



Restraint and the Future of Warfare

The Changing Global Environment and Its Implications for the U.S. Air Force

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Preface

Where will the next war occur? Who will fight in it? Why will it occur? How will it be fought? Researchers with RAND Project AIR FORCE's Strategy and Doctrine Program, attempted to answer these questions about the future of warfare—specifically those conflicts that will drive a U.S. and U.S. Air Force response—by examining the key geopolitical, economic, environmental, geographic, legal, informational, and military trends that will shape the contours of conflict between now and the 2030. This report on restraint and the future of warfare is one of a series that grew out of this effort. The other reports in the series are

- Raphael S. Cohen et al., *The Future of Warfare in 2030: Project Overview and Conclusions* (RR-2849/1-AF)
- Raphael S. Cohen, Eugeniu Han, and Ashley L. Rhoades, *Geopolitical Trends and the Future of Warfare: The Changing Global Environment and Its Implications for the U.S. Air Force* (RR-2849/2-AF)
- Forrest E. Morgan and Raphael S. Cohen, *Military Trends and the Future of Warfare: The Changing Global Environment and Its Implications for the U.S. Air Force* (RR-2849/3-AF)
- Howard J. Shatz and Nathan Chandler, *Global Economic Trends and the Future of Warfare: The Changing Global Environment and Its Implications for the U.S. Air Force* (RR-2849/4-AF)
- Shira Efron, Kurt Klein, and Raphael S. Cohen, *Environment, Geography, and the Future of Warfare: The Changing Global Environment and Its Implications for the U.S. Air Force* (RR-2849/5-AF).

This volume examines political, strategic, and technological trends by asking four key questions. First, what does research say about

how this variable shapes the conduct of warfare? Second, how has this variable historically shaped the conduct of warfare, especially in the post–Cold War era? Third, how might this variable be expected to change through 2030? And finally, but perhaps most importantly, how might this variable be expected to affect the future of warfare, especially as it relates to the U.S. armed forces and the U.S. Air Force in particular? By answering these questions, it is hoped that this report will paint a picture of how shifting incentives for policymakers to exercise restraint in warfare will shape conflict over the next decade plus.

This research was sponsored by the Director of Strategy, Concepts and Assessments, Deputy Chief of Staff for Strategic Plans and Requirements (AF/A5S). It is part of a larger study, entitled *The Future of Warfare*, that assists the Air Force in assessing trends in the future strategic environment for the next Air Force strategy.

This report should be of value to the national security community and interested members of the general public, especially those with an interest in how global trends will affect the conduct of warfare. Comments are welcome and should be sent to author Bryan Frederick or project leader Raphael S. Cohen. Research was completed in August 2018.

RAND Project AIR FORCE

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Summary

Military objectives often can be pursued using several different approaches: airpower versus ground forces, larger munitions versus smaller ones, more- or less-restrictive rules of engagement. Military effectiveness often favors the immediate application of overwhelming force, but militaries and their civilian overseers often opt for more-restrained approaches. Understanding how and why policymakers have chosen to impose these restraints in the past and how and why they are likely to do so in the future is critical to understanding how states will conduct future wars.

This report identifies the following four key trends likely to shape the future exercise of restraint in warfare:

1. the spread of *lawfare*, or the use of law as a weapon of war
2. the widespread distribution of imagery of U.S. military operations
3. the increasing effectiveness of false accusations
4. increasing public concern for civilian casualties.

We assess how these trends are likely to affect both conflict between states and conflict between states and nonstate actors, in addition to how the effects of these trends might differ for different types of states. We consider these issues within roughly a ten-year time frame, through 2030.

In conflicts against weaker adversaries, we find evidence that these trends are likely to further increase the incentives of decision-makers in liberal democratic states to avoid civilian casualties—and to support investments in capabilities to make this possible—in order to

mitigate a future in which military operations are increasingly deterred by concerns regarding collateral damage. Other states that are more autocratic are not likely to be similarly constrained, and policymakers in democratic states will need to adapt to this asymmetry. On a different note, potential conflicts between highly capable state actors, although less likely to occur, could involve very different incentives; operational considerations could prompt a sharp reduction in the degree of restraint exercised beyond each state's legal obligations, and the public might show greater tolerance of heightened levels of military casualties and collateral damage to civilians.

We provide the following recommendations for U.S. policymakers to begin to adapt to these anticipated trends:

- **Plan to deal with proxy forces.** U.S. planning for operations should increasingly incorporate appropriate rules of engagement for encounters with groups that are operating as proxies of adversary states, both to limit the effectiveness of such groups and to limit the escalation risks they might pose.
- **Enhance focus on public affairs efforts.** These capabilities are likely to become increasingly important to highlight adversary violations of legal obligations under various treaties and agreements. These capabilities also will be needed to rebut false accusations against U.S. forces and to maintain both domestic and international support for military operations. Greater professionalization and integration of public affairs officers with military operations should be explored.
- **Consider video recordings of U.S. operations.** Although this would raise difficult legal, technical, and security concerns, policymakers should consider consistently making video recordings of U.S. operations and doing so in a manner that allows material to be released to the public if deemed necessary.
- **Prepare for more-limited utility of coalition partners.** U.S. planning assumptions should incorporate the possibility that growing differences among coalition partners regarding acceptable risks of collateral damage could limit the ability of the United States to rely on partner support for future operations, particularly against nonstate groups and in urban environments.

Acknowledgments

This study would not have been possible without the help of many people. First and foremost, we would like to thank Brig Gen David Hicks, Col Linc Bonner, and Scott Wheeler of the Air Force A5S for sponsoring and guiding the project. We would also like to thank Paula Thornhill, the Project AIR FORCE Strategy Doctrine Program Director, for her guidance and mentorship along the way. Raphael Cohen provided vital direction and guidance as the principal investigator of the project under which this research was conducted. David Johnson and Philip Potter provided invaluable reviews that greatly improved the quality of the report. Arwen Bicknell and Julianne Ackerman provided essential assistance in the final preparation of the manuscript. The research team owes a special debt of gratitude to numerous experts across the globe, too numerous to name individually, who volunteered their time to give their perspectives on the future of warfare both within their region and globally in a series of interviews conducted by our colleagues Raphael Cohen, Howard Shatz, and Ashley Rhoades. We thank both our colleagues and the interviewees for sharing their insights.

Abbreviations

DoD	U.S. Department of Defense
EEZ	Exclusive Economic Zone
ICRC	International Committee of the Red Cross
IDF	Israeli Defense Force
ISAF	International Security Assistance Force
ISIS	Islamic State in Iraq and al-Sham
ISR	intelligence, surveillance, and reconnaissance
LOAC	Law of Armed Conflict
NATO	North Atlantic Treaty Organization
PAO	Public Affairs Officer
PGM	precision-guided munition
PLAN	People's Liberation Army Navy
PMC	private military contractor
UAS	unmanned aerial system
UN	United Nations
USAF	U.S. Air Force

Global Restraint Trends

Military objectives often can be pursued using several different approaches: airpower versus ground forces, larger munitions versus smaller ones, more- or less-restrictive rules of engagement. Military effectiveness often favors the immediate application of overwhelming force, but militaries and their civilian overseers often opt for more-restrained approaches. Understanding how and why policymakers have chosen to impose these restraints in the past and how and why they are likely to do so in the future is critical to understanding how states will conduct future wars.

In this report, we first identify the key factors that determine the degree of restraint in military operations. Second, we identify key trends among these factors with the greatest potential to alter these decisions in the future. Finally, we highlight the key conclusions and policy implications from the analysis.

Overall, we find evidence of trends that are likely to increase the incentives of decisionmakers in liberal democratic states to avoid civilian casualties in conflicts against weaker adversaries—and to support investments in capabilities to make this possible—in order to mitigate a future in which military operations are increasingly deterred by concerns regarding collateral damage. However, incentives might be quite different in the event of conflict between highly capable state adversaries: The stakes could threaten vital national interests or state survival. Such a conflict might be less likely than military contingencies against less-capable state or nonstate actors, but should one occur, we would anticipate (1) a substantial reduction in the degree of restraint exercised

beyond each state's legal obligations and (2) that state publics might be substantially more tolerant of military casualties and collateral damage to civilians.

What Factors Encourage Greater Restraint in Warfare?

In this section, we provide a brief overview of six of the most influential factors likely to affect the degree of restraint that policymakers adopt in warfare—legal obligations, public opinion, media coverage, partner preferences, operational imperatives, and technological capabilities—as identified from a review of the literature.

Legal Obligations

All states have legal obligations under the numerous treaties and agreements that make up the Law of Armed Conflict (LOAC) that constrain the actions, procedures, and munitions that states can employ in military actions.¹ Precisely how states interpret these obligations varies somewhat, but there are five broad principles reflected in the documents that restrain states' conduct of warfare and are now considered to apply to all states as customary international law—and, in many cases, these have been translated into domestic law as well.² The principles are as follows:

1. **Distinction:** Parties to a conflict, whether states or nonstate actors, must distinguish between belligerents and civilians and

¹ The foundational documents of the modern LOAC are the 1949 Geneva Conventions, which focus on the treatment of wounded soldiers, prisoners of war, and the protection of civilians during wartime. International Committee of the Red Cross (ICRC), "The Geneva Conventions of 1949 and Their Additional Protocols," webpage, October 29, 2010.

² United Kingdom Ministry of Defence, *Joint Service Manual of the Law of Armed Conflict*, Swindon, England: Joint Doctrine and Concepts Centre, Joint Service Publication 383, 2004; Gary D. Solis, *The Law of Armed Conflict: International Humanitarian Law in War*, New York: Cambridge University Press, 2010; Office of General Counsel, *Department of Defense Law of War Manual*, Washington, D.C.: U.S. Department of Defense, December 2016, p. 50.

target only the former, regardless of the actions of their adversary.³

2. **Military necessity:** Military actions against legal targets are permitted to use what force is needed “to compel the complete submission of the enemy with the least possible expenditure of time, life, and money.”⁴
3. **Unnecessary suffering:** Attacks targeting military personnel and facilities are not permitted if they result in suffering unnecessary to achieve operational objectives. Several international agreements have been signed to prohibit weapons that might violate this standard, such as exploding bullets and chemical and biological weapons.⁵
4. **Precautionary measures:** Attacks against valid military targets must also take all reasonable steps to minimize harm to civilians.⁶
5. **Proportionality:** Finally, the LOAC also requires that attacks against military targets be undertaken only when the anticipated collateral damage to civilians is not excessive in comparison with the anticipated military value of the attack.⁷

These principles of the LOAC are widely accepted (although perhaps not equally adhered to), but other points of international law are more widely disputed. For example, the United States, China, and Russia have not ratified the 1997 Ottawa Treaty banning land mines

³ Solis, 2010, pp. 269–275.

⁴ *United States v. List*, Case No. 7, Section 76, Nuremberg Military Tribunal, February 19, 1948.

⁵ See for example, ICRC, *Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects*, Geneva: June 2004.

⁶ See Jean-François Quéguiner, “Precautions Under the Law Governing the Conduct of Hostilities,” *International Review of the Red Cross*, Vol. 88, No. 864, 2006.

⁷ Although proportionality is a complex standard to apply, recent investigations into incidents with large civilian death tolls have been more concerned with potential violations of the principles of distinction or precautionary measures. Matthew Rosenberg, “Pentagon Details Chain of Errors in Strike on Afghan Hospital,” *New York Times*, April 29, 2016.

and the 2008 Convention on Cluster Munitions (although the United States often adheres to these restrictions).⁸ For their part, nonstate groups have similar obligations under the LOAC, although their commitment to adhering to these obligations varies widely.⁹

Public Opinion

Beyond legally imposed restrictions, policymakers also face political incentives to exercise restraint in the use of force. Military engagements can put both civilians and military personnel at risk, and casualties experienced by either group have the potential to sap public support, although this link is more clearly established with regard to military casualties.¹⁰ Even limited casualties have the potential to reduce support for operations, particularly when those operations are perceived as being unsuccessful or focused on internal political conflicts rather than on direct security threats.¹¹ In most contexts, therefore, U.S. policy-

⁸ Thomas J. Herthel, "On the Chopping Block: Cluster Munitions and the Law of War," *Air Force Law Review*, Vol. 51, 2001, p. 229; Andrew Feickert and Paul K. Kerr, *Cluster Munitions: Background and Issues for Congress*, Washington, D.C.: Congressional Research Service, RS22907, April 29, 2014; Brian Murphy, "'Unique' Conflict with North Korea Keeps U.S. Land Mines Along Border," *Washington Post*, September 23, 2014. The U.S. position on retaining cluster munitions shifted in late 2017, giving commanders the authority to employ cluster munitions until a replacement capability is developed. It remains unclear whether or in what circumstances the United States would use the weapons. Patrick M. Shanahan, "DoD Policy on Cluster Munitions," memorandum, Deputy Secretary of Defense, November 30, 2017; Jeff Abramson, "U.S. Undoes Cluster Munitions Ban," *Arms Control Today*, Vol. 48, January 10, 2018.

⁹ ICRC, "Understanding Armed Groups and the Applicable Law," *International Review of the Red Cross*, Vol. 93, No. 882, June 2011; Richard Natonski and Geoffrey Corn, " Hamas, ISIS and the Law of Armed Conflict," *Real Clear Defense*, August 14, 2017.

¹⁰ For example, see John E. Mueller, *War, Presidents, and Public Opinion*, Hoboken, N.J.: John Wiley & Sons, 1973; Bruce W. Jentleson, "The Pretty Prudent Public: Post Post-Vietnam American Opinion on the Use of Military Force," *International Studies Quarterly*, Vol. 36, No. 1, 1992, pp. 49–74; Eric V. Larson, *Casualties and Consensus: The Historical Role of Casualties in Domestic Support for U.S. Military Operations*, Santa Monica, Calif.: RAND Corporation, MR-726-RC, 1996; Christopher Gelpi, Peter Feaver, and Jason Reifler, *Pay the Human Costs of War: American Public Opinion & Casualties in Military Conflicts*, Princeton, N.J.: Princeton University Press, 2009.

