Chapter Seven: An Alternative to Nuclear Weapons?
Proportionality, Discrimination, and the Conventional Global Strike Program

Published by

Gentry, Caron E. and Amy E. Eckert.
University of Georgia Press, 2014.

For additional information about this book
https://muse.jhu.edu/book/28327
An Alternative to Nuclear Weapons?

Proportionality, Discrimination, and the Conventional Global Strike Program

Alexa Royden

In the spring of 2010, the White House confirmed that President Obama supports the development of Conventional Prompt Global Strike (CPGS), a “super” conventional ballistic missile program that would serve as an alternative to, and possible long-term replacement for, U.S. nuclear weapons. Osten-sibly, a conventional ballistic missile system would be free of the disadvantages that make nuclear weapons so problematic: indiscriminate destructive power and radiation. And yet, on closer examination, CPGS poses serious problems of its own. These problems stem largely from the fact that CPGS is designed to be used—and used under conditions in which it may be difficult to adhere to the jus in bello principles of discrimination and proportionality.

First emerging in 2001 as part of the U.S. Air Force Global Strike Concept in support of the 2002 Quadrennial Defense Review, CPGS would offer the United States a flexible, hypersonic capability that could respond to rapidly evolving threats in approximately one hour. The White House, having prioritized a reduction in the U.S. nuclear arsenal, clearly finds the idea of a usable, conventional capability an important way to bolster U.S. strategic forces while pursuing deep cuts in the existing nuclear stockpile. Further, having a weapon that can be used to rapidly and preemptively respond to the threats posed by rogue states and global terrorist groups fills an existing gap in our military arsenal.
And as a conventional weapon system, CPGS violates none of the norms that have evolved to constrain a potential nuclear encounter.

The assumption, however, that a conventional ballistic missile attack is a more just means of responding to global threats has received little careful attention. Certainly, conventional ballistic missiles are generally less destructive, in a literal sense, than even the smallest nuclear device. However, any weapons system that has even the slightest potential to replace a nuclear capability is likely to pose problems in terms of its legitimate use, particularly if the threshold for its use is significantly lower than the one observed for the use of nuclear weapons. This chapter explores precisely this issue through an examination of the core *jus in bello* principles that are generally cited when critiquing the use of nuclear weapons: discrimination and proportionality. The first section examines the principles generally, as they are commonly understood to date. The next section explores their application to nuclear weapons, including a discussion of nuclear strategy and deterrence. Following, these same concepts are applied to the CPGS program in order to examine the extent to which it meets *jus in bello* criteria. Finally, a concluding section considers responses to these issues in hopes of furthering the utility of the Just War tradition in light of the evolution of conventional weaponry.

**JUS IN BELLO: THE PRINCIPLES OF DISCRIMINATION AND PROPORTIONALITY**

In the Just War tradition, *jus in bello* principles are concerned with justice in battle. Two criteria are central to the use of missile technologies, be they nuclear or conventional: the principle of discrimination and the principle of proportionality. Both principles have received extensive treatment in academic and professional literatures; however, the emergence of new technologies continues to complicate their application, as weapons have at once become more deadly and more accurate.

The principle of discrimination identifies parameters regarding the targeting of enemy combatants, noncombatants and civilians, including all civilians and members of the military who are either off duty or a member of a protected class, such as medics and chaplains. Simply put, enemy combatants may be justly targeted, while enemy noncombatants and civilians may not. Unfortunately, as war is an undertaking that doesn’t always allow for neat distinctions, it is sometimes inevitable, and under certain circumstances permissible, to know-
An Alternative to Nuclear Weapons?

ingly target locations where noncombatants and civilians may be at risk, as long as the intended act is generally perceived to be morally good or neutral. For instance, it has become generally accepted that the targeting of key infrastructures critical to the success of the enemy’s war effort is in fact just, as it is likely to shorten the length of hostilities. Civilians or noncombatants engaged in activities that directly support these efforts may inadvertently become casualties, but there are likely to be fewer civilian casualties in the long term if the amount of time engaged in active combat is reduced. Thus the act, while destructive, could be considered a moral good. The key to this caveat is the doctrine of Double Effect, or the distinction made between the unintentional targeting of noncombatants and civilians versus the deliberate targeting of the innocent. This “collateral damage,” while regrettable, is not innately unjust, although it is subject to further restriction under the principle of proportionality (below).

