LEGAL AND ETHICAL GUIDING PRINCIPLES AND CONSTRAINTS CONCERNING NON-LETHAL WEAPONS TECHNOLOGY AND EMPLOYMENT

LTC Margaret-Anne Coppernoll, ARNG
Defense Manpower Center
DoD Center-Monterey Bay

Xavier K. Maruyama
Institute for Joint Warfare Analysis
Naval Postgraduate School

Development and employment of non-lethal weapons and their associated technologies require legal and ethical review prior to the procurement and acquisition process. Non-lethal technologies apply to the entire spectrum of conflict in the post Cold-War environments, including Military Operations Other Than War. However, the use of these non-traditional methods must still adhere to the same principles which have historically guided the conduct of our armed forces, namely, humanitarian law, customary international law, and the Law of Armed Conflict.The unconventional technologies associated with non-lethal weapons make them sensitive to the provisions of more recent treaties and conventions, including the Chemical and Biological Weapons Conventions and the four Protocols of the Certain Conventional Weapons Convention and the appended 1995 Supplement. In addition, other treaties such as the Nairobi International Telecommunications Convention and the Montreal Protocol on the Substances that Deplete the Ozone Layer may impact the use of certain non-lethal weapons technologies.

The three major issues of the Law of Armed Conflict apply to non-lethal weapons: proportionality of inflicted suffering balanced against military necessity; discrimination in effect; and extant rules of law. Domestic laws including those that regulate environmental and occupational health considerations also affect non-lethal weapons and their use. In this discussion, we shall present aspects of history and DoD directives and interpretations with the intention of engaging in dialogue involving legal and ethical considerations provoked by the technology of non-lethal weapons.

Although some NLWs have been deployed, the acquisition process has proceeded slowly. DOD Instruction 5500.15, "Review of Weapons under International Law," requires that any new weapon undergo a legal review by the Judge Advocate General (JAG) of the appropriate military department to ensure that its intended use is consistent with the "obligations assumed by the United States Government under all applicable treaties, with customary international law, and, in particular, with the laws of war."[1] Acquisition and procurement of weapons must be consistent with all applicable treaties including arms control agreements and customary international law. The responsibility for compliance resides in each Service Component and the Under Secretary of Defense for Acquisition and Technology (USD, A&T), in coordination with the Office of the Secretary of Defense (OSD) General Counsel and the Under Secretary of Defense (Policy). The legal review must take place before the award of the engineering and manufacturing development contract and before the award of the initial production contract."[2] The Department of the Navy JAG has functional responsibility to conduct the legal review of NLWs under SECNAVINST 5711.8A, "Review of Weapons under International Law,"[3] and SECNAVINST 5000.2B, "Implementation of Defense Acquisition Management Policies, Procedures, Documentation and Reports."[4]

The Navy JAG has completed legal reviews of the Stinger Grenades; 12 gauge shotgun bean bag/ rubber pellets/ wood baton rounds; 40 mm rubber pellet/, Foam Rubber Multiple Baton/ Bean Bag/ Wood Multiple Baton Rounds; sticky/restraining foam; barrier foam; 40 mm practice M781 round modified

---

[1] Department of Defense Instruction 5500.15, Subject: Review of Legality of Weapons Under International Law, October 16, 1974.
[2] Department of Defense Directive 5000.1, Subject: "Defense Acquisition." March 15, 1996, p. 7.
[3] SECNAVINST 5711.8A, "Review of Weapons Under International Law."
[4] SECNAVINST 5000.2B, "Implementation of Defense Acquisition Management Policies, Procedures, Documentation and Reports."

with foam rubber projectile.[5] Other NLW are currently being considered as the review process is not static. Additionally, The International and Operational Law Division of the Deputy Assistant Judge Advocate General has recently completed its legal review and approval of proposed new, advanced or emerging technologies which may lead to development of weapons or weapons systems that are under consideration by the the Joint DoD Nonlethal Weapons Program.

