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TOO GOOD TO BE LEGAL? NETWORK CENTRIC WARFARE AND INTERNATIONAL LAW

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America's military today faces new challenges that appear resistant to conventional solutions. The concept known as Network Centric Warfare (NCW) promises to use speed, precision, and information technology to win conflicts more quickly with minimal force. But many of the advantages that look beguiling to a commander can create problems for a military that focuses too much on speed and effects, at the expense of deliberation and law. This article argues that both the U.S. military and the American public will lose if new tools and technologies make war seem too easy. It calls for a reassessment of NCW in light of international law and offers recommendations to help guide that effort.

One of the most prominent visions for the transformation of war in the U.S. military today is the concept known as Network Centric Warfare (NCW), which seeks to increase combat power by exploiting modern information and networking technology to transform formerly "platform-centric" military units into a highly adaptive and more effective force. Developed originally by strategists within the U.S. Navy, NCW has inspired new Navy strategy and doctrine, and is beginning to take hold among a wider circle of analysts and policy makers. For example, retired Vice Admiral Arthur K. Cebrowski—credited with having developed NCW—heads the Department of Defense Office of Force Transformation and is charged with

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helping to move the Pentagon into an era of Revolution in Military Affairs (Hughes 2003). More significantly, senior Bush Administration officials, in particular Secretary of Defense Donald Rumsfeld, appear receptive to many of the tenets of NCW. News reports have indicated that the U.S. military's plan for the invasion of Iraq was revised at a late stage to take these tenets into account (Shanker and Schmitt 2002).

As might be expected of a new and potentially revolutionary method of warfare, NCW has been analyzed in recent years in numerous articles, conferences, reports, and monographs. Navy officials, contractors, and defense analysts have studied operational, technical, and doctrinal issues relating to NCW. Issues of law, including international law, have not been neglected; Navy leaders have generally expressed the view that traditional legal concepts may not be sufficient in this new age. "From a legal perspective, Hague and Geneva Conventions, and other sources of international law, arising in other eras of warfare, provide only guides for future conflict" (Cebrowski 1999b).

To date, however, published studies concerning NCW and international law focus only on the more limited areas of information warfare. This form of warfare involves attempts to protect various types of information systems or to attack an enemy's systems. It includes the more narrow concept of cyber warfare, which focuses on defending or attacking computer systems. Questions concerning the legality of attacking computer and other information systems are still far from answered, but they have at least been asked and debated in legal as well as military circles (Schmitt and O'Donnell 2002). But while NCW relies heavily on information networks and computer systems, it is a much larger concept that encompasses all aspects of warfare in the information age. There has been little work done—or at least made available publicly—concerning the broader implications of NCW under the international law of armed conflict.

This lack of attention does not appear to result from any deliberate disregard for international law; on the contrary, as commentators have frequently observed in recent years, military lawyers are involved in planning at all levels of operations in the U.S. military. The inattention may stem instead from a lack of understanding of how the law of armed conflict might apply to the wider concepts that fall under the (often misunderstood) rubric of NCW. How, one might ask, could there be any legal problem with a new concept of warfare that utilizes speed, precision, and communications to fight faster and win more quickly? Who could argue with the application of the absolute minimum force in exactly the right place at precisely the right time?

This article argues that NCW does in fact raise several difficult issues under the international law of armed conflict. Even tenets of NCW that might appear to be legally unobjectionable present problems both for the U.S. military and for society as a whole. The article provides background information on NCW and then considers the question of why a “network centric warrior” should be concerned about international law. Subsequent sections examine the broader implications of NCW from the point of view of *jus in bello* (international law governing the conduct of armed conflict) and *jus ad bellum* (international law governing the decision to resort to armed conflict). The article argues that U.S. military forces should be concerned especially about *in bello* considerations, while American society and the international community as a whole have reason to be worried about *ad bellum* implications. In the concluding section, policy implications and recommendations are presented.

WHAT IS NETWORK CENTRIC WARFARE?