However, determining the line between critical targets and noncritical targets has proven complicated. A munitions factory undoubtedly meets the criteria, while a factory that produces soldiers’ uniforms likely does not. More controversial is the targeting of civilian structures and other public spaces where combatants may gather. Thus, the extent to which the principle of discrimination can be successfully implemented relies heavily upon the acquisition of accurate and timely intelligence, without which selecting legitimate targets that minimize collateral damage is challenging. And in all cases, it is incumbent upon the party launching the attack to demonstrate that careful deliberation preceded a military strike that results in a significant level of collateral damage, even if the target itself is ultimately deemed just. This allows, unsurprisingly, for a fair degree of subjectivity in the selection and prioritizing of targets, further fueling the debate regarding the acceptable casualty rate of civilians in wartime.

The principle of proportionality further limits the actions of those engaged in combat. While the use of violence by state actors is considered legitimate under certain conditions, “the bombing will be morally permissible only if the importance of the military targets equals or outweighs the resulting deaths of ordinary civilians.” In other words, the amount of force utilized must be commensurate with the injury or likely harm the enemy has committed or intends to commit. Further, the amount of force used should be the minimum amount of force necessary to achieve the desired end state. It would be immoral to cause unnecessary injury, and given a range of alternatives, the moral course of action is to pursue the military strategy that successfully neutralizes the threat while causing the least harm to the population and the infrastructures necessary to
support the population. Thus, as a practical matter, proportionality posits a base-level cost-benefit analysis. The extent to which this is successful, of course, depends upon the accuracy of the threat assessment. And it is in the assessment of threat that subjective analysis inevitably takes place.

Taken together, the principles of discrimination and proportionality provide broad guidance regarding the moral constraints leaders should observe in the conduct of war. The specifics, however, are vigorously debated. That said, one arena in which there is comparatively little debate is in the use of nuclear weapons. With the bombings of Hiroshima and Nagasaki, it became clear that nuclear weapons were inherently both indiscriminate and disproportional, and most scholars deplored their potential use, even while they recognized the seemingly inevitable reality that was the nuclear arms race. And yet, within the debates of this period emerged an important discussion regarding the “worst case” scenario: global nuclear war. The hypothetical “rules” that would govern its conduct are illuminating and demonstrate the deficiencies inherent in crafting a just strategy for the use of nuclear weapons.

JUST CONDUCT, NUCLEAR WEAPONS, AND THE EVOLUTION OF CPGS

Nuclear weapons are created in the fervent hope that they will never be used. Upon first blush, this makes little sense, but key to an understanding of nuclear strategy is the concept of deterrence. As noted above, Hiroshima and Nagasaki revealed the intrinsic potential of the atom bomb: the ultimate and unsparring destruction of life and everything related to life within the bomb’s core blast zone. In addition, beyond the kill zone, the bomb left behind a terrible and entirely uncontainable secondary effect, nuclear fallout from the radiation released in the process of the explosion. Because the consequences were so horrific, it seemed that any military objective would pale in comparison to the likely result of confrontation. The basis of deterrence, then, is the idea that no rational actor would invite nuclear retaliation by actually using a nuclear weapon, much less provoking a nuclear attack.

This is why nuclear weapons are classified by so many as inherently unjust. While a ruling by the International Court of Justice in 1996 seemed to leave open the possibility for the first use of nuclear weapons in the event a state should face supreme emergency, or a truly existential threat to its existence, that decision was deeply controversial and has never fully resolved the debate
regarding the use of nuclear weapons. In targeting, it is impossible to discriminate between combatant and civilian, and in proportion, nuclear weapons are truly commensurate only in response to another nuclear attack. Thus, for many, the only possible scenario in which nuclear weapons can be used legitimately is in a “second strike.” This, however, is precisely the scenario that scholars and policymakers contemplated during the Cold War. What if deterrence failed? What if the worst-case scenario did happen? How might we respond? And was any response truly just?

