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# Casualties, Technology, and America's Future Wars

HARVEY M. SAPOLSKY and JEREMY SHAPIRO

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No one should want to fight the United States. We are the world's richest, most technologically capable nation. We can mobilize more combat power and move it farther, faster, and sustain it longer than anyone else. Sufficiently provoked, we are very dangerous, indeed even brutal. The World War II experience suggested this; the Korean and Vietnam wars added proof.

Our vulnerabilities, such as they are, lie not in the quantity or quality of our conventional forces nor in weapons of mass destruction. The United States cannot be outresearched, outproduced, or outgunned. Our troops are superbly equipped, brave, and well trained. No one's forces can see more or communicate better in the fog of war than ours. We have great redundancy in nearly every aspect of our forces and economy.[1] And as the Cold War demonstrated, not even the threat to use nuclear, biological, or chemical weapons can stop us from protecting what our leaders manage to define as our vital national interests.

Rather, our vulnerabilities lie within ourselves and our society. Our strength is complimented by our good fortune. We live in a quiet part of the world surrounded by oceans and neighbors who have not the slightest thought of attacking us. As we have come to recognize both our strength and our security, we have imposed constraints on ourselves. In particular, we have grown ever more sensitive about casualties--our own military casualties, opponent and neutral civilian casualties, and even enemy military casualties--and we seek to avoid them. This limits our ability to exercise the tremendous power we possess and makes us susceptible to pressures others can ignore.

Our sensitivity to our own military casualties is long-standing and certainly not unique. People of all countries love their children and their soldiers, but only we in the United States have the opportunity, the wealth, and the technology to protect them, even in battle. One way to protect personnel is to remove them as much as possible from the violent edge of the battlefield. US forces have traditionally attempted this by substituting materiel for manpower in war--capital for labor in economic parlance.[2] Today, capital-intensive warfare means soldiers in protective vests or heavily armored vehicles, increasing ranges of fire, and most important, perhaps, vastly increased firepower which attempts to destroy the enemy before many Americans are engaged. Over time we have become quite good at this. In each of our wars we have increased dramatically the tonnage of ordnance delivered per combat soldier exposed.[3] We also have improved significantly the accuracy of our weapons, their reaction times, and the overall pace of our operations. In fact, by now the very worst place on earth to be is in front of an engaged US armored division or on the receiving end of one of our bombing campaigns.

Of course there are other ways to protect against casualties. Historically, disease has been the biggest killer of soldiers.[4] No nation has done more to reduce this toll than the United States. Recall just the effort against yellow fever. We also have worked hard to salvage the wounded. It is the United States that pioneered field surgeons, blood transfusions, helicopter rescues, and medical evaluations.[5] About a tenth of the personnel sent to the Persian Gulf in 1990 were medical.[6] No other nation offers its forces that amount of support.

But the main focus of our efforts to keep our casualties low has been to increase the lethality of our military through the use of technology. Thus it is not surprising that we would be, as Eliot Cohen points out, the nation most taken by the mystique of airpower, because airpower promises the best opportunity to increase firepower while reducing reliance on manpower.[7] In World War II, our enemies learned how lethal this trade-off can be.

Of course, the World War II air effort was not cost-free. We lost tens of thousands of airmen in the bombing campaigns in Europe and the Pacific, and thousands more preparing for them. But we inflicted hundreds of thousands of casualties, military and civilian, while attacking German, Italian, and Japanese war-making capacity and civilian populations. These campaigns did not on their own win the war, but they did help keep our casualties light relative to our opponents.[8] And by war's end we knew that we could, with the risk of hardly any or perhaps no casualties of our own, turn an enemy's cities into glass.

The Cold War brought new conflicts and additional applications of technology to combat. But the Cold War also brought restraints, inhibitions regarding the use of all our power against an enemy. The inhibitions were moral as well as political. To be sure, in both the Korean and Vietnam conflicts we wished to avoid inviting wider wars and thus did not bring to bear all our destructive capabilities. Although a strong impulse within American society deplored that restraint, many, perhaps most, within the United States began to feel that it was neither necessary nor virtuous to kill civilians or destroy their livelihoods.

