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THE LEGAL REGIME GOVERNING THE CONDUCT OF
OPERATION DESERT STORM

Robert Kogod Goldman*

In this article, the author describes the rules embodied in the Geneva
Conventions and the customary rules of war. He focuses on the relation of
customary law to codifications such as the Geneva Conventions and their
First Additional Protocol. The author describes many of these rules in the
context of Operation Desert Storm during the 1991 Persian Gulf War

I. INTRODUCTION

The recently concluded hostilities between the allied coalition and
Iraq were a classic example of an international, i.e., interstate, armed
conflict as defined in article 2 of the four 1949 Geneva Conventions. As

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1. In addition to the United States, the allied coalition in Operation Desert Shield
and Operation Desert Storm was comprised of forces from Argentina, Australia, Bang-
ladesh, Czechoslovakia, Egypt, The Gulf Cooperation Council (Saudi Arabia, Oman,
Qatar, United Arab Emirates, Bahrain, and Kuwait), Honduras, Morocco, NATO members
(Belgium, Canada, Denmark, France, Great Britain, Italy, Netherlands, Norway, Portugal,
and Spain), Nigeria, Pakistan, Senegal, Sierra Leone, Syria, and the Soviet Union. See

The air war against Iraq was carried out by the following coalition members: Canada,
France, Great Britain, Italy, the United States, Saudi Arabia, Oman, Qatar, United Arab
Emirates, Bahrain and Kuwait.

2. Article 2 of the four Geneva Conventions of 1949 states:

In addition to the provisions which shall be implemented in peacetime, the present
Convention shall apply to all cases of declared war or of any other armed conflict
which may arise between two or more of the High Contracting Parties, even if the
state of war is not recognized by one of them.

The Convention shall also apply to all cases of partial or total occupation of the
territory of a High Contracting Party, even if the said occupation meets with no
armed resistance.

Although one of the Powers in conflict may not be a party to the present Convention,
the Powers who are parties thereto shall remain bound by it in their mutual relations.
They shall furthermore be bound by the Convention in relation to the said Power, if
such, the military operations conducted by all the warring parties in the Gulf were governed by the Geneva Conventions, as well as by the customary laws of war. Because Iraq, as well as many of the key members of the allied coalition, were not parties to the First Additional Protocol to the Geneva Conventions, that instrument was not directly applicable to the Gulf conflict as a matter of conventional law. This does not mean, however, that the Protocol was irrelevant to the conduct of the war. Since many of the Protocol's provisions strengthen, clarify, or otherwise codify pre-existing customary legal restraints on methods and means of combat, these provisions constitute customary international law and, thus, are directly binding on all nations and on their armed forces during international conflicts regardless of ratification.

Despite its refusal to ratify Geneva Protocol I, the United States has expressed its support for many rules in the Protocol and has declared others to be customary law. Moreover, the U.S. Army, Navy, and Air Force manuals on international law applicable during armed conflict include prescriptions which often track the terminology of Geneva Protocol I.

The four Geneva Conventions of 1949 comprise:


3. Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protections of Victims of International Armed Conflicts (Protocol I), June 8, 1977 Annex I, II, 1125 U.N.T.S. 3 [hereinafter Geneva Protocol I]. This instrument, which supplements the four 1949 Geneva Conventions as to the protection of war victims, codifies and updates legal restraints on means and methods of warfare to provide more effective protection of the civilian population against the effects of hostilities in international armed conflicts. Its elaboration was stimulated largely by a shared perception of an increased danger to the civilian population because of air warfare and modern weaponry.


This article sets forth, albeit not exhaustively,6 the basic legal rules and principles governing the conduct of aerial bombardment7 by belligerent forces during the Gulf War. The focus is, in particular, on customary restraints on methods and means of warfare and the relation of customary law to codifications of the laws of armed conflict in Geneva Protocol I.

II. INTERNATIONAL HUMANITARIAN LAW

The law of armed conflict, or international humanitarian law, as stated by a leading scholar in the field, "is the outgrowth of centuries of warfare from which the rules and customs governing hostilities have developed."8 Consequently, the law was largely shaped and crystallized before the emergence of air power. In fact, the 1907 Hague Convention (IV) and its annexed regulations,9 which codified the laws and customs of land warfare, were elaborated at a time when the only method of dropping bombs from the air was by balloon. Bombardment by aircraft, while dimly foreseen, was "thought to be feasible only for the close support of ground forces—a kind of supplement to artillery."10 Since combat was essentially limited to the immediate zone where opposing land forces confronted each other, the hinterlands of the belligerents "were believed to be secure from the effects of hostilities."11 Rapid technological advances in military air power and modern weaponry and especially the devastating effects of strategic aerial bombardment during World War II shattered any illusion about the security of military targets and the civilian population that are located far from areas of land combat. Although there is no comprehensive treaty comparable to the 1907 Hague Regulations applicable to the conduct of

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6. It does not discuss, for example, prohibitions on the use of chemical, biological and other poisonous weapons, prohibitions against seizure or destruction of enemy property or the special protections afforded to prisoner of war camps and to medical units, hospitals and means of transport.

7. The term aerial bombardment includes, inter alia, "dropping munitions from manned or unmanned aircraft, strafing, and using missiles or rockets against enemy targets on land. United States Department of the Air Force, Air Force Pamphlet No. 110-31, International Law—The Conduct of Armed Conflict and Air Operations 5-1, ¶ 5-1 (1976) [hereinafter Air Force Pamphlet]. The same rules discussed herein also apply to Iraq's use of modified SCUD missiles to attack Israel and Saudi Arabia. For a discussion of the legality of these attacks, see Middle East Watch Committee, Needless Deaths in the Gulf War: Civilian Casualties During the Air Campaign and Violations of the Laws of War 317-99 (1991).


9. The Convention Regarding the Laws and Customs of Land Warfare, Oct. 18, 1907 36 Stat. 2277 T.S. 539, 99 U.N.T.S. 149; Regulations Respecting the Laws and Customs of War on Land, Oct. 18, 1907, 36 Stat. 2295, T.S. No. 539 [hereinafter Hague Regulations]. The United States is a party to this Convention which, together with its annexed Regulations, remains the most authoritative source of law for the United States in the conduct of actual military operations.

10. Solf, supra note 8, at 126.

11. Id.
air warfare, aerial bombardment is, like all other forms of combat, governed by certain legal rules which "must be derived from general principles, extrapolated from the law affecting land or sea warfare, or derived from other sources including the practice of states reflected in a variety of sources." 12

III. MILITARY NECESSITY AND THE PRINCIPLE OF HUMANITY

Customary legal restraints on warfare are premised on the notion that "violence and destruction which are superfluous to actual military necessity are not only immoral and wasteful of scarce resources, but also counterproductive to attaining the political objectives for which military force is employed." 13 The Air Force Pamphlet defines military necessity as "the principle which justifies measures of regulated force not forbidden by international law which are indispensable for securing the prompt submission of the enemy with the least possible expenditure of economic and human resources." 14 It notes that this concept embraces the following four basic elements:

(i) that the force used is capable of being and is in fact regulated by the user; (ii) that the use of force is necessary to achieve as quickly as possible the partial or complete submission of the adversary; (iii) that the force used is no greater in effect on the enemy's personnel and property than needed to achieve his prompt submission (economy of force); and (iv) that the force used is not otherwise prohibited. 15

Accordingly, the conduct of hostilities by belligerents "must be carried on within the limits of the prohibitions of international law, including the restraints inherent in the principle of 'necessity'" 16

The principle of humanity both complements and inherently limits the doctrine of military necessity. The Air Force Pamphlet states that this principle forbids the infliction of suffering, injury or destruction not actually necessary [or proportionate] for the accomplishment of legitimate military purposes. The principle of humanity results in a specific prohibition against unnecessary suffering, a requirement of proportionality and confirms the basic immunity of civilian populations and civilians from being objects of attack during armed conflicts. 17

12. Air Force Pamphlet, supra note 7 at 1-7 § 1-3(c).
13. Solf, supra note 8, at 117.
15. Id. at 1-6, § 1-3(a)(1).
16. Id.
17 Id. at 1-6, § 1-3(a)(2).
IV UN GENERAL ASSEMBLY RESOLUTION 2444

The duty to distinguish and to refrain from attacking the civilian population was reiterated in U.N. General Assembly Resolution 2444, adopted by unanimous vote on December 18, 1969. The Resolution states in pertinent part:

1. The right of Parties to a conflict to adopt means of injuring the enemy is not unlimited;
2. It is prohibited to launch attacks against the civilian population as such;
3. A distinction must be made at all times between persons taking an active part in the hostilities and members of the civilian population to the effect that the later be spared as much as possible.