¹¹ Casualties could have independent effects on public support and on public perceptions of mission success, which have historically been closely correlated with support.

makers face clear political incentives to limit military casualties. They likely face similar incentives to avoid civilian casualties, particularly the perception that civilian casualties resulted from inattention or carelessness by U.S. forces.¹² Depending on the operational context, however, these incentives could conflict: Restricting the rules of engagement might help reduce risk to civilians but simultaneously increase risk to military personnel.¹³

Different actors are likely to manage these incentives in different ways depending on their political systems and media environment, but most states are likely to face some political incentives to avoid casualties. For example, Russia appears to shield its public from information regarding Russian military casualties in Ukraine, illustrating that even leaders in authoritarian states are concerned that casualties could undermine public support.¹⁴

Sensitivity to civilian casualties could vary even more widely across different actors. Close U.S. partners, such as key North Atlantic Treaty Organization (NATO) allies, have taken numerous steps to avoid these deaths in bombing campaigns, imposing limitations on munitions and targeting procedures.¹⁵ Some potential U.S. adversaries could diverge in this regard, at least partly because of their greater ability to control their domestic media, as we will discuss in greater detail. The Russian bombing campaign in Syria, for example, has inflicted

Richard Eichenberg, "Victory Has Many Friends: U.S. Public Opinion and the Use of Military Force, 1981–2005," *International Security*, Vol. 30, No. 1, Summer 2005, pp. 170–172.

¹² Eric V. Larson and Bogdan Savych, *Misfortunes of War: Press and Public Reactions to Civilian Deaths in Wartime*, Santa Monica, Calif.: RAND Corporation, MG-441-AF, 2007, p. 209; David Rothkopf, "The Slaughter of Innocents: Why Collateral Damage Undoes the Best-Laid Plans of 'Limited' War Makers," *Foreign Policy*, July 17, 2014; James Igoe Walsh, "Precision Weapons, Civilian Casualties, and Support for the Use of Force," *Political Psychology*, Vol. 36, No. 5, 2015, pp. 507–509.

¹³ Bryan Frederick and David E. Johnson, *The Continued Evolution of U.S. Law of Armed Conflict Implementation: Implications for the U.S. Military*, Santa Monica, Calif.: RAND Corporation, RR-1122-OSD, 2015, pp. 91–92.

¹⁴ Thomas Gibbons-Neff, "The Unusual Difficulty of Tracking Russia's Dead in Ukraine and Syria," *Washington Post*, October 27, 2015.

¹⁵ ICRC, "Libya, NATO Intervention 2011," webpage, undated.

higher rates of civilian casualties than similar U.S. efforts.¹⁶ Iran was accused of “indiscriminate shelling” of Iraqi border towns and other atrocities against civilians during the Iran-Iraq War.¹⁷

The calculations of nonstate groups with regard to both military and civilian casualties are often complex. Terrorist or insurgent groups, for example, ultimately rely on a measure of public support for their causes to help drive recruitment and sustain their organizations, and that support could be sapped if their fighters take too many casualties or are perceived as committing atrocities.¹⁸ In other cases, public support actually might be enhanced by civilian casualties if they occur within demonized groups.¹⁹

Media Coverage

Often, the degree to which military and civilian casualties decrease public support for a military operation depends on the media coverage. Generally speaking, newer conflicts are likely to receive more coverage than older ones, and conflicts that are domestically contentious could

¹⁶ Emma Graham-Harrison, “Reality Check: Are US-Led Airstrikes on Syrians as Bad as Russia’s?” *The Guardian*, October 12, 2016. Also, rates of civilian casualties resulting from U.S. air strikes have increased substantially since 2017. Micah Zenko, “Why Is the U.S. Killing So Many Civilians in Syria and Iraq?” *New York Times*, June 19, 2017.

¹⁷ It should be noted that Iraq was at least as flagrant in the extent and frequency of its breaches of the LOAC (and potentially more so) in this conflict, including in the use of chemical weapons. ICRC, “ICRC, Iran/Iraq Memoranda,” May 7, 1983; “Iranian Warns It May Shell Iraqi Towns,” UPI, February 10, 1985; Javed Ali, “Chemical Weapons and the Iran-Iraq War: A Case Study in Noncompliance,” *The Nonproliferation Review*, Vol. 8, No. 1, 2001, pp. 47–54.

¹⁸ João Ricardo Faria and Daniel G. Arce, “Terror Support and Recruitment,” *Defence and Peace Economics*, Vol. 16, No. 4, 2005, p. 263; Andrew H. Kydd and Barbara F. Walter, “The Strategies of Terrorism,” *International Security*, Vol. 31, No. 1, 2006, pp. 71–72; Seth G. Jones, James Dobbins, Daniel Byman, Christopher S. Chivvis, Ben Connable, Jeffrey Martini, Eric Robinson, and Nathan Chandler, *Rolling Back the Islamic State*, Santa Monica, Calif.: RAND Corporation, RR-1912, 2017, pp. 22, 36–37, 178, 217–218.

¹⁹ Mia M. Bloom, “Palestinian Suicide Bombing: Public Support, Market Share, and Out-bidding,” *Political Science Quarterly*, Vol. 119, No. 1, 2004, pp. 85–87; Robert Anthony Pape, *Dying to Win: The Strategic Logic of Suicide Terrorism*, New York: Random House Incorporated, 2006.

be more likely to see reporting on negative events, such as casualties.²⁰ The more negative images shown in the media, the greater the potential political concerns that policymakers might face regarding support for the operation, and the greater incentive they might have to limit military and civilian casualties.²¹

Starting with Vietnam and becoming pervasive in the post–Cold War era, television news incorporated video imagery of military and civilian casualties. There is a common perception that this imagery adversely affects public support for military interventions.²² In reality, the effect appears to be more complex, with elite assumptions about likely popular reaction to military casualties sometimes driving shifts in policy before public opinions are even formed.²³ The diffusion of images and imagery through social media raises additional issues. On social media, imagery can be widely distributed, regardless of the editorial decisions of any particular organization, and traditional media organizations are increasingly incorporating information and trends from social media into their reporting.²⁴

²⁰ Matthew A. Baum and Philip B. K. Potter, “The Relationships Between Mass Media, Public Opinion, and Foreign Policy: Toward a Theoretical Synthesis,” *Annual Review of Political Science*, Vol. 11, 2008, pp. 49–51; Sean Aday, “Leading the Charge: Media, Elites, and the Use of Emotion in Stimulating Rally Effects in Wartime,” *Journal of Communication*, Vol. 60, No. 3, 2010, pp. 444–445.

²¹ The effects on restraint over time might be complex. Media coverage of conflicts generally tends to decline over time, but it can be sustained if the salience of the conflict for the state is high or there are persistent casualties. Under such sustained coverage, public support can be expected to flag over time, increasing the incentives for states to exercise restraint. Baum and Potter, 2008; Matthew A. Baum and Philip B. K. Potter, *War and Democratic Constraint: How the Public Influences Foreign Policy*, Princeton, N.J.: Princeton University Press, 2015.

²² Cori Dauber, “Image as Argument: The Impact of Mogadishu on US Military Intervention,” *Armed Forces & Society*, Vol. 27, No. 2, 2001, pp. 205–207; Hugh Smith, “What Costs Will Democracies Bear? A Review of Popular Theories of Casualty Aversion,” *Armed Forces & Society*, Vol. 31, No. 4, 2005, pp. 498–499.

²³ Dauber, 2001, pp. 215–216.

²⁴ Stuart Dredge, “Social Media, Journalism and Wars: ‘Authenticity Has Replaced Authority,’” *The Guardian*, November 14, 2014; Anthony C. Adornato, “Forces at the Gate: Social Media’s Influence on Editorial and Production Decisions in Local Television Newsrooms,” *Electronic News*, Vol. 10, No. 2, 2016, pp. 87–104.

The relative independence of media outlets also varies substantially across different actors. In states with high levels of media independence and open political systems, media outlets have relative freedom to disseminate content that might sap public support for a conflict. Similar content is less likely to spread in states with closed political systems and greater state control over media, reducing the incentives of leaders of those states to exercise restraint,²⁵ although even in such states as Russia and China control over media is not total, particularly given the rise of social media. Still, evidence suggests that although Moscow appears concerned about public reaction to military casualties, the state's ability to control most media coverage means that these concerns do not translate into much incentive to exercise operational restraint.²⁶ By contrast, nonstate armed groups might actually rely on media coverage of the attacks they undertake and the casualties they inflict for recruitment and other purposes.²⁷ In those cases, media coverage might be no incentive to exercise restraint—it could even have the reverse effect.

Partner Preferences

The preference for multinational coalitions also incentivizes restraint in many post–Cold War conflicts. Maintaining support for unified action across international publics and elites with different risk tolerances often requires coalition acceptance of restrictions, or caveats, on the use of force. In Afghanistan, for instance, NATO commanders have been operationally restrained by an estimated 50 to 80 formal

²⁵ Matthew A. Baum and Yuri M. Zhukov, "Filtering Revolution: Reporting Bias in International Newspaper Coverage of the Libyan Civil War," *Journal of Peace Research*, Vol. 52, No. 3, pp. 384–400.

²⁶ Gabriela Baczynska, "Putin Classifies Information on Deaths of Russian Troops in Peacetime," Reuters, May 28, 2015; Catherine A. Fitzpatrick, "Finding Putin's Dead Soldiers in Ukraine," *The Daily Beast*, September 16, 2015; Graham-Harrison, 2016.

²⁷ Brian Michael Jenkins, *The Psychological Implications of Media-Covered Terrorism*, Santa Monica, Calif.: RAND Corporation, P-6627, 1981; Charlie Beckett, "Fanning the Flames: Reporting on Terror in a Networked World," *Columbia Journalism Review*, September 22, 2016; Brigitte L. Nacos, *Mass-Mediated Terrorism: Mainstream and Digital Media in Terrorism and Counterterrorism*, Lanham, Md.: Rowman & Littlefield, 2016.

restrictions—and countless informal ones—determined by the preferences of individual International Security Assistance Force (ISAF) partner nations.²⁸ In coalition parliamentary governments, where decisions on when and how troops deploy often require compromise, contributing partner nations could tend to impose greater restrictions on the use of force (all else equal) than in other systems in which individual leaders hold more decisionmaking power.²⁹ Partners might take different views of the immediacy or seriousness of the threat that the coalition operation is addressing. In theory, countries with stronger threat perceptions might be less restrained and less averse to risk than those whose participation is primarily motivated by fulfilling treaty obligations or pleasing an ally.³⁰

Although coalitions have been a feature of warfighting for centuries,³¹ modern-era democracies have been far more likely than nondemocracies to fight via coalitions.³² The factor of partner preferences is thus most applicable to trends in future warfare among the United States, its key allies and partners, and among non-Western liberal democratic states (such as Japan and South Korea) and less applicable to the other actors we examine in this report, such as North Korea, Iran, Russia, China, and nonstate armed groups.

²⁸ David P. Auerswald and Stephen M. Saideman, “NATO at War: Understanding the Challenges of Caveats in Afghanistan,” paper prepared for presentation at the Annual Meeting of the American Political Science Association, Toronto, Canada, September 2–5, 2009, p. 1.

²⁹ Stephen M. Saideman and David P. Auerswald, “Comparing Caveats: Understanding the Sources of National Restrictions upon NATO’s Mission in Afghanistan,” *International Studies Quarterly*, Vol. 56, No. 1, 2012, pp. 70–72.

³⁰ Stephen Walt, *The Origins of Alliances*, Ithaca, N.Y.: Cornell University Press, 1987, pp. 5–6; Saideman and Auerswald, 2012, pp. 79–80; Kathleen McInnis, “Lessons in Coalition Warfare: Past, Present, and Implications for the Future,” *International Politics Review*, Vol. 1, No. 2, December 2013, pp. 88–89.

³¹ Steve Bowman, “Historical and Cultural Influences on Coalition Operations,” in Thomas Marshall, Phillip Kaiser, and Jon Kessmer, eds., *Problems and Solutions in Future Coalition Operations*, Carlisle, Pa.: Strategic Studies Institute, U.S. Army War College, December 1997, pp. 1–2.

³² Patricia Weitsman, “With a Little Help from Our Friends? The Costs of Coalition Warfare,” *Origins*, Vol. 2, No. 4, January 2009.

Operational Imperatives

At the operational level of warfare, three competing necessities are often at cross purposes with one another: (1) mission accomplishment, (2) force protection, and (3) harm minimization.³³ Two factors—the nature of the conflict and the specific actors involved—theoretically determine how commanders balance these imperatives at the operational level of warfare and, thus, the degree of restraint exercised.

With regard to the first factor, operational imperatives differ across the spectrum of warfare and the related threat perceptions and political objectives involved. In theory, at the higher end of this spectrum—particularly in conflicts between peer or near-peer state competitors—the operational imperative to accomplish the mission can be expected to outweigh the competing imperatives of minimizing risk to soldiers and civilian casualties.³⁴ That said, operational imperatives could still encourage caution even when domestic public opinion is less likely to act as an incentive for restraint in such high-intensity conflicts. U.S. operations that produce high levels of collateral damage in an adversary's population could, for example, shore up popular support within the adversary for that state's war effort. States might be concerned that particularly destructive attacks could trigger an unwanted escalatory response by the adversary. Attacks also could damage potential assets, such as bridges or airfields that are currently in adversary hands but anticipated to be of future use to the forces of the attacking state. Operational incentives for restraint are likely to depend on the nature of the conflict and the nature of the adversary.

Further down the spectrum of conflict intensity, operational imperatives are more likely to be counterbalanced by competing imperatives of minimizing risk to soldiers and limiting civilian casualties, gener-

³³ Tony Pfaff, *Resolving Ethical Challenges in an Era of Persistent Conflict*, Carlisle, Pa.: Strategic Studies Institute, U.S. Army War College, Professional Military Ethics Monogram Series, Vol. 3, April 2011, pp. 1–2.

