Chapter Two

THE LAW OF ARMED CONFLICT AND URBAN AIR OPERATIONS

The law of armed conflict[1] is the body of norms regulating the conduct of states and combatants engaged in armed hostilities. International law generally derives from both treaties (conventions and agreements among states) and custom. The contemporary law of armed conflict regime draws heavily from the Hague Conventions, negotiated at the peace conferences of 1899 and 1907, and the Geneva Conventions,[2] as well as numerous agreements that limit the means and conduct of hostilities.[3] Equally, and in some instances more, important for regulation of air operations is "customary law."[4]

[1] The term "law of war" is often used interchangeably with "law of armed conflict," even though the legal requirements placed on parties sometimes depend on the type of conflict or operation being waged. This report is concerned with the legal norms that apply across the spectrum of conflict and, for clarity's sake, employs throughout the term "law of armed conflict." On the applicability of the law of armed conflict to military operations other than war, and some ambiguities surrounding this issue, see Timothy P. Bulman, "A Dangerous Guessing Game Disguised as Enlightening Policy: United States Law of War Obligations During Military Operations Other Than War," *Military Law Review*, Vol. 159 (1999).

[2] The 1977 Protocols Additional to the Geneva Conventions of 1949 (often referred to simply as Protocol I and Protocol II) spell out specific sets of rules to govern international and internal conflicts. The United States has not ratified the Protocols; it has declared its intention to be bound by them to the extent that they reflect customary law. See Michael J. Matheson, "The United States Position on the Relation of Customary International Law to the 1977 Protocols Additional to the 1949 Geneva Conventions," *American University Journal of International Law and Policy*, Vol. 2 (1987), pp. 419–431.

[3] For example, the 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases and of Bacteriological Methods of Warfare ("Gas Protocol") prohibits the use of some types of chemical weapons.

[4] Theodor Meron, "The Continuing Role of Custom in the Formation of International Humanitarian Law," *American Journal of International Law*, Vol. 90 (1996). The growing

Customary international law is composed of behavioral norms that become widely recognized among states as binding.[5] Together, these various sources of law aim to reduce damage and the suffering of combatants and noncombatants during conflict.

U.S. political and military decisionmakers generally respect the dictates of the law of armed conflict not only out of a traditional commitment to notions of the rule of law but also for policy reasons. Aside from moral and humanitarian considerations, the United States, as a prosperous democracy, has a strong interest in upholding international norms, which tend to be stabilizing forces and increase the predictability of state actions.

Beyond general efforts to uphold the law of armed conflict, U.S. planners place a premium on the perceived legitimacy of military operations, which often turns in part on their perceived legality. Planners strive to maintain support among three sets of audiences—the domestic public, the international community, and some parties local to the areas of operations—and adherence to international law can be integral to this support.[6]

International legal norms may shift or remain unsettled, and accusations alleging breaches of legal duties by the United States or its forces are not uncommon, but many of the basic principles embodied in the law of armed conflict have, over time, been internalized in the highest levels of strategic planning down to the lowest levels of tactical decisionmaking by individuals, where commitment to legal norms can help motivate and sustain the morale of U.S.

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importance of customary law in the law of armed conflict regime is highlighted by a decision of the International Criminal Tribunal for the Former Yugoslavia in *Prosecutor v. Tadic*, where the court emphasized, among other things, that certain customary rules of warfare apply in internal as well as international armed conflicts. (Decision on the Defence Motion for Interlocutory Appeal on Jurisdiction, October 2, 1995, available at http://www.un.org/icty/tadic/appeal/decision-e/510002.htm.)

[5] Definitions of customary law vary. One widely cited definition states: "Customary international law results from a general and consistent practice of states followed by them from a sense of legal obligation." *Restatement (Third) of Foreign Relations Law*, §102(2).

[6] This report focuses on the law governing *how* military operations are conducted, not *whether* a state or other actor is justified in acting militarily, although legal justification for intervening may also be important in solidifying public and international support.

servicemen.[7] Prior to and during operations, legal advisors and military Judge Advocate General (JAG) officers play a variety of roles in ensuring compliance with international law—roles that have gained prominence in the past decade.[8]

THE INTERNATIONAL LEGAL REGIME: FUNDAMENTAL CONCEPTS

The body of international law regulating armed conflict is intricate, and many of its most salient provisions remain contested among states, international organizations, and scholars. Nevertheless, much of the legal regime is reducible to several key concepts around which there is near-consensus: military necessity, humanity, distinction (or discrimination), and proportionality. These legal principles long pre-date the advent of air power,[9] and the international community has struggled throughout much of the past century to reconcile air power capabilities with well-established, basic tenets.[10]

International regulation of armed conflict begins with the principle of *military necessity:* "the principle which justifies measures of regulated force not forbidden by international law which are indispens-

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[7] John G. Humphries, "Operations Law and the Rules of Engagement," *Airpower Journal*, Vol. 6, No. 3 (Fall 1992), pp. 38–39, describes how international legal norms have, particularly since the Vietnam War, been internalized by military planners and operators.

[8] Particular attention is increasingly given to review of target lists and promulgation of rules of engagement by international law experts and military judge advocates.