The U.S. government has expressly recognized this Resolution as declarative of existing customary international law. These principles govern the conduct of hostilities, including aerial bombardment, by all armed forces, including the U.S. military.

V CUSTOMARY LAW AND GENEVA PROTOCOL I. CIVILIAN IMMUNITY AND THE PRINCIPLE OF DISTINCTION

Geneva Protocol I contains detailed rules, mostly reaffirmations or clarifications of existing customary law, which implement the customary principles that a distinction should be made between combatants and civilians and that civilians and civilian objects may not be the targets of attacks. Four different sections of the Protocol are devoted to this task. First are provisions strengthening the legal requirement to distinguish military objectives from civilians and civilian objects and to limit attacks to military objectives. Second are provisions clarifying practical steps to be taken in the selection of targets to prevent attacks on civilians and civilian objects, including the rule of proportionality and a prohibition of indiscriminate attacks. Third are provisions regulating the means and methods of both attack and defense to avoid or minimize civilian casualties and damage to civilian objects. Fourth are specific provisions limiting or prohibiting attacks on particular objects and specified areas.

VI. GENERAL RESTRICTIONS ON AIR WARFARE

A. The Basic Rule: The Immunity of Civilians and Civilian Objects

Article 48 of Geneva Protocol I is a paraphrase of the basic rules stated in paragraphs 2 and 3 of UNGA Resolution 2444. It states that "[i]n
order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives.”21 The Air Force Pamphlet’s formulation of this basic principle is substantially similar. It states that “[t]he 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.”22

Article 51(2) reaffirms this mandatory distinction by providing that “[t]he civilian population as such, as well as individual civilians, shall not be the object of attack.”23 This general immunity does not prohibit attacks which may cause civilian casualties. For example, civilians forfeit their protection against attack when they directly participate in hostilities — which means taking part in an attack intended to physically harm enemy personnel or objects. Also, civilians who are located within or near legitimate military targets, while still immune from individualized attack, assume the risk of death or injury as a result of direct attacks against such targets, although as noted below, such civilians, nonetheless, would retain the benefits of the rule of proportionality as it applies to collateral civilian casualties.

B. Terror and Morale Attacks

Article 51(2) also prohibits attacks, and threats of such acts, which are launched or threatened with intent to terrorize the civilian population. Specifically, the second sentence of that section provides: “Acts or threats of violence the primary purpose of which is to spread terror among the civilian population are prohibited.”24 This provision is intended to make clear that terror bombing violates the laws of war. However, the fact that attacks upon legitimate military objectives may cause terror among the civilian population does not make such attacks unlawful.

Article 51 also prohibits bombing to attack civilian morale. Although technically there may be a distinction between morale and terror bombing, they are, in practice, treated the same. It has often been observed that what is morale bombing to the attacking force is terror bombing to the civilians who are targeted. In the past, these attacks were carried out by strategic aerial bombardment of the enemy’s economic infrastructure. This infrastructure may include a mix of military and civilian targets. To the extent that these attacks are launched or threatened solely or primarily for political ends, they violate the principles of civilian immunity, proportionality, and humanity. Attacks intended primarily to induce the

22. AIR FORCE PAMPHLET, supra note 7 at 5-8, ¶ 5-3(a)(2)(b).
23. Geneva Protocol I, supra note 3, art. 51(2).
24. Id.
civilian population to rebel or to overthrow its leadership would be examples of unlawful attacks.25

C. Prohibited Uses of Civilians

The general protection of the civilian population against the effects of attacks would be frustrated if the party in control of the population used civilians to render certain areas immune from military operations. Accordingly, article 51 protects civilians against such deliberate abuse by prohibiting their use as shields for defensive positions, to hide military objectives or to screen attacks. Nor may civilians be induced or compelled to leave their homes or shelters to interfere with the movement of the enemy 26 The *Air Force Pamphlet* notes that "[a] party to the 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."27 However, as discussed later, such deliberate misuse of civilians to gain a military advantage does not permit the attacking party to disregard customary precautions, designed to avoid or minimize incidental civilian casualties.

The U.S. government has expressly recognized articles 48 and 51 as customary international law,28 and the *Air Force Pamphlet* enjoins attacks


26. Article 51(7) provides:

The presence or movements of the civilian population or individual civilians 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. The Parties to the conflict shall not direct the movement of the civilian population or individual civilians in order to attempt to shield military objectives from attacks or to shield military operations.


One authoritative treatise on the Protocols states:

The paragraph reaffirms Art. 28 of the Fourth Convention which provides that "[T]he presence of protected persons may not be used to render certain points or areas immune from military operations," and it extends this provision by enlarging the protected class to all civilians. It also incorporates the concept of movement to the prohibition in order to cover cases in which civilian refugees are herded down a road either as a shield for a moving column of combatants, or to impede the movement of the adversary's columns.


During the Persian Gulf Conflict, Iraq used hostages as human shields of military targets. See *U.N. Accuses Iraq of Rights Abuses in Kuwait*, Reuters, Feb. 4, 1992. This was a clear breach of the Geneva Conventions of 1949 and the Geneva Protocols.

27. *Air Force Pamphlet*, *supra* note 7 at 5-8, ¶ 5-3(b).

against civilians in terms virtually identical to article 51. The U.S. government also regards other articles in Geneva Protocol I which are designed to further clarify the requirement to distinguish between civilians and military objectives as declaratory of customary law. These articles, among others, provide rather precise definitions of civilians, the civilian population, military objectives, and civilian objects.

D. Civilians and Civilian Population

Article 50 of Geneva Protocol I defines the term “civilian population” as comprising “all persons who are civilians” and defines a civilian as anyone who is not a member of the armed forces or of an organized armed group of a party to the conflict. Thus, civilians and the civilian population comprise all persons who are not entitled to, or do not directly participate in hostilities. This article also stipulates that the “presence within the civilian population of individuals who do not come within the definition of civilians does not deprive the population of its civilian character” The point of this provision is that “[t]he presence of a small number of off-duty combatants, or even of some engaged in the transaction of business for the armed forces within a community of civilians would not subject that community to attack.” Such a community, therefore, is similarly immune from direct attack.
E. Military Objectives

Both article 52(2) of Geneva Protocol I and the Air Force Pamphlet employ the two-pronged test to define military objectives. This test limits military objectives to those objects or targets which by their nature, location, purpose, or use contribute effectively to the enemy's military action and whose total or partial destruction, neutralization, or capture offers a definite military advantage in the circumstances ruling at the time.33

The requirement that military objectives effectively contribute to military action does not necessarily require a direct connection with combat operations. As the Air Force Pamphlet states, "the inherent nature of the object is not controlling since even a traditionally civilian object, such as a civilian house, can be a military objective when it is occupied and used by military forces in an armed engagement."34 The military objective not only must effectively contribute to the enemy's military action, but its destruction, neutralization or capture must also offer a "definite military advantage" to the attacking party in the "circumstances ruling at the time."35

The official International Committee of the Red Cross ("ICRC") Commentary on Geneva Protocol I36 notes that the concept "definite military advantage in circumstances ruling at the time" means it is not "legitimate to launch an attack which only offers potential or indeterminate advantages. Those ordering or executing the attack must have sufficient information available to take this requirement into account; in case of doubt, the safety of the civilian population, which is the aim of the Protocol, must be taken into consideration."37 The other authoritative commentary, the New Rules, similarly indicates that the adjective "definite" which modifies "military advantage is a word of limitation denoting in this context a concrete and perceptible military advantage rather than a hypothetical or speculative one."38 The requirement that the definite military advantage must be present "in circumstances ruling at [the] time" imposes an additional significant limitation on the attacker's target selection. The New Rules states in this regard that "[t]his element emphasizes that in the dynamic circumstances of armed conflict, objects which may have been military objectives yesterday, may no longer be such today and vice

33. Geneva Protocol I, supra note 3, art. 52(2); Air Force Pamphlet, supra note 7 at 5-8, ¶ 5-3(b)(1).
34. Air Force Pamphlet, supra note 7 at 5-9, ¶ 5-3(b)(2).
35. Geneva Protocol I, supra note 3, art. 52(2); Air Force Pamphlet, supra note 7 at 5-8, ¶ 5-3(b)(1).
37. Id. at 636 (emphasis added).
38. New Rules, supra note 26, at 326.
versa. Thus, timely and reliable information of the military situation is an important element in the selection of targets for attack."