Anti-personnel technologies including gastrointestinal convulsives, calmative agents, sticky foam, aqueous foam, adhesives, malodorous agents, oleoresin Capsicum (OC) Cayenne Pepper Spray, smokes and fogs, riot control agents (CS & CN), slick coatings/superlubricants and anti-material technologies such as viscosity/surface polymerization agents, corrosive and supercorrosive agents, caustic agents, embrittling agents, depolymerization agents, combustion modifiers, sticky foam, adhesives, microbes, and slick coatings/superlubricants are candidates for acceptance in the military inventory. Microbes represent the only legally reviewed technology that did not receive approval for development since this category of weapon violates the Biological Weapons Convention.[6] Calmative and gastrointestinal convulsives, if classified as RCAs, can be acceptable within the context of the BWC. Once these technologies evolve into actual weapons and weapons sytems, Navy JAG will then review and analyze them in light of their toxic properties and compliance with all extant international laws and treaties and domestic restrictions before granting final approval or rejection.

Although the research and development of nonlethal weapons technology, doctrine, and training are still in the embryonic stage, their potential for future options to commanders should not be underestimated. The new evolving "homeland defense" military strategy proposed by the National Defense Panel underscores the importance of nonlethal weapons doctrine and training in domestic support operations and environments that preclude the use of deadly force, such as humanitarian assistance, peacekeeping, emergency operations and other MOOTW.[7]

In conducting its legal weapons review, the Navy JAG analyzed certain International Agreements that had direct relevance to the military use of NLWs and addressed three major issues pertaining to the Law of Armed Conflict: 1) does the weapon cause suffering that is needless, superfluous, or disproportionate to the military advantage reasonably expected from the use of the weapon? 2) can the weapon be controlled so as to be directed against a lawful target and be discriminate in its effect? and 3) are there any extant rules of law that prohibit its use in the law of armed conflict?

These major issues form the Law of Armed Conflict concept of proportionality that all weapons and military action can cause suffering, but stipulates that any suffering caused must be balanced against military necessity. Proportionality is subsumed within the overarching concept of humanity which requires that combatants and non-combatants not be subjected to unnecessary suffering. From these basic concepts derive the principles governing the prohibition and control of certain weapons: unnecessary suffering principle, the discrimination principle and the treachery or perfidy principle.[8] Legal and ethical precedents having historical roots established a framework within which current military legal counsels can consider non-lethal weapons and their applications to the entire spectrum of conflict.

Present and future non-lethal weapons

---

[5] Judge Advocate General, Department of the Navy, Subjects: "Legal Review of Stinger Grenades, Jan 25, 1995, "Legal Review of 12 Gauge Shotgun Bean Bag/Rubber Pellet/Wood Baton Rounds," Jan 30, 1995, "Legal Review of 40mm Rubber Pellet/Foam Rubber Multiple Baton/Bean Bag/Wood Multiple Baton Rounds," Jan 30, 1995, "Legal Review of Sticky/Restraining Foam," Feb 6, 1995, "Legal Review of Barrier Foam," Feb 6, 1995, "Legal Review of 40MM Practice M781 Round Modified With Foam Rubber Projectile," Feb 7, 1995, Deputy Assistant Judge Advocate General, International and Operational Law, Navy JAG, 2000 Navy Pentagon, Washington, D.C. 20350-2000.

[6] "Legal Review of Proposed Chemical Based Nonlethal Weapons," Deputy Assistant Judge Advocate General, International and Operational Law, Navy JAG, the Pentagon, Washington, D.C. Proposal of March 10, 1997 and final review and approval documentation, signed November 30, 1997. Telephone interviews conducted with Navy JAG, September 30, 1997 and December 5, 1997.

[7] Bradley Graham, "Experts Urge Upgraded Defense of U.S. Territory - Congressionally Chartered Panel Takes Issue With Pentagon's Two-War Scenario," The Washington Post, December 2, 1997, p. A15

[8] Ibid.

such as lasers, directed energy weapons, high-power microwaves and infrasound, weapons developed from biotechnology and genetic engineering, and chemical and biological weapons must be analyzed according to these established laws and principles. The ground work for the declarations and conventions that pertain to legal review of NLWs was already well established in the Lieber Code of 1863 and the Declaration of St. Petersburg of 1868.