[9] Many of the modern legal regime's basic tenets can be found, for example, in the Christian "Just War doctrine" developed in the Middle Ages and in Hugo Grotius' 17th century treatise, *De Jure Belli ac Pacis Libri Tres*, in which he argued that war should be governed by a strict set of laws.

[10] An early attempt to regulate aerial bombardment took place at the Hague Peace Conference of 1899, several years before the inaugural Wright Brothers flight, where European delegates adopted a declaration prohibiting for five years the dropping of bombs from balloons. After witnessing air power's potential during World War I, a commission of jurists from major military powers reconvened in the Hague and drafted a code regulating air warfare, known as the 1923 Draft Hague Rules of Air Warfare. No states ever ratified the code as a treaty, however. The impact of air power technology and strategy on international legal development is discussed in Matthew C. Waxman, "Siegecraft and Surrender: The Law and Strategy of Cities as Targets," *Virginia Journal of International Law*, Vol. 39 (1999), pp. 381–399. An excellent collection of essays tracing the history of the law of armed conflict may be found in Michael Howard, George J. Andreopoulos, and Mark R. Shulman, *The Laws of War: Constraints on Warfare in the Western World* (New Haven: Yale University Press, 1994); see especially the chapter by Tami Davis Biddle on air power.

able for securing the prompt submission of the enemy, with the least possible expenditures of economic and human resources."[11] In pursuing military victory, however, parties are also governed by the principle of *humanity*, which forbids the infliction of injury or destruction not necessary to the achievement of legitimate military purposes.[12]

To a degree, the principles of military necessity and humanity complement each other, both reflecting the notion of economy of force. Yet they are also in tension—a tension that the law of armed conflict seeks to mediate—between allowing sufficient military flexibility to subdue an enemy while also restricting that flexibility to limit the destructive impact of conflict. Many of the specific rules contained in the law of armed conflict attempt to balance, on the one hand, the latitude necessary for military forces to carry out their functions, with, on the other, a desire to minimize human suffering.[13]

The principles of military necessity and humanity together also underlie the rule of *proportionality*, which demands that parties refrain from attacks, even against legitimate military targets, likely to cause civilian suffering and damage disproportionate to the expected military gain.[14] A classic example of this rule holds that a force advancing through a town that encounters a single enemy

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[11] Department of the Air Force, Air Force Pamphlet 110-31, *International Law—The Conduct of Armed Conflict and Air Operations* (1976) ("AFP 110-31"), p. 1-5.

[12] The precise formulation of these key principles varies. *The Commander's Handbook on the Law of Naval Operations* (Department of the Navy, 1995), para 8.1, for example, enumerates the following three fundamental principles of the law of armed conflict that regulate targeting:

- The right of belligerents to adopt means of injuring the enemy is not unlimited.
- It is prohibited to launch attacks against the civilian population as such.
- Distinctions must be made between combatants and noncombatants, to the effect that noncombatants be spared as much as possible.

[13] For an excellent discussion of the relationship between these principles, see Myres S. McDougal and Florentino P. Feliciano, *Law and Minimum World Order: The Legal Regulation of International Coercion* (New Haven: Yale University Press, 1961), pp. 520–530.

[14] Article 51(5)(b) of Protocol I prohibits "an attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated." The United States has accepted this provision as reflecting international law. Matheson (1987), p. 426. Although this principle is almost universally regarded internationally as law, its precise meaning remains elusive, in part because of the inherent difficulties in measuring, and then weighing, expected military gain and civilian harm.

sniper firing from atop a hospital is prohibited from demolishing the entire building, because the civilian harm would far outweigh the military advantage attained.

Embedded in these principles and rules is the idea of *distinction* (or *discrimination*) between military and civilian persons or property. Planners and commanders are generally obligated to distinguish between military and civilian targets, restricting their attacks to the former only. In broad terms, international law prohibits attacks on civilian populations, as such, as well as acts or threats of violence having the primary purpose of spreading terror among the civilian population.[15] Furthermore, operations are to be directed exclusively at military objectives, defined as "those objects which by their own nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage."[16]

To a large degree, this military-civilian distinction has been blurred in the modern age of warfare. Indeed, the difficulties in retaining sharp delineations of "military" targets were highlighted in the *General Orders, No. 100: Instruction for the Government of Armies of the United States in the Field* (1863), issued to the Union Army at the outset of the Civil War. Dubbed the "Lieber Code" after its author, Francis Lieber, the document set forth restrictions governing the actions of military forces during conflict. The code recognized that "as civilization has advanced during the last centuries, so has likewise steadily advanced, especially in war on land, the distinction between the private individual belonging to a hostile country and the hostile country itself, with its men in arms."[17] At the same time, the document acknowledged that "[i]t is a law and requisite of civilized existence that men live in political, continuous societies, forming organized units, called states or nations, whose constituents bear, enjoy, and suffer, advance and retrograde together, in peace and in war."[18]

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[15] AFP 110-31, p. 5-7.

[16] Protocol I, Article 52; AFP 110-31, p. 5-8.

[17] Lieber Code, Article 22.

[18] Lieber Code, Article 20.