A leading humanitarian law scholar, who was present at the drafting of Geneva Protocol I, endorses these interpretations by stating:

The "definite military advantage" required under the definition must be present "in the circumstances ruling at the time." This element in the definition effectively precludes military commanders from relying exclusively on abstract categorizations in the determination of whether specific objects constitute military objectives ("a bridge is a military objective; an object located in the zone of combat is a military objective," etc.). Instead, they will have to determine whether, say, the destruction of a particular bridge, which would have been militarily important yesterday, does, in the circumstances ruling today, still offer a "definite military advantage" if not, the bridge no longer constitutes a military objective and, thus, may not be destroyed.

Whether the required definite military advantage under prevailing circumstances would occur from a particular attack "must be judged in the context of the military advantage anticipated from the specific military operation of which the attack is a part considered as a whole, and not only from isolated or particular parts of that operation." "

F Types of Military Objectives

Except for certain objects given special protection, Geneva Protocol I does not delineate specific categories of persons or property that can be considered legitimate military objectives. It is clear, however, that enemy combatants and civilians who assume a combatant's role are legitimate targets. The *Air Force Pamphlet* identifies undisputed military objectives as the enemy's encampments and his armament, such as military aircraft, tanks, anti-aircraft emplacements and troops in the field. The U.S. Army's and the U.S. Navy's lists of military targets are similar, although the Navy's is more expansive.

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39. *Id.*
41. NEW RULES, supra note 26, at 324-25.
42. AIR FORCE PAMPHLET, supra note 7 at 5-9 ¶ 5-3(b)(2).
43. Army military objectives include, for example, factories producing munitions and military supplies, military camps, warehouses storing munitions and military supplies, ports and railroads being used for the transportation of military supplies, and other places that are for the accommodation of troops or the support of military operations. UNITED STATES DEPARTMENT OF THE ARMY, FIELD MANUAL. THE LAW OF LAND WARFARE ¶ 40 (c) (1956) [hereinafter ARMY FIELD MANUAL].
44. Targets listed as proper for naval attack include:

enemy warships and military aircraft, naval and military auxiliaries, naval and military bases ashore, warship construction and repair facilities, military depots and ware
The *ICRC Commentary* contains the following proposed list of military objectives:

1. Armed forces and persons who take part in the fighting.
2. Positions, installations or construction occupied by the forces as well as combat objectives (that is to say, those objectives which are directly contested in battle between land or sea forces including airborne forces).
3. Installations, construction and other works of a military nature, such as barracks, fortifications, War Ministries (e.g. Ministries of Army, Navy, Air Force, National Defence, Supply) and other organs for the direction and administration of military operations.
4. Stores of arms or military supplies, such as munition dumps, stores of equipment or fuel, vehicles parks.
5. Airfields, rocket launching ramps and naval base installations.
6. Those of the lines and means of communication (railway lines, roads, bridges, tunnels and canals) which are of fundamental military importance.
7. The installations of broadcasting and television stations; telephone and telegraph exchanges of fundamental military importance.
8. Industries of fundamental importance for the conduct of the war: 
   a. industries for the manufacture of armaments
   b. industries for the manufacture of supplies and material of a military character, such as transport and communications material, equipment for the armed forces;
   c. factories or plant constituting other production and manufacturing centres of fundamental importance for the conduct of war, such as the metallurgical, engineering and chemical industries, whose nature or purpose is essentially military;
   d. storage and transport installations whose basic function it is to serve the industries referred to in (a)-(c);
   e. installations providing energy mainly for national defence, e.g. coal, other fuels, or atomic energy, and plants producing gas or electricity mainly for military consumption.
9. Installations constituting experimental, research centres for experiments on and the development of weapons and war material.  

G. Civilian and “Dual-Use” Objects

The ICRC’s model compilation includes objects that have “dual-uses or functions,” that is, they serve the needs of the civilian population, but...
they also effectively contribute to the enemy's military action. These objects typically include bridges, power plants, chemical and other factories, fuel storage depots, railroad and other transportation facilities and systems, vehicles, and communications facilities. The Air Force Pamphlet openly concedes that "controversy exists over whether, and the circumstances under which, objects, such as civilian transportation and communications systems, dams and dykes can be classified properly as military objectives."\(^{46}\)

It is important to understand that, under customary law, civilian objects enjoy general protection against direct attack. Article 52(1) defines civilian objects in the negative; that is, as all objects that are not military objectives, as defined in paragraph 2 of that same article which sets forth the two-fold test for military objectives.\(^{47}\) Therefore, article 52 implicitly characterizes all objects as civilian, unless they make an effective contribution to the enemy's military action and unless destroying, capturing, or neutralizing them offers a definite military advantage in the prevailing circumstances.

In doubtful situations, article 52 creates a presumption that objects normally dedicated to civilian use, such as churches, houses, or schools, are not employed to contribute effectively to military action. This presumption attaches only to objects that ordinarily have no significant military use or purpose. This presumption, therefore, does not apply to dual-use objects. The New Rules indicates that "the test as to such objects—unaffected by presumptions on either side of the equation—remains the two-pronged test [of military objectives] established in para. 2 [of article 52]."\(^{48}\)

VII. Restraints on Attacks: Prohibition of Disproportionate and Other Indiscriminate Attacks

A. The Rule of Proportionality

The legitimacy of a military target under article 52 does not provide unlimited license to attack it. The customary principles of military necessity and humanity require that the attacking party always seek to avoid or minimize civilian casualties and, thus, prohibit disproportionate and other kinds of indiscriminate attacks.

Articles 51(5)(b) and 57(2)(iii) contain the first codification of the customary rule of proportionality as it relates to collateral civilian casualties and damage to civilian objects. Article 51(5)(b) formulates this rule as "[a]n attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination

46. Air Force Pamphlet, supra note 7 at 5-9, ¶ 5-3(b)(2). The Pamphlet does state that given the heavy military purposes of sophisticated transportation systems in intense conflicts, "their status as military objectives is readily apparent." Id. at 5-8, ¶ 5-3(a)(2).
47 Geneva Protocol I, supra note 3, art. 52(1).
thereof, which would be excessive in relation to the concrete and direct military advantage anticipated." This rule, according to the New Rules, clearly requires those who plan or decide upon attack must take into account the effects of the attack on the civilian population in their pre-attack estimate. They must determine whether those effects are excessive in relation to the concrete and direct military advantage anticipated. Obviously, this decision will have to be based on a balancing of: (1) the foreseeable extent of incidental or collateral civilian casualties or damage, and (2) the relative importance of the military objective as a target.

The U.S. government expressly recognizes the rule of proportionality as a general restraint on the conduct of hostilities. Acceptance of this customary law rule is also evidenced by its inclusion in the military manuals of the three U.S. armed services. The Air Force Pamphlet formulates the rule of proportionality as follows:

Attacks are not prohibited against military objectives even though incidental injury or damage to civilians will occur, but such incidental injury to civilians or damage to civilian objects must not be excessive when compared to the concrete and direct military advantage anticipated. Careful balancing of interests is required between the potential military advantage and the degree of incidental injury or damage in order to preclude situations raising issues of indiscriminate attacks violating general civilian protections.

B. Concrete and Direct Military Advantage

The New Rules notes that the rule of proportionality imposes "an additional limitation on the discretion of combatants in deciding whether

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50. New Rules, supra note 26, at 310.
51. See Matheson, supra note 5, at 426.
52. Air Force Pamphlet, supra note 7 at 5-10, ¶ 5-3(c)(2)(b). The Naval Manual, supra note 44, ¶ 8.1.2.1 states that:

[j]t is not unlawful to cause incidental injury or death to civilians, or collateral damage to civilian objects, during an attack upon a legitimate military objective. Incidental injury or collateral damage should not, however, be excessive in light of the military advantage anticipated by the attack. Naval commanders must take all practicable precautions, taking into account military and humanitarian considerations, to keep civilian casualties and damage to the absolute minimum consistent with mission accomplishment and the security of the force. In each instance, the commander must determine whether incidental injuries and collateral damage would be excessive, on the basis of an honest and reasonable estimate of the facts available to him.

Id.

The Army Field Manual echoes this concept:

loss of life and damage to property incidental to attacks must not be excessive in relation to the concrete and direct military advantage expected to be gained. Those who plan or decide upon an attack, therefore, must take all reasonable steps to insure that those objectives may be attacked without probable losses in lives and damage to property disproportionate to the military advantage anticipated.

an object is a military objective under para. 2 of Art. 52."  