The Lieber Code, the cornerstone of humanitarian law, established that military necessity does not include means and methods of warfare that are cruel, and that military necessity does take into account the long-term consequences of the use of a particular weapon.[9] A few years later, as a result of a general feeling of abhorrence for certain inhumane weapons, the Declaration of St. Petersburg was signed. It prohibited the use of certain weapons that "uselessly aggravate the sufferings of disabled men, or render their death inevitable."[10] These historical documents, along with the Hague Declarations (1899) Concerning Asphyxiating Gases and Concerning Expanding Bullets, and the Hague Convention (1907), Respecting the Laws and Customs of War on Land, and the concomitant protocols, provided the historical basis for the development of future conventions and treaties.[11]

The use of foam provides an example of the analysis done by the Navy JAG prior to the acquisition and procurement process.[12]

The Chemical Weapons Convention (CWC) was signed on January 13, 1993 by the US and ratified in 1997. The CWC definition of toxic chemicals does not apply to Sticky Foam which acts as a "high-tech lasso" restricting the movement of an individual's limbs. It does not rely on any toxic properties to disrupt human life processes and it is essentially non-toxic. Sticky Foam is not considered a riot control agent (RCA) which is a chemical prohibited as a method of warfare only when its toxic properties are intended as the primary means of inflicting temporary disability. It is Sticky Foam's binding property, not its toxicity, that is its primary disabling mechanism. This characteristic clearly distinguishes it from CS and CN gas, both of which depend on their chemical effects on the human body for their riot control efficacy. It should be noted that since the expression, a "method of warfare" is not defined in the CWC treaty, RCAs may be used during all other operations not involving international armed conflict such as operations in peacekeeping, humanitarian or disaster relief, noncombatant evacuation, counterterrorist operations such as hostage rescue, and law enforcement.

During the legal review process, Sticky Foam raised an international environmental law issue related to the Montreal Protocol on Substances that Deplete the Ozone Layer. Dichlorodifluoromethane or Freon-12 is an ingredient comprising 30-32% of Sticky Foam. Placed on the list of controlled substances, Freon-12 was phased out on an accelerated basis. The Clean Air Act, which implements the Montreal Protocol, and the EPA banned production and consumption of all Freon-12 after December 31, 1995.[13]

Under the CWC, Barrier Foam, classified as a RCA, may not be used against combatants in armed conflict.[14] The restriction on the use of barrier foam resulting from the President'a June 1994 memo interpreted the phrase "method of warfare" as applicable to the conjunction of both a circumstance (international or internal armed conflict) and a class of targets (combatants, including where combatants and

---

[9] Human Rights Watch Arms Project (1995b), "Blinding Laser Weapons: The Need to Ban a Cruel and Inhumane Weapon", Human Rights Watch, Washington, D.C., September.

[10] W. Michael Reisman and Chris T. Antoniou, eds. The Laws of War: A Comphrehensive Collection of Primary Documents on International Laws Governing Armed Conflict, Vintage Books, New York, July 1994, p. 35.

[11] Ibid., pp. 38-150.

[12] Judge Advocate General, Department of the Navy, ibid.

[13] Judge Advocate General, Department of the Navy, Subject: "Legal Review of Sticky/Restraining Foam," Feb 6, 1995, pp. 1-6.

[14] RCA use was unacceptable in armed conflict because it could easily be confused with chemical weapons of a more lethal nature by the enemy who could then be provoked into escalating the conflict via a retaliatory response. In Vietnam, RCAs were used for offensive purposes and as a result received widespread public disapproval. Soldiers employed RCAs first to "smoke out" the enemy hiding in tunnels or other obscure locations. Once the enemy was out in the open, the American soldiers then fatally shot them (rather than taking them as prisoners of war). Consequently, the use of RCAs against combatants in armed conflict has been legally disallowed. Interview with Navy JAG, October 30, 1997.

noncombatants are intermingled). Since Barrier Foam contains CS, a RCA, under the CWC it may not be used against combatants in armed conflict.[15]

The Biological Weapons Convention signed by the US on April 10, 1972 and ratified in 1975, bans the development, production, stockpiling or acquisition of biological agents or toxins of "types and quantities that have no justification for prophylactic, protective, or other peaceful purposes."[16]

The 1986 Nairobi International Telecommunications Convention restricts the use of electromagnetic weapons. Article 35 (1) prohibits "harmful interference" with the radio services or communications of Member states. The US, which is not a party to this treaty, has nonetheless implemented its provisions by incorporating them into US law (47 US Code 502). Treaty provisions do not apply during wartime. Although "wartime" is not defined in the treaty, it would certainly apply to MRC but their status in MOOTW operations is not unambiguous.