Some objects like troops or weapon depots are clearly military objects and therefore subject to legitimate attack. Other objects like a schoolhouse or ordinary residences are clearly civilian and therefore off-limits to direct attack (although, as discussed below, their protected status can in some instances be lifted because of enemy actions that convert them to military targets). In between is a large, variously shaded gray area of objects that serve both military and civilian functions, and are therefore subject to differing legal interpretations of status.

Because the legal status of targets turns on the contribution they make to the enemy's war effort (and on the expected military advantage gained from their neutralization), a legal assessment presumes a theory linking destruction of the targets to strategic goals. The United States generally supports interpretations of "military objectives" that include economic targets and infrastructure because their destruction is sometimes thought to undermine an adversary's ability to sustain operations as well as its will to do so.[19]

Aside from the general international legal principles prohibiting direct attacks on civilians and civilian objects, narrow rules also proscribe attacks on specific objects granted special protection. The 1949 Geneva Conventions protect hospitals and other medical

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[19] "Economic targets of the enemy that indirectly but effectively support and sustain the enemy's war-fighting capability also may be attacked." Department of the Navy (1995), p. 8-1. See also Michael N. Schmitt, "The Principle of Discrimination in 21st Century Warfare," *Yale Human Rights and Development Law Journal*, Vol. 2 (1999), p. 149. Prevailing logic in USAF planning emphasizes that "[s]trategic attack objectives often include producing effects to demoralize the enemy's leadership, military forces, and population, thus affecting an adversary's capability to continue the conflict." Department of the Air Force, Air Force Doctrine Document 1, *Air Force Basic Doctrine* (September 1997), p. 51. John A. Warden III, "The Enemy As a System," *Air Power Journal*, Vol. 9, No. 1 (Spring 1995), argues that "It is pointless to deal with enemy military forces if they can be bypassed by strategy or technology." (p. 52.)

During Operation Allied Force against Yugoslavia in spring 1999, NATO military and political leadership clashed over many targets. A spokesman for Supreme Allied Commander Wesley Clark at one point declared that "Serb radio and television is an instrument of propaganda and repression . . . . It has filled the airways with hate and with lies over the years, and especially now. It is therefore a legitimate target in this campaign." Such attacks were initially opposed by many NATO civilian leaders, although the restrictions on hitting them were soon lifted. Craig R. Whitney, "Generals Vow to Hit Serb TV but NATO Civilians Say No," *New York Times*, April 9, 1999, p. A8. This issue is discussed in more detail in Chapter Five.

assets. Religious and cultural buildings and monuments are also promised special protected status under international law.[20]

INTERNATIONAL LEGAL CONSTRAINTS ON AIR OPERATIONS

Despite the melding of military and civilian resources in the modern nation-state, the contemporary law of armed conflict retains strict obligations to discriminate between military and civilian targets. During its early history, air power technology helped erode combatant-noncombatant and military-civilian distinctions. In the past several decades, however, advances in precision-guidance and airborne intelligence and reconnaissance technologies have to a limited extent helped redraw those lines.

World War I displayed the potential for air power to hit enemy targets far beyond the lines of battle, while at the same time the experience of the major powers gave rise to interwar air power theories that centered on destroying the enemy's military-industrial resources. In World War II, the inability of Allied planes to bomb precisely while maintaining tolerable levels of aircraft losses, combined with the influence of strategic theories that emphasized disrupting the enemy's workforce or eroding civilian morale, led to bombardment of entire urban areas. The great conflagrations and human suffering across Germany and Japan resulting from this practice caused some prominent authorities to question whether the principle of military-civilian distinction still existed at all.[21]

Since then, technological advances, particularly those generating improved accuracy of air-delivered ordnance, have, at least in the case of the United States, its allies, and other developed states, made air power an instrument of potentially high precision. The enhanced

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[20] This status was codified in Article 27 of Hague Regulations Respecting the Laws and Customs of War on Land, 18 October 1907, and Article 5 of Hague Convention No. IX Concerning Bombardment by Naval Forces in Time of War, 18 October 1907. The Statute of the International Criminal Tribunal for the Former Yugoslavia, Article 3, enumerates as a "law or custom of war" the prohibition of the "seizure of, destruction or wilful damage done to institutions dedicated to religion, charity and education, the arts and sciences, historic monuments and works of art and science." (http://www.un.org/icty/basic/statut/statute.htm.)

[21] See, for example, Lester Nurick, "The Distinction Between Combatant and Noncombatant in the Law of War," *American Journal of International Law*, Vol. 39 (1945).

precision of air power, particularly since the Vietnam War, has strengthened international obligations to discriminate among targets. The legal regime's demands for civilian-military target distinction have further hardened as greater precision spurred the replacement of strategic theories emphasizing massive area bombardment with those emphasizing more economical uses of firepower.

Air Force Pamphlet 110-31, *International Law—The Conduct of Armed Conflict and Air Operations*, instructs that, applying international legal limits to air attacks, planners must take the following precautions:

(a) Do everything feasible to verify that the objectives attacked are neither civilians nor civilian objects . . .

