. In decisive combat operations, it is usually much better to simply employ lethal means and move on to the next military objective. This method could prove to be more effective and could produce a much better settlement, particularly if the enemy then knows that he has been decisively defeated and not just temporarily inconvenienced.

Non-lethal weapons are a reality that commanders must confront. In many circumstances they may prove decidedly advantageous. However, they will not change the nature of war. They only provide options to the commander to better operate at the spectrum of conflict that became so prevalent in the last part of the twentieth-century. We should not expect non-lethal weapons to solve all our conflict issues—no other weapon ever has and non-lethal weapons are no exception.

NOTES

[1] Greg R. Schneider, Non-Lethal Weapons: Considerations for Decision Makers. (Urbana, IL: University of Illinois at Urbana-Champaign 1997), 4.

[2] Douglas Lovelace and Steven Metz, Non-Lethality and American Land Power: Strategic Context and Operational Concepts. (Carlisle, PA: Strategic Studies Institute 1998), 3.

[3] Stephen Mihm, "The Quest for the Nonkiller App.," New York Times Magazine, (July 25, 2004): 41.

[4] John L. Barry, Michael W. Everett and Allen G. Peck, Non-Lethal Military Means: New Leverage for a New Era (Cambridge: Harvard University 1994), 4.

[5] Department of Defense, Policy for Non-Lethal Weapons, DoD Directive 3000.3 (Washington, DC: 1996), 3.

[6] John M. Kenny, "What's So Special About Non-Lethal Weapons' Human Effects---Everything," Marine Corps Gazette, 84 (June 2000): 30.

[7] National Academy of Sciences, An Assessment of Non-Lethal Weapons Science and Technology, Washington, DC. 2003, http://www.books.nap.edu/cataloge/10538.html/ [21 March 2005].

[8] John M. Kenny, "Are You Sure It's Non-Lethal?" U.S. Naval Institute Proceedings, 127 (April 2001): 72.

[9] Schneider, 4.

[10] Brad Knickerbocker, "The Fuzzy Ethics of Non-Lethal Weapons," Christian Science Monitor, (14 February 2003): 2.

[11] Kenny, U.S. Naval Institute Proceedings, 71.

[12] Margaret-Anne Coppernoll, "The Nonlethal Weapons Debate." Naval War College Review, 52 (Spring 1999): 6.

[13] Ibid.

[14] Eric L. Nutley, Non-Lethal Weapons: Setting Our Phasers on Stun? Potential Strategic Blessings and Curses of Non-Lethal Weapons on the Battlefield, (Air War College. Occasional Paper No. 34, August 2003), 44.

[15] Coppernoll, 6.

[16] James C. Duncan, "A Primer on the Employment for Non-Lethal Weapons," Naval Law Review, 45, (1998): 51.

[17] Ralph Peters, "The New Warrior Class," Parameters, 24 (Summer 1994): 16.

[18] Martin N. Stanton, "What Price Sticky Foam?" U.S. Naval Institute Proceedings, 122 (January 1996): 60.

[19] Department of Defense, Policy for Non-Lethal Weapons, DoD Directive 3000.3 (Washington, DC: 1996): 2.

[20] Martin N. Stanton, "Non-Lethal Weapons: Can of Worms." U.S. Naval Institute Proceedings, (November 1996): 60.

[21] Department of the Navy, The Commander's Handbook on the Law of Naval Operations, NWP 1-14M (Washington, DC: 1995): para 11.4.

[22] Nick Lewer and Neil Davidson, "Objections to Weapons of Less Destruction," The Futurist, 33 (Oct 1999): 39.

[23] Nutley, 32.

[24] Ralph Peters, "In Praise of Attrition," Parameters, 34 (Summer 2004): 31.

[25] Mihm, Stephen "The Quest for the Nonkiller App." New York Times Magazine, (July 25, 2004): 38-43.

[26] Benjamin K. Barrett, "The Utility of Non-Lethal Weapons in Large-Scale Conflict," (Unpublished Research Paper, U.S. Naval War College, Newport, RI: 2000), 1.

[27] Peters, "In Praise of Attrition," Parameters, 34 (Summer 2004), 23.

[28] Carl Von Clausewitz, On War (Princeton: Princeton University Press 1984), 88.

[29] Graham T. Allison, Richard L Garwin and Paul X. Kelly, Non-Lethal Weapons and Capabilities: Report of an Independent Task Force (New York: Council on Foreign Relations Press 2004), 2.

[30] Coppernoll, 10.

BIBLIOGRAPHY

Adams, Eric. "Shoot Not To Kill." Popular Science, 262 (May 2003): 22-29.

Aftergood, Steven "The Soft-Kill Fallacy." The Bulletin of the Atomic Scientist. (September/October 1994). 40-45.

Alexander, John B. "Non-Lethal Weapons: When Deadly Force Is Not Enough." The Futurist, 33 (Oct 1999): 34-39.

Allison, Graham T., Richard L Garwin, Paul X. Kelly. Non-Lethal Weapons and Capabilities: Report of an Independent Task Force. New York. Council on Foreign Relations Press. 2004.

Barrett, Benjamin K. "The Utility of Non-Lethal Weapons in Large-Scale Conflict." Unpublished Research Paper, U.S. Naval War College, Newport, RI: 2000.