As the trauma of the Vietnam War began to fade, we came to realize that even defeat did not matter in these distant conflicts. The United States remained the strongest, most influential nation in the world, even though we abandoned South Vietnam. We were still safe, still prosperous. What mattered was the domestic interpretations of the fighting, the cost to families and to public life of the casualties we suffered and inflicted. The potential political effects of these reactions began to constrain US leaders more than did assessments of opposing forces. Although we do not fully appreciate the consequences even today, we were by the 1970s quite constrained.[9]

### **Wars With Too Much Killing**

The Persian Gulf War ended abruptly, some would say prematurely, for two reasons that are telling about the way we fight these days. One was that General Schwarzkopf, the war's field commander, stated in a press conference summarizing the fourth day of allied ground operations against Iraqi forces that all military objectives at that point had been met.[10] This statement meant that senior officials in Washington had to order the war ended immediately, even if they knew Iraqi Republican Guard units were still escaping to the north. To do otherwise would leave the officials open to unbearable public criticism that they were allowing American soldiers to die for political, not military, objectives. General George Marshall set the tone when he rejected Churchill's plea to beat the Soviets to Prague with the judgment that he was "loath to hazard American lives for purely political purposes." [11] Schwarzkopf was quick to judgment because so much progress had been made with so few American deaths; Washington officials had no choice but to endorse his view.[12]

Senior Washington officials were already inclined in that direction. In the hours before the war's end they were on the phone to Riyadh complaining to Schwarzkopf's headquarters about the CNN pictures of the so-called "Highway of Death"--TV images of the smoldering ruins of a convoy of fleeing Iraqis trapped by aircraft. "Wasn't there some way to avoid more of this?" they pleaded.[13] Later George Bush was questioned about the failure to pursue the Iraqi Republican Guard. His reply was that we were not in the business of slaughter.[14] What business is war, one might wonder, if not slaughter? The lesson that Grant taught America--that war is about death, pure and simple--appears to have been forgotten by the inheritors of his office.[15]

There were other instances in the war that indicated our qualms about casualties. The attack on the communications bunker in Baghdad that turned out also to be an air raid shelter for the families of Iraqi officials resulted in 300 deaths and almost caused the end of the air war over Iraq. It was several days before our field commanders were again permitted to bomb Baghdad and then only to hit a handful of high-priority targets.[16]

There were regrets, as well, about the attacks on the Iraqi electrical grid and generation capacity that were part of the plan to cut off Saddam's ability to control his forces in the field. Later, it was argued that it would take months to restore the system and that its loss caused widespread civilian misery and death through the effects on public sanitation, hospitals, and other dependent public health systems. Although the frequently cited claim of up to 145,000 delayed civilian deaths resulting from the bombing of infrastructure was surely an exaggeration, the accepted view now is that the bombing of such targets has to be limited because of the certain effect on the frailest parts of a population, infants and the elderly.[17] A good bet is that next time we will not be shutting off the lights. The parallel is with the

use of herbicides in Vietnam, another technique no longer in our repertoire.[18]

## **Wars Without Killing**

Technology is our first answer to the lethal hazards of waging war. US forces have led the way in the development of precision-guided weapons in large part to reduce the exposure of pilots to enemy anti-aircraft measures, but also to avoid the ever-unwanted "collateral damage," as the military briefers refer to civilian casualties. The TV image, if not the reality, is of weapons entering airshafts of buildings to destroy enemy command and control capabilities. Although some of these weapons "lose lock" and go astray, and although many more sorties still deliver dumb bombs rather than precision-guided munitions, the hope is for silver bullets that are certain to target and that remove the need for sustained attack and for the flattening of an enemy city.[19]

Such weapons impose a tremendous intelligence burden on our forces because the targets must be known precisely, or almost so, to be destroyed. Experience shows the difficulty. In the Gulf War, we failed to locate Saddam as well as his SCUD launchers and a number of the facilities that were producing his weapons of mass destruction.[20] Aided and Khadafi also escaped detection. There are just too many haystacks in which to hide. Our reconnaissance drones will surely get much better, but so will the enemy's disguises.[21] Saddam is said to be building 50 palaces and still has lots of Winnebagos left.[22]

For the really tight spots, we are developing robots to replace soldiers. Already robots guard some installations and can be used to enter dangerous buildings or approach suspected bombs. Soon, no doubt, they will be able to take a share of the real fighting, demonstrating an ability to identify and engage resisting targets on a smoke-obscured battlefield under remote direction.[23] But killing, even remotely or robotically, is what we want to avoid as much as possible. From this realization springs the growing interest in nonlethal weapons. Dozens of goos, sprays, traps, and noisemakers are being developed to disable enemy equipment and personnel. In this kit, we hope, is (or will be soon) just the alternative we need for those times when a lethal encounter is undesirable.[24]

