Swords & Ploughshares

The official journal of international affairs at the
School of International Service

Spring 2008 Issue

Non-Lethal Weapons: The Organizational Interests Behind Their Use and Disuse

Jeff King

Non-lethal weapons (NLW) technology seems to be a contradiction in terms.[1] Weapons, as their use is generally understood by the United States military, are tools designed to destroy or disable an enemy using the most efficient level of force. Until recently, this definition almost universally implied lethal force. However, the recent proliferation of peacekeeping, nation-building, and other multi-faceted operations has led to a revision of the force continuum used by the US military. Non-lethal weapons expand the available choices for mission commanders operating in unfamiliar conditions. Their efficacy in the field, however, conflicts with the perceived political expedience of non-lethal force. The question arises, then, as to which set of organizational needs is driving the employment of non-lethal technology. Are strategic and tactical exigencies governing the use of weapons that complement or replace lethal force in missions where lethal force would defeat the mission objective? Or are political realities—concern for casualties and maintaining public support—governing the drive for viable non-lethal weapons? The answer seems to be a mixture of the two; tactical concerns govern NLW use when the weapon is both effective and unobtrusive in appearance, while political interests militate against even effective weapons that damage public support for operations.

To assess the influence of the non-lethal debate in military-political thinking, an examination of current US grand strategy is necessary. The *National Security Strategy of the United States of America* (*NSS*), in its most recent incarnation, identifies several key goals of US security strategy. Of these, two stand out in their relation to NLWs: the imperatives of working "with others to defuse regional conflicts" and "building the

infrastructure of democracy" abroad.[2] In both cases, vital US security interests are inextricably linked to the domestic politics of foreign states. Included in these interests are the development of "free and fair elections, rule of law, civil society, human rights, women's rights, free media, and religious freedom."[3] This laundry list of problems in need of solutions presupposes a doctrine of conflict intervention; some assaults on these "broader interests" of security strategy require a military response to supplement normal diplomatic processes.[4]

The lack of capable military forces in many conflict zones defined as "vital" interests reinforces the interventionist mentality of US strategy. At the same time, a new dimension is added to intervention in the form of "peace operations," which include both end-of-conflict action and stabilization of the post-conflict environment. As noted in the *NSS*, military involvement is often necessary to ensure the "early establishment of strong local institutions such as effective police forces and a functioning justice and penal system."[5] It is in this capacity that non-lethal weapons are to serve US military and political interests. They afford the US military the opportunity to continue rehabilitating foreign states still experiencing some level of conflict, while simultaneously protecting military assets and the indigenous population. These two functions of NLWs help to ensure continued public support for US "peace" operations, thus earning some measure of organizational support from political interests.

The literature on non-lethal technology is instructive both for its surveys of present non-lethal weapons being developed and employed and for its discussion of the circumstances in which NLWs might see use. To that end, the Bradford Non-Lethal Weapons Research Project (Bradford Project) dissects in detail the capabilities of NLWs currently in use. These include impact, or "kinetic" munitions, defined as ammunition (beanbags, plastic pellets, etc), that "stun[s] or otherwise temporarily incapacitate[s] a suspect or dangerous individual…with less injury or death for themselves and others."[6] Area denial (AD) and barrier/entanglement systems cover all NLWs designed for "stopping vehicles or denying access to individuals or crowds," such as sticky foam and rapidly deployable nets.[7] In addition, the Bradford Project examines tasers (electrical stun guns), noting the effects of their use, and the medical and ethical difficulties these effects create. These specific NLWs, because they satisfy different strategic/tactical needs and produce disparate public responses when used, will help to gauge which organizational interests, military or political, are responsible for the rise in non-lethal weapons deployment.