There were three primary strategies that evolved around the idea of second strike, or the strategy a state would execute in the event deterrence failed and it was subject to nuclear attack. These strategies—countercity, counterforce, and countercontrol—were retaliatory in nature, as first-strike nuclear attacks were overwhelmingly considered illegitimate. In the event of an attack, however, and in the absence of a conventional response commensurate to the initial aggression, various policies were proposed that were designed to maximize the overall goal of deterrence. These scenarios inevitably drew criticism from ethicists, who argued that no nuclear second-strike strategy could be either discriminating or proportional enough to meet Just War criteria.

The first of these, the countercity strategy, emerged in the early 1950s, when U.S. nuclear weapons were pointed at Soviet cities and vice versa. The assumption, of course, was that neither adversary would act first if their populations were held hostage. And this is exactly why critics objected to the strategy on the grounds that it was indiscriminate. Beyond the fact that nuclear weapons themselves are indiscriminate in their effect, the deliberate targeting of civilians as the base strategy—a strategy designed to maximize, not minimize, casualties—failed as it violated the core condition of discrimination: civilians shall not be targeted with intent. While it is undeniably true that civilian centers remained on the target list of U.S. strategic nuclear forces, this type of response became increasingly delegitimized.

As a result, nuclear strategy evolved to include a counterforce approach. This plan, coming close to a decade after the beginning of the U.S.-Soviet nuclear arms race, was designed to target Soviet military installations, including the missile silos. The policy appears to have been an attempt on the parts of senior leadership to discriminate between military and noncombatant or civilian targets. Again, it doesn't change the inherent nature of the weapon, and this led to a second round of criticism from ethicists concerned with the justness of nuclear retaliation. These objections recognized that any plan for a second
strike that hoped to neutralize the enemy’s remaining nuclear infrastructure would necessarily involve thousands of bombs, and the effects of those bombs would not be limited to military installations and the combatants that manned them. Inevitably, through either error or overkill, innocent civilians would lose their lives, potentially in great numbers, again violating the principle of discrimination. This objection likely had little effect on the actual plans prepared by the Pentagon, but it did force yet another rethinking of nuclear strategy that resulted in a final iteration of the second-strike concept.\textsuperscript{10}

The countercontrol strategy, enunciated by the Reagan administration in the 1980s, would alternatively focus on the elimination of Soviet political and military leadership, under the assumption that the elites were more likely to be concerned with their own survival in the event of nuclear retaliation. Again, however, it is difficult to imagine a countercontrol strategy that would not result in mass civilian casualties, especially as the nucleus of Soviet government activity was embedded within a densely populated urban area, Moscow. It would seem that, even when responding to a nuclear first strike, responding in kind resulted in the indiscriminate targeting of civilians.\textsuperscript{11}

Nor do these strategies fully account for concerns regarding proportionality. Over the years, much debate has taken place regarding the degree of retaliation necessary to achieve the military objective, which ultimately was not the end of a nuclear exchange but the deterrence of a Soviet first strike. Some proposed that a limited counterforce second strike may be adequate to prevent an initial attack. And yet, if deterrence was the fundamental military objective, deliberately limiting the scope of one’s response might instead be misread by the Soviets as an opportunity to act. Of course, deterrence itself was a calculated bluff, and it only worked if the other side truly believed that mutually assured destruction was a likely outcome. Clearly, this conception has questionable moral implications. Fortunately, these strategies have never been tested, and with the end of the Cold War in the early 1990s, it seemed that the United States could abandon its focus on strategic forces and turn instead to the business of eliminating missile stockpiles.