³⁴ Viewed from a utilitarian ethics perspective: “The greater the good, the greater the kinds of harms that may be done in its name. While the use of weapons of mass destruction (WMD) or mass killings of combatants would normally be ruled out, if victory—depending on what was at stake—becomes more elusive or defeat more imminent, indiscriminate acts of violence may under certain circumstances be justified.” Pfaff, 2011, p. 5.

ally resulting in “ROE demanding greater restraint in applying combat power.”³⁵ Some military theorists even argue that success in counterinsurgency campaigns results from exercising restraint, thereby limiting risk to civilians, growing popular support, and building government legitimacy.³⁶

With regard to the second factor, generally speaking, the less powerful the adversary (and therefore the less of a threat it poses), the greater the restraint of force that will be exercised.³⁷ This might not always be the case. In Sri Lanka in 2008–2009, after nearly three decades of guerrilla warfare waged by the militarily weaker Liberation Tigers of the Tamil Eelam, the government unleashed a brutal, indiscriminate military operation that effectively resulted in a decisive military victory—at the expense of some 40,000 civilian deaths.³⁸ The calculations of nonstate actors also could vary. Depending on the strategy they choose to employ, nonstate actors might face operational incentives *not* to ensure restraint. Some groups, such as the Islamic State in Iraq and al-Sham (ISIS), have intentionally adopted punishment strategies against local populations to demoralize potential opposition and gain control through brute force rather than aiming for popular support for their efforts as in many traditional guerrilla campaigns.³⁹

³⁵ Headquarters, Department of the Army, *Legal Support to Operations*, Field Manual 27-100, March 1, 2000, section 8-1. See also Headquarters, Department of the Army, *Insurgencies and Countering Insurgencies*, Field Manual 3-24, May 2014, section 1–10.

³⁶ Eliot Cohen, Conrad Crane, Jan Horvath, and John Nagl, “Principles, Imperatives, and Paradoxes of Counterinsurgency,” *Military Review*, March–April 2006, pp. 52–53; Headquarters, International Security Assistance Force (HQ/ISAF), “Tactical Directive on 02 July 2009,” Kabul, Afghanistan, press release, July 6, 2009; Stanley McChrystal, *Commander’s Initial Assessment*, Commander, NATO ISAF, Afghanistan U.S. Forces, August 30, 2009.

³⁷ Frederick and Johnson, 2015, p. 35.

³⁸ Colum Lynch, “U.N.: Sri Lanka’s Crushing of Tamil Tigers May Have Killed 40,000 Civilians,” *Washington Post*, April 21, 2011; Liam Collins, Lionel Beehner, Mike Jackson, and Steve Ferenzi, *The Taming of the Tigers: An MWI Contemporary Battlefield Assessment of the Counterinsurgency in Sri Lanka*, West Point, N.Y.: Modern War Institute, April 2017.

³⁹ Seth G. Jones, *Waging Insurgent Warfare: Lessons from the Vietcong to the Islamic State*, New York: Oxford University Press, 2017, pp. 47–52.

Technological Capabilities

As discussed, policymakers often must balance competing imperatives to minimize harm to noncombatants, protect the force, and accomplish the mission. The options they have for addressing these challenges are affected by their technological capabilities.

All else being equal, growing possession and use of sophisticated intelligence, surveillance, and reconnaissance (ISR), precision-guided munitions (PGMs), unmanned aerial systems (UASs), and stealth technology systems provide states with options to increase restraint and reduce collateral damage on the battlefield. These technologies allow high-end powers to distinguish more easily between combatants and noncombatants and to deliver lethal force with more accuracy, thus reducing the risk of collateral damage.⁴⁰ Of course, the possession of sophisticated weapons does not guarantee restraint. As the record of “surgical” strikes in the post–Cold War period has shown, unintended consequences can never be avoided on the battlefield. Moreover, barriers to the use of precision weapons might be lower, meaning more strikes could take place when commanders have these capabilities.⁴¹ If so, proliferation of these technologies might paradoxically increase total civilian casualties and other collateral damage, even if they are lower on a per-strike basis.⁴² Finally, these technologies might encourage restraint only to the extent they are employed against a weaker adversary; against near-peer adversaries, a military might not place similar value on restraint.

⁴⁰ Stephen D. Wrage, “The Ethics of Precision Air Power,” in Stephen D. Wrage, ed., *Immaculate Warfare: Participants Reflect on the Air Campaigns over Kosovo and Afghanistan*, Westport, Conn.: Praeger, 2003, pp. 85–100.

⁴¹ Frederick and Johnson, 2015, p. 47.

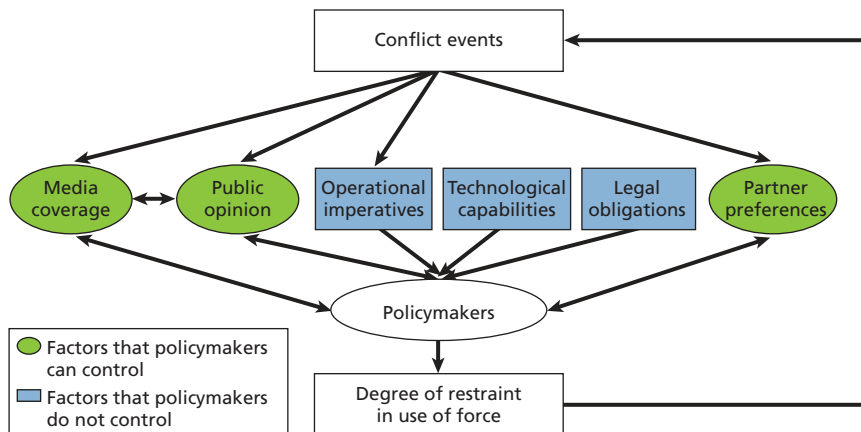
⁴² Lynn E. Davis, Michael J. McNerney, James Chow, Thomas Hamilton, Sarah Harting, and Daniel Byman, *Armed and Dangerous? UAVs and U.S. Security*, Santa Monica, Calif.: RAND Corporation, RR-449-RC, 2014, pp. 11, 14.

Modeling Restraint and Warfare

Taken together, the key factors affecting the degree of restraint that policymakers choose to exercise, and the relationships between them, are summarized in Figure 1.1.

We will next explore how different actors' decisions to exercise restraint in warfare are likely to be affected by several ongoing or anticipated trends. These potential trends were identified by exploring developments within each of the factors highlighted in Figure 1.1 and a review of current scholarship.⁴³ The four trends upon which we focus reflect those anticipated to have the greatest effect on policy-

Figure 1.1
Model of Policymaker Decision to Utilize Restraint in the Use of Force



SOURCE: Derived from Baum and Potter, 2008, p. 41.

⁴³ A potential fifth trend regarding state use of private military contractors (PMCs) was also carefully considered for inclusion, though we ultimately omitted it. The use of PMCs appears to be diverging between the United States and NATO and their adversaries, such as Russia. In the United States, for example, the chaotic experience in Iraq has led to increasing standardization and strict codes of conduct to which PMCs must adhere in order to gain U.S. Department of Defense (DoD) contracts. Along with recent consolidation within the industry, this would appear to reduce the potential temptation for U.S. policymakers to employ PMCs as a less-restrained alternative to military forces, therefore making this a less influential future trend (especially considering DoD's relatively limited use of PMCs even today). The use of PMCs by other states, such as Russia, however, is discussed in Trend 1 in

maker decisions over the next ten to 15 years. The trends we identified, along with how the key factors from our model are anticipated to drive these trends, are summarized in Table 1.1. We will discuss each of these trends in detail in the rest of this report.

We did not anticipate noteworthy trends over the next ten to 15 years to be driven by changing legal obligations. Historically, dramatic changes in international law itself have required catalyzing events or substantial shifts in state consensus, such as World War II or the large increase in postcolonial states in the 1960s and 1970s, which we do not anticipate over this period. Existing legal obligations will continue to frame the contest over acceptable and unacceptable behavior in warfare, but other factors are more likely to alter policymaker decisions on restraint in the near term.

Chapter Two. For more information on PMCs, see Peter W. Singer, *Corporate Warriors: The Rise of the Privatized Military Industry*, Ithaca, N.Y.: Cornell University Press, 2007; Molly Dunigan, “The Future of US Military Contracting: Current Trends and Future Implications,” *International Journal*, Vol. 69, No. 4, 2014; Mark Galeotti, “Moscow’s Mercenaries Reveal the Privatisation of Russian Geopolitics,” *Open Democracy Russia*, August 29, 2017; James Bingham and Konrad Muzyka, “Private Companies Engage in Russia’s Non-Linear Warfare,” *Jane’s Intelligence Review*, 2018.

Table 1.1
Future Trends Most Likely to Affect Policymaker Restraint

Trend	Media Coverage	Public Opinion	Operational Imperatives	Technological Capabilities	Partner Preferences
Spread of lawfare	Increased ability for nonstate groups to document and disseminate civilian casualties	Potential for increase in public concern over legality or civilian casualties	Urban, high-population operating environments increasingly likely	Precision strike or ISR force adaptations by nonstate actors	Tactics could provide opportunity for ambivalent partners to reduce support
Widespread distribution of imagery of U.S. military operations	Proliferation of social media access and smartphones increases likelihood of distribution of video of military engagements		Urban, high-population operating environments increasingly likely		
Increasing effectiveness of false accusations	Increasingly partisan media outlets increase likelihood of distribution of false accusations	Increasing partisan divisions increase susceptibility to believing false accusations			
Increasing public concern for civilian casualties	Decentralization of media increases availability of imagery of civilian casualties	Potential for increase in public concern over legality or civilian casualties	Increased reliance on coalition warfare could increase salience of divergent partner public concerns	Increasing precision capabilities increases expectations of “immaculate” warfare	U.S. partner publics might have heightened concerns over civilian casualties

Trend 1: The Spread of *Lawfare*

The use of law as a weapon of war has become a central feature of the 21st century battlefield. Often referred to as *lawfare*, this phenomenon is defined as “the strategy of using (or misusing) law as a substitute for traditional military means to achieve an operational objective,”¹ particularly to “mitigate or even neutralize the advantages of . . . otherwise militarily superior opponent[s].”² Nonstate actors often exploit the LOAC and international humanitarian laws and norms in this way, intentionally heightening the risk of civilian casualties to deter attacks against the nonstate actor by militarily superior states—or, failing this, they use resulting civilian casualties to influence public opinion. State actors often weaponize the law in different ways, conducting activities short of war, variously termed *gray-zone operations* or *hybrid warfare*, to achieve political goals while limiting adversarial military responses. These trends are likely to continue in the future, with important implications for the United States and its partners and allies and for key state adversaries (specifically, Russia, China, and Iran) over the next ten to 15 years.

¹ Charles J. Dunlap, Jr., “Lawfare: A Decisive Element of 21st-Century Conflicts?” *Joint Forces Quarterly*, Vol. 54, No. 3, 2009, p. 35.

² Shane Billsborough, “Counterlawfare in Counterinsurgency,” *Small Wars Journal*, December 14, 2011. Although this chapter focuses on trends in the use of lawfare by the weak (i.e., nonstate and hybrid actors) against the strong (i.e., high-end state actors), it is important to recognize that law as a weapon of war also can be used by the strong against the weak (and peer and near-peer state competitors). As we will discuss briefly, a growing body of literature has examined affirmative, or offensive, uses of lawfare by the United States and other state actors.

Though exploitation of international humanitarian law as a tool of the weak to encourage restraint by the strong is not new in the history of armed conflict, it has become “a tragically prevalent tactic in contemporary warfare.”³ Duke University law professor and retired U.S. Air Force (USAF) Maj Gen Charles J. Dunlap asserts that

[a]s international law generally penetrates modern life, it tends to influence, as other trends have, the way war is conducted . . . [Indeed,] lawfare has emerged as the principal effects-based air defense methodology employed by America’s adversaries today.⁴

In fact, strategic manipulation of the LOAC to gain operational advantages has a long tradition in both conventional interstate wars and asymmetric, irregular conflicts. The classic example is the use of civilian human shields to deter attacks on combatants.⁵ These tactics have been employed in such diverse conflicts as the U.S. Civil War, the Franco-Prussian War, World Wars I and II, the Korean War, the Vietnam War, the Iran-Iraq War, and the First Gulf War, as well as post-Cold War intrastate conflicts in Bosnia, Kosovo, Somalia, Liberia, Sierra Leone, Lebanon, Chechnya, El Salvador, and Colombia.⁶

³ Michael Schmitt, “Human Shields in International Humanitarian Law,” *Columbia Journal of Transnational Law*, Vol. 47, No. 2, 2009, p. 292.

⁴ Dunlap, 2009, pp. 35–36.

⁵ In some cases, local or foreign noncombatants might be willing participants of counter-targeting tactics. In other cases, prisoners of war and other foreign nationals, such as journalists and nongovernmental organization (NGO) volunteers, could be forcibly exploited as human shields. See G. H. Teninbaum, “American Volunteer Shields in Iraq: Free Speech or Treason?” *Suffolk Transnational Law Review*, Vol. 28, No. 139, 2004.

⁶ Schmitt, 2009, pp. 293–296; Simon Rubinstein and Yaniv Roznai, “Human Shields in Modern Armed Conflicts: The Need for Proportionate Proportionality,” *Stanford Law & Policy Review*, Vol. 22, No. 1, 2011, pp. 97–98; Juan Manuel Padilla, “Lawfare: The Colombian Case,” *Estudios Militares*, Vol. 10, No. 10, 2012.