The situations in which today's military must operate also bear heavily on the non-lethal weapons debate: as non-traditional military or "peace" operations multiply, opportunities for NLW use increase. Colonel Joseph Siniscalchi outlines several new features of these non-traditional missions. The rise of non-state actors, he argues, presents a problem for current lethal force systems, as "conflict involving non-state actors

would likely occur in the midst of the civilian population."[8] The presence of civilians militates against the indiscriminate use of lethal force. Siniscalchi also suggests that current security strategy makes low-level force interventions more advantageous; "delayed intervention…may be more costly in terms of resources."[9] By this rubric, if US military forces intervene early and with moderation in force, less damage is done, and the chances of escalation are minimized. Finally, political exigencies imprint their own requirements on modern non-military operations. Specifically, "the intrusiveness of the media," and the "high regard for life in modern democracies" combine to create an atmosphere more conducive to NLWs than traditional weapons.[10] It is within these parameters that the existing literature attempts to define the strategic and tactical necessities of NLWs and the countervailing political interests.

The strategic interests in question are essentially the same as those addressed by lethal force—the NLW debate focuses on their ability to accomplish the same missions. Samuel Huntington defines "strategy" as that which "concerns the units and use of force" or, more specifically, the description of the strength and composition of military forces and decisions concerning their use.[11] In strategic terms then, NLWs make sense only if they enable the US military to engage in its new, non-traditional missions as effectively as lethal force would. Paul Capstick, in his work on the strategic implications of NLWs, attempts to gauge their ability to substitute for lethal force in the field. In the case of peace operations, one of the most basic strategic goals is the minimization of casualties (both American and indigenous); as Capstick puts it, "It's part of the environment and the nature of the business."[12] NLWs also add a dimension of credibility to any force short of lethal. Failing to use lethal force, then, no longer implies the loss of control in a given operation and provides a flexibility lacking in lethal arms.[13] Thus, at a strategic level, non-lethal technology theoretically meets two operational goals of the US military in its new mission profile: minimizing casualties while simultaneously filling in the force envelope between less effective verbal warnings and prohibitive lethal force.

At a tactical level, there is again a similarity between the challenges that both lethal and non-lethal weapons are designed to solve. Tactics are a subset of strategic planning; where Huntington refers to the "employment of military force" and associated "force movements," he refers to the two major facets of tactical military action.[14] To complement, or in some cases, supplant lethal force, Capstick outlines three general requirements for an effective non-lethal weapon: availability, field performance, and perhaps most critically, the ability to convert appropriate NLWs from non-lethal to lethal force.[15] Field performance is the most obvious tactical challenge, which Capstick addresses in several brief analyses, noting satisfaction at their use in United Shield in Somalia, the United Nations Protection Force (UNPROFOR) in the former Yugoslavia, and Iraqi Freedom in Iraq.[16] Availability, although not perhaps a "tactical" challenge at first glance, falls under the heading of force "employment." The most effective weapon

is not merely the weapon with the most efficient "neutralizing" power but also that which is the easiest to use and the most plentiful. Lastly, although NLWs are seeing increased use in peace operations, their ready convertibility into lethal force does constitute a significant tactical challenge—in cases where non-lethal force is no longer appropriate, US forces must have quick recourse to a lethal alternative.

The organizational political interests behind the development and use of NLWs are generally concerned with two factors, the first of which is also a strategic/tactical interest. The minimization of American military (and, increasingly in peace operations, civilian contractor) casualties is a high priority for policymakers. The information age has led to this reality; the so-called "CNN" factor forces policymakers to find the "most effective, yet bloodless options possible" for any potential US intervention or peace operations.[17] A public confronted by high casualty figures and a dubious or nebulous mission profile will not long support a political agenda that calls for American force to be deployed abroad. However, visuals of an American military equipped with non-lethal weapons and using them appropriately can in fact "muster support for…US policies."[18] With respect to this political interest, NLWs can lead to either of two positives or to a potentially crippling negative. They can help to maintain public support by minimizing casualties, or they can expand it through visuals of properly applied non-lethal force. However, their misapplication, or in some cases their camera-unfriendly appearance, can result in the converse: a dramatic reduction in public support for an operation.