Although NCW has been widely discussed in recent years, especially in U.S. Navy circles, it remains a difficult concept to define. As two analysts from the Naval War College have written, “[t]here is no real consensus among its proponents about precisely what NCW is or entails” (Dombrowski and Ross 2003, 128). It is commonly described, though, as a broad concept involving the use of advanced communications technologies to network forces together. The Department of Defense *Report to Congress on Network Centric Warfare*, for example, describes it as “a useful shorthand for describing a broad class of approaches to military operations that are enabled by the networking of force” (Department of Defense 2001, 1). In the words of its originator, NCW “enables a shift from attrition-style warfare to a much faster and more effective warfighting style characterized by the new concepts of speed of command and the ability of a well-informed force to organize and coordinate complex warfare activities from the ground up” (Cebrowski 1999b).

Just as a network of computers is much more capable than the same number of stand-alone units, NCW suggests that a network of military platforms will be far more efficient, faster, and more capable than the same number of unconnected platforms. Networks are inherently more secure from attack or the failure of any one unit, and can share knowledge and resources much more effectively than non-networked systems. But NCW is not just about networks or information technology; its proponents argue that this new form of warfare will involve changes and adaptation in all aspects of the military art, from the development of new weapons systems, to the training of personnel, to the development of doctrine and strategy.

Networked forces, equipped with highly capable surveillance and reconnaissance systems as well as precision-guided munitions, will be able to self-synchronize—that is, to coordinate their own operations to a larger degree than previously possible—allowing forces to react to new situations and threats much faster than before. Through collaborative planning and coordinated operations, they will use advanced weapons and situational awareness not merely to focus greater firepower against a target, but to achieve far greater effects than were previously possible. According to one U.S. Department of Defense (DOD) study, the central hypothesis of NCW is that “a force with these attributes and capabilities will be able to generate increased combat power by synchronizing effects, achieving greater speed of command, and increasing lethality, survivability, and responsiveness” (Alberts, et al., 2001, 58). The ability to focus military effects precisely and swiftly may even enable the network centric force to so thoroughly shock and disrupt the enemy that the conflict will be over quickly and relatively painlessly. Cebrowski stressed this ability of NCW to destroy a critical part of the enemy’s force so quickly that it gives up immediately. “That stops wars—which is what network-centric warfare is all about” (Cebrowski and Garstka 1998, 32).

Considering the potential benefits of a networked force, it may be worth asking why any military officer or defense official should be concerned with how such a presumably benign force might be seen under international law. In particular, why should the American military, which appears to enjoy a clear technological superiority in these areas, ask questions that might generate more attention and even stimulate new laws that could limit American freedom of action? There appear to be three separate reasons.

First, military thinkers and NCW theorists should consider the implications of international law because that law requires that they do so. Although little in international law specifically addresses the technologies of NCW, it is nonetheless an accepted part of customary international law that new weapons and technologies must be subjected to legal review. This view is stated in Article 36 of the 1977 Protocol I to the Geneva Conventions:

In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or any other rule of international law applicable to the High Contracting Party (Roberts and Guelff 2000, 442).

The United States has signed but not ratified the 1977 Protocols, so it is not bound by them as a matter of positive law. Several scholars, however, have expressed the view that Article 36 is accepted widely enough to be considered to reflect customary international law, and thus to apply to the United States (Dinstein 2002; Haslam 2000). An argument can also be made that the United States is required under humanitarian law to consider carefully the legal ramifications of all weapons and means of warfare (Krauss and Lacey 2002).

Second, American military officials should strive to examine NCW from a legal point of view because such considerations are part of a great American tradition, dating back at least to the Lieber Code that was issued to the soldiers of the Union Army during the Civil War. The Union issued that set of regulations, one of the first modern attempts to codify the laws of war, not because of pressure from abroad or even from the Confederacy. Instead, the Lieber Code was issued, in the later words of the U.S. Supreme Court, in order “to mitigate the evils of the contest” even though the South was under no obligation or incentive to follow the rules (*Williams v. Bruff*, 96 U.S. 176 1877). The impetus to place limitations and regulations on military conduct simply because it is the right thing to do continues to be expressed today, as in the following statement by Cebrowski: “Despite the difficulties in application, I am persuaded that we will be well served by applying the core principles of international law to information age warfare. . . . One commentator stated it with precision: ‘adherence to the law reflects who we are as a nation, and separates the good guys from the bad guys’” (Cebrowski 1999a).

Third, a close examination of international law is necessary not only because it is the right thing to do, but also because it best serves the strategic interests of the United States. The immediate effect of any new legal regime might well be to hinder or at least complicate U.S. military efforts. But the beneficial effects of most laws of war are seen in the long run, often in unintended ways, as state practice gradually tends to adapt to laws that are found to be useful and reject those that are not. The United States should not fear the careful consideration of international law, but rather should fear laws made without due consideration, and without its participation.