Historical Trend: Lawfare's Increased Use

Since the beginning of the U.S.-led Global War on Terror in 2001, the concept of lawfare has gained increasing currency among academics and policymakers, primarily for its growing strategic implications for combating irregular nonstate and hybrid adversaries.⁷ Indeed, the U.S. experiences in Iraq and Afghanistan revealed how lawfare tactics can mitigate overwhelming military superiority while undermining domestic and international support and legitimacy. In both conflicts, nonuniformed combatants created operational dilemmas for U.S. and allied forces by blending into the local population, particularly in urban areas, and dispersing arms caches and military equipment to civilian and humanitarian facilities and to cultural and religious sites as a way to confound superior ISR, UAS, and PGM technologies. At the same time, Iraqi and Afghan insurgents recognized the propaganda value that could be gained by creating the perception—such as through dissemination of false reports and manufactured evidence—that U.S. air strikes and other uses of force were “immoral, reckless, and ultimately criminal if and when innocent people are killed.”⁸ That said, these concerns did not deter U.S. forces in the Iraq War from undertaking operations with less-restrictive rules of engagement in major urban battles waged in Fallujah, Sadr City, and Baghdad, where “dense populations, narrow streets, subterranean passages, and multistory buildings that

⁷ Dunlap is frequently credited with popularizing the modern usage of the term *lawfare* beginning in 2001. See Charles J. Dunlap, Jr., *Law and Military Interventions: Preserving Humanitarian Values in 21st Century Conflicts*, Boston, Mass.: Harvard Kennedy School of Government, working paper, 2001. Although the term *lawfare* is a relatively new, post-9/11 neologism, and although the nascent and growing literature on lawfare generally agrees that law is becoming increasingly important—or intensifying—as a weapon of war, lawfare has antecedents dating back at least as far as the colonial era. For a counterargument on the “newness” of lawfare, see Craig A. Jones, “Lawfare and the Juridification of Late Modern War,” *Progress in Human Geography*, Vol. 40, No. 2, 2016.

⁸ Jones, 2016, p. 224. Indeed, as one recent RAND analysis concluded, “All public-opinion polls indicate unambiguously that civilian casualties caused by air strikes are the single biggest complaint among Afghans against coalition and U.S. forces, a complaint echoed by President [Hamid] Karzai to no avail.” Arturo Munoz, *U.S. Military Information Operations in Afghanistan: Effectiveness of Psychological Operations, 2001–2010*, Santa Monica, Calif.: RAND Corporation, MG-1060-MCIA, 2012, p. 41.

[served] as enemy defensive positions” created additional challenges for U.S. and coalition forces.⁹ More recently, ISIS militants have pursued increasingly extreme versions of lawfare in Iraq. As one example, during the battle to liberate western Mosul from ISIS control in 2017, combatants forcibly trapped as many as 500,000 civilian hostages in the city, deliberately putting them in harm’s way. In an effort to deter air strikes by U.S. and allied aircraft, innocent civilians were “corralled from place to place by ISIS gunmen mounting a chaotic defense of the last neighborhoods of the city under their control.”¹⁰

The experiences of the Israeli Defense Force (IDF) in Gaza between the First Gaza War (Operation Cast Lead, December 2008 through January 2009) and the end of Operation Protective Edge (July–August 2014) might hold particularly valuable lessons for future combat against hybrid irregular forces in urban terrain.¹¹ Here, the IDF was forced to conduct urban warfare under high levels of legal and public scrutiny. During the prolonged conflict, which was punctuated by periods of intense rocket and mortar fire from Gaza into Israel and by retaliatory air strikes and limited ground incursions by the IDF, Hamas and Palestinian Islamic Jihad repeatedly used lawfare tactics in violation of their own obligations under the LOAC to increase risk to civilians—thereby mitigating Israel’s military superiority, provoking civilian casualties, and gaining a political advantage in the court of world opinion.¹² The effects of the Palestinian lawfare strategy and tactics were twofold. First, Israel did decide in some

⁹ Raphael Cohen, David E. Johnson, David E. Thaler, Brenna Allen, Elizabeth M. Bartles, James Cahill, and Shira Efron, *From Cast Lead to Protective Edge: Lessons from Israel’s Wars in Gaza*, Santa Monica, Calif.: RAND Corporation, RR-1888-A, 2017a, p. ix.

¹⁰ Jared Malsin, “‘They Just Took Us.’ Mosul Civilians on Being Used as Human Shields by ISIS,” *Time*, March 30, 2017.

¹¹ Raphael S. Cohen, David E. Johnson, David E. Thaler, Brenna Allen, Elizabeth M. Bartles, James Cahill, and Shira Efron, “Lessons from Israel’s Wars in Gaza,” Santa Monica, Calif.: RAND Corporation, RB-9975-A, 2017b, p. 8.

¹² Hamas, for instance, frequently hid personnel and weapons caches in—and conducted assaults and operational planning from—civilian buildings and residences; in one “flagrant violation” of international law, for example, the UN Relief and Works Agency discovered 20 Hamas rockets stored in one of its schools. See Cohen et al., 2017a, pp. 143–144.

circumstances to employ greater military restraint than it might have otherwise.¹³ Second, when Israel nonetheless still carried out many attacks and inflicted a large number of civilian fatalities, those actions led to international denouncements of Israel and the establishment of a United Nations (UN) Independent Commission of Inquiry into the legality of the IDF's use of force.¹⁴

Lawfare tactics are not, however, strictly asymmetric tools of non-state groups. Legal warfare has been used by states in recent years as well.¹⁵ In Beijing and Moscow, for example, lawfare tactics increasingly have been employed as elements of broader gray-zone campaigns designed to assert geostrategic dominance in the South and East China Seas and in Eastern Europe, respectively. China and Russia have pursued revisionist objectives by leveraging nonstate surrogates (and other gray-zone tactics) in order to “mask attribution of their activities”; to obfuscate the facts upon which the application and analysis of international law regimes depend; and, ultimately, to limit other states' abilities to respond to their aggression and threats.¹⁶ That is, by blurring the legal boundaries between peace and war and between civilian and military agents, Chinese and Russian paramilitary actions have attempted to avoid triggering “the right of individual and collective self-defense” and have thus remained “under key escalatory thresholds to avoid outright warfare.”¹⁷ In short, by operating in the gray zone, China and Russia increasingly have exploited gaps in international law to deter

¹³ Cohen et al., 2017b, p. 8.

¹⁴ Although only six Israeli civilians died in Palestinian attacks, an estimated 1,489 Palestinian civilians were killed in six weeks of fighting during Operation Protective Edge. Padilla, 2012, p. 121; Cohen et al., 2017b, pp. 6–8.

¹⁵ James Kraska, “How China Exploits a Loophole in International Law in Pursuit of Hegemony in East Asia,” Foreign Policy Research Institute, January 22, 2015.

¹⁶ Todd Huntley, “Law in the Gray Zone: Lawfare and Legal Challenges in Responding to Hybrid Threats,” U.S. Navy, Judge Advocate General's Corps, PowerPoint presentation, August 8, 2016, pp. 4, 7, 16.

¹⁷ Kraska, 2015; Michael J. Mazaar, *Mastering the Gray Zone: Understanding a Changing Era of Conflict*, Carlisle, Pa.: U.S. Army War College, Strategic Studies Institute, December 2015, pp. 82–85.

escalation and encourage restraint by the United States, its key allies and regional partners, and the international community.

China and Russia have similar reasons for using lawfare tactics in pursuit of their geostrategic and economic interests. In seeking an “ideal of national revival,”¹⁸ Beijing has sought to extend its offshore territorial claims in the South China Sea in order to assert its rights to deep-sea oil and gas resources, develop forward military outposts (particularly in the Spratly Islands, some 1,000 nautical miles from mainland China), protect vital sea lines of communication, coerce weaker regional states (i.e., the Philippines, Vietnam, Indonesia, and Malaysia), and deter freedom-of-navigation operations by foreign naval ships.¹⁹ Likewise, in seeking to restore Russia’s great-power prestige, Moscow’s revisionist goals in Ukraine and Crimea are similar: to reassert Russian dominance and economic influence in its near abroad, undermine U.S. influence in Europe while coercing weaker regional states (i.e., Ukraine and Georgia), and preserve a security buffer zone on its periphery.²⁰ As China and Russia have engaged in these great-power political competitions to alter aspects of the current international system, they have both done so in ways carefully designed to manage risk and avoid creating a widespread descent into regional instability or provoking large-scale interstate warfare by triggering U.S. security agreements (i.e., with

¹⁸ Timothy R. Heath, “Chinese Political and Military Thinking Regarding Taiwan and the East and South China Seas,” testimony presented before the U.S.-China Economic and Security Review Commission, Santa Monica, Calif.: RAND Corporation, CT-470, April 13, 2017, p. 2.

¹⁹ James Kraska and Brian Wilson, “China Wages Maritime ‘Lawfare,’” *Foreign Policy*, March 12, 2009; Kraska, 2015; Christopher Cavas, “China’s ‘Little Blue Men’ Take Navy’s Place in Disputes,” *Defense News*, November 2, 2015; Mazaar, 2015, p. 81; Heath, 2017, pp. 2–3; Harry B. Harris, Jr., “Statement of Admiral Harry B. Harris, Jr., U.S. Navy, Commander, U.S. Pacific Command before the House Armed Services Committee on U.S. Pacific Command Posture,” Washington, D.C.: U.S. House of Representatives, February 14, 2018; Ronald O’Rourke, *Maritime Territorial and Exclusive Economic Zone (EEZ) Disputes Involving China: Issues for Congress*, Washington, D.C.: Congressional Research Service, May 24, 2018, pp. 2–3.

²⁰ Mazaar, 2015, pp. 89, 92; Boris Toucas, “The Geostrategic Importance of the Black Sea Region: A Brief History,” Washington, D.C.: Center for Strategic and International Studies, February 2, 2017.

NATO, Japan, South Korea, or the Philippines).²¹ That is, these tactics are designed to encourage broader restraint by the United States and its allies while still achieving localized objectives on the ground.

Although their motivations have been similar, Russia and China have pursued post–Cold War lawfare campaigns and paramilitary activities in different ways. In China’s patient pursuit of regional maritime hegemony since at least the 1990s, it has deputized a “stunning” spectrum of both irregular civilian naval forces (e.g., commercial fishing vessels and trawlers, civilian maritime militia, fishery enforcement vessels, and coast guard vessels operating in foreign waters) and “non-traditional means” (e.g., mobile state oil rigs, construction crews building artificial islands, water cannons, reconnaissance UASs, and nausea-inducing sonic devices) to exploit gaps in the UN Convention on the Law of the Sea.²²

According to some military analysts, the most significant Chinese lawfare tactic has become the proliferation of civilian or paranaul vessels deputized as government proxies, training and operating in close coordination with (sometimes under the direct chain of command of) the People’s Armed Forces Departments, the People’s Liberation Army Navy (PLAN), and the Chinese Coast Guard (CCG).²³ Recently, DoD concluded the following:

In the South China Sea, the [China Maritime Militia (CMM)] plays a major role in coercive activities to achieve China’s political goals without fighting, part of broader PRC [People’s Republic of China] military doctrine that states that confrontational operations short of war can be effective means of accomplishing political objectives. . . . A large number of CMM vessels train with

²¹ Kraska, 2015; Mazaar, 2015, pp. 81, 89.

²² Kraska, 2015; Van Jackson, “Testimony before the U.S. House Committee on Foreign Affairs, Subcommittee on Asia and the Pacific,” Washington, D.C.: February 26, 2015, pp. 1–3; Cavas, 2015; Mazaar, 2015, p. 86.

²³ Andrew S. Erickson and Conor M. Kennedy, “Beware of China’s ‘Little Blue Men in the South China Sea,’” *The National Interest*, September 15, 2015a; Andrew S. Erickson and Conor M. Kennedy, “Irregular Forces at Sea: Not ‘Merely Fishermen’—Shedding Light on China’s Maritime Militia,” Center for International Marine Security, November 2, 2015b.

and support the PLAN and CCG in tasks such as safeguarding maritime claims, protecting fisheries, logistics, search and rescue (SAR), and surveillance and reconnaissance. The government subsidizes various local and provincial commercial organizations to operate militia vessels to perform “official” missions on an ad hoc basis outside of their regular commercial roles. The CMM has played significant roles in a number of military campaigns and coercive incidents over the years . . .²⁴

In such confrontational operations, China’s civilian and paramilitary proxy fleets frequently form into flotilla swarms to “circle a disputed area of contention or create a barrier to prevent access,” thereby providing the government plausible deniability for provocative acts of intimidation and aggression conducted on its behalf.²⁵ Since the 1990s, these swarm tactics have been used in (1) maritime disputes involving China’s expansive claims to “its historic waters” that extend well beyond claims permitted under the UN Convention on the Law of the Sea (i.e., the so-called nine-dash-line claim by which China has asserted maritime rights over an area covering 90 percent of the South China Sea), (2) its interference in the fishing and petroleum exploration activities in the exclusive economic zones (EEZs) of its regional neighbors,²⁶ and (3) its repeated attempts to deny foreign warships access to its own EEZ.²⁷ These flotillas have been deployed variously

²⁴ DoD, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2017*, May 15, 2017, p. 56.

²⁵ Kraska, 2015; Cavas, 2015.

²⁶ China estimates that the South China Sea could contain some 125 billion barrels of oil and 500 trillion cubic feet of natural gas; it estimates that oil reserves in the East China Sea might be even higher, between 70 and 200 billion barrels. The fisheries in these waters are equally important resources. For instance, about one-quarter of the world’s total annual haul of fish are caught in the South China Sea. Rafiq Dossani and Scott Warren Harold, eds., *Maritime Issues in the East and South China Seas: Summary of a Conference Held January 12–13, 2016*, Santa Monica, Calif.: RAND Corporation, CF-358-CAPP, 2016, p. 12.