If an attack is expected to cause incidental casualties or damage, the requirement of an anticipated "definite" military advantage under article 52 is heightened to the more restrictive standard of a "concrete and direct" military advantage set forth in article 51(5)(b).

According to the New Rules:

"Concrete" means specific, not general; perceptible to the senses. Its meaning is therefore roughly equivalent to the adjective "definite" used in the two-pronged test prescribed by Art. 52(2). "Direct," on the other hand, means "without intervening condition of agency." Taken together the two words of limitation raise the standard set by Art. 52 in those situations where civilians may be affected by the attack. A remote advantage to be gained at some unknown time in the future would not be a proper consideration to weigh against civilian losses.

The ICRC Commentary provides a similar interpretation, stating: "The expression 'concrete and direct' was intended to show that the advantage concerned should be substantial and relatively close, and that advantages which are hardly perceptible and those which would only appear in the long term should be disregarded."

While allowing a fairly broad margin of judgment, the ICRC Commentary notes,

even in a general attack the advantage anticipated must be a military advantage and it must be concrete and direct; there can be no question of creating conditions conducive to surrender by means of attacks which incidentally harm the civilian population. A military advantage can only consist in ground gained and in annihilating or weakening the enemy armed forces. In addition, it should be noted that the words "concrete and direct" impose stricter conditions on the attacker than those implied by the criteria defining military objectives in Article 52

The term "concrete and direct military advantage" refers to the advantage anticipated from the specific military operation of which the attack is a part taken as a whole and not from isolated or particular parts of that operation.

Although the three U.S. military manuals use identical terminology in formulating their definitions of the rule of proportionality, the Defense Department, in its July 1991 report to Congress on the conduct of the Gulf War, described that rule in somewhat different—and less restrictive—terms. "[The rule] prohibits military actions in which the negative effects

54. Id. at 365.
55. ICRC Commentary, supra note 36, at 684.
56. Id. at 685.
57 New Rules, supra note 26, at 311 (footnote omitted).
(such as collateral civilian casualties) clearly outweigh the military gain."

This particular statement of the rule of proportionality appears to modify the customary-law formulation of that rule found in the U.S. military manuals and codified in Geneva Protocol I. Under the Pentagon’s new version of the rule, collateral damage is not evaluated in relation to the “concrete and direct military advantage anticipated,” but in terms of the “military gain.” This considerably relaxed standard would unduly ease the burden of commanders in their choice of targets.

This new formulation, if accepted as Pentagon policy, would amount to a unilateral revision of a fundamental rule of the customary law of armed conflict, long accepted by and binding on the United States. As such, it would be in conflict with governing laws.

C. Excessive Collateral Damage

The other side of the proportionality equation is the requirement that the foreseeable injury to civilians and damage to civilian objects not be disproportionate, i.e., “excessive” to the expected “concrete and definite military advantage.”

Excessive damage is a relational concept, not quantifiable in terms of a fixed number of civilians dead or injured, or houses destroyed. Such damage need not be so great that it “shock the conscience” of the world. Rather, its avoidance requires a good-faith balancing of disparate probabilities—the foreseeability of collateral damage and the relative importance of a particular military target. Thus, the destruction of a village, including its 500 civilian inhabitants, in order to kill a single enemy sniper or destroy a machine gun position would be clearly excessive because of the relatively low importance of the target. 6

The ICRC Commentary provides other examples of “excessive” damage: (a) “the presence of a soldier on leave obviously cannot justify the destruction of a village,” yet (b) “if the destruction of a bridge is of paramount importance for the occupation or non-occupation of a strategic zone, it is understood that some houses may be hit, but not that a whole urban area be leveled.” Of course, the disproportion between losses and damages caused and the military advantages anticipated raises a delicate problem; in some situations there will be no room for doubt, while in other situations there may be reason for hesitation. In such situations the interests of the civilian population should prevail. However, the ICRC Commentary makes it clear that there is never a justification for excessive civilian casualties:

The idea has also been put forward that even if they are very high, civilian losses and damages may be justified if the military advantage at stake is of

60. ICRC COMMENTARY, supra note 36, at 684.
61. Id. at 626.
great importance. This idea is contrary to the fundamental rules of the Protocol; in particular it conflicts with article 48 (Basic rule) and with paragraphs 1 and 2 of the present Article 51. The Protocol does not provide any justification for attacks which cause extensive civilian losses and damages. Incidental losses and damages should never be extensive.\(^2\)

Ultimately, compliance with the rule of proportionality depends on the subjective judgment of military commanders in specific situations. Recognizing that decisions are taken in battle "under circumstances when clinical certainty is impossible and when the adversary is striving to conceal the true facts, to deceive and to confuse,\(^3\) the New Rules states that

\[\text{[the standard for judging the actions of commanders and others responsible for planning, deciding upon or executing attacks, must be based on a reasonable and honest reaction to the facts and circumstances known to them from information reasonably available to them at the time they take their actions and not on the basis of hindsight.}\(^4\)]

In view of the subjective nature of such decisions, the New Rules suggests that parties to the conflict "should curtail the limits within which commanders of operating units exercise their discretion by issuing rules of engagement tailored to the situation prevailing in the area of conflict involved."\(^5\)

In this regard, the Defense Department's July 1991 report to Congress contains a section on the rules of engagement for coalition forces, but it is utterly silent as to the content of those rules. Since these rules of engagement must be consistent with the law of armed conflict, an important unanswered question remains as to what the rules for Operation Desert Storm provided. Assuming that they are classified, is continued classification still necessary given the successful conclusion of hostilities? It is also not clear whether, in discussing the nature of the balance required under the rule of proportionality, the July 1991 Pentagon report's use of the phrase "clearly outweigh" in place of "excessive"—the term used in Geneva Protocol I and the three U.S. military manuals—was meant to signal a substantive change.

\(D\) Other Kinds of Indiscriminate Attacks

In addition to disproportionate attacks, article 51(4) and (5) define and prohibit other kinds of "indiscriminate" attacks.\(^6\) Examples of such

\[
\begin{align*}
62. & \text{Id.} \\
63. & \text{New Rules, supra note 26, at 279.} \\
64. & \text{Id. at 279-80.} \\
65. & \text{Id. at 310-11.} \\
66. & \text{Article 51(4) and (5) state:}
\end{align*}
\]

4. Indiscriminate attacks are prohibited. Indiscriminate attacks are:
\begin{enumerate}
\item a) those which are not directed at a specific military objective;
\end{enumerate}
attacks are those that are not directed at specific military objectives or those that employ a method or means of combat that a party cannot direct at a specific military objective. Thus, the article prohibits parties from indiscriminately attacking military objectives and civilians or civilian objects.

Article 51(5)(a) characterizes an attack as indiscriminate when it treats a number of clearly separate and distinct military objectives located in a city, town, village, or other area containing a concentration of civilians or civilian objects as a single military objective. A ground assault on a single military objective within that locale, on the other hand, would not constitute an unlawful indiscriminate attack. An attack on an entire populated area in order to destroy several military objectives that a party could have attacked separately, however, would be indiscriminate under this test. This provision, therefore, would prohibit the target area aerial bombardment of densely populated civilian centers that occurred during World War II.

Whether the prohibition in article 51(5)(a) is new law or merely a reaffirmation of existing custom depends on how the term “clearly separated” is construed. The United States and other delegations at the diplomatic conference that elaborated the Protocol expressed the understanding that the words “clearly separated” refers not only to a separation of two or more military objectives that can be observed or which are visually separated, but also includes the element of a significant distance. Further, that distance must be at least such a distance that will permit the individual military objectives to be attacked separately.

b) those which employ a method or means of combat which cannot be directed at a specific military objective; or

c) those which employ a method or means of combat the effects of which cannot be limited as required by this Protocol;

and consequently in each such case, are of a nature to strike military objectives and civilians or civilian objects without distinction.

5. Among others, the following types of attacks are to be considered as indiscriminate:

a) an attack by bombardment by any methods or means which treats as a single military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects; and

b) 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.