The 1977 Environmental Modification Convention (Convention on the Prohibition of Military or Other Hostile Use of Environmental Modification Techniques - "ENMOD") is the treaty that regulates the use of environmental modification as a weapon of war. It defines environmental modification techniques as "changing through deliberate manipulation of natural processes the dynamics, composition, or structure of the earth, including its biota, lithosphere, hydrosphere, and atmosphere, or of outer space." ENMOD prohibits techniques having widespread (several hundred square kilometers), long-lasting (months), or severe (serious or significant disruption or harm to human life, natural and economic resources, or other assets) environmental effects as the means of destruction, damage, or injury to any other State Party. Given these restrictions, the US will not develop NLWs that violate any of these criteria.[17]

The Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous, or Other Gases, and of Bacteriological Methods of Warfare of June 17, 1925 entered into force 8 February 1928. There are several legal issues of concern regarding the use of chemical-based NLWs, although their use will likely be restricted to MOOTW: First, facilities where chemical-based NLWs are developed, produced, stored, or tested must be declared and may be subject to routine or challenge inspections under the CWC, an important consideration if the nature or existence of such chemicals is to be kept secret. Second, declared RCAs under the CWC could be used by adversaries as a cover for developing lethal CWs. Third, a legal concern regarding the use of any NLW is the liability resulting from the decision not to use NLWs: this liability could be on an individual scale (for example, the case of a soldier who decides to use lethal force instead of non-lethal force in a humanitarian mission) or the liability could be on a much broader scale. It is possible that a nation could bring a case against the US to the UN or World Court claiming the US used excessive force because it had a non-lethal capability but chose to use lethal force instead. Of course, this issue raises the question of a legal or moral obligation always to use the lowest level of force possible. For example, following Desert Storm, the human rights organization, Middle East Watch, argued that since the US had precision-guided munitions, the use of "dumb bombs" was illegal.[18]

In sum, there are definite possible legal and treaty restrictions on the use of NLWs in both MOOTW and MRC. For example, NLWs such as neural inhibitors, gastrointestinal convulsives, neuropharmacological agents, calmative agents, and disassociative hallucinogens, and sedatives, may be considered "temporary incapacitants" and therefore defined as toxic chemicals prohibited by the CWC for any purpose. Notwithstanding, other antipersonnel chemical-based NLWs, such as Sticky Foam, odor-producing chemicals, and lubricants, are likely to be permitted under the CWC. RCAs, which can be used in MRC only against noncombatants, such as in riot control situations or in rear echelon areas outside the zone of immediate combat, will be useful in adjunct MOOTW operations occurring during a MRC. As noted above, biological weapons, both antipersonnel and antimaterial, violate US

---

[15] Ibid., Subject: "Legal Review of Barrier Foam," Feb 6, 1995, pp. 1-4.

[16] Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

[17] Convention on the Prohibition of Military or Other Hostile Use of Environmental Modification Techniques.

[18] W. Hayes Parks, Special Assistant for Law of War Matters, Department of the Army Office of the Judge Advocate General, "Memorandum for OASD SO/LIC Policy Planning of June 17, 1994, Subject: Nonlethal Technology," cited in Hannigan, Raff, and Paschall, pp. 17-18.

domestic law. Use of antimaterial chemical-based NLWs such as corrosives, embrittling agents, viscosity agents, depolymerizations agents, etc., is probably permitted under the CWC. If the Pentagon interprets the term "toxic chemicals" to include incapacitating NLWs, such as calmative agents, their utility in MRC is questionable. The sole operational utility of chemical-based anti-personnel NLWs will then be in MOOTW, not MRC.[19] Under certain restraints inherent in international law, in some cases, the status of NLWs is ambiguous under the terms of broadly conceived international conventions prohibiting the use of certain classifications of technologies and weapons. For example, it surely would be ironic if "lethal weapons were employed because ambiguities in international law prevented the use of non-lethal weapons."[20]

The use of NLWs in MRC brings with it ethical and moral implications. Just war criteria applied to NLWs strongly indicates that NLWs can make a positive contribution to the US ability to fight a MRC on an ethical basis, and Western just war tradition will provide the central terms of reference for US decision-makers in deciding the use of NLWs. In present day environments, situations arise that blur the lines of distinction between MOOTW and "armed conflict," such as the unexpected use of deadly force by warring factions during humanitarian assistance missions.