The second political interest in question involves the growth (or possibly, the contraction) of feasible missions in which NLWs are the primary enabler of military action. Non-lethal technology, because of its supposed ability to limit casualties, affords its users a "moral high ground."[19] Although this moral ground can be of use in operations already within the purview of the US military, it also opens up the possibility of missions that would never have been attempted with solely lethal force. The result is what scholar Margaret-Anne Coppernoll refers to as the "slippery slope to war."[20] This slippery slope leads to one of two possible scenarios. In the first, US military force is applied only where its use results in the defense of a "vital" US or humanitarian interest that would have been impossible using lethal means. The second scenario is the temptation to use NLWs indiscriminately because of their zero-casualty allure; this potentially escalates into "unintended and unwanted involvement" in conflicts in which no clear vital US interest is at stake.[21] Thus, political interests lead to two double-edged arguments concerning non-lethal weapons. NLWs either allow US forces to attempt missions they would not otherwise try (because of potentially minimal casualties) or they jeopardize those very same missions through their publicized misapplication. Second, but no less importantly, NLWs present a temptation for over-use—the policymakers' challenge is to discern which missions are worthwhile regardless of the tools at hand, and which are not.

Interestingly, all of the literature on NLWs, regardless of whether it deals with strategic/tactical or political interests, nonetheless devotes at least some attention to an explanation of current non-lethal technology and the challenges it is designed to face. This explanatory tone presupposes the audience's lack of familiarity with non-lethal technology because of the relative novelty of the field. As such, although the literature deals in detail with the various organizational interests involved in NLWs, there is a dearth of direct evidence that links their increased or decreased usage to one or another of these interests. To effectively marshal what evidence does exist, therefore, three NLWs will be examined when possible: the beanbag shotgun, the taser, and AD weapons such as sticky foam and the so-called "people zapper." These three weapons have been chosen because of their appearance when used, from relatively pacific (entanglement barriers and some AD systems) to the viscerally physical (the taser). Their increased or decreased usage may determine whether their strategic/tactical efficacy governs their continued use or whether political exigencies militate for or against their use. Each weapon will be examined with respect to three cases in which US forces had recourse to NLWs: operation United Shield (Somalia in 1995), operation Enduring Freedom (Afghanistan from 2001), and operation Iraqi Freedom (Iraq from 2003).

Operation United Shield consisted of the US Marine-led evacuation of United Nations peacekeepers from Somalia in 1995. United Shield developed as a response to operation Restore Hope, the peacekeeping mission to Somalia that began in late 1992. By 1994, a $2 billion price tag and 130 slain peacekeepers led to the mission being deemed a "failure," necessitating the safe removal of remaining UN forces.[22] Before the Marine deployment, military planners determined that "unarmed hostile elements" in Somalia could threaten US forces.[23] As such, the Marine Expeditionary Force (MEF) sought to equip itself with an appropriate response; it included general lethal force capabilities, but also a small although not-insignificant non-lethal component. The MEF's non-lethal component was selected on the basis of the criteria outlined by Lieutenant Colonel Capstick: availability, performance, and speed in conversion to lethal force. These requirements led to the adoption of the M203 grenade launcher and standard 12-gauge shotgun as vehicles for deploying non-lethal rounds.[24]

Tactically, the NLW rounds used in conjunction with the M203 and the 12-gauge shotgun were chosen to provide the MEF with the capacity to stop rioters and other hostiles at a distance. Training with the weapons was extensive, to prepare marines to use the weapons non-lethally both in crowd control situations and in possibly "large-scale civil disturbance[s]" that could have quickly developed in Mogadishu.[25] The detailed planning of the MEF's mission resulted in no casualties without recourse to the impact NLWs acquired for the operation—the M203 and 12-gauge never saw use because of minimal crowd control difficulties. This does not, however, imply that the impact NLW did not adequately fill a tactical need for the marines. The NLW training regimen