Unfortunately, the Global War on Terrorism prompted a reassessment of U.S. strategic capabilities. In fact, it is likely that the cpgs program ultimately emerged in response to the Clinton administration’s failed targeting of Osama bin Laden at an al-Qaeda training camp in 1998.\textsuperscript{12} Discovering that there were no long-range capabilities that would allow the United States to rapidly
respond to an evolving security situation short of launching nuclear missiles, the U.S. Air Force began to work on a broad strategic concept called Global Strike. Global Strike, incorporated into the 2002 Quadrennial Defense Review, sought to highlight potential programs for development that would improve the ability of the United States to rapidly respond to a variety of threats in a dramatically shortened time frame. After 9/11, this capability became increasingly critical, and the Pentagon has spent much of the last decade conceiving of various ways in which to bring the concept to fruition. CPGS is the culmination of these efforts, and both the Bush and the Obama administrations have actively encouraged support for the proposal.13

CPGS actually encompasses a variety of possible programs, from existing initiatives to tip Trident missiles with conventional warheads to the proposed ArcLight missile system of the Defense Advanced Research Projects Agency (DARPA), which would use a combination of boosters and gliders to deliver conventional weapons at a speed similar to those reached through ballistic technologies.14 Most of these programs would field missiles in the range of two to eleven tons, including the payload, and those payloads could vary, depending upon the design of the delivery vehicle.15

It is worth noting at this point that the missiles envisioned under CPGS are in no way comparable in terms of devastation to nuclear warheads. The Davy Crockett, the smallest nuclear weapon in the U.S. arsenal, had a yield of fifteen to twenty tons, far outstripping most conventional weapons.16 In addition, the Pentagon has spent considerable effort addressing the issue of accuracy in the development of a conventionally armed ballistic missile. Unlike nuclear weapons, which detonate above the target, a conventional weapon would have to hit the target precisely. Due to advances in GPS technology, this is technically feasible. Thus, it can be assumed that CPGS has the potential to be both more discriminating and more proportional than nuclear-armed ballistic missiles.

What then, is the problem? The answer to this question lies in the underlying concept that defines CPGS and its likely use. Unlike nuclear weapons, which are designed around the concept of deterrence, CPGS is designed to be used, if selectively, as a regular part of the U.S. antimissile and counterterror strategies. They certainly have the potential to create a deterrent effect, but hardly on the scale associated with mutually assured destruction. In addition, CPGS as it is currently envisioned would most likely be deployed preemptively, not as a retaliatory response to a first strike.17 This poses possible new problems
in relation to their just use, even if they are not inherently unjust in the way that nuclear weapons are generally perceived to be.

Specifically, the assumption that cpgs will be discriminate enough to effectively target combatants, while minimizing the harm to noncombatants and civilians, is open to debate. The war in Afghanistan has provided a wealth of data that seems to indicate that despite remarkable gains made in the military’s ability to target with startling accuracy, civilians are still inadvertently killed in disproportionate numbers during the course of an attack. Why is this, and is the cpgs program likely to face similar challenges?

Based upon research carried out by the Project on Defense Alternatives and Human Rights Watch (hrw), it is increasingly clear that the ability to successfully discriminate targets correlates strongly with the amount of time taken when identifying a target and authorizing its destruction. As hrw notes in its recent report on U.S. airstrikes in Afghanistan, “whether civilian casualties result from aerial bombing in Afghanistan seems to depend more than anything else on whether the airstrike was planned or was an unplanned strike in rapid response to an evolving military situation on the ground.” From 2006 to 2008, hrw tracked planned bombings versus unplanned bombings. They found that in almost all cases, planned bombings resulted in significantly fewer casualties— for example, in 2008 “no planned airstrikes appear to have resulted in civilian casualties.” Why? When planning an airstrike, the military generally relies upon a process designed to select targets that uses “civilian mitigation procedures.” This process takes place in the hours, and often days, leading up to an air strike and uses both technical and human intelligence to determine the pattern of civilian activity in the area prior to launch. In addition, a planned strike requires visual confirmation of the target, allowing pilots to suspend an attack in the event that civilians are found to be in the area.