²⁷ As codified in the 1982 Law of the Sea Convention, an EEZ generally constitutes the coastal zone extending beyond 12 nautical miles out to 200 nautical miles, in which “coastal states have exclusive rights to exploit natural resources in the zone, [but] they cannot claim a security interest in the area.” China has thus attempted to exert economic control over

against Japan and Taiwan in the East China Sea; the Philippines, Vietnam, Malaysia, and Brunei in the South China Sea; and Korea in the Yellow Sea.²⁸ The recent catalogue of such incidents is lengthy:²⁹ Perhaps most belligerently, it features the increased basing of paramilitary maritime militia on the artificial islands that Beijing has been building in the Spratly Island chain (some 900 miles offshore) in order to extend its territorial claims, assert its rights to oil and natural gas resources, and forward deploy missile systems in the South China Sea.³⁰ Figure 2.1 illustrates China's claimed territorial waters and EEZs relative to the internationally recognized EEZs of its coastal neighbors.

In many instances, sailors on these civilian vessels—sometimes referred to as “little blue men”³¹—have been documented changing between uniformed and nonuniformed status during international stand-offs. Andrew Erickson explains the legal implications of these tactics on the potential use of force (and military restraint): “Putting on camouflage [uniforms], they qualify as soldiers. . . . Taking off the

resources hundreds of miles beyond its EEZ while blocking foreign naval access within its own EEZ. Kraska and Wilson, 2009; O'Rourke, 2018, p. 1.

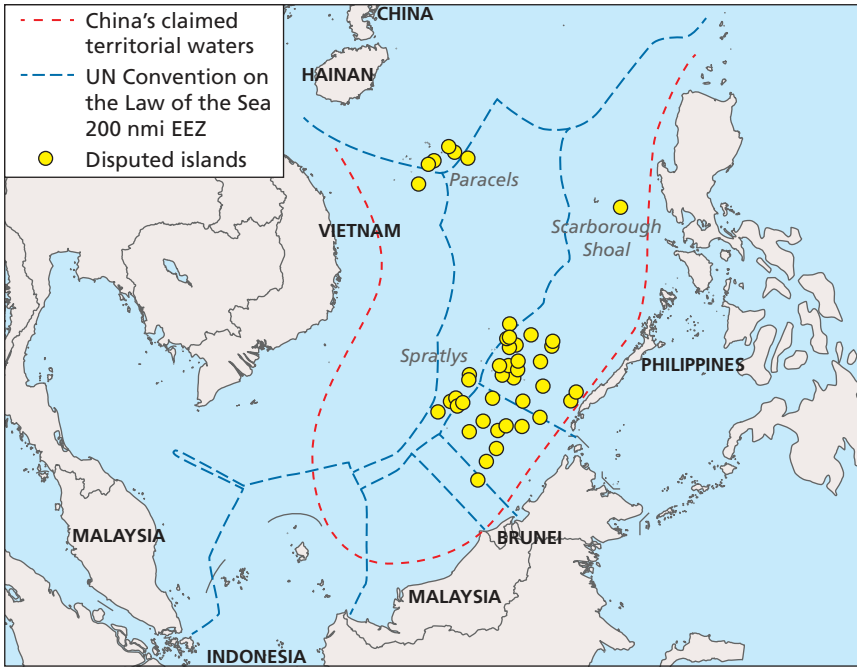
²⁸ The most heavily disputed territories are the Paracel Islands, Spratly Islands, and Scarborough Shoal in the South China Sea and the Senkaku Islands in the East China Sea. Kraska, 2015; O'Rourke, 2018, p. 1.

²⁹ This catalogue includes repeated harassment of U.S. naval vessels on Freedom of Navigation operations within China's EEZ; the 2014 Haiyang Shiyou-981 oil rig incident, in which the China Offshore National Oil Corporation placed a mobile exploratory rig in Vietnam's EEZ, and Vietnamese vessels were rammed by unflagged Chinese fishing ships; China's occupation in 2012 of the Scarborough Shoal off of the Philippines; and maneuvers in 2014 to block the Philippines' efforts to resupply a grounded naval ship on the disputed Second Thomas Shoal. Greg Torode, “Chinese Coast Guard Involved in Most South China Sea Clashes: Research,” Reuters, March 29, 2014; Cavas, 2015; Rodelio Cruz Manacsa, “Hamstringing a Hegemon: Examining the Effectiveness of Lawfare in the South China Sea Disputes,” *Fletcher Security Review*, Vol. 4, No. 1, Summer 2017.

³⁰ Andrew Erickson, “The South China Sea's Third Force: Understanding and Countering China's Maritime Militia,” Washington, D.C.: Testimony before the House Armed Services Committee, September 21, 2016, pp. 5–6.

³¹ A reference to Russia's unidentified surrogate fighters in Ukraine and Crimea, colloquially known by Ukrainian civilians as the “little green men.”

Figure 2.1
EEZs Overlapping with China's Claimed Territorial Waters



SOURCE: Adapted from O'Rourke, 2018, p. 26.

camouflage, they become law-abiding fishermen [against whom . . .] U.S. and allied rules of engagement might be very restrictive.”³²

U.S. Naval War College professor James Kraska’s analysis echoes this dilemma:

If the fishing vessels are challenged by neighboring states’ maritime law enforcement, it appears that fishermen are subjected to heavy-handed action. This political element also stokes righteous nationalism in China. On the other hand, if coastal states acquiesce in the actions of the fishing vessels, they cede jurisdiction and sovereign rights in their EEZs. . . . Furthermore, China’s use of its fishing fleet as a component of “legal warfare” goes beyond exploiting the

³² Cavas, 2015.

gap between the use of force and self-defense in *jus ad bellum*; it affects *jus in bello* as well. Fishing vessels likely would be used as belligerent platforms during any regional war. Some suspect China is outfitting thousands of its fishing vessels with sonar in order to integrate them into PLAN's anti-submarine warfare operations that would have to find and sink U.S. and allied submarines.³³

China's use of these lawfare tactics has been notably effective in furthering Chinese goals. The weaker regional states whose maritime rights have increasingly been infringed upon have repeatedly been coerced to retreat from their positions despite significant external support from the United States and international bodies. Most notably, following the Permanent Court of Arbitration's landmark 2016 ruling in favor of the Philippines' defense of its EEZ against China, Beijing dismissed the court's authority and responded "by sending more ships to the disputed Scarborough Shoal, overwhelming the Philippines' meager fleet. It forced the Philippines to withdraw from the islands where three Chinese ships are now permanently stationed."³⁴ Similarly, three weeks after a U.S. carrier group departed Vietnamese littorals, "the Vietnamese government bowed to Chinese pressure and cancelled a major oil drilling project in disputed South China waters."³⁵

In Russia, meanwhile, the employment of lawfare and gray-zone tactics has been even more militarized. The most salient of Russian tactics has arguably been the employment of surrogate or proxy forces in Crimea and eastern Ukraine—the so-called little green men—in order to mask attribution of Moscow's role in politically controversial or illegal military actions and blur the line between peacetime and wartime legal regimes.³⁶ In the days following the ouster of Ukraine's president, Victor Yanukovich, by pro-Western political groups in February 2014, uniden-

³³ Kraska, 2015.

³⁴ Manacsa, 2017, p. 84; Ryan Martinson and Andrew Erickson, "Re-Orienting American Seapower for the China Challenge," *War on the Rocks*, May 10, 2018.

³⁵ Peter Apps, "Commentary: How Beijing Is Winning in the South China Sea," Reuters, March 28, 2018.

³⁶ Kimberly Marten, "Semi-State Security Actors and Russian Aggression," *Lawfare*, July 8, 2018.

tified professional soldiers donning Russian-style combat fatigues (without insignias) and bearing Russian military equipment began infiltrating Crimea. The Kremlin initially denied that these were Russian soldiers, claiming that they were “local self-defense units.”³⁷ But this obfuscation of fact was soon exposed: These were in fact Russian Airborne and Special Operations Forces seizing territory and government buildings, including the parliament on February 27, 2014.³⁸ Two weeks later, Russian regular forces began mobilizing along Ukraine’s eastern border in support of armed separatists in Donetsk and Luhansk; throughout the spring and summer of 2014, little green men began appearing in districts of eastern Ukraine.³⁹ More recently, Russia has allegedly employed other proxy security forces—including PMCs, such as the Wagner Group, Moran Security Group, Slavonic Corps, and Russian Security Systems Group—on the battlefields of Syria, Libya, and Sudan.⁴⁰

Russia’s increasing use of unidentified operatives in Crimea, Ukraine, and elsewhere raises several important questions related to the LOAC and restraint in the future of warfare. Because of the more militarized status of Russia’s proxy security forces, the implications might differ significantly from those related to China’s paranaul forces. First, unlike civilian maritime militia in the South and East China Seas, Russia’s little green men seemingly qualify for combatant status under the laws regulating international armed conflict and do not thus far appear to have violated the principle of distinction despite “practicing *maskirovka*, or military deception . . . to make it difficult to attribute their actions to Russia.”⁴¹ Although these actors are operating in a gray

³⁷ Steven Pifer, “Watch Out for Little Green Men,” *Spiegel Online*, July 7, 2014.

³⁸ Michael Kofman, Katya Migacheva, Brian Nichiporuk, Andrew Radin, Olesya Tkacheva, and Jenny Oberholtzer, *Lessons from Russia’s Operations in Crimea and Eastern Ukraine*, Santa Monica, Calif.: RAND Corporation, RR-1498-A, 2017, pp. 7–12.

³⁹ Neil Buckley, Roman Olearchyk, Andrew Jack, and Kathrin Hille, “Ukraine’s ‘Little Green Men’ Carefully Mask Their Identity,” *Financial Times*, April 16, 2014.

⁴⁰ Marten, 2018.

⁴¹ Shane Reeves and David Wallace, “The Combatant Status of the ‘Little Green Men’ and Other Participants in the Ukraine Conflict,” *International Law Studies*, Vol. 91, No. 361, 2015, p. 393.

legal zone, West Point legal professors Shane Reeves and David Wallace conclude that they are indeed complying with their legal obligations under the LOAC:

Choosing to ignore this obligation [of distinction] by “masquerading as a civilian in order to mislead the enemy and avoid detection” may lead the *Spetsnaz* commandos to lose the privileges associated with combatant status. . . . Yet wearing a uniform with a Russia insignia is not an absolute requirement for the commandos to comply with the principle of distinction. The law of armed conflict mandates only that belligerents be distinguishable; it does not require that they advertise their nationality. . . . *Spetsnaz* commandos, carrying Russian manufactured arms openly, wearing unmarked-Russian type uniforms and speaking Russian, are clearly not impersonating the Ukrainian military nor are they attempting to blend into the civilian population. . . . Their singular act of using unmarked uniforms does not constitute a violation of the principle of distinction.⁴²

At the same time, there is no evidence that unmarked *Spetsnaz* forces have been operating under looser rules of engagement or with less respect for the LOAC than regular marked forces might do. The use of little green men appears, therefore, to have had negligible impact on Russia’s operational restraint during these hostilities. Rather, the critical implication of these gray-zone tactics has been to encourage strategic restraint by other actors; by causing “confusion and disorientation among the Ukrainian government and its allies,” Moscow succeeded in “slowing any defensive response.”⁴³

On the other hand, Russia’s increasing employment of PMCs such as the Wagner Group in officially denied missions in Syria and elsewhere might reflect trends implying an overall loosening of operational restraint in the future of warfare. Substantial uncertainty persists in the open literature around the precise relationship between these seemingly commercial actors and the Russian military, but the general con-

⁴² Reeves and Wallace, 2015, pp. 394–395.

⁴³ Reeves and Wallace, 2015, p. 393.

sensus is that these actors do not qualify as lawful combatants under the laws regulating international armed conflict. Rather, as mercenary “unlawful combatants,” these groups have different international legal rights, duties, and responsibilities than Russia’s little green men do.⁴⁴ Namely, these commercial actors do not possess immunity from prosecution for the killing or injuring of civilians or enemy military personnel as do combatants (provided their actions comply with the LOAC). Indeed their legal status is essentially the same as the “legion of foreign fighters” that Iran has been deploying for years to Iraq and Syria in order to “create confusion and uncertainty surrounding the nature of the belligerents involved, which in turn, make it more difficult to discern the appropriate policies and authorities that military forces and intelligence services are working under.”⁴⁵

How this distinction in combatant status has translated into restraint (or lack thereof) in recent conflicts remains ambiguous. For instance, anecdotal evidence suggests that these emerging models “centered on ambiguity” have equated to less “command and control over how armed force is used” in Moscow’s name.⁴⁶ As one clear example, in February 2018, Russian mercenaries belonging to the Wagner Group allegedly attacked U.S. forces and their allies in Syria; the United States responded with air strikes leaving 200–300 mercenaries dead.⁴⁷ In this case, the U.S. response to the attack does not appear to have been restrained, but the obscured nature of these groups does have the

⁴⁴ Strictly speaking, the designation of unlawful combatant “is not a distinct individual battlefield status and does ‘not appear in the Geneva Conventions, Additional Protocols, or any other LOAC treaty, convention or protocol.’ The term is instead descriptive for those who unlawfully engage in combat activities by taking part in hostilities ‘without being entitled to do so.’ Unlawful combatants may be spies and saboteurs, mercenaries, members of a State armed force who abuse their status, members of a non-State armed group, or civilians who ‘directly participate in hostilities.’” Reeves and Wallace, 2015, p. 389.

⁴⁵ Colin P. Clarke, “Counteracting Iran’s Gray Zone Strategy in Syria,” *Lawfare*, January 24, 2018.

⁴⁶ Marten, 2018.

⁴⁷ Adam Taylor, “What We Know About the Shadowy Russian Mercenary Firm Behind an Attack on U.S. Troops in Syria,” *Washington Post*, February 23, 2018; Thomas Gibbons-Neff, “How a 4-Hour Battle Between Russian Mercenaries and U.S. Commandoes Unfolded in Syria,” *New York Times*, May 24, 2018.

potential to sow confusion about their legal status and thus encourage opponents to refrain from attacking. This issue could become more complex for the United States and its allies if little green men or PMCs began appearing on NATO soil—for instance, in Estonia, where a decision to attack these groups could involve a heightened risk of triggering a wider conflict among the United States, its allies, and Russia.