(b) Take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians, and damage to civilian objects; and

(c) Refrain from deciding to launch any attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.[22]

Note that these precautions embody the principles outlined above: discrimination (section a), humanity (section b), and proportionality (section c).[23]

Authorities disagree as to whether planners and operators legally must always select the weapon, from among those capable of destroying a target, that poses the *least* risk of collateral damage and civilian injury when operating in highly populated areas. The principles of humanity and distinction give rise to the consensus view

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[22] AFP 110-31, p. 5-9. These requirements restate almost verbatim the provisions in Protocol I, Article 57.

[23] In attacking even legitimate military targets, commanders may also be obligated to issue warnings to civilians within their vicinity. This long-standing requirement is codified in Hague Regulations, although with an important caveat for cases of assault, when advance warning would spoil tactical surprise. Thus, "[g]eneral warnings are more frequently given than specific warnings, lest the attacking force or the success of its mission be jeopardized." AFP 110-31, p. 5-11.

prohibiting weapons that cause superfluous injury (e.g., poisoned projectiles, dum-dum bullets) or are completely incapable of discrimination (e.g. World War II German V-1 and V-2 rockets).[24] Some scholars and organizations argue that, beyond these minimal threshold prohibitions, an attacker must choose the means and methods that minimize risk of incidental civilian damage to the greatest extent feasible.[25] Under this interpretation, for example, U.S. forces might always be legally obligated to use precision-guided munitions against urban targets.[26] As noted in the next chapter, U.S. forces virtually always have done so anyway since the Vietnam War for reasons related to politics or military effectiveness. But the U.S. military generally opposes this tighter legal interpretation, because it restricts operational and tactical flexibility and because the military's precision-guided arsenal is limited and financially costly.[27]

It could be argued that the consistent U.S. practice over the past several decades of using precision-guided weapons against urban targets is creating customary law demanding that nations possessing precision munitions always use them in highly populated environments.[28] Recall from the beginning of this chapter that a customary international legal norm is created when states act in conformity with it and the international community accepts it as obligatory. It is also, however, an international legal principle that by persistently objecting to a norm while it is becoming law, a state may exempt

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[24] AFP 110-31, p. 6-2; Department of the Navy, *Commander's Handbook*, (1995) p. 9-1.

[25] See, for example, Michael Bothe et al., *New Rules for Victims of Armed Conflicts* (The Hague: Martinus Nijhoff Publishers, 1982), p. 364; Middle East Watch, *Needless Deaths in the Gulf War: Civilian Casualties During the Air Campaign and Violations of the Laws of War* (New York, 1991), pp. 126–127.

[26] Schmitt (1999) states that the discrimination principle contains "the requirement to select the method or means of attack likely to cause the least collateral damage or incidental injury, all other things being equal, relative to the military advantage obtained." Based on this, he concludes that "if guided munitions would lessen the expected loss and damage without increasing the risk to the aircrew or decreasing the expected damage to the target, and the guided munitions are readily available, then the attacking force should employ them." (p. 152.)

[27] Both sides of this debate, illustrated in the Gulf War context, are outlined in Ariane L. DeSaussure, (Maj, USAF), "The Role of the Law of Armed Conflict During the Persian Gulf War: An Overview," *Air Force Law Review*, Vol. 37 (1994), pp. 60–61.

[28] Customary international law is defined in footnote 5 and accompanying text. Some of the difficulties in determining whether state practice has gained customary law status are discussed in Theodor Meron, "Geneva Conventions as Customary Law," in Theodor Meron, *War Crimes Law Comes of Age* (Oxford University Press, 1998), pp. 154–174.

itself from it.[29] The usual problems of determining whether a practice has "matured" into customary law and whether a state has opted out of its development are complicated in this case because the party perhaps seeking to opt out (the United States) of the norm (i.e., using precision-guided weapons against urban targets) is the one to whom the norm would most often apply, and also because U.S. actions do not corroborate—indeed, they seem to contradict—its objection to the norm. It is also not immediately clear, given that U.S. and many allied forces generally follow the proposed norm as a matter of policy anyway, whether regarding it as a legal requirement will promote civilian protection in the long term. The positions taken by an international actor with regard to this issue and that of the previous paragraph depend not only on whether a state has precision capabilities or expects to be the target of air attacks, but also on policy judgments (for instance, will inhibiting forces' flexibility regarding how best to use their available technology reduce incentives to develop weapons more capable of protecting civilians?) as well as value choices (for instance, how should the benefits of technology be distributed?). As later chapters of this report make clear, public expectations at home and abroad will push U.S. decisionmakers not to deviate from the consistent U.S. policy regarding precision weapons and urban environments, regardless of how one resolves this interesting legal question.[30]

Another increasingly contentious issue involves choices between weapon systems, particularly stand-off weapons, that may trade off increased force protection for a heightened risk of collateral damage. Again, the U.S. military generally favors a liberal interpretation of weapon-selection duties, one that permits an extremely high level of force protection so long as an appropriate level of accuracy is still

[29] For an excellent discussion of the customary law and the "persistent objector rule," see Jonathan I. Charney, "The Persistent Objector Rule and the Development of Customary International Law," *British Yearbook of International Law*, Vol. 56 (1985). A practice generally does not become customary law just because it is widely or consistently followed. There is also a requirement, termed o*pinio juris sive necessitatis (*or simply *opinio juris*), that states regard the practice as obligatory.