One final objection might be raised: Why should the U.S. military worry about international law, when lawyers and legal thinking are already found in practically every American command center, war plan, and operations order? The influence of the law has certainly been felt in the development of NCW—for example, through the presence of lawyers on the Navy

staffs and commands that are developing the concept. Yet the presence of lawyers is no guarantee that the broader concerns of international law are taken into account. As Michael Ignatieff has noted, military lawyers “provide harried decision-makers with a critical guarantee of legal coverage, turning complex issues of morality into technical issues of legality, so that whatever moral or operational doubts a commander may have, he can at least be sure that he will not face legal consequences” (Ignatieff 2000, 199).

NETWORK CENTRIC WARFARE AND *JUS IN BELLO*

It is hardly surprising that few commentators have expressed concern about the impact of NCW on the laws governing the conduct of war (*jus in bello*). Although questions have been raised concerning the legality of information warfare (and in particular computer network attack), the broader realm of NCW does not seem to many to present legal problems. Surely it cannot be “illegal” to network forces, flatten hierarchies, and use information age technologies and advanced weaponry to achieve greater speed and precision? What objections can there be under international law to locking out the enemy if possible, and to fighting a quick, less destructive war?

Some have cautioned that in the information age the U.S. military runs the risk of losing its ethical or moral sense—that U.S. military personnel, for example, may lose touch with the basic concepts of honor and chivalry as long-distance warfare turns them into “console warriors” (Dunlap 1999, 30). But this fear seems unjustified; after all, admirals warned about a similar loss of military virtue more than a century ago, when modern technology threatened to change the nature of warfare at sea (Morison 1968). Even in the Kosovo air war in 1999, which has been widely criticized on ethical grounds, U.S. planners appear to have made a serious, good faith effort to follow ethical norms. The real problem for NCW lies in the paradox that many of the very principles and tenets that make it so appealing can actually be problematic under international law. A focus on effects, on flatter and more flexible hierarchies, and even on greater speed and precision—all of which may sound useful for military commanders—presents the possibility of unintended consequences under international law.

An example is the concept of effects-based operations (EBO), a tenet of NCW that is growing in popularity among a wider range of military thinkers, especially in the U.S. Air Force (Smith 2002; Deptula 2001). One analyst describes EBO as “operations conceived and planned in a systems

framework that considers the full range of direct, indirect, and cascading effects, which may—with different degrees of probability—be achieved by the application of military, diplomatic, psychological, and economic instruments” (Davis 2001, 7). Supporters of the concept are convinced it should be the way of the future: U.S. Air Force Brigadier General David Deptula, a prominent advocate for EBO, argues “[it] permits surprise at the tactical level, a larger span of influence, fewer casualties, paralyzing effects, and reduction in time required to gain control over the enemy” (Deptula 2001).

On the surface, there seems little to criticize in the idea that planners should pay more attention to the longer-range effects of military operations, and less to the immediate gains and losses encountered along the way. The “body count” mentality of the Vietnam War era, for example, clearly demonstrated the futility of a shortsighted approach. The concept of EBO appears to lift the focus to a more appropriate level. According to *Air Force Doctrine Document 2*, “the focus at a given level of war is not on the specific weapons used, or on the targets attacked, but rather on the desired effects” (Mann, Endersby, and Searle 2002, 39). But problems arise because in war, as in life, the ends do not always justify the means, and from a legal standpoint, the targets attacked and the weapons used are just as important as the effects achieved.

The primary concern about the targets attacked is that a focus on the effects of military actions may encourage a planner to move farther down the dual-use spectrum toward systems and targets that are primarily—perhaps solely—civilian. In “effects-based targeting,” a military planner attempts to understand the enemy’s military, command and control, economic, and other systems, and develops targeting strategies against these systems that aim at accomplishing strategic objectives rather than merely destroying as many targets as possible. James E. Baker, an associate judge on the U.S. Court of Appeals for the Armed Forces, argues that too much of an emphasis on the effects of an attack might lead the attacker to target facilities that might otherwise be considered off limits. When a dual use target is examined on its own merits, it might be seen as primarily civilian, and thus not eligible to be struck. But a broader, effects-based approach might place that same facility squarely on the target list. In that case, Baker writes, “‘effects based’ targeting . . . and the law of armed conflict may be on a collision course” (Baker 2002, 22).