undergone by the marines was "enthusiastically supported" because it afforded marines a level of force to use between verbal warnings and a lethal response.[26] Despite the failed materialization of crowd-control situations, the marines who trained with the NLWs understood the ability to respond quickly and potentially non-lethally. General Anthony Zinni, commander of the MEF in Somalia, publicized the intended use of NLWs, hoping to intimidate possible hostiles.[27] Although the relative infrequency of crowd-control issues in United Shield cannot be used to infer that Zinni's psychological gambit paid off, it nonetheless illustrates a strategic dimension to NLWs. The enemy's knowledge of the existence of these types of weapons may in some cases be enough to avert their use.

United Shield's munitions portfolio did not include electrical stun weapons—tasers—as such, but they nonetheless made an instructive appearance. Marines on the ground, attempting to fill a niche in their NLW arsenal, tried to create makeshift electrical weaponry out of vehicle batteries, to deter aggressors.[28] Although MEF officers quickly put a stop to further use of these dangerous substitutes for actual stun guns, the marines' innovation speaks for itself. Impact munitions, although non-lethal in character, are nonetheless generally lethal at close range, and are thus not suitable for close-quarters crowd control. The taser, by contrast, is suitable for that part of a mission. Although most users of a taser would prefer a variant possessing a greater standoff distance, it nonetheless satisfies a distinct tactical need.[29]

In terms of area denial technology available in United Shield, sticky foam and caltrops (multi-pointed metal objects that impede motor vehicle traffic) were the NLWs of choice. Unlike impact munitions and electrical stun weapons, AD systems are designed not to confront an enemy but to tactically deny him the use of ground for military action. Such systems are, theoretically, the least violent of NLWs in hindering an enemy's advances. United Shield saw only limited use of the AD systems at its disposal; both sticky foam and caltrops were used only to "supplement key barrier systems at night during the final hours of the withdrawal."[30] Nonetheless, tactical lessons were learned even from limited use. The application system used for sticky foam in Somalia proved to be expensive, hard to target, and liable to be damaged, and it proved as entangling to US forces as to those of the enemy.[31]

Politically, non-lethal technology, despite its promise of reduced casualties and less viscerally visual conflict, nevertheless had to contend with two major challenges. The first challenge faced by NLWs in Somalia resulted from the novelty of the technology. NLWs thus bore the burden of heightened expectations for bloodless conflict. Extensive publicity before the operation described the catalogue of weapons to be used by the MEF in United Shield; it noted the methods, but not the implied limits of those methods.[32] The result was a bevy of unrealistic expectations—the media presented the image of marines capably opposing hostile crowds without casualties from almost the moment they landed. In addition, the rules of engagement (ROE) imposed on NLWs

suggested that political concerns were guiding weapons policy. The requirement that NLWs be used only once deadly force was authorized negates the origin*al rationale for* the technology.[33] Although reasons abound for such a policy, one contender offers the best of both worlds. Having NLWs along while legally precluding their use grants the moral high ground to US forces, but it also makes sure the most efficient means for minimizing US casualties (lethal force) are being used. Finally, the potential for sticky foam to suffocate hostiles proved an impediment to its use because of the political sensitivity of the resulting visuals.[34] It was limited to situations in which there was a low likelihood of its becoming an anti-personnel entanglement, or its use was prohibited outright.

Operation United Shield was one of the earliest military operations in which NLWs played a significant role, either in the field or in the planning stages. As such, it is difficult to assess the extent to which tactical/strategic or political exigencies militated for or against their use. NLWs were not used heavily in the operation itself, but they were included in the planning, and the general consensus of the officers assigned their use was that they satisfied an "urgent need" of the military for credible force between verbal warning and lethal action.[35] The plans envisaged numerous tactical scenarios in which non-lethal weapons would have proved useful. At the same time, the limitations imposed by the Rules of Engagement for specific NLWs suggest that political concerns were not without influence in the selection and use of non-lethal technology in this period.