Jus ad bellum (war decision law) comprises the ethical criteria for assessing decisions to resort to military force. The seven main criteria that must be satisfied for a war to be considered just are: just cause, right authority, right intention, goal of restoring peace, overall proportionality of good over evil, reasonable hope of success, last resort.[21] *Jus in bello* (war conduct law) sets ethical limitations on the use of military force once the decision to resort to justified military force has been taken. Just conduct of war rests on two main principles of proportionality and discrimination. Military necessity proportionality requires that the means used in fighting a war be reasonably proportionate to the ends pursued. Both war-conduct and war-decision proportionality are concerned with a proper balance between the costs and benefits of using force. War-conduct proportionality is concerned with the strategic and tactical levels of warfare (*raison de guerre*), while war-decision proportionality is concerned with a war's fundamental political and grand-strategic purposes (*raison d'etat*). Discrimination prohibits the direct, deliberate targeting of noncombatants and civilian targets during combat. Civilian damage must be proportionate to the military advantage gained by the military measure.[22]

Using the concepts and criteria of Western just war theory, can the employment of NLWs be consistent with *Jus ad bellum* and *Jus in bello*? With war decision criteria, the nature of specific weapons technologies only figures indirectly into the war-decision criteria with two of the seven main criteria: those are overall military necessity proportionality and reasonable hope of success. NLWs could change a favorable war-decision calculus only if those NLWs failed to live up to their advertised abilities to 1) attain specific combat objectives at much lower human and material costs, failure of which would weaken the case for overall proportionality and 2) provide military commanders with more options and increased capabilities, failure of which would weaken the case for reasonable hope for success. But the injection of NLWs into the MRC equation would make an otherwise just resort to war unjust only if NLWs were to play a major role in the war and by such employment they failed to meet their advertised capabilities. This situation is highly unlikely since more of the weapons employed in any MRC will be lethal ones, with, perhaps, the exception of operations in urban terrain.

With war-conduct criteria the nature of the weapons technologies used in combat figures much more directly. The impact on *jus in bello* is important given that some NLWs may increasingly substitute for lethal weapons for certain MRC missions, while other NLWs will open up new MRC missions altogether. It is probably safe to state that the introduction of NLWs will not violate war-conduct criteria except when NLWs do not work as advertised,

---

[19] Hannigan, Raff, and Paschall, Ibid., pp. 17-18.

[20] Malcolm H. Wiener, Chairman. "Non-Lethal Technologies: Military Options and Implications," Report of an Independent Task Force, Council of Foreign Relations, 1995, p. x.

[21] James Turner Johnson, "The Just War Tradition and the American Military," in James Turner Johnson and George Weigel, eds., Just War and the Gulf War, Washington, D.C., Ethics and Public Policy Center, 1991, pp. 21-19.

[22] William V. O'Brien, "Just War Doctrine's Complementary Role in the International Law of War," paper delivered at the Symposium on Moral/Legal Limits on Low-Intensity Conflict, US Naval War College, April 9, 1992, pp. 23-25.

that is result in relatively minor, short-term, reversible physiological effects. If NLWs result in nonlethal but debilitating, permanent effects such as blindness or paralysis, long-term unforeseen lethal effects such as cancer or other "unnecessary suffering" will raise serious questions about proportionality. Additionally, combatants must not deliberately use NLWs toward lethal ends in a treacherous or perfidious manner. Military planners and technologists design NLWs with greater discrimination in mind and they must do so in order to receive a favorable legal review prior to acquisition and production.

Nevertheless, infrasound and pulsing-light weapons used in urban operations will not discriminate between combatants and noncombatants, but their effects still may be far less destructive than the effects of conducting the same missions with lethal weapons.[23]

In sum, the use of NLWs in MRC may accomplish three things. First, their use may increase the capabilities of US forces to attain combat objectives while adhering to traditional ethical standards of combat. Second, their use may strengthen the ethical basis of US decisions to resort to the use of military force in MRC. Third, if used improperly, their use may raise questions about proportionality in combat.[24]

The Council on Foreign Relations Task Force considered six inherent risks related to NLWs. The first risk, called the "slippery slope," involves the element of escalation if the use of NLWs leads inadvertently to "unintended and unwanted involvement,"[25] which includes use on a large-scale. This risk can be obviated by a comprehensive understanding of NLW capabilities and limitations, careful and coherent integrated planning, enemy identification and congressional consultation. The second risk is retaliation in forms of NLW technological vulnerabilities, such as computer viruses, induced banking failures, etc. The US dependence on technology increases its vulnerability. The third risk is proliferation. Since much military research and development is based on mimicry, other countries may develop NLWs, which then could fall into the hands of renegades and mercenaries.