Geneva Protocol I, supra note 3, art. 51(4 & 5).
67 Geneva Protocol I, supra note 3, art. 51(5)(a).
68. New Rules, supra note 26, at 309. The New Rules indicates that, for this rule to apply the “concentration” of civilians must actually be endangered by the attack: “the rule would not be violated if the civilian population has evacuated the town or city before the attack or if the entire locality is used for military purposes.” Id. However civilians remaining in the town or city would retain the benefits of the rule of proportionality. Id.
69. Id.
If construed in accordance with this understanding, the prohibition probably reaffirms customary law

E. Precautionary Measures

Article 57 of Geneva Protocol I codifies pre-existing customary law regarding precautions that an attacking party must observe to avoid and minimize collateral civilian casualties and damage to civilian objects. Not only does the U.S. government regard this article as declaratory of existing law, but the Air Force Pamphlet's list of required precautions is virtually a verbatim transcription of article 57. The Air Force Pamphlet recites these precautions as follows:

(a) In conducting military operations, constant care must be taken to spare the civilian population, civilians, and civilian objects.

(b) With respect to attacks, the following precautions must be taken:

70. See id. at 357-69. See also Matheson, supra note 5, at 426-27. Article 57 states:

1. In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects.

2. With respect to attacks, the following precautions shall be taken:
   a) those who plan or decide upon an attack shall:
      (i) do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects and are not subject to special protection but are military objectives within the meaning of paragraph 2 of Article 52 and that it is not prohibited by the provisions of this Protocol to attack them;
      (ii) 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;
      (iii) 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;
   b) an attack shall be cancelled or suspended if it becomes apparent that the objective is not a military one or is subject to special protection or that the attack 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;
   c) effective advance warning shall be given of attacks which may affect the civilian population, unless circumstances do not permit.

3. When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that the attack on which may be expected to cause the least danger to civilian lives and to civilian objects.

4. In the conduct of military operations at sea or in the air, each Party to the conflict shall, in conformity with its rights and duties under the rules of international law applicable in armed conflict, take all reasonable precautions to avoid losses of civilian lives and damage to civilian objects.

5. No provision of this article may be construed as authorizing any attacks against the civilian population, civilians or civilian objects.

Geneva Protocol I, supra note 3, art. 57
(i) Those who plan or decide upon an attack must:
(a) Do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects and are not subject to special protection but are military objectives and that it is permissible to attack them;
(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.

(ii) An attack must be cancelled or suspended if it becomes apparent that the objective is not a military one, or that it is subject to special protection or that the attack 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.

(iii) Effective advance warning shall be given of attacks which may affect the civilian population unless circumstances do not permit.
(c) When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that which may be expected to cause the least danger to civilian lives and to civilian objects.\footnote{11}

The \textit{Air Force Pamphlet} notes that "precautionary measures are not a substitute for the general immunity of the civilian population, but an attempt to give effect to the immunity of civilians and the requirements of military necessity"\footnote{12} These measures in effect impose additional restraints on attacks against legitimate military targets. Thus, the planners of a particular attack must (1) initially verify that the object selected is a lawful military objective; (2) avoid, or at least minimize, incidental civilian casualties and damage and (3) ensure that such casualties and damages are not disproportionate to the "direct and concrete" military advantage anticipated; and (4) do everything feasible to verify that military objectives are in fact being attacked and not civilians or civilian objects.

\begin{itemize}
\item \textit{Air Force Pamphlet}, supra note 7 at 5-9 to 5-10, ¶ 5(3)(c)(1).
\item \textit{Id.} at 5-10, ¶ 5-3(c)(2). The \textit{Air Force Pamphlet} also notes:
\end{itemize}

Since states have not always separated military activities from civilian activities, a geographical and functional mixture of combatants and civilians and military objectives and civilian objects often results. Dangers to civilian populations in a given situation vary according to the military objective attacked, configuration of terrain, type of weapons used, meteorological conditions, the presence of civilians at the scene or in the immediate vicinity and a particular combatant's ability and mastery of bombardment techniques as well as the level of the conflict and the type of resistance to be encountered during the attack. Permissible bombardment techniques vary according to such factors.

\textit{Id.}
F Verification of Military Objectives

Both article 57 and the Air Force Pamphlet adopt a "feasible" precautions standard in connection with target verification and the rule of proportionality. The New Rules explains that the word "feasible" means "that which is practicable or practically possible." The United States and its NATO allies at the Diplomatic Conference expressed the understanding that that term means "that which is 'practicable or practically possible' taking into account all the circumstances ruling at the time, including those relevant to the success of military operations."

The New Rules indicates that the requirement that the planner do "everything feasible" to verify that the target selected is a military objective involves a continuing obligation to assign a high priority to the collection, collation, evaluation and dissemination of timely target intelligence. It must be observed, however, that the adverse party will do its utmost to frustrate target intelligence activity and may be expected to employ rules to conceal, deceive and confuse reconnaissance means.

The Air Force Pamphlet states in this regard that "[s]ound target intelligence also enhances military effectiveness by insuring that the risks undertaken are militarily worthwhile. It is also a matter of conservation of vital resources. Economy of force, concentration of effort and maximization of military advantage support such efforts."

G. Collateral Casualties and Damage

The duty under article 57(2)(a)(ii) and the Air Force Pamphlet to "take all feasible precautions in the choice of means and methods of attack to avoid or minimize incidental civilian casualties and damage to civilian objects is an injunction to promote the maximum feasible accuracy in the conduct of bombardments of military objectives situated in populated places."

The Air Force Pamphlet, while indicating that civilian casualties "are to be avoided to the greatest extent possible," states that "international law has long recognized that civilian casualties and damage to civilian objects, although regrettable, do occur in armed conflict." The Air Force Pamphlet notes that such incidental casualties result from several factors:

73. New Rules, supra note 26, at 362.
74. Id. See also Parks, supra note 59, at 156 (footnote omitted).
75. New Rules, supra note 26, at 363.
76. Air Force Pamphlet, supra note 7 at 5-10, ¶ 5-3(c)(2)(a).
77 New Rules, supra note 26, at 364. The term "means" of attack, combat or warfare generally refers to the weapon deployed, while the term "methods" of attack, etc. generally refers to the way in which such weapons are used. ICRC Commentary, supra note 36, at 621.
78. Air Force Pamphlet, supra note 7 at 5-10, ¶ 5-3(c)(2)(b).
First, military objectives may not be segregated from civilian population centers, civilians, or civilian objects. Second, civilians may be used for military purposes, sometimes taking a direct part in hostilities and other times being used unlawfully in an attempt to shield military objectives from attack. Third, objects designed for civilian purposes may be used for military purposes and become military objectives. Fourth, combatants themselves may not fulfill their strict obligation to identify themselves as combatants and thus create risks that what appear to be civilians are in fact combatants. Fifth, care is not taken by combatants to avoid civilian casualties.\(^7\)

It is important to note that the ICRC’s draft of subparagraph 2(a)(ii) which referred to collateral casualties and damage in the “immediate vicinity” of military operations was deleted from the final text of article 57.\(^8\) The New Rules suggests that “[t]his action indicates a recognition that it is not possible to regulate all of the infinite variables which may affect military operations. It nevertheless imposes an affirmative duty to do what is feasible to promote accuracy and to avoid, or minimize civilian losses.”\(^9\) It admonishes that “[t]hese matters should be regulated in detail by the rules of engagement and technical instructions issued by the Parties.”\(^10\)

H. The Rule of Proportionality

The Air Force Pamphlet and article 57(2)(a)(ii) both restate and codify the rule of proportionality as a required precautionary measure. As previously explained, this rule prohibits an attack if the foreseeable injury or damage would be excessive or disproportionate compared with the “concrete and direct” military advantage anticipated.

I. Cancellation or Suspension of Attacks

Customary law and traditional military doctrines, codified in article 57(2)(b) of Geneva Protocol I and the Air Force Pamphlet, require the cancellation or suspension of an attack if it becomes apparent that a given target is not a military objective or that the attack will cause excessive collateral casualties and damage in relation to the concrete and direct military advantage anticipated. The New Rules indicates that this obligation is so phrased as to “apply to all commanders who have the authority to cancel or suspend attacks, including those at higher echelons who frequently have better intelligence sources than those actually engaged.