Operation Enduring Freedom (OEF) is the United States' response to the terrorist attacks of September 11, 2001; it refers specifically to the invasion/occupation of Afghanistan in an attempt to neutralize a terrorist stronghold. In the wake of September 11th, it was decided that only a direct ground incursion would eliminate any future threat. US ground forces faced a unique challenge in Afghanistan. The country is relatively large (24 million people) with several urban centers (Kabul, Kandahar, etc.) and a largely non-combatant populace obscuring a much smaller militant fringe.[36] The resulting operation poses many of the same tactical difficulties as United Shield, while also deepening the associated political exigencies. A larger and sustained occupation requires wider and more prolonged public support than the evacuation of peacekeepers. Despite its status as an ongoing operation, OEF is thus an opportune lens through which to examine the evolution of the clash of tactical/strategic and political prerogatives in non-lethal weapon use.

The tactical role of non-lethal impact munitions has changed little from Somalia to Enduring Freedom. The nature of OEF, an occupation, forces US (and NATO) units to operate in and among civilian populaces to an unparalleled degree. The death-by-ricochet of a two-year-old girl in October of 2007 in Afghanistan during a simple traffic-warning scenario illustrates the point.[37] OEF soldiers required a means of arresting the approach of possibly hostile elements while simultaneously taking care not to harm

civilians. Maj. Steve Simpson, the writer of the first (1996) army instruction manual on NLWs, said of his own experience with non-lethal technology, "non-lethals bridge that gap," between verbal warnings and intentional (or accidental) lethal force.[38] Simpson, who used blunt-impact weaponry in Afghanistan during OEF, envisioned NLWs as an "integral part of all future operations."[39] Applying Capstick's criteria again, impact NLWs satisfied all three requirements in their OEF deployment. First, they were available as a part of generic kits supplied by the military. Second, they were effective at deterrence with minimal civilian injuries.[40] Finally, their ready convertibility to lethal force ensured that OEF soldiers were not without a means of definitively defending themselves should non-lethal force no longer be appropriate.

The taser has seen minimal operational use as a part of OEF, echoing its lack of use in Somalia. This lack of evidence in favor of its use may result from one of two factors. On the one hand, there may be very little evidence on the taser's use in general, and as such it was a poor choice as a variable to research. Alternatively, because of the weapon's presently short standoff distance between itself and a target, it may not suit the tactical needs of military forces attempting to deter close-quarters confrontation with potential hostiles. Examining the taser with respect to the three definitions of NLW utility produces the following assessment. The taser is relatively available (although in multiple versions of differing capacity), its efficacy in the field is questionable because of the necessary proximity to a target, and it is not readily convertible to lethal force.[41] Lewer and Davison list a variety of medical conditions resulting from taser testing, and though accidental death by taser is possible, it is not a use for which the weapon is designed. The taser may succeed in subduing a target, but it does so at an inadequate distance and cannot incapacitate in a more permanent fashion, thus failing two of the three guidelines established for NLW efficacy. The failure to include tasers in the generic NLW riot-control kits employed by the US in Afghanistan (which do have impact NLWs and a net barrier) suggests that the tactical shortfalls of the weapon have led military interests to eschew its use.[42]

AD systems witnessed significant innovation between operations in Somalia and Afghanistan, which ultimately have provided officers with a wider array of barrier technologies capable of stopping vehicle advancement and passively denying ground to the enemy. Again, as in Somalia, the tactical and strategic goals are much the same for AD systems. They aim, at the tactical level, to deny vehicles unopposed access to established US perimeters and to deny hostiles the use of large, unenclosed space with high civilian populations. This leads to the strategic goal of creating secure and stable zones within Afghanistan from which to further extend US control and peace operations. Supplementing the sticky foam and caltrop ADs are the Vehicle Lightweight Arresting Device (VLAD) and Long-Range Acoustic Device (LRAD), which both attempt to

disable oncoming vehicles at a safe distance without injury.[43] The former rapidly deploys a net to stop medium-speed vehicles, while the latter attempts to force vehicle drivers to change course. Although there is little evidence on the use of sticky foam, the same tactical considerations underlie the use of companion VLAD and LRAD systems. The various AD systems currently in use, although they do not possess a lethal component (and are not designed to, thus eliminating that criterion), nonetheless fulfill an important tactical need. The inclusion of a VLAD in the basic NLW kits distributed to US forces in Afghanistan implies the selection of AD systems by military interests based on the tactical needs they successfully address.[44]