A singular emphasis on the effects of military operations, then, can divert attention from the legal status of the object being attacked. But EBO can also run afoul of international law because it neglects the means

used to conduct that attack. The particular instrument used, as opposed to the effect desired, can in some cases be a critical concern in determining whether an action is allowable. Some actions are permissible despite their effects; for example, international law seems to be clear on the point that economic or political coercion, even if it results in serious effects, is not considered to be a use of force and thus is not governed by the law of armed conflict (Schmitt 1999, 906). But in some cases the use of a particular instrument may be considered illegal, even if it results in minimal effects; as Emily Haslam explains, a failed chemical weapons attack would most likely still be treated as a use of force (Haslam 2000, 170).

Further legal problems arise because most of the networking in a networked force is conducted over civilian communications systems, and targeting is carried out with little regard for whether a target is civilian or military. This exacerbates a problem that has often been associated with modern warfare: a blurred distinction between civilian and military targets. Cebrowski argued in 1995 that as a result of this military-civilian intermingling, civilian information systems could be considered lawful targets and “[t]here is no logical distinction . . . between military or civil systems or technologies” (Greenberg, Goodman, and Soo Hoo 1998). High on NCW target lists are what are known as Supervisory Control and Data Acquisition (SCADA) systems, which control power, water, or other complex networks, and support civilian as well as military uses. “We rely more and more on those kinds of systems as potential targets, and sometimes very lucrative targets, as we go after adversaries,” said a senior U.S. Air Force official (Church, 2-3).

Few observers would deny that this blurring of the line separating civilian and military targets raises serious ethical and legal issues, and the problem has generated considerable debate concerning its implications for information and computer warfare. Dan Kuehl, for example, eloquently describes the problem arising from information warfare against civilian systems:

If Bits and Bytes offer an alternative form of exerting national power than bombs and bullets, which ethical mandate should we follow? That which attempts to hold separate the military from the civilian, no matter what the overall cost in blood and suffering, or that which attempts to minimize the destructiveness and duration of the conflict, even at the expense of affecting systems or functions that are clearly and unquestionably civilian? (Kuehl 2002)

Beyond information warfare, the problem of blurred civil-military lines

raises multiple questions for network centric warriors, such as the appropriateness of attacking dual-use targets, and the legal status that should be accorded to non-uniformed combatants such as civilian technicians. Charles Dunlap, for example, expresses concern that the use of civilians in operational capacities, increasingly common in today's high-tech military, may lead us away from the concept of civilian immunity (Dunlap 1999, 11-12). But for NCW the problem goes beyond the questions of distinguishing between what is civil and what is military. The problem persists even when military officials use modern technology to *avoid* civilian casualties.

The modern, network centric military not only does a better job of precisely targeting the adversary; it can more precisely determine how many of the enemy will die and how many civilians will be at risk. This raises ethical and legal questions that older technology had previously put out of reach: Just how many civilian casualties are acceptable in a given attack? How much dual-use infrastructure may be destroyed? Jean Bethke Elshtain appeared to be commenting on this paradox of modern military capabilities when she praised the American military for limiting civilian casualties, but criticized it for appearing to take the remaining casualties for granted. She refers to a photo that appeared in *The New York Times* following the Chinese Embassy bombing in Belgrade, which had been annotated to show a DOD casualty estimate of "unintended civilian casualties of 25-50." Elshtain writes of this annotation: "We have done our moral duty, this seems to say. Calculating civilian casualties in such a routinized way violates the spirit if not the letter of just war teaching" (Elshtain 2001, 5-6). Her objection is likely to ring hollow to the military planner, whose function after all is to deal routinely with such numbers and calculations, but it voices a concern that is likely to be felt more, and not less, in the future.