\(^7\) Id. ¶ 5-3(c)(2)(b).
\(^8\) New Rules, supra note 26, at 364.
\(^9\) Id.
\(^10\) Id.
But it also applies to the commander of military organizations actually engaged in combat. 83

The authors of the New Rules make the following important point concerning application of the rule of proportionality:

In a co-ordinated military operation, the relative importance of the military objective under attack in relation to the concrete and direct military advantage anticipated is not a matter which can be determined by individual tank leaders, the commanders of lower echelon combat units or individual attacking bomber aircraft. If assigned a fire or bombing mission they must assume that an appropriate assessment has been made by those who assigned the mission. Thus, in this situation, the decision to cancel will have to be made at the level where the decision to initiate the attack was made. Article 85(3) evidences recognition that responsibility for causing excessive loss of civilian lives or injury or excessive damage to civilian objects rests on those who know such consequences to be excessive. 84

J Warning Requirement

Both article 57(2)(c) and the Air Force Pamphlet require the giving of "effective advance warning" of attacks which may affect the civilian population, unless circumstances do not permit. This requirement is based on and reaffirms article 26 of the Hague Convention of 1907 which relates to the Bombardment of Naval Forces. 85

The New Rules notes that, since the element of surprise is frequently critical to air operations, "and as a warning serves to alert air defence forces as well as to provide civilians an opportunity to take shelter, the practice of States during and after World War II has been either to omit warnings or to make them so general and unspecific as not to serve the

83. Id. at 366. The term "attacks" refers to acts of violence, whether offensive or defensive. "The thrust of the term 'attacks' as used in Art. 57 deals with the fire aspect of the operations, not necessarily the movement part." Id. While offensive operations may be difficult to halt,

any commander even at the lowest echelon can and must halt fire on a target that he has mistaken as a military objective when he realizes that his target consists of civilians or specially protected objects. Halting fire at a target which does not pose a threat against the attacking element in no way delays the movement of a unit of the armed forces engaged in an offensive military operation. Thus the first clause of subpara. 2(b) poses no problem to combatants who respect the rules applicable in armed conflict.

Id.

84. Id. at 366-67

85. Art. 26 provides "if the military situation permits, the commander of the attacking naval force, before commencing the bombardment, must do his utmost to warn the authorities." Bombardment by Naval Forces, Oct. 18, 1907 art. 26, 36 Stat. 2351, T.S. 542. The New Rules indicates that subparagraph 2(c) of article 57 "relaxes the warning requirement of Art. 26 of the Hague Regulations of 1907 which permits derogations only in case of assault." New Rules, supra note 26, at 367
intended purpose.\textsuperscript{86} While the \textit{Air Force Pamphlet} makes a similar assertion,\textsuperscript{87} it does observe, however, that "[m]ore recently, increased emphasis has been placed on the desirability and necessity of prior warnings."\textsuperscript{88}

\textbf{K. Special Legal Protection}

Although the provisions in Geneva Protocol I, in governing restraints on attacks are more explicit than those in preexisting conventional and customary law, these provisions, as Solf observes, "remain to a large extent general principles which require subjective judgment in specific situations."\textsuperscript{89} He adds in this regard "[r]ecognizing this subjectivity the Diplomatic Conference developed the fourth approach to achieving improved protection for the civilian population -- namely specific provisions regulating attacks on particular objects and specific areas."\textsuperscript{90}

\textbf{L. Prohibition Against Starvation of the Civilian Population}

By prohibiting starvation of the civilian population as a method of warfare, article 54 establishes, in essence, a new rule which, while arguably not yet customary law, has nonetheless been accepted as such by the U.S. government.\textsuperscript{91} This article provides:

1. Starvation of civilians as a method of warfare is prohibited.
2. It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as food-stuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, for the specific purpose of denying them for their sustenance value to the civilian population or to the adverse Party, whatever the motive, whether in order to starve out civilians, to cause them to move away, or for any other motive.
3. The prohibitions in paragraph 2 shall not apply to such of the objects covered by it as are used by an adverse Party:
   a) as sustenance solely for the members of its armed forces; or

\textsuperscript{86} \textit{New Rules}, supra note 26, at 367. "This practice is supported by the negotiating record of the Hague Regulations which suggests that the 'assault' exception includes all cases where surprise is required." \textit{Id.}

\textsuperscript{87} \textit{Air Force Pamphlet}, supra note 6, at 5-11, ¶ 5-3(d). The Pamphlet states: During World War II, practice was lax on warnings because of the heavily defended nature of the targets attacked as well as because of attempts to conceal targets. The practice of states recognizes that warnings need not always be given. General warnings are more frequently given than specific warnings, less the attacking force or the success of its mission be jeopardized. \textit{Id.}

\textsuperscript{88} \textit{Id.}

\textsuperscript{89} Solf, supra note 8, at 132.

\textsuperscript{90} \textit{Id.}

\textsuperscript{91} See Matheson, supra note 5, at 426.
b) if not as sustenance, then in direct support of military action, provided, however, that in no event shall actions against these objects be taken which may be expected to leave the civilian population with such inadequate food or water as to cause its starvation or force its movement.

4. These objects shall not be made the object of reprisals.

5. In recognition of the vital requirements of any party to the conflict in the defense of its national territory against invasion, derogation from the prohibitions contained in paragraph 2 may be made by a Party to the conflict within such territory under its own control where required by imperative military necessity.

Paragraph I of the article prohibits starvation as a means of warfare, "i.e., a weapon to annihilate or weaken the population." The ICRC Commentary states:

To use it as a method of warfare would be to provoke it deliberately, causing the population to suffer hunger, particularly by depriving it of its sources of food or of supplies. It is clear that activities conducted for this purpose would be incompatible with the general principle of protecting the population, which the Diplomatic Conference was concerned to confirm and reinforce.

It should be noted that this basic rule in paragraph 2 prohibiting attacks, destruction, removal, or rendering useless covered objects applies only where such action is taken for the specific purpose of denying their sustenance value to the civilian population of either party, or to a combination of the enemy's forces and the civilian population, but not for any collateral effect. The New Rules states in this regard:

This paragraph does not prohibit the incidental distress of civilians resulting from otherwise lawful military operations. It would not, for example, be unlawful to attack or destroy a railroad line simply because the railroad was used to transport food needed to supply the population of a city, if the railroad was otherwise a military objective under Art. 52. Such incidental effects are regulated to some degree by Art. 57 and Arts. 68-71 dealing with relief actions.

Paragraph 3 specifies the two situations in which the objects covered lose their special protection from direct attack, destruction, or removal. Subparagraph 3(a) permits supplies of foodstuffs intended for the sole use of the enemy's armed forces to be attacked or destroyed. The New Rules indicates that this exception generally applies "to supplies already in the hands of the adverse Party's armed forces because it is only at that point that one could know that they are intended for use only for

92. Geneva Protocol I, supra note 3, art. 54.
93. ICRC Commentary, supra note 36, at 653.
94. Id.
95. New Rules, supra note 26, at 339 (emphasis added).
the members of the enemy's armed forces." However, it would not be permissible to destroy objects "in the military supply system intended for the sustenance of prisoners of war, the civilian population of occupied territory or persons classified as civilians serving with, or accompanying the armed forces." The ICRC Commentary indicates that subparagraph (a) "is undoubtedly concerned with foodstuffs and the agricultural areas producing them, crops, livestock, and supplies of drinking water, but not with installations for drinking water or irrigation works." The ICRC Commentary notes, however, that while "some supplies of foodstuffs or drinking water can serve to sustain the armed forces, this possibility does not seem sufficient reason for depriving such objects of protection."

The second situation entailing loss of protection is detailed in subparagraph (b). This exception permits attacks against objects when used for a purpose other than the subsistence of the enemy's forces and such use is "in direct support of military action." The New Rules state that the term "direct support of military action" is narrower than the term "effective contribution to military action" in article 52, "which might include indirect support." The ICRC Commentary states that this term refers to the following kinds of military operations: "bombarding a food-producing area to prevent the army from advancing through it, or attacking a food-storage barn which is being used by the enemy for cover or as an arms depot etc." The New Rules suggests that "[t]his exception is an extremely narrow one which is not likely to be invoked frequently because a Party confronted with such a situation is most likely to consider his attack to be for the purpose of defeating the direct support activity (and therefore not prohibited under para. 2) rather than for the purpose of denying sustenance value to the adverse Party." Even if action is taken against covered objects under this exception, other provisions of paragraph 3(b) limit such action by prohibiting those "which may be expected to leave the civilian population with such inadequate food or water as to cause its starvation or force its movement." The New Rules indicates, however, that "Art. 57 provides the limitations on the effects of the attack, if the purpose of the attack is to deny the adverse Party the direct support of military action afforded

96. Id. at 340.
97. Id. at 340-41.
98. ICRC Commentary, supra note 36, at 656.
99. Id. at 656-57
100. New Rules, supra note 26, at 341.
101. ICRC Commentary, supra note 36, at 657 The New Rules gives the following examples of direct support: "an irrigation canal used as part of a defensive position, a water tower used as an observation post, or a cornfield used as cover for the infiltration of an attacking force." New Rules, supra note 26, at 341.
102. New Rules, supra note 26, at 341.
103. Id.
by the object (other than its sustenance value) and if the two pronged test of Art. 52 [military objectives] is met."