The political interests arrayed in favor of, or in opposition to, NLWs as they have been used in Afghanistan can be assessed to an extent by examining weapon selection. Impact munitions appear in Afghanistan much as they would have in Somalia; they are effective, and although they apply violent physical force, they do so in a conventional and recognized way. Their appearance does not visually startle a public accustomed to regular firearm use. Tasers, on the other hand, are generally assumed to appear torturous when used on a target. Although classified as non-lethal, the visuals they produce can negate the "moral high ground" that NLWs confer. This factor (potentially combined with their inadequate standoff distance) may explain their failure to appear both in Somalia and in the even more visually accessible Afghanistan. AD systems appear to be a political "no-brainer." Sticky foam may have its drawbacks (environmental concerns and its ability to obscure dangerous terrain), but its successor systems, such as the VLAD, achieve tactical goals with minimal televised violence. This is the ideal "political" NLW—tactical effect with minimal violence; its continued presence despite its clear lack of lethality implies a political interest in its continued use beyond its military utility.

After six years of OEF, some inferences can be made with respect to NLW use. Impact NLWs have gone from provisional to actual use because of their utility, and potentially, their conventional appearance. Tasers, on the other hand, have yet to see any (documented) use in Afghanistan, just as in Somalia. This may simply be a case where lack of evidence prevents a definitive analysis; it may also be that political interests have selected against a weapon that appears, for many Americans, to torture its targets. AD barriers, although they also frustrate research with a dearth of evidence, nevertheless seem to be influenced by both military and political pressures; they satisfy a distinct tactical need while also producing inoffensive visuals that do not erode public support. This "mixed" influence of interests represents a potential third answer to the research question between the extremes of purely military or political interests selecting for or against specific non-lethal weapons.

Operation Iraqi Freedom (OIF) is the last case to be considered with reference to non-lethal weapons, and consists of the American-led invasion and occupation of Iraq.

OIF began in late March of 2003, and by April 9th, had taken Baghdad and then set about creating a provisional authority to occupy and administer a country of twenty-five million people.[45] The occupation and rebuilding of Iraq present many of the same difficulties faced by the US military in Afghanistan. These include heavily populated urban centers (Baghdad, Mosul, etc.), an entrenched resistance, and a large civilian population of which some either passively aid the resistance or provide aid out of fear. In either case, although NLWs had no real use defeating the Iraqi army in the field, the post-conflict period in Iraq presents ample opportunities for NLWs to be deployed.

Impact munitions are again at the non-lethal forefront of US operations. Their use is governed by the same set of tactical challenges found in Afghanistan and earlier in Somalia. In Iraq, they have seen limited use controlling unruly crowds and deterring the approach of unidentified civilians to US property or personnel. The Mossberg 590 shotgun has proven itself in such encounters—as recently as April of 2007, marines used the Mossberg, with three hundred beanbag or fin-tailed rounds, to subdue an advancing crowd in an unnamed Iraqi city.[46] This shotgun satisfies all three major criteria for NLW use. First, it is widely available as a conventional firearm. Second, it is demonstrably effective when combined with non-lethal munitions. The last criterion, however, ensures continued military support for the Mossberg in firefights—its ready use of any standard 12-gauge shotgun shell, lethal or non-lethal.[47] Military police in Iraq have made use of non-lethals and echo this refrain; in the words of one platoon leader who served in a battalion equipped with NLWs, "[they] offer a way out of delicate situations that leaves few, if any, casualties."[48] These "delicate situations" are the essence of the strategic dimension of NLWs. By offering tactical solutions to problems of crowd control, they enable military planners to achieve strategic goals such as pacification and reconstruction. Lethal ordnance saps the goodwill of the indigenous population and frustrates peace operations; NLWs minimize this tendency.