Alternatively, airstrikes called in by forces on the ground in response to rapidly evolving threats resulted in a disproportionate number of civilian casualties. This is largely due to the fact that no one was able to determine in advance the location of civilians, as the process of civilian mitigation procedures is suspended in the event that hostile intent is determined to exist and defensive action is taken to mitigate hostile activity. For example, U.S. guidelines define hostile intent as “the threat of the imminent use of force,” while NATO defines the same term as “manifest and overwhelming force.” Thus, the United States allows ground forces to preemptively call for airstrikes, while NATO requires that hostilities be evident before an airstrike can be approved.
This is particularly relevant as one considers the CPGS program, as it is deliberately designed to be used in response to rapidly evolving threats. It is unlikely, in many cases, that a thorough process of civilian mitigation could take place if the goal is to authorize and execute a strike in no more than an hour. While this may allow us to eliminate high-value targets more effectively, it is also likely to result in significantly greater collateral damage, as leaders will rarely have a fully accurate picture of civilian activity leading up to the operation’s authorization.

This leads to the second concern, proportionality. In the scenarios outlined by the administration, be it a strike against a rogue state with evolving missile capabilities or a terrorist leader at the top of the U.S. hit list, the use of CPGS would likely be preemptive in nature. This is very different from the retaliatory, second-strike scenarios envisaged by nuclear strategists during the Cold War. Again, because this technology is designed to be useable, it seems likely that it will be used, and used in rapid response to real time, evolving threats. Because proportionality is assessed relative to the likely benefit attained as a result of an attack, it is critical that the benefit be obvious and confirable.

While it may seem self-evident that a rapid response conventional strike on North Korea’s missile launch facilities would meet the threshold established by Just War theory should preparations for a nuclear missile launch be detected and confirmed, it is less certain that an attack on Iran’s nuclear reactor sites meets these same criteria. Preemption assumes that the intent of the adversary is well understood, and the quality and content of the target is clear and verifiable. Because this type of military action is unlikely to take place in response to a specific attack, but in response to our perception of threat, the accuracy with which threat is assessed is critical to the calculation of proportionality in the event of a preemptive strike. Under such conditions, it may be very difficult to determine with any certainty if the number of civilian casualties generated in an attack would be proportionate to the perceived threat and injury should the threat have been carried out. As there is ample evidence that threat is not always accurately measured and assessed, most recently demonstrated in the justifications leading up to the war in Iraq, it is possible that a preemptive strike based on an uncertain understanding of the enemy’s intent will lead to a response that is disproportionate to the threat.

Thus, while hypersonic conventional missiles have the technical potential to be used justly, the CPGS program is responding to a need that increases the likelihood of indiscriminate and disproportionate use, thereby presenting a significant problem in terms of just conduct.
The issues associated with the CPGS program identified above indicate areas in which the Just War tradition needs to respond and evolve. In particular, Just War theory has yet to fully accommodate changes necessitated by the rapidly advancing conventional technologies associated with contemporary warfare, nor has it fully addressed issues related to an increased reliance upon preemptive war, especially in terms of just conduct.

This is important, as it seems likely that hypersonic conventional weapons will be used once they are deployed, as conventional weapons are generally not subject to the restrictions associated with their nuclear cousins. As noted by an anonymous administration official, “A U.S. president might be more likely to approve the launch of a Conventional Strike Missile because it would involve fewer negative consequences and less stigma than nuclear weapons.”

That said, it is also arguably true that the evolution of conventional weapons and the parameters for their future use have escaped rigorous assessment simply because they are not weapons of mass destruction, at least as popularly conceived. If they are to be used justly, what adjustments need to be made?