[30] Somewhat perversely, an argument that the consistent U.S. practice of using only precision-guided munitions (PGMs) against urban targets generates a legal norm despite U.S. protestations to the contrary might in theory create incentives for the United States to deviate from its practice in order to manifest dissent.

assured.[31] Somewhat ironically, a major "success" of NATO's Operation Allied Force against Yugoslavia (1999)—the avoidance of even a single friendly combat casualty—may have fed perceptions, especially among human rights organizations and some segments of the international media, that U.S. and NATO forces were externalizing the entire human cost of conflict to the civilian population on the ground by bombing from high altitudes (typically from 15,000 feet).[32]

RECIPROCAL OBLIGATIONS AND THE DEFENDER'S DUTIES

So far, this outline of legal constraints has been one-sided; it has focused on regulating the *attacker's* actions.[33] Because the attacker generally has an array of options as to when, where, how, and how much it employs destructive force, the law of armed conflict places on it the above-mentioned responsibilities. A regime that seeks to regulate the extent to which noncombatants suffer the harms of conflict will obviously place a great deal of emphasis on the attacker's actions and obligations. But the international legal regime also places corresponding duties on the *defender*.

The reasons are illustrated in a September 1864 exchange following Confederate General Hood's accusation that General Sherman's Union army had deliberately shelled the civilian population of Atlanta. To Hood's allegations Sherman responded: "You defended

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[31] According to *The Commander's Handbook on the Law of Naval Operations*, for example, "[m]issiles and projectiles with over-the-horizon or beyond-visual-range capabilities are lawful, provided they are equipped with sensors, or are employed in conjunction with external sources of targeting data, that are sufficient to ensure effective target discrimination."

[32] Mary Robinson, the UN high commissioner for human rights, remarked during the air campaign, "What is alarming about this war is that there are no military casualties on those who are carrying out the bombing campaign." Quoted in Jan Battles, "Robinson Hits at Clinical Bombing," *Sunday Times* (London), May 16, 1999, p. 18. These perceptions offered support to those who suspiciously viewed NATO actions as hegemonic. For interesting press accounts or editorials on "indiscriminate" NATO bombings from India, South Africa, and China, respectively, see "Sonia Misled President on MPs' Support" *The Statesman* (India), May 11, 1999; Heribert Adam, "Failure of Military Humanitarianism," *Business Day* (South Africa), June 1, 1999, p. 13; and "People's Daily' Observer Slams US Hegemonism" (China), BBC Summary of World Broadcasts, June 25, 1999.

[33] The law of armed conflict, particularly as applied to air operations, often speaks in terms of "attacker" and "defender." Because this study analyzes constraints on U.S. air operations in urban environments, the former, generic term is assumed to apply to U.S. forces, whereas the latter describes adversaries' obligations and actions.

Atlanta on a line so close to town that every cannon-shot and many musket-shots from our line of investment, that overshot their mark, went into the habitations of women and children."[34]

Although Sherman's defense of the Atlanta shelling was probably disingenuous, his comments illustrate that incidental harm befalling civilians is often a product of both parties' actions, including defensive steps and failure to segregate defensive forces from local civilian sites.[35] First, the defending force often has substantial control (whereas the attacker has none) over where military forces and equipment are placed in relation to the civilian population. Second, the defending power often has better information than the attacker about where civilian persons and property actually are, and is therefore better positioned to avoid knowingly leaving them in harm's way. And, third, the defender's actions—including its proper efforts to protect itself by resisting attack—may contribute to the danger facing noncombatants. The defender's choice of strategy, too, will significantly determine the extent to which civilians are vulnerable to possible attack. The Viet Cong's strategy of converting hamlets into fortified strongholds predictably increased combat in heavily populated areas during the Vietnam War.[36]

Efforts during the past several decades to codify the law of armed conflict have emphasized the reciprocal duties of attackers and defenders. Article 58 of Protocol I demands that parties endeavor to

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[34] Letter from Sherman to Hood, September 10, 1864, reprinted in William T. Sherman, *Memoirs* (Bloomington: Indiana University Press, 1957), p. 120. To this Hood retorted:

> I feel no other emotion other than pain in reading that portion of your letter which attempts to justify your shelling Atlanta without notice . . . . [T]here are a hundred thousand witnesses that you fired into the habitations of women and children for weeks, firing far above and miles beyond my line of defense. I have too good an opinion, founded both upon observation and experience, of the skill of your artillerists, to credit the insinuation that they for several weeks unintentionally fired too high for my modest field-works, and slaughtered women and children by accident and want of skill.

Letter from Hood to Sherman, September 12, 1864, reprinted in Sherman (1957), pp. 121–122.

[35] The importance of reciprocal duties is stressed throughout W. Hays Parks, "Air War and the Law of War," *Air Force Law Review*, Vol. 32 (1990).