Keeping conflict minimally lethal requires a cooperative opponent and much good fortune. We must not only prevent him from killing, we need to prevent him from dying. Some opponents may find the goo and noisemakers a test of wills rather than our attempt to work around the problem of their survival and will begin shooting, killing, and dying, thus seizing the political initiative. Worse, the use of nonlethal alternatives may carry special penalties in terms of unrealistic expectations that a battle with non-lethal weapons will cause zero deaths. What merely stuns a 20-year-old soldier may easily kill a two-year-old child or a slightly out of shape 56-year-old professor.[25] It also seems probable that the use of blinding laser weapons will be considered by the public as more horrible than the use of old-fashioned but quite deadly TNT.[26] Here the weapon category "worse than lethal" may be appropriate. There are political as well as military minefields to cross in the quest to reduce war's killing.[27]

The option of not using weapons, lethal or otherwise, provides little solace. Many argue that we should apply economic sanctions and encourage others to join us in diplomatic efforts to change tyrannical behavior or deter international aggression. This policy was applied to communist regimes during the Cold War and to Serbia, Iraq, and Haiti afterwards. The ability of elites to pass on the costs of sanctions to their poor gives pause, however. Many suffer under sanctions, but rarely the intended. We can kill militarily and economically without achieving desired results.[28]

## **Retreat to America**

There is no technological route out of our dilemma. No doubt we will invest much in the effort to keep open the option of bloodlessly imposing our will on others. But the many obstacles to this happy state might also cause us to retreat from these ambitions to a fortress America where intruders will be met with deadly force.

This is because there are ratchets in our war experience. If we do well in the Gulf then we have to do better in the next encounter. Bosnia cannot cost more American lives than Kuwait. We cannot be more deadly there than we were in Iraq. President Clinton was said to ask before the Haiti adventure what were the casualty figures for recent US military ventures in Panama, Grenada, and the Gulf, stating that he thought the public would tolerate the average.[29] By avoiding casualties in Haiti, one suspects that he made his next military strike or that of his successor much more difficult.

Moreover, our opponents know our limitations and work to take advantage of them. Saddam speculated openly about our willingness to see the body bags come home. Aideed found that one very bad night was enough to start our planning for a withdrawal from Somalia. He also had his forces use women and children as shields in encounters with US soldiers, believing this would unnerve them--which it did.[30] Such experience then becomes data for the next thug.

Once the use of professional soldiers seemed to give protection from concerns about casualties. We sent Marines many places during the first half of the 20th century. The fact that not all of them returned alive or whole seemed to be without dramatic political consequence. After Vietnam, some analysts traced public concern over casualties to the observation that draftees did most of the fighting. The All-Volunteer Force policy that ended the draft was the politicians' way of avoiding the heat of calling to serve those 19-year-olds who would not want to fight the next war.[31] The Total Force concept, which requires the mobilization of 40-year-old reservists for any serious military engagement by US forces, was the professional's counter-initiative to protect themselves from having to fight alone.[32]

But public sensitivity to casualties is not purely a function of the volunteer component of the force structure. The different ways that nations relate to their forces are determined by historical and cultural factors which transcend the method of recruitment. For the United States, past glory, pride in our current military superiority--which offsets failings in other realms--and a military that consciously presents itself as a vehicle for social mobility and equality all create a heightened sensitivity to the fortunes of individual soldiers. Even an army as demographically unrepresentative of society as our all-volunteer one can carry with it the hopes and dreams of Americans as much as a force composed of either 19-year-old draftees or 40-year-old reservists.[33] The Rangers and other special operations soldiers who fell that night in Mogadishu were all at least triple volunteers, having signed up for the Army, followed by airborne and Ranger training.[34] Nevertheless, they still had the full attention of the American public and their political leaders. No one is expendable these days.

This is truly an American dilemma, though like blue jeans and Coca-Cola it will probably spread to many other nations.[35] Pragmatically, we feel the concern for casualties most strongly because we have been the most active in sending forces thousands of miles from home to fight. Culturally, American society has a greater distrust of government than many other societies, a sentiment which has historic roots, but which has deepened since Vietnam and Watergate. This distrust means that deaths "for state purposes" must be shown to be necessary, purposeful, and unavoidable. Together with the belief, encouraged by military and political leaders, that war can be--indeed should be--free of American casualties, this distrust can lead some to argue that any such deaths are the result of government incompetence or deceit. So, when thousands of returning Gulf War veterans claim to be victims of a "Gulf War Syndrome," they are readily believed, although at this writing there is no scientific evidence of a link between service in the war and excess illness and death. For many there is a belief that the government is covering up Iraqi biological or chemical warfare or self-infection.[36] When Rangers die in Somalia, the reason is a lack of armor caused by incompetent civilians and insufficient political support.[37] Bad things are happening to some soldiers and veterans--there is pain, illness, and premature death among them--but war, in the classic sense, cannot be the cause: the government must be at fault.