Future Projection: Lawfare’s Significance Likely to Increase in Certain Conflicts

In the future, lawfare could become an increasingly significant lever employed by both state and nonstate actors for several reasons. First, the growing use of sophisticated ISR, weaponry, and munitions—and the proliferation of these technologies to a wider range of state actors—will increase the incentives for nonstate actors to employ lawfare tactics. Faced with the prospect of being remotely identified, targeted, and killed by increasingly capable states, nonstate groups are likely to rely more and more on human shields, violations of the requirement to identify themselves as combatants, and other lawfare tactics to deter such attacks.

Second and relatedly, current trends in global urbanization and population growth increase the likelihood that cities will become the locus of future conflict and instability.⁴⁸ Here, both nonstate actors and state actors are increasingly likely to attempt to exploit the com-

⁴⁸ Gian Gentile, David E. Johnson, Lisa Saum-Manning, Raphael S. Cohen, Shara Williams, Carrie Lee, Michael Shurkin, Brenna Allen, Sarah Soliman, and James L. Doty III, *Reimagining the Character of Urban Operations for the U.S. Army: How the Past Can Inform the Present and the Future*, Santa Monica, Calif.: RAND Corporation, RR-1602-A, 2017, pp. 8–11. An in-depth review of these trends is beyond the scope of our analysis, but it is worth noting that current estimates project that some 60 percent of the world’s population will be living in urban areas by 2030. For more details, see U.S. Army Training and Doctrine Command, *The U.S. Army Operating Concept: Win in a Complex World*, Fort Eustis, Va.: TRADOC Pamphlet 525-3-1, 2014, p. 11. Also see U.S. National Intelligence Council, *Global Trends 2030: Alternative Worlds*, Washington, D.C.: Office of the Director of National Intelligence, 2012; and U.S. Department of the Army, *The Megacity: Operational Challenges for Force 2025 and Beyond*, Washington, D.C.: Army Chief of Staff’s Future Study Plan, 2014.

plexities of urban environments and the proximity to civilians in dense population centers to evade or deter long-range strike and sophisticated ISR capabilities of militarily superior opponents.⁴⁹

Third, lawfare tactics have demonstrated that they can be effective for nonstate groups, notwithstanding their illegality and immorality. Hamas' tactics in Gaza have posed substantial operational and strategic problems for Israel, just as ISIS's use of human shields greatly slowed the military campaign against it in Iraq. If these tactics are perceived as successful in deterring action or in creating political damage, they likely will be adopted more widely by groups without military capabilities to challenge powerful states.

Fourth, the democratization of media and proliferation of smartphones and other technologies are likely to reinforce the effectiveness of lawfare tactics by providing militarily inferior adversaries and local populations a method of systematically documenting and widely disseminating evidence of collateral damage, thereby raising the political costs of unintended civilian casualties.

Fifth, Russia and China's successful record of employing proxy forces in gray-zone operations to achieve plausible deniability and largely preclude overt military responses by the United States and its partners and allies suggests that these tactics might be used more in the future. It seems clear that Beijing intends to continue its use of paranaul forces in the South and East China Seas as a pillar of Chinese doctrine and strategy. Russia's attachment to the tactic of deploying unidentified ground forces in Ukraine and Crimea is somewhat more opaque, but Moscow is likely to continue to maintain the capability to deploy unacknowledged forces or PMCs to mask its level of involvement and political aims in future conflicts.

Taken together, these factors suggest that lawfare as a central feature of modern warfare is likely to increase in importance in the years to come. To some degree, this will depend on how the United States responds to this trend. If these tactics are successful in encouraging greater restraint by the United States and its allies, then such tactics are likely to become more widespread among potential adversaries.

⁴⁹ Frederick and Johnson, 2015, pp. 39–41.

Alternatively, the United States and its allies might make a political decision to attribute gray-zone activities directly to state authorities and respond as though they were being conducted on that basis: This might heighten the risk of escalation or impose other strategic, diplomatic, or political costs the United States does not wish to bear, but it would also make these tactics less advantageous for opponents.

With regard to lawfare by nonstate groups, it is worth noting that liberal democratic states are more likely targets for these tactics than states with tight control over their domestic media or a track record of lower concern for civilian casualties, such as Russia or China. Such nondemocratic states are also more likely to effectively employ lawfare tactics themselves, given the lower levels of transparency in their domestic political systems. Even in liberal democratic states, however, domestic publics could become desensitized over time to civilian casualties that result from adversary lawfare tactics, such as employing human shields, if these tactics were to become commonplace and egregious in their disregard for the risk they pose to civilians. Finally, it should be emphasized that concerns about lawfare are likely most salient for conflict between states and weaker nonstate groups and less so for direct conflict between two states where both the capabilities and the political incentives to adhere to LOAC requirements are likely to be more symmetrical.

Implications for the U.S. Air Force and the Future of Warfare

These trends in the spread of lawfare hold important implications for the USAF and DoD more broadly. First, they imply that future adversaries could be increasingly successful in developing tactics to limit the utility of superior U.S. airpower, coerce restraint, and undermine support and legitimacy for U.S. military operations.

Second, as a result of adversaries' growing sophistication and ability to manipulate the legal battlespace, the USAF will have new incentives to evolve operationally and technologically to mitigate civilian casualties. For instance, DoD might be incentivized to develop

novel tactics to warn noncombatants to flee densely populated urban areas before air strikes or to invest more heavily in nonlethal weaponry, greater stocks of PGMs, and micromunitions.⁵⁰

Third, the USAF should anticipate the need to implement proactive, offensive measures to highlight adversary LOAC violations in contrast with its own compliance. For instance, it might become more important to document and publicly defend U.S. air-strike decisions, including preemptively using social media and other public affairs outlets to explain to domestic and international audiences the legal basis for attacks and measures taken to minimize collateral damage. At the same time, the USAF should explore ways to release evidence that definitively demonstrates adversary LOAC violations more quickly. This could include increased investment in ISR to enable better documentation of adversary violations. Such efforts would be aimed at affecting international public opinion, but should not necessarily be expected to directly alter the behavior of adversary groups or states.

Fourth, the U.S. government should prepare for the possibility that state adversaries—such as Russia, China, and Iran—will increasingly employ less-restrained alternatives to regular military force or engage in politically sensitive missions they might not have undertaken previously. To date, Washington’s response to such state-sponsored lawfare tactics has been ad hoc. To counter such tactics, concerted planning will be required to develop strategies in advance regarding how to deal with proxy forces in different circumstances and to better align existing interagency policy, doctrine, and infrastructure.⁵¹

⁵⁰ Here, the experiences of the IDF in Gaza in 2014 could be instructive: “Dropping leaflets with specific instructions to civilians, knocking on the roof (sometimes multiple times), and making phone calls to apartments in a targeted building were all warning methods the IDF used in Operation Protective Edge. When the probability of collateral damage was higher because of urban area density around a relatively small target (such as an individual in a room or car), a commander might call on an Apache helicopter with a Hellfire missile because of its small warhead size compared with the larger munitions dropped by fixed-wing aircraft.” See Cohen et al., 2017a, p. 146.

⁵¹ Huntley, 2016, pp. 19–20.

Trend 2: Widespread Distribution of Imagery of U.S. Military Operations

Images of human suffering can have a strong emotional effect on viewers and, in turn, generate important political and strategic effects.¹ Although the U.S. military generally takes tremendous care to avoid civilian casualties in its operations, warfare is rarely immaculate. In past campaigns, many civilian casualties that have occurred as a result of U.S. actions have been reported after the fact by journalists, civilians, adversaries, or U.S. forces themselves. Historically, however, most military operations, and the casualties they might produce, have not been visually recorded. Going forward, visual records of such events will likely become more the rule than the exception.

Historical Trend: Wartime Imagery Has Been Limited, but Powerful

At least since Vietnam, the potential political power of images of civilian suffering in warfare has been clear. Photos such as those taken by Sergeant Ron Haeberle of the 1968 My Lai massacre generated intense

¹ Such imagery helps make previously abstract, distant suffering appear more proximate and urgent. It should be noted, however, that the degree of reaction can vary widely, and fatigue or numbness as a result of viewing of suffering also can be widespread. Nonetheless, the potential for imagery to evoke emotional reactions, at least under the right circumstances, seems clear. See Birgitta Höijer, “The Discourse of Global Compassion: The Audience and Media Reporting of Human Suffering,” *Media, Culture, and Society*, Vol. 26, No. 4, 2004; and Andrew Linklater, “Distant Suffering and Cosmopolitan Obligations,” *International Politics*, Vol. 44, No. 1, 2007, pp. 19–36.

controversy, and senior policymakers concluded that pervasive television coverage of the conflict was undermining public support.² By contrast, the images that the press used to cover the 1991 Gulf War were primarily antiseptic in nature, emphasizing U.S. technological capabilities and minimizing graphic imagery of casualties.³ During the post-2003 war in Iraq, however, the most famous images likely have been those of the torture inflicted at Abu Ghraib prison, the publication of which had widespread strategic and political ramifications.⁴ As discussed in Chapter One, coverage of different conflicts is likely to vary according to a conflict's age or duration and the level of elite political support that it enjoys domestically.⁵

This record shows that, at least under certain conditions, such imagery can have political effects and shift policymaker decisions. In the past, however, only a small number of actors could produce such material. Media outlets also often had complex relationships with the governments on which they often depended for access to war zones, complicating decisions to publish negative stories or images.⁶ And although journalists, service members, and adversaries had the technology to chronicle and distribute these images, before the widespread profusion of digital cameras and recording devices, the likelihood that individuals would be recording any specific military engagement was relatively low, limiting the frequency and immediacy of the images produced of human suffering.

² Daniel C. Hallin, *The Uncensored War: The Media and Vietnam*, Berkeley, Calif.: University of California Press, 1989, pp. 3–5, 213; Claude Cookman, “An American Atrocity: The My Lai Massacre Concretized in a Victim’s Face,” *Journal of American History*, Vol. 94, No. 1, 2007, pp. 154–155, 159–160.

³ Ken Burns, “The Painful, Essential Images of War,” *New York Times*, January 27, 1991; Torie Rose Deghett, “The War Photo No One Would Publish,” *The Atlantic*, August 8, 2014.

⁴ Kari Andén-Papadopoulos, “The Abu Ghraib Torture Photographs: News Frames, Visual Culture, and the Power of Images,” *Journalism*, Vol. 9, No. 1, 2008, p. 23; Dunlap, 2009, p. 34.

⁵ Baum and Potter, 2008, pp. 49–51; Aday, 2010, pp. 444–445.

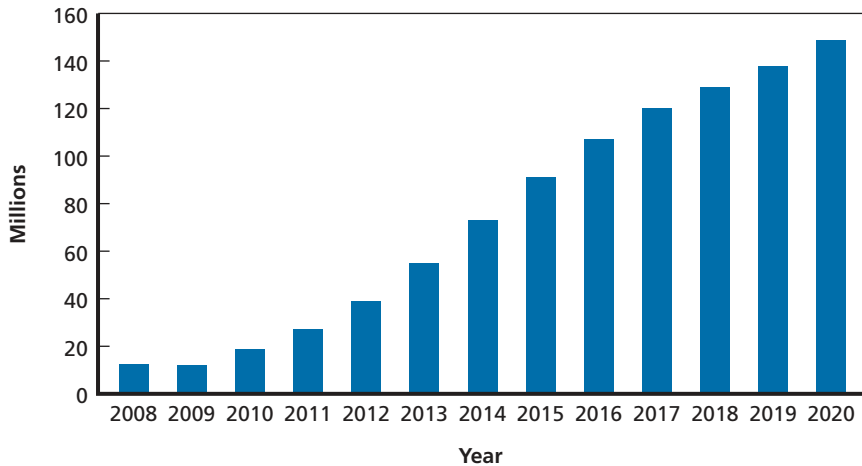
⁶ Baum and Potter, 2008, pp. 49–51; Aday, 2010, pp. 443–445.

Future Projection: Proliferation of Imagery May Affect Political Support

The ability to record and distribute high-quality visual imagery is now on the cusp of being thoroughly democratized. As shown in Figure 3.1, the proliferation of smartphones with the ability to record and distribute video images has also dramatically increased the odds of the execution or immediate aftermath of a U.S. attack being recorded.

Intensive U.S. engagements in Iraq and Afghanistan largely ended before this trend took hold in those countries, meaning that the United States has not yet had extensive experience with a recorded battlefield.⁷ The location of future U.S. engagements is unpredictable, but

Figure 3.1
Historical and Projected Smartphone Shipments in the Middle East and Africa, 2008–2020



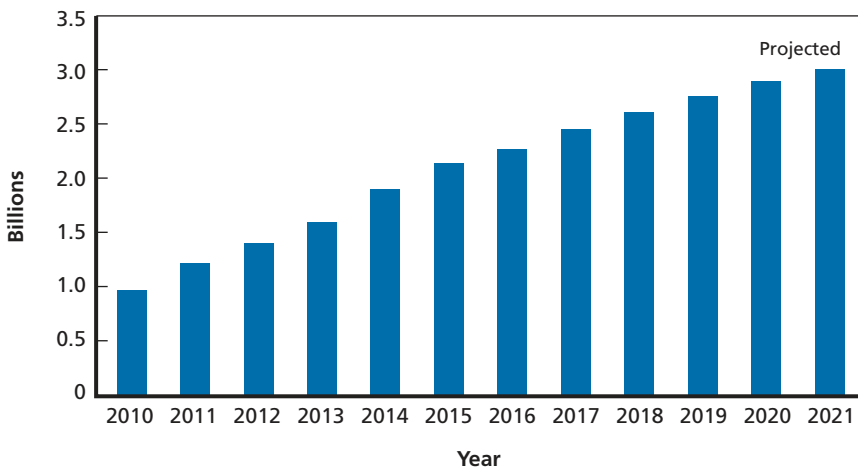
SOURCE: Global Technology, Media, and Telecom Team, *Mobility 2020: How an Increasingly Mobile World Will Transform TMT Business Models over the Coming Decade*, New York: Jefferies, September 2011, p. 155.