[36] Guenter Lewy, *America in Vietnam* (New York: Oxford University Press, 1978), pp. 230–231.

segregate military objectives from their civilian population and take steps to protect civilians from the dangers of military operations.[37] Article 51 also provides that the "presence or movements of the civilian population or individual citizens shall not be used to render certain points or areas immune from military operations, in particular in attempts to shield military objectives from attacks or to shield, favour or impede military operations."[38] The recently negotiated Rome Statute of the International Criminal Court includes in its enumeration of war crimes "[u]tilizing the presence of a civilian or other protected person to render certain points, areas or military forces immune from military operations."[39]

The key implication of the law's mutuality of obligations is that the probable harm to civilians resulting from military attacks is in part a product of *both* parties' decisions to adhere to versus breach legal duties.

Exploiting the discrimination requirement placed on attackers by deliberately commingling civilians with military targets violates the basic principles of the law of armed conflict. Note, however, that a defender's violation of these principles—for example, its deliberate placement of civilians in the vicinity of military targets or its use of

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[37] The same principle applies to specially protected sites such as medical, cultural, or religious buildings. For example, Article 19 of the Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (1949) establishes: "The responsible authorities shall ensure that the said medical establishments and units are, as far as possible, situated in such a manner that attacks against military objectives cannot imperil their safety."

[38] Protocol I, Article 51(7). This admonition is similarly articulated in AFP 110-31, para. 5-8, which explains:

> The requirement to distinguish between combatants and civilians, and between military objectives and civilian objects, imposes obligations on all the parties to the conflict to establish and maintain the distinctions . . . . Inherent in the principle of protecting the civilian population, and required to make that protection fully effective, is a requirement that civilians not be used to render areas immune from military operations. Civilians may not be used to shield a defensive position, to hide military objectives, or to screen an attack. . . . A party to a conflict which chooses to use its civilian population for military purposes violates its obligations to protect its own civilian population. It cannot complain when inevitable, although regrettable, civilian casualties result.

[39] United Nations Diplomatic Conference of Plenipotentiaries on the Establishment of an International Criminal Court, Rome Statute of the International Criminal Court (July 17, 1998), Article 8(2)(b)(xxiii). The United States is not a signatory to the document.

specially protected sites to house weapons—does not relieve the attacker of all legal obligations. Among other things, an attacker would generally still be obligated to comply with proportionality principles and refrain from attacks likely to result in civilian damage excessive in relation to military gain. Nevertheless, the relative protections normally granted those civilian persons and objects is weakened. Chapter Four discusses implications of the reciprocity of legal duties and examines how adversaries, especially those that show little regard for international law and do not face political or diplomatic pressures similar to those faced by the United States, may exploit the asymmetry of constraints for strategic or tactical gain.

THE CHALLENGE OF URBAN ENVIRONMENTS

The structure and organization of urban centers pose special problems for compliance with the principles of discrimination and proportionality. From a planning viewpoint, these principles contain a foreseeability element: planners must consider collateral damage and likely injury to noncombatants or civilian property and must take reasonable actions to avoid or minimize these potential effects. Not only does the urban environment, by connecting and tightly packing both military and civilian resources, increase the chances that military attacks will harm civilians, but it increases the likelihood that even relatively small destructive impacts can unleash substantial reverberating effects on the urban population.

Population Density and Geographical Proximity

The density of civilian populations in urban areas increases the chances that even accurate attacks will injure noncombatants. In addition, the collocation of military and civilian assets in urban environments multiplies the chances that military attacks will cause unintended, and perhaps disproportionate, civilian damage. The close proximity of civilian and military targets in urban environments exists in the horizontal dimension (military and civilian structures situated side-by-side) as well as the vertical dimension (military and civilian assets stacked one above the other, within the same structure).

Horizontal proximity of civilian and military sites raises both the possibility that an attack will accidentally hit nearby civilian buildings or the possibility that a direct hit on a military site will damage

adjacent civilian ones. A primary objective for U.S. forces during the early phases of Operation Just Cause was the Panamanian Defense Force (PDF) general headquarters—the Comandancia—located in the middle of a poor Panama City neighborhood (El Chorrillo). During U.S. shelling of the headquarters and subsequent efforts to squelch sniper fire, several fires broke out and spread through nearby civilian residences, leading the human rights organization Americas Watch to conclude that "inadequate observance of the rule of proportionality resulted in unacceptable civilian deaths and destruction,"[40] a conclusion disputed by other post-operation analyses. Most urban air operations were conducted with direct line-of-sight precision weapon platforms, which were more accurate than indirect-fire weapons, thereby reducing the risk and extent of damage to nearby structures and injury to civilian residents.[41] Even with these precautions in place, however, civilian injury and damage were extensive.[42] During Operation Desert Fox in December 1998, planners avoided bombing some facilities that contributed to Iraq's chemical weapons program because of the possibility of releasing toxins within Baghdad. These targeting restrictions may not have been required from a strictly legal standpoint, but they illustrate that civilian and military sites need not be immediately adjacent to complicate decisionmaking that seeks to avoid collateral damage.

The Gulf War Al Firdos bunker incident demonstrates how proximity of military and civilian targets can operate in a vertical dimension, especially in the urban environment. On the night of February 13, 1991, U.S. F-117 strikes destroyed the bunker, a building that intelligence gatherers had identified as a command and control facility. The true nature of the facility remains disputed, but on the night it was destroyed it housed families of government officials in its upper levels; the strikes thus resulted in dozens of civilian deaths.