Both the ICRC Commentary and the New Rules agree that the term civilian population referred to in paragraph 2(b) does not refer to the civilian population of the country as a whole, but rather to the population of "an immediate area," although the size of the area was not defined by the Diplomatic Conference.\textsuperscript{105}

 VIII. SPECIAL PROTECTION TO OTHER OBJECTS AND AREAS

A. Protection of the Natural Environment

Articles 35(3)\textsuperscript{106} and 55\textsuperscript{107} of Geneva Protocol I prohibit the use of methods and means of warfare which are specifically intended or may be expected to cause widespread, long term, and severe damage to the natural environment and thereby prejudice the health and survival of the population.\textsuperscript{108}

Although some humanitarian law scholars argue that this prohibition, albeit new, is so basic that it must be construed as being inherent to a general principle of law and thereby binding on all states as general international law,\textsuperscript{109} the U.S. government considers this prohibition to be

\textsuperscript{104} Id.
\textsuperscript{105} See id., ICRC Commentary, supra note 36, at 656 n.16.
\textsuperscript{106} Article 35(3) states: "It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment." Geneva Protocol I, supra note 3, art. 35(3).
\textsuperscript{107} Article 55 provides:

1. Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.
2. Attacks against the natural environment by way of reprisals are prohibited.

\textit{Id.} art. 55.

\textsuperscript{108} For a detailed discussion of these provisions, see New Rules, supra note 26, at 343-48. This treatise states that "[t]here may be a tendency to confuse the effects of Arts. 35 and 55 with the Convention on Environmental Modification which was concluded in Geneva only ten days before the Plenary adopted Art. 55." \textit{Id.} at 347 It notes in this regard that:

The convention prohibits the military or other hostile use of environmental modification techniques having widespread, long-lasting, or severe effects as a means of destruction or other damage or injury to any other State. This prohibition is directed at deliberate environmental modification, whereas those of Protocol I also include objectively foreseeable collateral effects. Under the convention any one of the described effects separately is prohibited, but under Protocol I they must be cumulative.

\textit{Id.} (emphasis original). See also ICRC Commentary, supra note 36, at 661-64.

\textsuperscript{109} See Solf, supra note 8, at 134. See also Cassese, The Geneva Protocols of 1977 on the Humanitarian Law of Armed Conflict and Customary International Law, 3 Pac. B.L. Rev 55, 93-94 (1984) (stating that it is possible to conclude that the first two provisions of article 55 "were regarded by States (except possibly for France) as reflecting general law" but the "paragraph on reprisals, by contrast, constitutes a bold innovation and has only contractual force." ).
"too broad and ambiguous" and not to be "a part of customary law." 110

B. Protection of Works and Facilities Containing Dangerous Forces

Article 56 provides special protection for dams, dikes, and nuclear electric generating stations. It prohibits attacks on these works and installations and on military objectives located in their vicinity if such attack may cause the release of dangerous forces and, consequently, severe losses among the civilian population.111

There are some limited exceptions to this protection such as when the installation or military objective is used in regular and direct support of military operations and if such attack is the only feasible way to terminate such support. In the event these objects lose their special protection from attack, the party launching such an attack would still be obliged to take the necessary precautions to avoid and minimize collateral civilian casualties as required by articles 51 and 57 of the Protocol. Solf cautions, however, that "it would require an extraordinarily important target and a very significant military advantage to outweigh the severe civilian losses which might result from the dangerous forces released by the destruction of a dam, dike, or nuclear power station."112

Despite the fact that the U.S. military during the Vietnam conflict generally refrained from attacks against dams and dikes, the U.S. government does not "support" the provisions of article 56 and does not "consider them to be customary law."113 The Air Force Pamphlet does state that if such objects are legitimate military targets under prevailing circumstances,

[o]f course, their destruction must not cause excessive injury to civilians or civilian objects [T]here are clearly special concerns that destruction of such objects may unleash forces causing widespread havoc and injury far beyond any military advantage secured or anticipated. Target selection of such objects is accordingly a matter of national decision at appropriately high policy levels.114

C. Protection of Cultural Objects and Places of Worships

Article 53 prohibits acts of hostility against culturally important historic monuments, places of worship, and works of art, and also forbids the use of such objects to support the military effort.115

110. See Matheson, supra note 5, at 424.
111. Geneva Protocol I, supra note 3, art. 56.
112. Solf, supra note 8, at 134. See also NEW RULES, supra note 26, at 348-57; ICRC COMMENTARY, supra note 36, at 665-75.
113. Matheson, supra note 5, at 427
114. AIR FORCE PAMPHLET, supra note 7 at 5-11, ¶ 5-3(d).
115. Article 53 provides:

Without prejudice to the provisions of the Hague Convention for the Protection of
Customary international law, as reflected in article 27 of the Hague Regulations of 1907, prohibits attacks on a variety of cultural and religious objects provided they are not used at the time for military purposes, and the Hague Convention for the Protection of Cultural Property of 1954 permits derogations even in the case of very important cultural objects in the case of imperative military necessity. As article 53 is made subject to these relevant conventions, it is not yet clear whether customary international law is as broad as article 53 seems to be.

The Air Force Pamphlet states the following concerning these objects:

Buildings devoted to religion, art, or charitable purposes as well as historical monuments may not be made the object of aerial bombardment. Protection is based on their not being used for military purposes. Combatants have a duty to indicate such places by distinctive and visible signs. When used by the enemy for military purposes, such buildings may be attacked if they are, under the circumstances, valid military objectives. Lawful military objectives located near protected buildings are not immune from aerial attack by reason of such location, but, insofar as possible, necessary precautions must be taken to spare such protected buildings along with other civilian objects.

IX. Prohibitions of Attacks on Non-defended Localities and Demilitarized Zones

As a basic clarification of the prohibition of attacks on undefended places which are open to occupation without resistance, article 59 is declaratory of customary international law.

Cultural Property in the Event of Armed Conflict of 14 May 1954, and of other relevant international instruments, it is prohibited:

a) to commit any acts of hostility directed against the historic monuments, works of art or places of worship which constitute the cultural or spiritual heritage of peoples;

b) to use such objects in support of the military effort;

c) to make such objects the object of reprisals.

Geneva Protocol I, supra note 3, art. 53.

116. Article 27 of the Hague Regulations states:

In sieges and bombardments all necessary steps must be taken to spare, as far as possible, buildings dedicated to religion, art, science, or charitable purposes, historic monuments, hospitals, and places where the sick and wounded are collected, provided they are not being used at the time for military purposes.

It is the duty of the besieged to indicate the presence of such buildings or places by distinctive and visible signs, which shall be notified to the enemy beforehand.

Hague Regulations, supra note 9, art. 27.

The New Rules states that "[t]he obligation of the Hague Regulation to spare such objects as much as possible implies the precautions against collateral damage which are provided in Protocol I by Arts. 51(4) and (5) and in Arts. 57 and 58. Article 27 of the Hague Regulations is considered to have passed into customary international law." New Rules, supra note 26, at 329. See also ICRC Commentary supra note 36, at 639-49.

117. Air Force Pamphlet, supra note 7 at 5-13, ¶ 5-5(c).

118. Article 59 provides:
Article 60 merely provides for special protection, by agreement, for certain demilitarized zones which are then not subject to attacks or any other kind of military operation while the agreement remains in effect.\(^{119}\)

1. It is prohibited for the Parties to the conflict to attack, by any means whatsoever, non-defended localities.

2. The appropriate authorities of a Party to the conflict may declare as a non-defended locality any inhabited place near or in a zone where armed forces are in contact which is open for occupation by an adverse Party. Such a locality shall fulfill the following conditions:
   (a) all combatants, as well as mobile weapons and mobile military equipment must have been evacuated;
   (b) no hostile use shall be made of fixed military installations or establishments;
   (c) no acts of hostility shall be committed by the authorities or by the population; and
   (d) no activities in support of military operations shall be undertaken.

3. The presence, in this locality, of persons especially protected under the Conventions and this Protocol, and of police forces retained for the sole purpose of maintaining law and order, is not contrary to the conditions laid down in paragraph 2.