Another aspect of NCW that raises issues of international law is the flattening of hierarchies. With fewer levels of command—following the model of modern business structures—junior personnel can utilize improved technologies to make more decisions on the spot, creating a faster, more flexible, and self-synchronizing force. The merits of this approach can certainly be debated in terms of military effectiveness, and critics and proponents alike are well aware that this could lead to rash or unwise decisions by the newly empowered junior personnel (Dunlap 1999; Donnelly 2002). But NCW advocates argue this need not be a significant problem, because technology will improve the information available to lower-level commanders. As Alberts, Garstka, and Stein write: "In the

future we can expect tactical level commanders will have a better understanding of both the big picture and the local situation than operational level commanders currently have today” (Alberts, Garstka, Stein, 1999, 107). This assumption is debatable, and even if more and better information becomes available at lower levels, those junior commanders will still suffer because the combination of time pressure and smaller staffs will not permit them to take advantage of the variety of views and discussions possible at headquarters, which benefit from larger staffs and the presence of more senior officers.

But even if the optimistic predictions of NCW advocates are proven true and the attempt to eliminate middle levels of command and move more decision-making authority down to junior personnel is successful, this change would create problems from the perspective of the law of war. These problems stem from the fact that the law does not always treat junior personnel in the same way it treats senior commanders. While all military personnel throughout the chain of command are expected to observe the same laws and regulations, there nonetheless may be a different standard applied to the decisions of a senior commander, who is expected to have had access to all available intelligence and advice, than to those of junior personnel in the field, who are understood to be making decisions under different and often more challenging circumstances. This calculus may need to be changed if improved technology and flattened hierarchies enable junior personnel to make more decisions that were previously the province of more senior leaders. It may become necessary to hold those junior commanders to the same exacting standard currently expected of senior officers—and the legal ramifications of such a change have yet to be examined.

NCW emphasizes the need for greater speed in military command and control. Yet it was recognized well before the network centric age that the desire for speed in decision-making must be limited by the need for human reflection; as the USS Vincennes shoot down of an Iranian airliner in 1988 suggested, automated systems may encourage or even force a decision before commanders are ready (Gruner 1990). But NCW places even greater emphasis on operating faster, decreasing decision-cycle time, and “getting inside” what is called the opponent’s OODA (Observe, Orient, Decide, Act) loop. This not only can lead to bad decisions, but can also create legal problems for a well-meaning, network centric force. As Thomas P. M. Barnett describes, the result may be that we could “shoot first and ask questions later” (Barnett 1999, 38). But the requirement to consider factors such as necessity and proportionality applies even in the information age, no matter how fast a decision is made.

There is nothing new, of course, about military personnel having to make important decisions quickly. At a tactical level, this problem is to some extent mitigated through a systematic process of analyzing hypothetical scenarios ahead of time and developing potential responses. The individual soldier or fighter pilot, for example, normally operates under Rules of Engagement that reduce uncertainty and simplify the decision-making process. But when new technology and doctrine, in the form of NCW, give those junior personnel even more responsibility for making decisions more quickly, the time for the deliberation required under law and policy will also be compressed. To some extent senior commanders will be able to mitigate this problem by promulgating “commander’s intent” statements that provide guidance for making such decisions, but it is still likely that some steps in the decision-making process will be skipped.

Even the use of modern information technology to achieve greater precision, one of the hallmarks of information age warfare, can create legal problems for the network centric warrior. Precision-guided munitions (PGMs) embody the NCW ideal of using information to apply force precisely where and when required. Critics have often pointed out that PGMs can on occasion cause unintended destruction, by not being precise enough or by being improperly targeted. PGMs can blind, maim, or produce other “worse than lethal” results (Sapolsky and Shapiro 1996). But seen through the prism of international law, the main problem with PGMs is not that they are too imprecise, but just the opposite. Precision munitions are so beneficial, it is argued, that they should become required under the law.

The use of PGMs is not mandatory under international law, but the opinion that they should be, at least under circumstances when there is great risk of collateral damage, is beginning to be voiced. Stuart Belt, for example, examined recent U.S. practices and statements concerning PGM use, and argues that the Kosovo experience indicates the use of PGMs by the United States in urban areas has now become a common enough practice to rise to the level of international law. “It is an established, recurrent, and repeated practice that unguided, gravity bombs are not employed in densely populated, urban areas. Rather, when targets are identified in urban areas, precision-guided weapons, such as TLAM, CALCMs, JDAMs, or LGBs are used” (Belt 2000, 163). In addition, Belt suggests—to the consternation, no doubt, of some U.S. military planners—this requirement holds only for the United States and those other countries that might have sufficient inventory and experience with PGMs to meet such a standard. The concept of “normative relativism,” Belt argues, holds that

belligerents are held to the standards they are reasonably believed capable of meeting (Belt 2000, 171).