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[40] Americas Watch Report, "The Laws of War and the Conduct of the Panama Invasion," (May 1990), pp. 16–21.

[41] AH-64 attack helicopters and AC-130 gunships, both with direct line-of-sight weapons and night-vision capability, were used against the Comandancia. John Embry Parkerson Jr., "United States Compliance with Humanitarian Law Respecting Civilians During Operation Just Cause," *Military Law Review*, Vol. 133 (1991), p. 54.

[42] Most estimates put the total number of civilian deaths resulting from the Panama invasion between 220 and 300. (Parkerson [1991], p. 55.) Americas Watch (1990) reported that the attack on the Comandancia left about 15,000 persons homeless and resulted in 50–70 civilian deaths. (p. 19.)

The legal regime recognizes the difficulty of military decisionmaking amid the fog of war, and thus obligates planners and commanders to base their decisions on the information reasonably available at the time. The fact that civilian and military targets may be stacked on top of each other in urban environments complicates the assessment of potential civilian risk in attacking certain sites, as well as the ability, even after information is gathered, to destroy only the latter. For example, vertical proximity creates potential problems for neutralizing an urban sniper without harming civilians in rooms on either side or above or below the sniper's. As elaborated later in this report, both horizontal and vertical proximity of military and civilian targets present adversaries with opportunities to exploit legal and political constraints to immunize legitimate targets from attack.

Particular difficulties emerge from the collocation of civilian and military assets in urban environments when air defenses are concentrated near key targets. Not only does the emplacement of air defense systems or even the possession of hand-held antiaircraft weapons by local forces in densely populated areas compound the problem of civilian-military asset mingling, but it can increase the chance of civilian damage resulting from air attacks on military targets, as attacking aircraft may now be forced to take evasive actions or operate at higher altitudes. As Hays Parks has explained, "The purpose of enemy defenses is not necessarily to cause aircraft losses; the defender has accomplished his mission if he makes the attacker miss his target."[43]

Shared Military-Civilian Resources

Urban environments contain shared military-civilian resources and house dual-use facilities. The military and civilian population often use common power sources, transportation networks, and telecommunications systems. Distinguishing between military and civilian infrastructure is sometimes difficult and, especially with respect to support systems that provide basic needs such as electricity, it may be impossible to destroy or disrupt only those portions servicing the military. This last point is especially true when the military, generally the priority user during crises, can be expected to utilize any residual capacity. Attacks on shared infrastructure can therefore

[43] Parks (1990), p. 191.

have large reverberating effects on the civilian population, giving rise to concerns about proportionality.[44] Planners sometimes view the dual-use nature of infrastructure systems opportunistically, because military usage arguably legitimizes these systems as targets, even though it may in fact be the incidental effects on the civilian population that planners hope to manipulate. As a result, the United States tends to favor liberal legal interpretations of "military objective" when it comes to dual-use facilities.[45]

Some of the most vocal criticism of Operation Desert Storm has surrounded air attacks on the Iraqi electrical system. Air campaign planners sought to degrade Iraq's electric-power generation and distribution capabilities during early phases of the operation to disrupt air defenses, weapon production, and command networks. Air planners recognized that these attacks would deny electricity to the Iraqi populace as well, and to some degree civilian deprivations were intended as part of the overall air strategy to compel the regime's capitulation.[46] Some accounts suggest that planners sought to avoid destroying those elements of the electric system that would require long-term reconstruction, in order to achieve immediate military objectives without subjecting the population to prolonged hardship. In that sense, they emphasized discrimination in a temporal, rather than geographical dimension, by trying to minimize potential lingering civilian effects long after the conflict. Because of the interconnectedness of resource systems in a modern society, however, attacks against certain elements can have unexpected ripple effects. As one post-war analysis of these strikes explained: "Unfortunately, it is simply not possible to segregate the electricity that powers a hospital from 'other' electricity in the same lines that powers a biological weapons facility."[47] In this case, the loss of

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[44] Some disagreement exists with respect to how to calculate adverse civilian effects of attacks on military targets. One view holds that planners must consider the long-term, indirect effects of attacks on a civilian population, whereas the U.S. military adheres to a narrower interpretation emphasizing direct civilian injuries or deaths. During operational planning, when target lists are reviewed for compliance with international law, much greater emphasis is typically given to immediate and direct collateral effects.

[45] "When objects are used concurrently for civilian and military purposes, they are liable to attack if there is a military advantage to be gained in their attack." Department of Defense, *Conduct of the Persian Gulf War*, Final Report to Congress (Washington, DC: Government Printing Office, 1992), p. 613.

[46] Barton Gellman, "Allied Air War Struck More Broadly in Iraq," *Washington Post*, June 23, 1991, p. A1.