In the case of CPGS, it will be necessary for the Just War tradition to address the problem of rapidly diminishing timelines. In many cases, it is considered to be the moral duty of an actor to consider thoroughly the likely outcomes of his actions. As Richard J. Regan observes, “The principle of discrimination requires military combatants to weigh carefully the effects of their actions on ordinary civilians. If military combatants either willfully do not consider the effects of their action on ordinary civilians or act with reckless disregard of those effects, the combatants violate the principle of discrimination.”

This is extremely pertinent when considering advancements in military technologies that allow a state to respond to global threats in, at most, a handful of hours. If the assumption is that the technology will demand an inevitably shortened time frame for decision making, can the principle of discrimination be fully, and conscientiously, applied?

The answer is yes, if the intelligence necessary to adequately assess civilian casualties is readily available. It would be helpful, however, if criteria were devised to broadly guide the actions of decision makers, especially in instances where intelligence is lacking. Logically, there should be an inverse relationship between shorter timelines and certainty; that is, the more quickly an attack is
authorized, the more robust the requirement for accurate and complete assessments of conditions on the ground. Unfortunately, in practical terms, the opposite is usually true, as demonstrated by recent air campaigns in Afghanistan. As a result, in situations with marked uncertainty, it seems reasonable to encourage more stringent requirements regarding the scope and degree of force utilized when responding to an emerging situation. As rapid response strikes become increasingly common, it will be important to devise specific parameters, perhaps directly correlated to the robustness of certainty, to help increase fidelity with the spirit of the principle of discrimination. Ultimately, in an environment with high certainty, technically advanced weapons have the potential to be highly discriminate, thus their use could be justly authorized, even when acting within a shortened timeline. In an environment, however, where conditions remain opaque, no matter the quality of the technology, the likelihood of indiscriminate casualties is too high. Regardless of the payload, be it nuclear or conventional, launching a hypersonic weapon in this instance is not always a legitimate option.

Of further concern regarding certainty and decision making is the increased reliance on technologies that have the potential to marginalize human judgment from the decision-making process. Over the past decade, the United States has become heavily dependent on unmanned aerial vehicles (UAVs) for surveillance and intelligence collection.\textsuperscript{24} UAVs are now capable of autonomous identification and confirmation of targets, and it will be more and more tempting to rely on computer software to determine certainty. This raises serious questions regarding moral agency, as it is difficult to vest moral responsibility in a drone, regardless of its technical potential to function autonomously. While it seems unlikely that a computer will ever be called upon to make the final decision to use CPGS, much of the data that is utilized to support such a decision may be processed with little thoughtful and measured analysis by an actual human being. Especially in a compressed time frame, this could lead to unfortunate errors, as these are emergent technologies with a comparatively recent track record. While beyond the scope of this chapter, the question of moral agency will likely pose an increasingly difficult problem for Just War theory, as conventional systems further delegate important functions to nonhuman actors.

At the same time, while Just War theory has considered in significant depth the question of preemption as it relates to the \textit{jus ad bellum}, or just resort in going to war, criteria; comparatively little has been written on the implications of preemptive action in terms of the \textit{jus in bello} principle of proportionality. In
other words, how does a state determine the level of military force to use in a first strike, when the target has yet to commit an aggressive act? In the absence of a definite incident of aggression, determining the appropriate level of force to be utilized in a preemptive strike is an inexact science. While the principle of proportionality already emphasizes restraint in the use of force (i.e., use no more force than necessary to eliminate the target25), it remains largely subjective, and often tied to the importance of the target in question or the anticipated military outcome.26 Alternatively, the amount of force utilized could be determined by the likely level of casualties involved, with the assumption that more force, in some cases, may result in a speedier result and fewer casualties overall, both to the warfighters and to the civilian population.27

That said, in the case of CPGS and many other developing technologies, there is little potential for attrition on the side of the state planning the attack, as these missions are unmanned. This makes the use of CPGS dangerously attractive. CPGS allows a state to intervene quickly, decisively, and with significant force, at little to no human cost to the state instigating the attack. While some might argue that the economic costs associated with a program like CPGS will provide a sufficient barrier to its promiscuous use, the Global War on Terrorism has demonstrated the tolerance a society can have for astronomical costs in the face of even the most ambiguous, and comparatively narrow, threats. If you further consider the fact that few states possess the technical capacity to field a system similar to CPGS, you face an acute imbalance in terms of the human cost to be paid as a result of its preemptive use.