However, any restraint in development in the US of NLWs cannot prevent NLW development by other nations. Russia, the United Kingdom, France, Italy, and Israel have made significant inroads in this domain. Unfortunately, terrorists can also find access to NLWs development since components for NLWs are commercially available. The fourth and fifth risks pertain to unrealistic expectations and comparative cost effectiveness. On the one hand, if the public expects bloodless battles and requires employment of NLWs first before lethal means can be used, then disappointment and unnecessary exposure to danger result. On the other hand, NLW employment could certainly increase the safety of US troops and the effectiveness of US actions. Examples include scenarios where a sniper is hidden in a crowd of women and children, preventing US use of lethal fire or when a hostile regime faces internal opposition and the US policy goal is to separate the regime's leaders from the general populace and army. Some individuals have proposed that the casualty-limiting benefits of NLWs could be achieved more quickly and less costly by increasing the precision of lethal arms.

In the final analysis, NLW technologies are not costly compared to potential benefits and when compared to the cost-effectiveness of other weapons systems development, procurement, training and operation. Given the risks related to restraints inherent in international law and conventions, NLW development should conform to constraints such as the banning of lasers that are configured to blind troops or noncombatants.[26]

From the perspective of the American public, there are reasons to support or to reject development and employment of NLWs. Those who favor NLW emphasize that NLWs are humanitarian, minimize human suffering, and save US lives by enabling US forces to disable enemy capabilities without resorting to dangerous air strike missions over the target. For example; they are operationally useful in electronic attack missions and provide an acceptable middle ground between diplomacy and conventional military force by enabling strategic paralysis rather than destruction of the enemy. Countering these positive viewpoints, the public could reject NLWs based on concerns already expressed above that US forces will be expected to use NLWs before lethal force or have to use them while facing a lethally armed adversary and that the US will be perceived as politically weak or the threshold for commitment to foreign conflict by US foces will be dangerously lowered. The guiding principles of necessity and proportionality apply to the use of force for self-defense, to protect noncombatants,

---

[23] Hannigan, Raff, and Paschall. Ibid., pp.21-23.
[24] Ibid.
[25] Wiener, Ibid., p. ix.

[26] Ibid., pp. ix-xii.

and to facilitate mission accomplishment.[27] During Operation United Shield most provisions of the applicable ROE were unclassified. Each Marine was issued an unclassified ROE card which contained the instructions: "When US forces are attacked by unarmed hostile elements, mobs, and/or rioters, US forces should use the minimum force necessary under the circumstances and proportional to the threat."[28] ROE restrictions pertaining to the use of non-lethal options were arbitrary in nature and did not allow for distinctions between the use of deadly force and all other levels of force. In spite of these restrictions, a consequence of the newness of the employment of NLWs, the Task Force managed to employ properly and appropriately the NLWs they had so diligently trained on prior to the landing in Somalia. A force continuum that allows for the measured application of force between no force and lethal force is rquired. The limitations imposed by the ROE in Operation United Shield did not make sense to the trainers and the operators. If a soldier or Marine has to wait until deadly force is actually authorized, that is, in situations that put life at risk, before a NLW such as a bean bag or rubber baton can be used, then the incentive to restrict response to non-lethal means no longer exists. Confusion on NLW employment was, in part, caused by lack of understanding of their effects.

Fundamental concepts of training and employment of non-lethal weapons systems are more critical than the technology itself because these weapons require quick decisions in stressful situations. Leadership and initiative must be undertaken by the individual troop who may have to decide when to switch from nonlethal to lethal and back to non-lethal force in a given situation with swift changes in activity. For this reason, leadership decisions take on a new magnitude and NLWs should be considered as a component of training across the entire operational spectrum and force continuum. Armed inventions and peace operations should include training in these dual capabilities.

---

[27] Joint Chiefs of Staff, "Standing Rules of Engagement," of October 1, 1996.

[28] JTF United Shield, Rules of Engagement, Unclassified ROE Card SER #1, 11 January 1995, cited in Lorenz, p. 62.