Tasers have seen some use in Iraq, more so than in either Somalia or Afghanistan, but generally in a prison setting as a means of enforcing detainee compliance. As in OEF, the taser has been found wanting from a tactical viewpoint; it cannot presently subdue a target non-lethally at distances of fifty or sixty yards. Using the taser in prison settings circumvents the standoff distance difficulty because prison guards must move in and around captured Iraqi militants. By late 2003, the taser was in use in some American-run Iraqi prison camps, where it effectively modified behavior of high-level detainees without requiring lethal force.[49] However, even at this early date in OIF's mission, concern arose about the conflation of taser use with torture, as defined by Amnesty International.[50] Thus, the taser's difficulties are two-fold. Although the taser is widely available, its efficacy is constrained by the limits of the technology, and it is not readily adaptable to lethal force. In addition, its torture-like appearance, apart from the political concerns it raises, is capable of generating a negative response from the

indigenous community that hampers reconstruction. The taser is of limited tactical use and may in fact hurt strategic goals; these two factors in combination may explain the relative scarcity of evidence on its use in Iraq.

Area denial systems face the same tactical challenges that they did in previous operations; their utility is measured by how well they prevent unauthorized approach, either intentional or accidental, to military assets. Some AD systems from previous conflicts, caltrops for example, because of their relatively innocuous appearance and utility, are seeing more action in Iraq. Col. Ralph Baker, who commanded a brigade of the 1st Armored Division in Baghdad, made use of an automated version of the caltrop NLW in response to calls for more civilized occupation by Iraqi Prime Minister Ibrahim al-Jaafari.[51] By way of comparison, the Active Denial System (ADS), or "people zapper," although designed specifically for area denial missions, has seen its deployment frustrated despite its probable operational utility. The weapon heats subcutaneous water to high temperatures (130°F) to inflict pain and drive away its targets, who quickly recover from its effects.[52] In the opinion of its development team, the ADS can prevent accidental shootouts spawned by misunderstanding (e.g., the Fallujah incident of April 28th, 2003).[53] However, despite its "economy of force" in repelling an approach by unidentified civilians (demonstrated by testing), the weapon's deployment was canceled in August of 2007, for fear its use would appear akin to torture.[54] The termination of the ADS appears to be the most clear-cut example of a weapon's tactical utility being overridden by external interests.

Of the three operations surveyed, operation Iraqi Freedom has been the most sensitive to political exigencies, likely stemming in no small part from its status as an "elective" war vis-à-vis Somalia and Afghanistan. In United Shield, American forces were used to evacuate peacekeepers in a short-term operation. Enduring Freedom in Afghanistan was (initially) a direct response to the terrorist attacks of September 11, 2001. Both missions required little in the way of maintaining public support—evacuating the peacekeepers was a necessity (although US involvement in Somalia in 1993 was not), and removing the Taliban for harboring bin Laden appeared justified to a majority of Americans. The current Iraq war, however, despite high initial public support, was nonetheless waged with no real (dubious intelligence on WMD aside) US vital interests at stake. Public support, therefore, is more critical for sustaining OIF, and harder to maintain, than for either United Shield or OEF. As such, the choice of NLWs takes on new significance in a heavily televised operation—impact NLWs and unobtrusive barriers have not generally soured public opinion. Tasers, however, have seen minimal use, while the ADS was canceled just prior to deployment. The failure to use these two NLWs, both of which can respond to tactical challenges faced in Iraq, is strong evidence that the political necessity of maintaining public support has trumped their tactical utility.