Such a view is not new. As W. Hays Parks described in 1982, some delegates to the conferences in the 1970s that produced the Geneva Protocols suggested that with the advent of PGMs, the use of less precise weapons that lead to civilian death or destruction would constitute a war crime. Parks dismisses this idea by pointing out that such a rule might have the contradictory effect of discouraging the development of PGMs, and in any case, “a nation is not expected to bankrupt itself to avoid civilian casualties among the enemy” (Parks 1982, 103). Danielle L. Infeld used a different argument against any legal requirement for PGMs, writing in 1992 that because precision munitions are susceptible to environmental effects and can on occasion produce greater civilian casualties than intended, they are not always the best choice of weapon even from a humanitarian standpoint (Infeld 1992). Since then, PGMs have become much more widespread, of course, but they are still relatively expensive and susceptible to error. As the DOD Office of General Counsel comments, the argument in favor of requiring PGM use has “garnered little support among nations and has been strongly rejected by the United States” (Department of Defense Office of General Counsel 1999, 22).

Military planners may not wish to be too complacent about the legal status of PGMs, however. As the development of technology continues to drive their price down, and as the networking of sensors and weapons continues to improve the likelihood that the target destroyed is the target intended, it is quite possible that the United States will encounter renewed calls for a requirement to use PGMs. Parks recently described this paradoxical aspect of PGMs and concluded, “Were I a lawyer for another government, my advice to that government would be: Don’t buy them. There is no legal obligation to acquire them. But if you do buy them, you may be required to use them or face criminal prosecution for failure to use them when some believe you should have” (Parks 2002, 291).

Another careful observer, Charles Dunlap, suggests that a similar effect might result from the widespread use of computer modeling as part of the targeting process. As these models become increasingly sophisticated and—an equally important point—increasingly understood by the public, it is possible, Dunlap writes, that commanders may begin to be considered legally or morally required to follow the results provided by the model, at the expense of flexibility and their own professional judgment (Dunlap 1999, 11-12). Dunlap does not necessarily support such an interpretation of the law concerning computer models or a requirement to use PGMs, but he raises concerns that may become more relevant in the future.

A final issue concerning precision munitions is that whatever their legal status, they may encourage militaries to attack targets that might otherwise have been considered off-limits because the risk of civilian casualties would have been too great. J. W. Crawford III made this argument concerning the use of PGMs (as well as other weapons) to attack Iraqi electrical power infrastructure in the first Gulf War. According to some post-war assessments, these infrastructure attacks led in the long run to excessive civilian casualties (Crawford 1997).

NETWORK CENTRIC WARFARE AND *JUS AD BELLUM*

In addition to raising problems concerning the legal use of force in war, the improved tools and techniques of NCW can also make it more difficult to determine when it is legal for a nation to go to war. For example, while it is a truism that a good military commander should be aggressive and “lean forward in the foxhole,” the capabilities and requirements of NCW may encourage the information-age warrior to lean forward a bit farther than international law allows. One such capability is the Expeditionary Sensor Grid, a network of surveillance sensors to be placed in a forward area—such as within enemy territory—before the commencement of hostilities. While the United States would presumably consider such action necessary and legal as a self-defense measure, the international community might not accept this interpretation (Henseler 2001).

Some critics believe that modern, information age warfare may, in fact, be too good—too efficient at killing the enemy while minimizing its own losses. For Michael Ignatieff, a war that is too one-sided may no longer be just. “Technological mastery removed death from our experience of war. But war without death—to our side—is war that ceases to be fully real to us: virtual war” (Ignatieff 2000, 4). Others argue that a feeling of impunity on one side may breed an attitude that a modern military can attack any target that has any military value whatsoever, rather than only those in which the military value clearly outweighs the potential civilian collateral damage (Walker 2001).