[47] Daniel T. Kuehl, "Airpower vs. Electricity: Electric Power as a Target for Strategic Air Operations," *Journal of Strategic Studies*, Vol. 18, No. 1 (March 1995), p. 254.

power-generating facilities disrupted irrigation, sewage, and medical systems, contributing to massive outbreaks of waterborne diseases and other public health crises (some post-war studies recorded a civilian death toll perhaps surpassing 100,000 resulting from these effects).[48]

The dilemmas stemming from shared civilian-military resources can be expected to increase as greater parts of the world modernize and develop networked infrastructure systems. Some military theorists welcome this trend because they view these systems as vulnerable to U.S. air power and their destruction or degradation may allow planners to bypass the enemy's fielded military forces by influencing the enemy populace and its leadership's decisionmaking.[49] Perhaps partly as a result of Gulf War criticism, Yugoslavia's major electric power infrastructure was a politically sensitive target in 1999 and was struck only after the NATO leadership decided to escalate strategic air attacks.[50]

Even if operational concepts directed at disrupting these systems pass legal scrutiny, political constraints may limit their availability. Although the United States may be able to strike power-generation and other infrastructure facilities with high accuracy and minimal destruction of nearby structures, the population on the ground and in many parts of the world—whether U.S. decisionmakers intend this effect or whether they protest to the contrary—is likely to view such attacks as indiscriminate.

Media Coverage

The Vietnam War inaugurated the now-commonplace media coverage and scrutiny of military operations. Media coverage does not itself affect the content of legal constraints, but it does affect their

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[48] For a critical account of coalition attacks on the Iraqi electric system and its aftereffects, see Middle East Watch (1991), pp. 171–193. It must be noted that the long-term effects of these attacks resulted in part from international sanctions but also from resource allocation decisions by the Iraqi government.

[49] See, for example, Warden (1995), who argues that "[u]nless the stakes in the war are very high, most states will make desired concessions when their power-generation system is put under sufficient pressure or actually destroyed." (p. 49.)

[50] Michael R. Gordon, "NATO Air Attacks on Power Plants Pass a Threshold," *New York Times*, May 4, 1999, p. A1.

strength because purported breaches of the law of armed conflict will be powerfully publicized.

The February 1994 Sarajevo marketplace shelling, which prompted NATO to threaten Serb forces with air strikes, reveals the extent to which a single, well-publicized incident can mobilize intense political and diplomatic pressures.[51] It also demonstrates that graphic images of conflict can have an immediate impact on policymaking over which planners have little control. Perhaps it is because instant imagery of bomb victims can be powerfully emotive that collateral damage appears to affect public perceptions more strongly than human suffering from resource deprivations caused by infrastructure attacks or economic sanctions. In their critique of U.S. sanctions policy, John Mueller and Karl Mueller speculate that "[s]ome of the inattention [to loss of Iraqi lives] may . . . be due to the fact that, in contrast to deaths caused by terrorist bombs, those inflicted by sanctions are dispersed rather than concentrated, and statistical rather than dramatic."[52]

Media coverage of military operations is typically most extensive and quickly broadcast from inside or around cities. This phenomenon stems in part from the pure pragmatics of media coverage in conflict zones—the international media tends to base its own operations in cities, and it is generally best-equipped to report instantaneously from these areas. If the international media is strictly controlled by the local government—take for example, the tightly monitored reporting by Peter Arnett of CNN from Baghdad during the Gulf War—reporting from outside of urban, or capital, centers may be virtually impossible. One correspondent wrote of his experience during the Gulf War:

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[51] During the January 1994 NATO Summit meeting in Brussels, differences in opinion among NATO partners over the use of air strikes became evident. The marketplace shelling reportedly killed over 60 civilians and brought pressure from the United States to issue an ultimatum that the Serbs withdraw their heavy weapons from around the besieged city or face air attacks. The Serbs backed down at the eleventh hour, with the aid of a compromise arranged with Russia enforcing the withdrawal of heavy weapons. These events are detailed in Dick A. Leurdijk, *The United Nations and NATO in Former Yugoslavia* (The Hague: Netherlands Atlantic Commission, 1994), pp. 47–58.

[52] John Mueller and Karl Mueller, "Sanctions of Mass Destruction," *Foreign Affairs*, May/June 1999, p. 47.

> [C]ameras and reporters had been able to witness not just where the bombs were being flown out from, but to some extent where they were landing. They were censored, restricted in Baghdad far more crudely than they were in Saudi Arabia—but it was only a matter of time before something went astray and television audiences around the globe would be treated to the plain, painful fact that Allied bombs did not always drop into buildings like the Riyadh videos would have had us believe, with no human distress involved. Sometimes they missed their targets. Sometimes they hit civilian areas.[53]

The implications of adversary control over media reporting and the opportunities for exploitation that such control provides are discussed in Chapter Four.

As previously noted, the media's extensive presence in urban areas does not itself create new legal constraints for planners. Rather, it amplifies those already existing by publicizing, sometimes with powerful imagery, the effects of military operations. This discussion therefore marks an appropriate point of departure for the examination of political constraints on urban air operations contained in the next chapter.

CONCLUSION

The law of armed conflict imposes obligations on attackers and defenders to take precautions to reduce the risk of collateral damage and civilian injury. The risk of such damage from air operations is magnified in the urban settings where military and civilian assets are collocated and often difficult to distinguish. As a result, legal constraints on air operations will often be most tightly felt by planners and operators in urban environments.

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[53] Alex Thomson, *Smokescreen: The Media, the Censors, the Gulf* (Kent: Laburnham and Spellmount Ltd., 1992), p. 212.