Several conclusions can be drawn about non-lethal weapons from the three cases studied. Certain non-lethal weapons are governed strictly by the military's tactical or strategic needs in a given operation. These weapons tend to have much in common. Impact NLWs and AD systems (excepting ADS) are both relatively effective at their specific tasks. Impact munitions have been used successfully and enthusiastically in Afghanistan and Iraq by US forces. They are also not noticeably different from any firearm with which the American public is familiar. The military has displayed its continued interest in this type of NLW in the Fiscal Year 2006 Defense Supplemental Request: it requested extra funding for a variety of non-lethal shotgun rounds for future operations.[55] Area denial systems are part of the standard riot-control kit used by the military in its peace operations; caltrops have proven popular because they are both effective and can be obtained via the internet in quantity. Caltrops and net barriers stop vehicles and only cause injury to their occupants if improperly secured. Neither weapon category is likely to jeopardize public support for a military operation—political interests do not materially affect their use.

By contrast, tasers and newer area denial weapons, because of their more violent appearance, are subject to increased political scrutiny. Occupation missions, because of their large scale and undefined termination, require more dedicated public support. Afghanistan and Iraq, therefore, cannot afford to sacrifice public goodwill capriciously. Although the American public has believed, at various times, in the missions of both OEF and OIF, it finds torture contrary to its sense of self (witness the Abu Ghraib scandal). Thus, weapons that mimic torture in their appearance tend to elicit strongly hostile reactions from the viewing public. The taser has been controversial of late because it generates that appearance and a variety of negative health effects. Evidence of taser use or non-use is hard to obtain, and though this may invalidate the taser as a variable, it may also suggest that it simply is not used because it functions in such a violent fashion. The ADS tests, although they produce the desired effect, cause the target to writhe in pain while in the weapon's radius of effect. Each of these NLWs creates a public perception that runs directly counter to the political goal of sustaining support for a military operation—political interests kill these weapons despite their utility.

Of final concern, politically, is the tendency for NLWs to create a misplaced partiality to military operations because of the promised low costs of non-lethal force. In this capacity, non-lethal technology would enable a variety of missions, including disabling/recovery of nuclear material, disabling of missile launch sites, or destroying production sites for weapons of mass destruction.[56] At present, however, none of the most effective NLWs (impact weapons, for example) are capable of the same degree of efficient destruction of opposing force. It would be politically risky, therefore, to engage in any operation in which anything less than the most effective means of countering resistance was deployed. NLWs serve a distinct purpose in certain tactical situations as

part of a larger operation built around lethal force; they are not capable, at present, of being the sole foundation of an operation.

Non-lethal weapons hold the promise of a future in which military operations become bloodless displays of technology. A variety of weapons exist that have proven accessible and effective. Some of these weapons produce unfortunate effects that militate against their use by a torture-averse public and its political servants, despite any tactical niche they might fit. The resulting dichotomy is as follows: tactical needs take point in weapon selection only when a weapon is both effective and low profile in its use, while political interests will intercede and block the use of any NLW that potentially costs a mission its support base. Although this breakdown appears straightforward, it nonetheless contains a lesson for military planners. Rather than throw good money after bad in a search for NLWs that achieve an objective at any cost short of lethal force, they should cede the point to political interests and seek only to develop and employ non-lethal weapons that do not grate on the public eye. Better to have both organizational military and political interests of one mind on non-lethal weapons than a military that spends, and expects, to use a weapon, only to be denied it at the last minute.

Endnotes

[1] Non-lethal weapons are defined here as any weapons which are "explicitly designed and primarily employed to incapacitate personnel or material, while minimizing fatalities, permanent injury and undesired damage to the property and environment." Quoted in U.S. Department of Defense, *Policy for Non-Lethal Weapons*, Department of Defense Directive 3000.3 (Washington, D.C.: U.S. Department of Defense, July 9, 1996), 2.

[2] President George W. Bush, *The National Security Strategy of the United States of America* (March 2006), 1.

[3] Ibid., 6.

[4] Ibid., 16.

[5] Ibid.

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