As a result, even wars begun for humanitarian reasons may be deemed illegitimate if they are seen to be too easy. The air war over Kosovo, in which NATO aircraft were kept at high altitudes to avoid enemy fire, has been often cited as an example of this phenomenon. In the view of one scholar, “the absence of casualties among the military forces of NATO during the bombing campaign and the killing of two thousand or more civilians in Serbia and Kosovo do seriously damage the humanitarian rationale for action” (Falk 1999, 856). Elshstain worries about the develop-

ment of what she terms the criterion of “combatant immunity.” Keeping American warriors out of the range of the enemy’s weapons, she writes, necessarily means that American weaponry will be used at longer ranges, with an increasing likelihood of collateral damage. This behavior, for Elshstain, not only violates the principles of discrimination and proportionality, but also the just war tradition that it is “better by far to risk the lives of one’s own combatants than the lives of enemy noncombatants” (Elshtain 2001, 8).

Some have proposed simply to outlaw such military operations, for example through an international legal convention that makes it clear “zero casualty” policies are illegal in peacekeeping and humanitarian intervention operations. As a result of such a convention “the risk of injury or death for military personnel may therefore be higher than it was for NATO pilots in Kosovo” (Voon 2001, 1113). Such proposals would only deter nations from participating in humanitarian missions, and from the U.S. point of view they would have the perverse effect of outlawing success. Similarly, the criticism of the 15,000-foot altitude restriction used in Operation Allied Force in Kosovo does not seem to be valid; such a precaution, combined with the use of technology that did appear to minimize civilian casualties, seems to have been a reasonable approach to balancing military requirements against the needs of proportionality and discrimination. But the comments of observers such as Elshstain and Ignatieff raise what may be the most important caution of all concerning NCW and other visions of modern war: they may make it too easy for nations to resort to war. Just as Elshstain warns that the attractiveness of humanitarian intervention may “lull our critical faculties to sleep,” the availability of new, precise technologies of war that present few risks to one’s own side may discourage commanders and leaders from thinking through the decision to use force (Elshtain 2001). This effect can be seen in the problems facing the United States in Iraq today; the tremendous capabilities of America’s network centric military appear to have at least in part blinded decision makers to the difficulties that history and many observers suggested might arise after the “end of major combat operations.”

As Michael Howard noted several decades ago, “[n]othing that makes it easier for statesmen to regard war as a feasible instrument of state policy . . . is likely to contribute to a lasting peace” (Howard 1983, 22). Today, the tools of modern war have indeed made war easier. Robert Kagan describes how this phenomenon, combined with the absence of the Soviet threat, affected American foreign policy in the 1990s. “Thanks to new technologies, the United States was also freer to use force around

the world in more limited ways through air and missile strikes, which it did with increasing frequency” (Kagan 2002, 9). The situation may be understood in relation to the old saying that “if the only tool you have is a hammer, all your problems look like nails.” Today, American planners may be facing a twist on that situation: if you have a full toolbox, with a shiny tool available for every conceivable use, then every problem appears solvable. New visions, such as NCW, provide planners and policy makers with ever more precise and apparently less destructive tools, and may thereby encourage leaders to attempt solutions that should otherwise be avoided. The continuing problems of post-invasion Iraq demonstrate that at best, America’s high-technology approach is insufficient to deal with the complexities of peacekeeping and nontraditional conflict; at worst, it may have helped create the very problems it now cannot solve.

POLICY IMPLICATIONS AND RECOMMENDATIONS

The international law of armed conflict presents numerous problems for Network Centric Warfare, many of which have yet to be sufficiently addressed by NCW advocates. For America’s military today, facing new and growing challenges that often appear resistant to conventional solutions, NCW offers the promise of a better, faster, and more effective way to fight. But many of the advantages that look beguiling to a military commander can also create problems for a military that focuses too much on speed and effects, at the expense of deliberation and the law. For some in the American public and the international community, NCW is part of a dangerous form of modern warfare in which military personnel kill civilians with impunity; for others, it suggests military force can be used to accomplish humanitarian goals at little risk. None of these views reflects a full understanding of the legal and ethical issues raised by NCW. These issues can be summarized as follows:

The Law Can Bite Back: This lesson is particularly important for the U.S. military, which must realize that international law, especially when written against U.S. wishes and without U.S. involvement, can constrain American capabilities and actions. The clearest case and most immediate concern for U.S. military policy is what might be termed the “PGM paradox.” American planners will continue to be blamed for causing unnecessary civilian casualties every time imperfectly precise or improperly targeted PGMs result in excessive collateral damage. But even if improved technology and tactics were able to produce PGMs capable of piercing the fog of war to hit the right target every time, the United States would find itself facing

increasing calls to make those weapons legally required—a restriction that would tie the hands of military planners and commanders, and could even lead to the absurd result of requiring the use of PGMs in situations such as low intensity conflicts where they are often inappropriate.