This is a distinctively different problem than the one faced by those tasked with designing a just nuclear strategy. The ethics of nuclear warfare were and are fundamentally about human costs. When utilizing a weapon that is essentially indiscriminate, combatants and noncombatants on both sides suffer disproportionately. The preemptive use of CPGS and other emerging unmanned systems divorce warfare, to a startling extent, from that mutual suffering and the potential reciprocity that compels a society to consider the consequences of its actions. This absence of reciprocal human costs undermines the just use of CPGS, a system that few actors beyond the United States have the capacity, or political will, to field.

This is a further reason to create clearer parameters for the preemptive use of hypersonic conventional capabilities. Unless criteria are created that require decision makers to consider both certainty and the human cost associated with its employment, CPGS could suffer from precisely the opposite problem
encountered when contemplating the launch of nuclear weapons: it will be too easy to authorize an attack. Because there is little real threat of significant retaliation, and because the harm done is unlikely to be catastrophic enough to militate against a preemptive strike, indiscriminate and disproportionate casualties can be expected. This is unacceptable. Even if a conventional capability has the potential to be just, it is dangerous to assume that actors will maximize that potential of their own volition. And while CPGS remains a virtual monopoly, there will be even less incentive to do so.

There is a need for the Just War tradition to be more explicit in its response to emerging technologies. The CPGS system is simply one example where this is the case. As advancements in unmanned weaponry change the face of modern warfare, traditional barriers to military intervention will change. It is critical that the Just War tradition recognizes and responds to these changes in order for it to remain resilient. It is no longer the case, if ever it was, that conventional weapons are somehow innately more legitimate than weapons of mass destruction. In fact, the limits on nuclear warfare and other restricted classes of weapons have, if anything, encouraged the production of conventional capabilities with the potential to be overwhelmingly lethal, if increasingly precise. Recent history would show us that state actors are not always able to use these weapons with the degree of restraint necessary to guarantee discrimination and proportionality. Until there are clearer criteria to guide and potentially limit their use, the spirit of the Just War tradition will remain unfulfilled.

Notes

5. Regan, Just War, 96.
7. In fact, of the seven votes taken in support of the overall ruling, vote number six, dealing specifically with the issue of supreme emergency, was the only vote to be split down the middle, with seven justices voting for and seven justices voting against. See “Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion,” *I.C.J. Reports*, July 1996, 226–67.

8. This is not to say that the potential for first strike was disregarded by policymakers and the military, but merely that it was generally acknowledged to be morally indefensible.


11. Ibid.


14. This proposal involving Trident missiles has repeatedly been met with objections, as there are concerns that Russia and China may be unable to distinguish between a conventionally armed Trident missile and a nuclear-armed Trident missile. To wit, the Senate recently voted to reduce funding for this particular part of the CPGS program.

15. It is difficult to estimate overall yield, as the specific munitions to be used will vary greatly depending upon the delivery vehicle. For specifics, see Noah Schachtman, “Hypersonic Cruise Missile: America’s New Global Strike Weapon,” *Popular Mechanics*, December 4, 2006, http://www.popularmechanics.com/technology/military/4203874 (accessed August 15, 2010).

16. For example, the MOAB, or Daisy Cutter, yields approximately eleven tons of explosive power. It is also an extremely heavy weapon, weighing almost twelve tons, and it could not be utilized in a rapid response program similar to the CPGS, where the total package (delivery vehicle and payload), in most cases, weighs approximately two tons.

17. Of course, it could be utilized in this capacity. The concept to date, however, focuses upon preemption, and not retaliation.


19. Ibid., 29.

20. Ibid., 29.


23. Regan, Just War, 100–106, emphasis added.