⁷ Prominent episodes where damaging or offensive imagery of U.S. forces in these conflicts did have notable political and strategic effects highlight the potentially greater risks from this trend going forward. For example, see Lene Hansen, “How Images Make World Politics: International Icons and the Case of Abu Ghraib,” *Review of International Studies*, Vol. 41,

the odds are continuously increasing that these engagements will take place among a population with widespread ownership of smartphones.

New technology has also made the distribution of such images much faster, easier, and more pervasive. Dramatic increases in the use of social media networks both by civilians in likely conflict areas and by the U.S. public, as shown in Figure 3.2, allow for the rapid distribution of such imagery, both with and without the assistance of traditional media outlets.⁸ Such distribution channels also mean that U.S. government efforts to minimize the impact of such events by framing or restricting domestic media coverage are likely to be less effective.⁹

Figure 3.2
Number of Global Social Network Users



SOURCE: Corey McNair, *Worldwide Social Network Users: eMarketer's Estimates and Forecast for 2016–2021*, London: eMarketer, July 17, 2017; Statista, “Number of Social Network Users Worldwide from 2010 to 2021 (in Billions),” webpage, 2018.

No. 2, 2015; Paolo G. Tripodi and David M. Todd, “Casualties of Their Own Success: The 2011 Urination Incident in Afghanistan,” *Parameters*, Vol. 47, No. 3, 2017.

⁸ Dredge, 2014; Adornato 2016.

⁹ Baum and Potter, 2008.

The combination of these advances in the ability of individuals to both produce and distribute imagery increases the potential for U.S. attacks to be chronicled in near-real time, and likely not from the perspective of someone interested in giving U.S. motives and actions the benefit of the doubt. Widespread coverage of civilian casualties, particularly if they occur in a context where U.S. forces appear careless or callous, has the potential to undermine domestic political support for military action.¹⁰ Such effects are likely to be most pronounced in conflicts where the United States is perceived as having a clear military advantage or the immediate threat to the U.S. homeland is lower. In a potential interstate conflict against a near-peer competitor with much higher stakes for U.S. security, the political effects of such imagery might be less dramatic.

Other states that conduct military operations are likely to confront similar situations. Key U.S. partners, such as the United Kingdom or Germany, are likely to have similar political concerns as the United States regarding such imagery, and perhaps even greater concerns depending on the perceived centrality of the military mission to their national security.¹¹ Potential U.S. adversaries, such as Russia or China, meanwhile, are less likely to be affected because of their greater ability to control or censor images to which their publics are exposed.

Implications for the U.S. Air Force and the Future of Warfare

This trend has several operational and strategic implications for the USAF and for defense policymakers more broadly. First, recognizing the increased political risks discussed, U.S. commanders increasingly might be deterred from undertaking some strikes in high-population

¹⁰ Davis Rothkopf, “The Slaughter of Innocents: Why Collateral Damage Undoes the Best-Laid Plans of ‘Limited’ War Makers,” *Foreign Policy*, July 17, 2014; Walsh, 2015; Larson and Savych, 2017.

¹¹ These observations reflect interviews with government officials and researchers in London, Brussels, Berlin, and Warsaw in April 2018.

environments, or they could decide to lengthen the review process for those strikes. Adversaries might respond by shifting their tactics as a result and operating to a greater extent within population centers. This would exacerbate existing difficulties for the United States, but also might create new opportunities for intelligence collection.

Second, additional advancements and investments in such capabilities as ISR, in greater stockpiles of PGMs, and in micromunitions are likely to increase in value.¹² More-accurate targeting information and munitions that allow for strikes to have a more limited area of effect would both help to minimize collateral damage and decrease the frequency with which U.S. attacks on individuals or small groups hiding within a civilian population are deterred by concern for such damage.¹³

Third, the potential for U.S. attacks to be documented in real time by civilians in information sources likely monitored by adversaries could increase the risk to U.S. forces undertaking the attacks, particularly ground forces that could be operating in conjunction with attacks from the air, or limit the effectiveness of such attacks. Adversaries could flow to the area of operation more quickly, target the area from a distance unconcerned or less concerned about civilian casualties, which could put U.S. ground forces at greater risk. U.S. air assets could also be at greater risk if operational plans require repeated targeting of the same locations. Attacks beyond an initial strike could also become less effective if adversaries are able to more rapidly evacuate from an area at the first reports of a U.S. operation.

Fourth, particularly given the potential for imagery of U.S. attacks to be distributed by those ill-disposed toward U.S. forces, it might be advantageous for the United States to ensure that it has its own recordings of attacks it undertakes. Having this record would allow the

¹² Frederick and Johnson, 2015, pp. 92–93.

¹³ One example of a potentially useful micromunition is the U.S. Navy Spike missile. Ryan Maass, “NAVAIR Completes Spike Missile Test with UAV Target,” UPI, February 2, 2017. There are also other munitions of similar size under development that can be fired from UASs such as the Fury from Textron and the Pyros from Raytheon. See Huw Williams, “Strike Out: Unmanned Systems Set for Wider Attack Role,” *Jane’s International Defence Review*, 2015, pp. 1–2.

United States to push back against deceptively edited imagery, not to mention outright false accusations, as we will discuss in greater detail. The widespread production and storage of such images by the U.S. military raise a host of security and legal issues that would need to be assessed in detail but might be worth considering.¹⁴

¹⁴ For additional discussion, see Frederick and Johnson, 2015, pp. 88–89. The implications of such a step have echoes in the debate surrounding whether U.S. police should more frequently wear body cameras. See Michael Douglas White, *Police Officer Body-Worn Cameras: Assessing the Evidence*, Washington, D.C.: Office of Justice Programs, U.S. Department of Justice, 2014; Jay Stanley, *Police Body-Mounted Cameras: With Right Policies in Place, a Win for All*, Washington, D.C.: American Civil Liberties Union, March 2015.

Trend 3: Increasing Effectiveness of False Accusations

Information operations are a persistent part of warfare.¹ States or groups opposed to U.S. interests use such tactics as false accusations of U.S. military misconduct or atrocities against civilians to damage U.S. standing and limit U.S. operations and engagement. Such accusations, pushed by U.S. adversaries and sometimes even by U.S. partners, likely have contributed to low levels of trust of the U.S. military in certain regions but have not resonated inside the United States and with other key Western allies. If ongoing political and technological trends continue, however, this could change in the future.

Historical Trend: False Accusations Have Affected International Support for U.S. Operations

The United States and the U.S. military in particular have been frequent targets of information operations pushing false accusations for some time. Throughout the war in Afghanistan, for example, the Taliban have frequently made false accusations against U.S. and coalition

¹ For useful overviews, see Leigh Armistead, ed., *Information Operations: Warfare and the Hard Reality of Soft Power*, Lincoln, Neb.: Potomac Books, Inc., 2004; and Linda Robinson, Todd C. Helmus, Raphael S. Cohen, Alireza Nader, Andrew Radin, Madeline Magnuson, and Katya Migacheva, *Modern Political Warfare: Current Practices and Possible Responses*, Santa Monica, Calif.: RAND Corporation, RR-1772-A, 2018.

forces of causing civilian casualties.² Russia is perhaps the most voluminous producer of false accusations against the United States and its allies in recent years. The Russian model is to produce a high volume of accusations across multiple Kremlin-linked media outlets, with little attempt to establish credibility or plausibility, designed to simply overwhelm recipients and leave them in a state of uncertainty.³ For example, Russia accused the United Kingdom of being behind the recent Syrian regime use of chemical weapons in Douma, and it accused the Ukrainian military of being responsible for the 2014 shooting down of Malaysian Airlines flight MH17.⁴ Russian disinformation often suggests that the United States is an unreliable partner unable or unwilling to defend its allies—or, conversely, that the United States and its overseas military presence is predatory and aggressive.⁵

Although false accusations against the United States and its allies by adversaries are perhaps to be expected, even states that are more closely aligned with the United States have spread disinformation against the U.S. military and government. In 2014, the Karzai government in Afghanistan falsely accused the U.S. military of causing substantial civilian casualties during a military attack, apparently echoing

² According to a UN investigation of Taliban accusations in 2017, U.S. and coalition forces did cause civilian casualties on many occasions, but there were roughly 50 instances in which investigations revealed Taliban accusations to be false and roughly 50 other instances in which the accusations could not be confirmed. See United Nations Assistance Mission in Afghanistan, *Afghanistan: Protection of Civilians in Armed Conflict: Annual Report 2017*, Kabul, Afghanistan, February 2018, p. 69; and SITE Intelligence Group, “Afghan Taliban Accuses U.S. President Trump of Directing Troops to Kill Civilians,” April 16, 2018.

³ Christopher Paul and Miriam Matthews, *The Russian “Firehose of Falsehood” Propaganda Model: Why It Might Work and Options to Counter It*, Santa Monica, Calif.: RAND Corporation, PE-198-OSD, 2016.

⁴ Peter Dickinson, “Russia Cannot Acknowledge MH17 Role Without Exposing Secret Ukraine War,” Atlantic Council, January 22, 2018; Paul Dallison, “Russia Accuses UK of Staging Syria Gas Attack,” *Politico EU*, April 13, 2018.

⁵ We reviewed a sampling of disinformation cases collected by the European External Action Service on May 7, 2018. European External Action Service East Stratcom Task Force, *EU vs. Disinformation*, website, undated.

a Taliban claim.⁶ Media outlets linked to the current Egyptian regime have pushed conspiracy theories that the United States has supported such groups as the Muslim Brotherhood in order to destabilize the Middle East.⁷

These accusations often have limited effect on the U.S. domestic public, but the same cannot be said for overseas audiences. For example, after years of conspiracy theories in the Mideast, a 2011 Pew poll found that only roughly one in five Muslim respondents in the Middle East believed that Arabs carried out the September 11, 2001, terrorist attacks in the United States, a figure that has declined over time.⁸ Middle Eastern publics might be particularly receptive to conspiracy theories because of the region's history of foreign meddling, active promotion of conspiracy theories by many states, and feelings of exclusion from political power on the part of much of the population.⁹

Future Projection: U.S. Audiences Could Become More Likely to Believe False Accusations

Concerns over the effectiveness of such information operations in the United States and other Western countries have spiked since the unearthing of Russian efforts to interfere with the 2016 U.S. presi-

⁶ Matthew Rosenberg, "False Claims in Afghan Accusations on U.S. Raid Add to Doubts on Karzai," *New York Times*, January 25, 2014.

⁷ Gabriel Koehler-Derrick, Richard A. Nielsen, and David Romney, "Conspiracy Theories in the Egyptian State-Controlled Press," presented at AALIMS-Pomona Conference on the Political Economy of the Muslim World, April 10, 2017; Connor Kopchick, "The Source of Fake News in the Middle East," Washington Institute for Near East Policy, February 2, 2018.

⁸ Pew Global Attitudes Project, "Islamic Extremism," in *Muslim-Western Tensions Persist*, Washington, D.C.: Pew Research Center, July 21, 2011. Although this decline might be the result of numerous factors, it does follow years of active efforts by Middle Eastern governments to promote it.

⁹ Matthew Gray, "Explaining Conspiracy Theories in Modern Arab Middle Eastern Political Discourse: Some Problems and Limitations of the Literature," *Critique: Critical Middle Eastern Studies*, Vol. 17, No. 2, 2008. To be clear, belief in conspiracy theories is prevalent in many societies. For example, see Richard Hofstadter, "The Paranoid Style in American Politics," *Harper's Magazine*, Vol. 229, No. 1374, 1964.

dential election.¹⁰ Changes in the U.S. domestic media landscape and sharp partisan divisions could enable false accusations of U.S. military misconduct to find more-fertile soil in the United States, even when strenuously denied by the U.S. military. Media in the United States has likely become more susceptible to disinformation because of several trends, such as the increasing role of social media, increasing distribution of opinions over facts in traditional media outlets, declining levels of trust in the government, and the growing influence of explicitly partisan new sources.¹¹ Increasing partisan divisions, driven by longer-term social and demographic trends and by more ideologically sorted parties, might themselves increase vulnerability to disinformation campaigns because partisans might be more apt to believe foreign disinformation that blames their domestic political opponents.¹²

A recent example is illustrative. As the United States considered a military response to the Syrian regime's use of chemical weapons in Khan Sheikhun in April 2017, online outlets linked to the Syrian regime claimed that the attack was a hoax perpetrated precisely to justify such a military response. The claims were then amplified by pro-Kremlin sources, and eventually gained wide distribution within the United States by far-right outlets, such as InfoWars.¹³ InfoWars had a limited audience until the 2016 election, when the outlet gained substantial prominence.¹⁴ Although this apparent Syrian effort was unsuc-

¹⁰ Office of the Director of National Intelligence, *Assessing Russian Activities and Intentions in Recent US Elections*, Washington, D.C.: Intelligence Community Assessment, ICA 2017-O1D, January 6, 2017; Jonathan Masters, "Russia, Trump, and the 2016 U.S. Election," Council on Foreign Relations, February 26, 2018.

¹¹ Jennifer Kavanagh and Michael D. Rich, *Truth Decay: An Initial Exploration of the Diminishing Role of Facts and Analysis in American Public Life*, Santa Monica, Calif.: RAND Corporation, RR-2314-RC, 2018, pp. 95–121.

¹² Kavanagh and Rich, 2018, pp. 152–170.

¹³ Joshua Gillin, "Conspiracy Claims That Syrian Gas Attack Was 'False Flag' Are Unproven," Politifact, April 7, 2017; Ben Nimmo and Donara Barojan, "How the Alt-Right Brought #SyriaHoax to America," Atlantic Council Digital Forensic Research Lab, April 7, 2017.

¹⁴ William Finnegan, "Donald Trump and the 'Amazing' Alex Jones," *New Yorker*, June 23, 2016; Tim Murphy, "How Donald Trump Became Conspiracy Theorist in Chief," *Mother Jones*, November/December 2016; Christianna Silva, "Alex Jones Says President Trump

successful in deterring U.S. strikes in response to the chemical attack, similar campaigns in the future could undercut domestic support for military engagements and potentially affect operational decisions.