You Can Be Too Good to Be Legal: This lesson, too, is primarily for the U.S. military. While commanders will always seek faster weapons and shorter decision times, too much speed may not allow time to consider the principles of international law. Improved technologies may enable leaders to lean farther forward, gaining crucial advantages over adversaries; but when those leaders lean into the enemy's territory, or when an aggressive attitude encourages premature action, complex questions of law and ethics arise. And when modern military forces are able to inflict damage upon an enemy with apparent impunity, what a commander sees as success may to the public look like unjustified killing.

War Can Become Too Easy: The biggest problem of all may be that NCW may make war too feasible for a nation considering whether to wage it. This is partly a problem for the military planners and commanders, for when decisions in war appear too easy, they risk being made without sufficient consideration of legal, moral, or ethical issues. But few military professionals are ever likely to see war as virtual, and even if they did, the decision to conduct war is not theirs to make. The real danger is that the public and its political representatives may become blinded by the promise of precision and speed offered by the modern military, and be too quick to choose war.

These issues suggest not only that the U.S. military must reassess the concept of NCW in light of international law, but also that the American public must be brought into the debate. If this discussion does not occur, both the military and the public it serves may find the impressive capabilities of modern warfare produce unexpected results. For the U.S. military, the result may be a tightening of *in bello* rules that it does not want, as new international law is made without its involvement. For the public, on the other hand, NCW may produce an opposite but even more dangerous effect, through a lessening of *ad bellum* rules that define when and where a nation may choose to go to war.

The following recommendations may help to avoid these dangers:

Begin a Broad-Based Consideration of the Legal Implications of NCW: While the U.S. military should not slow down the pace of transformation, it should take the time to consider the legal implications of it and other changing concepts of warfare. Too often, discussions about the law of armed conflict in the information age focus on the new and sexy topic of computer warfare. But military commanders and planners should realize that when hierarchies are flattened and decisions are made more quickly, the result can be not only more mistakes, but also decisions that violate principles of law and ethics.

Reconsider the Concept of Effects-Based Operations: While a focus on the long-term effects of military actions is useful in planning, military leaders should keep in mind that international law and ethics are equally concerned with the short-term results achieved by individual weapons applied against specific targets. Today's fad for EBO threatens to privilege the ends over the means and is particularly worrisome from the perspective of the law of war. It must be reevaluated based on legal and ethical perspectives.

Involve All Levels of the Military Profession in the Discussion: A reassessment of NCW from the perspective of international law must involve warfighters and planners at all levels of command—including the enlisted and junior officer level, where more and more of the decisions are made in a networked force. It is the responsibility of all military professionals to be concerned with the broader issues of justice and international law, and hiring more lawyers is not the answer to this problem. The prominent role of lawyers in the U.S. military, in fact, may serve only to make war more legalistic, not more moral or just.

Develop a Lieber Code for the Information Age: Especially in the difficult area of dual-use targets and the blurred line separating military and civilian targets, the U.S. military should consider adopting restrictions on its own actions—such as making a greater distinction between military and civilian systems—rather than waiting for international law to impose more drastic limitations. Such self-imposed limitations may not be operationally necessary or even desirable from a warfighter's point of view, but like the Lieber Code during the Civil War they may be called for out of a broader sense of the requirements of law and justice.

CONCLUSION

The American public and the international community must learn that modern tools and techniques of war are neither immoral, because they can harm civilians, nor a panacea, because they so often succeed. In particular, critics should refrain from attempting to brand efforts such as the Kosovo air campaign as immoral, illegal, or both, based on an uneasiness with modern war-fighting techniques. A lack of casualties on one side does not make an intervention illegal, and attempts to label it as such amount to little more than attempts to outlaw success. They will only discourage future efforts at humanitarian intervention.

Most important, the American public must realize there is a difference between a military that is too good, and a war that is too easy. The first is only a problem if the public and policy makers fail to understand and use that military properly. The second, however, threatens to undermine the barriers to war established by international law and ethics. While the concept of NCW holds great promise for the future, if the U.S. military is not careful it may learn that a military that is too good may not be legal. And if the American people are not watching, they may find that a war that is too easy may not be just.

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