4. The declaration made under paragraph 2 shall be addressed to the adverse Party and shall define and describe, as precisely as possible, the limits of the non-defended locality. The Party to the conflict to which the declaration is addressed shall acknowledge its receipt and shall treat the locality as a non-defended locality unless the conditions laid down in paragraph 2 are not in fact fulfilled, in which event it shall immediately so inform the Party making the declaration. Even if the conditions laid down in paragraph 2 are not fulfilled, the locality shall continue to enjoy the protection provided by the other provisions of this Protocol and the other rules of international law applicable in armed conflict.

5. The Parties to the conflict may agree on the establishment of non-defended localities even if such localities do not fulfill the conditions laid down in paragraph 2. The agreement should define and describe, as precisely as possible, the limits of the non-defended locality; if necessary, it may lay down the methods of supervision.

6. The Party which is in control of a locality governed by such an agreement shall mark it, so far as possible, by such signs as may be agreed upon with the other Party, which shall be displayed where they are clearly visible, especially on its perimeter and limits and on highways.

7 A locality loses its status as a non-defended locality when it ceases to fulfill the conditions laid down in paragraph 2 or in the agreement referred to in paragraph 5. In such an eventuality, the locality shall continue to enjoy the protection provided by the other provisions of this Protocol and the other rules of international law applicable in armed conflict.

Geneva Protocol I, supra note 3, art. 59. For an analysis of this article, see ICRC Commentary, supra note 36, at 699-706; New Rules, supra note 26, at 375-85.

\(^{119}\) Article 60 states:

1. It is prohibited for the Parties to the conflict to extend their military operations to zones on which they have conferred by agreement the status of demilitarized zone, if such extension is contrary to the terms of this agreement.

2. The agreement shall be an express agreement, may be concluded verbally or in writing, either directly or through a Protecting Power or any impartial humanitarian organization, and may consist of reciprocal and concordant declarations. The agreement may be concluded in peacetime, as well as after the outbreak of hostilities, and should define and describe, as precisely as possible, the limits of
The U.S. government has expressed its support for these rules.120

A. Special Protection for Civilian Defense Shelters

Articles 62 to 65 of Geneva Protocol I create new rules applicable to civilian civil defense personnel, activities, and objects. Paragraph 1 of article 62 accords general protection against direct attacks to civilian civil defense organizations and personnel.121 Paragraph 3 provides, inter alia, that "[b]uildings and material used for civil defense purposes and shelters provided for the civilian population are covered by Art. 52 [Geneva

the demilitarized zone and, if necessary, lay down the methods of supervision.

3. The subject of such an agreement shall normally be any zone which fulfills the following conditions:

(a) all combatants, as well as mobile weapons and mobile military equipment, must have been evacuated;
(b) no hostile use shall be made of fixed military installations or establishments;
(c) no acts of hostility shall be committed by the authorities or by the population; and
(d) any activity linked to the military effort must have ceased.

The Parties to the conflict shall agree upon the interpretation to be given to the condition laid down in sub-paragraph (d) and upon persons to be admitted to the demilitarized zone other than those mentioned in paragraph 4.

4. The presence, in this zone, of persons specially protected under the Conventions and this Protocol, and of police forces retained for the sole purpose of maintaining law and order, is not contrary to the conditions laid down in paragraph 3.

5. The Party which is in control of such a zone shall mark it, so far as possible, by such signs as may be agreed upon with the other Party, which shall be displayed where they are clearly visible, especially on its perimeter and limits and on highways.

6. If the fighting draws near to a demilitarized zone, and if the Parties to the conflict have so agreed, none of them may use the zone for purposes related to the conduct of military operations or unilaterally revoke its status.

7. If one of the Parties to the conflict commits a material breach of the provisions of paragraphs 3 or 6, the other Party shall be released from its obligations under the agreement conferring upon the zone the status of demilitarized zone. In such an eventuality the zone loses its status but shall continue to enjoy the protection provided by the other provisions of this Protocol and the other rules of international law applicable in armed conflict.

Geneva Protocol I, supra note 3, art. 60. For discussion of this article, see ICRC COMMENTARY, supra note 36, at 707-12; NEW RULES, supra note 26, at 385-89.

120. See Matheson, supra note 5, at 427

121. Article 62 states:

1. Civilian civil defence organizations and their personnel shall be respected and protected, subject to the provisions of this Protocol, particularly the provisions of this Section. They shall be entitled to perform their civil defence tasks except in case of imperative military necessity.

2. The provisions of paragraph 1 shall also apply to civilians who, although not members of civilian civil defence organizations, respond to an appeal from the competent authorities and perform civil defence tasks under their control.

3. Buildings and materiel used for civil defence purposes and shelters provided for the civilian population are covered by Article 52. Objects used for civil defence purposes may not be destroyed or diverted from their proper use except by the Party to which they belong.

Geneva Protocol I, supra note 3, art. 62.
Protocol I."\(^\text{122}\) While indicating that these facilities are protected to the same extent as civilian objects, the \textit{New Rules} notes:

A very difficult question in this connection is whether this reference to the protection of civilian objects in general also includes a reference to the definition in Art. 52, para. 2, which could mean that civil defence material making an effective contribution to military action would not be considered as a civilian object and thus not be considered as protected under Art. 52. This is of particular importance for those civil defence functions which are close to military efforts, such as warning and decontamination. The difficulty is, however, perhaps more apparent than real. The question is whether equipment used "to protect the civilian population" within the meaning of the introductory phrase of Art. 61 could ever be considered as "making an effective contribution to military action." The two purposes would be considered as being mutually exclusive. Thus the situation would be similar to that of medical units where their obvious utility for the military effort does not result in a loss of protection. It is only when they are used "outside their humanitarian function" to commit acts harmful to the enemy that they lose their protection. The same holds true for civil defence personnel, organizations and equipment used outside their "proper" task. Thus, civil defence equipment used exclusively for the purposes mentioned in Art. 61 may never be considered as a military objective under Art. 52.\(^\text{123}\)

The general protection from attacks enjoyed by civilian civil defense personnel and objects ceases only if "they commit or are used to commit, outside their proper tasks, acts harmful to the enemy."\(^\text{124}\) Paragraph 2 of article 65 lists the following acts as not constituting acts "harmful to the enemy:")

\begin{itemize}
  \item [(a)] that civil defence tasks are carried out under the direction or control of military authorities;
  \item [(b)] that civilian civil defence personnel co-operate with military personnel in the performance of civil defence tasks, or that some military personnel are attached to civilian civil defence organizations;
  \item [(c)] that the performance of civil defence tasks may incidentally benefit military victims, particularly those who are \textit{hors de combat}.\(^\text{125}\)
\end{itemize}

However, even in the event that these objects or personnel are used for such hostile purposes, article 65 specifies that their protection against attack ceases "\textit{only after a warning has been given setting, whenever appropriate, a reasonable time limit, and after such warning has remained unheeded.}"\(^\text{126}\) The U.S. government has declared its support for the principle that civilian civil defense organizations and their personnel should

\begin{itemize}
  \item [122.] \textit{Id.} art. 62, ¶ 3 (emphasis original).
  \item [123.] \textit{NEw RULES}, supra note 26, at 402.
  \item [124.] Geneva Protocol I, \textit{supra} note 3, art. 65, ¶ 1.
  \item [125.] \textit{Id.} art. 65, ¶ 2.
  \item [126.] \textit{Id.} art. 65 (emphasis added).
\end{itemize}
be respected and protected as part of the civilian population, but to date has expressed no view on the grounds for cessation of such protection set forth in article 65.\textsuperscript{127}

X. CONCLUSION

Geneva Protocol I represents the first systematic codification and revision of restraints on means and methods of warfare since 1907. Although this instrument applies to all forms of armed conflict, its provisions were particularly elaborated with the nature and effects of modern air warfare and weaponry in mind.

Despite the Protocol's non-applicability to the Gulf conflict, many of its detailed provisions reaffirm, strengthen and/or clarify pre-existing legal restraints on attacks, and thus, as this article suggests, these provisions should be regarded as customary international law binding on all states. Accordingly, these provisions, together with relevant rules in the 1907 Hague Regulations and the 1949 Geneva Conventions, constitute the basic sources of law applicable to the conduct of Operation Desert Storm by the allied coalition. Furthermore, the United States and its other coalition partners that are not parties to the Protocol should observe those new provisions in this instrument, absent their express rejection, which are designed to strengthen the customary principle of civilian immunity in the expectation that these provisions will become eventually part of the customary law of armed conflict.

\textsuperscript{127} See Matheson, supra note 5, at 427