When state survival is not threatened, distrust of government also implies there must be a moral cause worthy of a crusade to justify a distant war for Americans. Not surprisingly, political leaders when seeking the ultimate sacrifice from Americans have had to exaggerate the stakes. These exaggerations often come back to trap them, forcing greater commitment than reality requires.[38] We were told that freedom itself was at risk in Vietnam, that Noriega was a drug lord, that Saddam was a Hitler, that Aideed was a warlord, and that the Haitian rulers were brutality incarnate.

The recent Bosnian deployment is no exception. The effort to mobilize support included nightmare assertions that the war would spread throughout the Balkans and drag in the rest of Europe, that the North Atlantic Treaty Organization would collapse, and that America would forfeit its leadership role in the world if we did not follow through with the commitment to help enforce a shaky peace among the parties. The horrific aspects of the war, amply portrayed by CNN, were equated to those of World War II. War crime trials were promised.

When combined with the constraint of avoiding innocent deaths, these exaggerations and demonizations have inevitably driven us to reduce military action to the hunt for enemy leaders, in order to kill or capture the precise individuals responsible for forcing us to arms. But these are individuals who are extremely hard to track down and need only lose themselves among women and children to avoid our wrath or to frustrate our plans for a tasteful war. It is impossible to fight a war applying American civil liberty standards.[39] We may call for a crusade to expand tolerance and democracy in the world, but do not have the stomach for the slaughter that such a crusade requires.

At home, a similar paradox has driven us to flee the violence of the inner cities for the suburbs, leaving dying urban areas to fend for themselves. Abroad, the verdict is not yet in. We may soon be driven home to fortress America, or perhaps even worse, we may engage ourselves in problems we lack the will to solve. We possess the power to gain our way at home and abroad, but not the will to impose it.

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## NOTES

1. Much is made of the dangers of an information war waged against the United States because of our reliance on telecommunications systems, but, as a recent war game organized by the Federal Emergency Management Agency apparently demonstrates, this reliance produces many built-in redundancies that offer protection from intentional or unintentional shutdowns. See Pat Cooper and Robert Holzer, "America Lacks Reaction Plan for Info War," *Defense News* (October 1995), pp. 3, 37.
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4. Michael Clodfelter, *Warfare and Armed Conflicts: A Statistical Reference Vol. I* (Jefferson, N.C.: McFarland & Company, 1992), p. xxxiii.
5. See, for example, Douglas Starr, "Again and again in World War II, blood made the difference," *Smithsonian*, March 1995, pp. 125-38; Norman Berlinger, "From Death Comes Life," *Invention and Technology* (Winter 1996), pp. 22-31; Murray Hammick, "The Cutting Edge: Battlefield Casualty Management," *International Defense Review* (No. 3, 1992), pp. 243-45.
6. "Another War . . . and More Lessons for Medicine to Ponder in Aftermath," *Journal of the American Medical Association*, 266 (7 August 1991), 619-21.
7. Eliot A. Cohen, "The Mystique of U.S. Air Power," *Foreign Affairs*, 73 (January-February 1994), 109-24. See also Williamson Murray, "The United States Air Force: The Past as Prologue," in M. Mandlebaum, ed., *America's Defense* (New York: Holmes & Meier, 1989), pp. 231-78; John L. Frisbee, ed., *Makers of the U.S. Air Force* (Washington: Pergamon-Brassey's, 1989); Michael Howard, "The Concept of Air Power: An Historical Appraisal," *Air Power History*, 42 (Winter 1995), 4-11; John A. Warden III, "The Enemy as a System," *Airpower*, 9 (Spring 1995).
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9. Or, put in the most traditional terms, deterred. See Richard K. Betts, "What Will it Take to Deter the United States," *Parameters*, 25 (Winter 1995-96), 70-79.
10. Steven L. Arnold, MIT Defense and Arms Control Study Program (DACS) Special Seminar, 24 May 1993,

Cambridge, Mass.