Barry, John L., Michael W. Everett, Allen G. Peck. Non-Lethal Military Means: New Leverage for a New Era. Cambridge, MA. Harvard University. 1994.

Bass, Harold C. "Non-Lethal Weapons and Conventional War: Facing the Commander's Issues." Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1998.

Bedard, E.R. "Non-Lethal Capabilities: Realizing the Opportunities." Defense Horizons, 9 (March 2002): 1-6.

Bowers, Stephen R., Mieinik, Pamela A. "Making Warfare Acceptable: Non-Lethal Strategies." The Journal of Social, Political, and Economic Studies. 23 (Spring 1998): 17- 33.

Boyd, Kerry "Rumsfeld Wants to Use Riot Control Agents in Combat." Arms Control Today. 33 (March 2003): 32.

Callihan, W. M. "Non-Lethal Weapons in Conventional Combat Operations: Leveraging Capabilities or Violating the Rules of War?" Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1999.

Clausewitz, Carl Von. On War. Princeton: Princeton University Press, 1984.

Coppernoll, Margaret-Anne. "The Nonlethal Weapons Debate." Naval War College Review, (Spring 1999).

Deona, Nestor "Strategic and Tactical Viability of Employing Non-Lethal Weapons in Air Force Operations." Air Force Review. 2. http://www.paf.mil.ph/af_review/vol2-1/test/strategic_and_tactical_viability%20by%20D.htm/ [21 March 2005].

Duncan, James C. "A Primer on the Employment for Non-Lethal Weapons." Naval Law Review, vol. 45, 1998.

Henderson, Mark D. "Non-Lethal Weapons: "Applications in Maritime Interdiction." Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1999.

Joint Concept for Non-Lethal Weapons. Marine Corps Gazette, 82 (March 1998): A1-A13.

Kenny, John M. "Are You Sure It's Non-Lethal?" U.S. Naval Institute Proceedings. 127 (April 2001): 70-73.

_____. "What's So Special About Non-Lethal Weapons' Human Effects---Everything." Marine Corps Gazette. 84 (June 2000): 28-30.

Knickerbocker, Brad. "The Fuzzy Ethics of Non-Lethal Weapons." Christian Science Monitor, (14 February 2003).

Lewer, Nick, Davidson, Neil. "Non-Lethal Technologies—An Overview." Disarmament Forum. (2005): 37-51.

_____. "Objections to Weapons of Less Destruction." The Futurist, 33 (Oct 1999): 39-41.

Lovelace, Douglas C., Jr., Metz, Steven. Non-Lethality and American Land Power: Strategic Context and Operational Concepts. Carlisle, PA. Strategic Studies Institute. 15 June 1998.

Melampy, Ronald W. "The Potential Role of Non-Lethal Weapons in the Maritime Environment." Unpublished Research Paper, U.S. Naval War College, Newport, RI: 2000.

Mihm, Stephen "The Quest for the Nonkiller App." New York Times Magazine, (July 25, 2004): 38-43.

Morris, Chris., Janet Morris, Thomas Baines. "Weapons of Mass Protection: Non-Lethality, Information Warfare, and Airpower in the Age of Chaos." Airpower Journal. (Spring 1995): 15-29.

National Academy of Sciences. An Assessment of Non-Lethal Weapons Science and Technology. Washington, DC. 2003. http://www.books.nap.edu/cataloge/10538.html/ [21 March 2005].

North Atlantic Treaty Organization. NATO Policy on Non-Lethal Weapons. Brussels: NATO Press Statement. 1999.

Nutley, Eric L. "Non-Lethal Weapons: Setting Our Phasers on Stun? Potential Strategic

Blessings and Curses of Non-Lethal Weapons on the Battlefield." Center for Strategy and Technology. Air War College. Occasional Paper No. 34. August 2003.

Peters, Ralph. "The New Warrior Class." Parameters, 24 (Summer 1994), 16-26.

_____. "In Praise of Attrition." Parameters, 34 (Summer 2004), 24-32.

Sautenett, Vincent. "Legal Issues Concerning Military Use of Non-Lethal Weapons." Murdoch University Electronic Journal of Law. June 2000. http://www.murdoch.edu.au.elaw/issues/v7n2/sautenet72_text.html/ [18 March 2005].

Schneider, Greg R. Non-Lethal Weapons: Considerations for Decision Makers. Urbana, IL: University of Illinois at Urbana-Champaign. Program in Arms Control, Disarmament and International Security, 1997.

Stanton, Martin N. "What Price Sticky Foam?" U.S. Naval Institute Proceedings. 122 (January 1996): 58-60.

_____. "Non-Lethal Weapons: Can of Worms." U.S. Naval Institute Proceedings. (November 1996): 58-63.

Stockwell, Harmon A. "Beyond Sticky Foam: The Operational Employment of Non-Lethal Technologies." Unpublished Research Paper, U.S. Naval War College, Newport, RI: 2001.

U.S. Department of Defense. Policy for Non-Lethal Weapons. DoD Directive 3000.3, Washington, DC: 1996.

U.S. Navy Department. The Commander's Handbook on the Law of Naval Operations. NWP 1-14M. Washington, DC: 1995.