11. John Ehrman, *Grand Strategy*, History of the Second World War, United Kingdom Military Series, Vol. 6 (London: HMSO, 1956), p. 161.
12. Colin Powell with Joseph E. Persico, *My American Journey* (New York: Random House, 1995).
13. Arnold; Powell, *My American Journey*.
14. George Bush, "Address to the Veterans of Foreign Wars Convention," Indianapolis, 17 August 1992.
15. Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (Bloomington: Indiana Univ. Press, 1977).
16. Lawrence Freedman and Efraim Karsky, "How Kuwait Was Won: Strategy in the Gulf War," *International Security*, 16 (Fall 1991), 39.
17. Lawrence Jolidon, "War Aftermath: 145,000 Iraqi Dead," *USA Today*, 31 January 1992, p. 1.
18. See Michael D. Diederich, Jr. "'Law of War' and Ecology--A Proposal for a Workable Approach to Protecting the Environment Through the Law of War," *Military Law Review*, 136 (1992), 137-60, especially 148-51; Michael Gough, *Dioxin, Agent Orange: The Facts* (New York: Plenum Press, 1986); Kevin B. Jordan, "Petroleum Transport System: No Longer a Legitimate Target," *Naval War College Review*, 43 (Spring 1990), 47-52.
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21. "Time to Cut War Risks With UAVs," *Aviation Week & Space Technology*, 12 June 1995, p. 224.
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23. Gilbert A. Lewthwaite, "Robotic Weaponry in Works," *Baltimore Sun*, 28 August 1995, p. 1; Henry van Loon, "U.S. Navy Eyes European Minesweeping Drones," *Armed Forces Journal International*, February 1994, p. 16.
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26. See "Blinding Laser Weapons: The Need to Ban a Cruel and Inhumane Weapon," *Human Rights Watch Arms Project*, 7 (September 1995), 1-54; "Laser Stance Is on Target," *Defense News*, 25 September - 1 October 1995, p. 26; "Ban on Anti-Eye Lasers the Right Move," *Aviation Week & Space Technology*, 2 October 1995, p. 70.
27. Harvey M. Sapolsky, "Non-lethal Warfare Technologies: Opportunities and Problems," DACS Working Paper, No. 95-3, April 1995.

28. James Whittington, "Iraq's Citizens Count the Costs of Sanctions," *Financial Times*, 11 September 1995, p. 4: "UN Sanctions Led to 400,000 Deaths, Ministry in Iraq Says," *The New York Times*, 9 January 1994, p. 9.
29. Richard Clarke, Future of War Seminar, MIT Faculty Club, 20 October 1994, Cambridge, Mass.
30. John Alexander, private commentator, January 1995.
31. Martin Binkin, *Who Will Fight the Next War? The Changing Face of the American Military* (Washington: Brookings Institution, 1993). Some think it was not just the draft, but a class bias in Vietnam casualties due to draft avoidance opportunities. The evidence is considered in Tom Wilson, "Vietnam-Era Military Service: A Test of the Class-Bias Thesis," *Armed Forces and Society*, 21 (Spring 1995), 461-71.
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33. Eliot A. Cohen considers carefully the issue of the appropriate military for the American democracy in *Citizens and Soldiers: The Dilemmas of Military Service* (Ithaca, N.Y.: Cornell Univ. Press, 1985).
34. Jonathan Stevenson, *Losing Mogadishu* (Annapolis, Md.: Naval Institute Press, 1995).
35. Canada, long a stalwart of peacekeeping operations, is withdrawing from Cyprus and has been debating participating in the Bosnian mission. It also discovered racism in its elite paratrooper unit, revealed in the summary killing of unarmed locals for petty theft during the Somalia deployment.
36. NIH Technology Assessment Workshop Panel, "The Persian Gulf Experience and Health," *Journal of the American Medical Association*, 272 (3 August 1994), 391-95; report of Chairman Donald W. Riegle, Jr., and Alfonse D'Amato, *U.S. Chemical and Biological Warfare-Related Dual-Use Export to Iraq and Their Possible Impact on the Health Consequences of the Persian Gulf War*, Committee on Banking, Housing, and Urban Affairs, US Senate, 103d Cong., 2d sess., 25 May 1994; Lois Ember, "Joint Effort to Test Ailing Persian Gulf War Veterans to Begin Soon," *Chemical Engineering News*, 23 May 1994, pp. 31-32; "Gulf Veterans' Fatal Illness Rate Called Average," *The Washington Post*, 10 January 1996, p. 15.
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39. The Russian experience in Chechnya should give pause. See Lester W. Grau, "Russian Urban Tactics: Lessons from the Battle of Grozny," *Strategic Forum*, No. 38 (July 1995), 4 pages.

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