Some of these trends also could result in greater vulnerability to disinformation among key U.S. allies and to reduced vulnerability in U.S. adversaries. In the United Kingdom, for example, lack of financial disclosure laws might have heightened susceptibility to a Russian influence campaign around the 2016 “Brexit” referendum to leave the European Union.¹⁵ In France and Germany, Russian efforts at election interference do not appear to have been similarly influential, although other disinformation campaigns have had limited effects.¹⁶ Meanwhile, in potential adversaries, such as Russia or China, state control over the media likely limits susceptibility to similar external influence campaigns.

Implications for the U.S. Air Force and the Future of Warfare

These trends affect issues that extend well beyond the purview of the USAF or DoD, and raise truly whole-of-government concerns. From a USAF perspective, however, there are several narrower implications worth noting. First, as discussed, these trends suggest an increased

Spends ‘Executive Time’ Calling Him,” *Newsweek*, January 24, 2018. The future influence of InfoWars specifically was unclear as of this writing; the organization was recently banned from most major social media outlets. Alex Hern, “Facebook, Apple, YouTube and Spotify Ban Infowars’ Alex Jones,” *The Guardian*, August 6, 2018.

¹⁵ David D. Kirkpatrick, “Signs of Russian Meddling in Brexit Referendum,” *New York Times*, November 15, 2017; Patrick Wintour, “Russian Bid to Influence Brexit Vote Detailed in New US Senate Report,” *The Guardian*, January 10, 2018.

¹⁶ A 2016 Russian disinformation campaign to promote false accusations of rape by immigrants in Germany appears to have had some effect in boosting the electoral fortunes of the far-right AfD party, especially among Russian-speaking Germans who consume Russian state media. Maria Snegovaya, “Russian Propaganda in Germany: More Effective Than You Think,” *The American Interest*, October 17, 2017. However, overall Russian influence on the 2017 German elections appears to have been limited, and overt Russian efforts to boost Marion Le Pen in the 2017 French presidential election were ineffective. Max de Haldevang, “Russia’s Meddling in the French Election Has Backfired Spectacularly,” *Quartz*, May 8, 2017.

risk that false accusations of misconduct or atrocities could affect U.S. domestic support for ongoing or future military operations. These risks are likely to be greater for operations that are conducted in higher population areas (where such accusations would be more credible), and for operations that are conducted against relatively weak adversaries—the theory being that more-symmetric conflicts against near-peer adversaries with higher-stakes national security concerns might limit public concerns about such alleged misconduct.

Second, USAF efforts to maintain a reputation for accuracy and transparency are likely to be helpful. To promote such a reputation, the USAF might wish to enhance the number of Public Affairs Officers (PAOs) and the resources available to them. PAOs can help to limit the spread of false accusations in major media sources and to limit the share of the public that is receptive to such accusations. While focusing on the accuracy and transparency of their responses, PAOs will also need to be aware of the efforts of U.S. military psychological operations units and keep their own messaging clearly separate.

Trend 4: Increasing Public Concern for Civilian Casualties

Increasingly, domestic trends in civilian casualty aversion, particularly in liberal democracies, could push for increasing restraint in warfare.¹ As discussed, the U.S. public appears to have grown increasingly sensitive to both military and civilian casualties in recent decades.² Some observers have asserted that similar trends might be even stronger among the domestic audiences of U.S. coalition partners, specifically in Europe.³ The strength and durability of these trends going forward remains somewhat uncertain, but as long as they continue, they hold important implications for the employment of restraint—particularly in the application of airpower—in the future of warfare.

¹ Larson and Savych, 2007, p. xviii; Stephen Watts, “Air War and Restraint: The Role of Public Opinion and Democracy,” in Matthew Evangelista, Harald Muller, and Niklas Schorning, eds., *Democracy and Security: Preferences, Norms, and Policy-Making*, New York: Routledge, Taylor & Francis Group, 2008, pp. 56–60.

² For instance, see Mueller, 1973; Jentleson, 1992; Edward N. Luttwak, “Where Are the Great Powers? At Home with the Kids,” *Foreign Affairs*, Vol. 73, July/August 1994; Larson, 1996; Scott Sigmund Gartner and Gary Segura, “War, Casualties, and Public Opinion,” *The Journal of Conflict Resolution*, Vol. 42, No. 3, June 1998; James Burk, “Public Support for Peacekeeping in Lebanon and Somalia: Assessing the Casualties Hypothesis,” *Political Science Quarterly*, Vol. 114, No. 1, Spring 1999; Louis Klarevas, “Trends: The United States Peace Operations in Somalia,” *Public Opinion Quarterly*, Vol. 64, No. 4, Winter 2000; Eichenberg, 2005; Gelpi, Feaver, and Reifler, 2009; and Matthew Baum and Tim Groeling, “Reality Asserts Itself: Public Opinion on Iraq and the Elasticity of Reality,” *International Organization*, Vol. 64, No. 3, 2010.

³ Larson and Savych, 2007, p. xxvii. These observations also stem from interviews with government officials and researchers in London, Brussels, Berlin, and Warsaw in April 2018.

Historical Trend: Public Expectations That Militaries Can Avoid Civilian Casualties Have Increased

Most modern wars cause more civilian deaths than military deaths, often substantially so.⁴ In World War I, for instance, an estimated nine soldiers were killed for every one civilian: Today, that ratio is essentially reversed; on average, an estimated ten civilians have died for every one soldier or fighter in modern armed conflicts.⁵

In part, these trends in increased civilian casualties are attributable to 20th-century innovations in air warfare that made it possible to reach beyond the front lines of conventional armies and thus, perhaps paradoxically, increased both the “exceptional dangers to noncombatants” and the “unique opportunities to regulate the violence of warfare.”⁶ Since the end of the Cold War, growing operational reliance on precision strike technologies has raised both public and elite expectations of the promise of “immaculate warfare.”⁷ During the 1999 air campaign over Kosovo, for instance, NATO forces sustained zero fatalities, and civilian fatalities on the ground numbered fewer than 500 despite the

⁴ Edmund Cairns, *A Safer Future: Reducing the Human Cost of War*, Oxford, United Kingdom: Oxfam Publications, 1997, pp. 6, 17; Walter Clemens, Jr., and J. David Singer, “A Historical Perspective: The Human Cost of War: Modern Warfare Kills More Civilians Than Soldiers,” *Scientific American*, Vol. 282, June 2000; Valerie Epps, “Civilian Casualties in Modern Warfare: The Death of the Collateral Damage Rule,” *Georgia Journal of International and Comparative Law*, Vol. 41, No. 307, 2013, p. 309.

⁵ Stanley Greenberg and Robert Boorstin, “People on War: Civilians in the Line of Fire,” *Public Perspectives*, International Committee of the Red Cross, November/December 2001, p. 19. Estimating military and civilian deaths in armed conflict is inherently difficult. We do not necessarily endorse the methodology used by Greenberg and Boorstin to arrive at their 10:1 ratio. However, numerous other studies have found evidence supporting similar 10:1, 9:1, or 8:1 civilian-to-military fatality ratios in modern armed conflict. For instance, see European Union Institute for Security Studies, *A Secure Europe in a Better World: European Security Strategy*, Brussels, December 12, 2003, p. 2; Paul Collier, V. L. Elliott, Håvard Hegre, Anke Hoeffler, Marta Reynal-Querol, and Nicholas Sambanis, *Breaking the Conflict Trap: Civil War and Development Policy*, Washington, D.C.: World Bank and Oxford University Press, 2013, p. 17; Epps, 2013, pp. 319, 325–326.

⁶ Watts, 2008, p. 53.

⁷ Wrage, 2003, pp. 1–3.

“number of strikes flown (14,000) and munitions dropped (28,000).”⁸ During the 1995 and 2011 NATO air campaigns in Bosnia and Libya, the results were even starker: Fewer than 100 civilians were killed in each operation despite an estimated 1,000 and 7,700 PGMs dropped in 2,500 and 9,700 strike sorties, respectively.⁹ Notably, in Libya, all munitions expended were precision-guided; in Bosnia, approximately 70 percent were PGMs.¹⁰ By contrast, levels of civilian casualties sustained during other, more intense post–Cold War USAF and NATO air-strike campaigns in Kuwait, Iraq, and Afghanistan were substantially higher, although they still remained orders of magnitude lower than those inflicted in Vietnam, Korea, and World War II, reinforcing U.S. public expectations of the possibility of immaculate warfare.¹¹

⁸ Wrage, 2003, pp. viii, 2; Phillip Meilinger, “A Matter of Precision: Why Air Power May Be More Humane Than Sanctions,” *Foreign Policy*, November 18, 2009.

⁹ John Tirpak, “Deliberate Force,” *Air Force Magazine*, Vol. 80, No. 10, October 1997; Robert C. Owen, ed., *Deliberate Force: A Case Study in Effective Air Campaigning, Final Report of the Air University Balkans Air Campaign Study*, Maxwell Air Force Base, Ala.: Air University Press, January 2000, pp. 505, 522; C. J. Chivers and Eric Schmitt, “In Strikes on Libya by NATO, an Unspoken Civilian Toll,” *New York Times*, December 17, 2011; Fred Abrahams and Sidney Kwiram, *Unacknowledged Deaths: Civilian Casualties in NATO’s Air Campaign in Libya*, New York: Human Rights Watch, May 13, 2012.

¹⁰ Karl Mueller, ed., *Precision and Purpose: Airpower in the Libyan Civil War*, Santa Monica, Calif.: RAND Corporation, RR-676-AF, 2015, p. 4.

¹¹ In the First Gulf War, an estimated 3,500 civilians were killed between January and February of 1991, primarily as a result of coalition air strikes. Notably, less than 10 percent of munitions dropped during this air campaign were precision-guided. Exact figures are unknown on civilian casualties caused by air strikes during the combat phases of the U.S. invasions of Afghanistan and Iraq in October–December 2001 and March–April 2003, respectively, but most estimates put them in the low thousands. In both of these campaigns, approximately 60–70 percent of munitions dropped were smart bombs. By comparison, only about 0.2 percent of U.S. bombs used during the Vietnam War were precision-guided. Estimates of direct civilian fatalities from U.S. bombings and unexploded ordnance in North and South Vietnam, Laos, and Cambodia from 1965 to 1972 vary widely, but probably exceeded 100,000 in total; total civilian fatalities from all causes may well have exceeded 1 million. Bob Dreyfuss, Nick Turse, Eric Wuestewald, and Francis Reynolds, “The Deaths of Afghans: Civilian Fatalities in Afghanistan, 2001–2002,” *The Nation*, interactive database, undated; Human Rights Watch, *Needless Deaths in the Gulf War: Civilian Casualties During the Air Campaign and Violations of the Laws of War*, New York, 1991; Michael Kelly, “The American Way of War,” *The Atlantic*, Vol. 289, No. 6, June 2002; William J. Crowe, “Foreword,” in Stephen Wrage, ed., *Immaculate Warfare: Participants Reflect on the Air Cam-*

Conventional wisdom seemingly agrees that noncombatant fatalities on the order of those inflicted in Vietnam would not be tolerated today absent an existential national security threat, although the empirical evidence to support this claim remains somewhat underdeveloped. RAND Corporation researchers Eric Larson and Bogdan Savych offer a systematic empirical examination of the subject in the early post-Cold War period in their study of media reporting and public opinion reactions before and after high-profile civilian casualty incidents.¹² They find statistically meaningful evidence to support the conclusion that “attention to and concern about civilian casualties both at home and abroad have increased in recent years and could continue to do so, suggesting that they are likely to be a recurring—and perhaps even more salient—concern in the conduct of future military operations.”¹³ Relatedly, their analysis finds that news media reporting on incidents of civilian casualties generally increased (both domestically and internationally) between the end of the Cold War and the early phases of

paigns over Kosovo and Afghanistan, Westport, Conn.: Praeger, 2003, p. viii; Stephen D. Wrage, “The Promise of Immaculate Warfare,” in Stephen Wrage, ed., *Immaculate Warfare: Participants Reflect on the Air Campaigns over Kosovo and Afghanistan*, Westport, Conn.: Praeger, 2003, p. 2; T. Michael Moseley, “Operation Iraqi Freedom—By the Numbers,” U.S. Air Forces Central Command, April 30, 2003; Melissa Murphy and Carl Conetta, *Civilian Casualties in the 2003 Iraq War: A Compendium of Accounts and Reports*, Cambridge, Mass.: Project on Defense Alternatives, Commonwealth Institute, May 21, 2003; Robert Dudney, “The Gulf War II Air Campaign, By the Numbers,” *Air Force Magazine*, Vol. 86, No. 7, July 2003; Bonnie Docherty and Marc E. Garlasco, *Off Target: The Conduct of the War and Civilian Casualties in Iraq*, New York: Human Rights Watch, December 11, 2003; Beth Osborne Daponte, “Wartime Estimates of Iraqi Civilian Casualties,” *International Review of the Red Cross*, Vol. 89, No. 868, December 2007; Mueller, 2015, p. 4; World Peace Foundation, “Vietnam: The Vietnam War,” Mass Atrocity Endings, blog post, Fletcher School, Tufts University, August 7, 2015.

¹² Larson and Savych’s research is limited to the period 1990–2003. Anecdotally, media coverage of civilian casualties in later periods also appears to remain elevated. For example, see Josh Smith, “Afghan Civilian Casualties from Air Strikes Rise More Than 50 Percent, Says U.N.,” Reuters, October 12, 2017; Shashank Bengali, “U.S. Airstrikes Rise Sharply in Afghanistan—and So Do Civilian Deaths,” *Los Angeles Times*, December 4, 2017; Pamela Constable, “Civilian Casualties in Afghanistan at Near-Record Levels This Year, According to U.S. Report,” *Washington Post*, April 13, 2018; Ryan Browne, “Pentagon Says Nearly 500 Civilians Killed in US Military Operations in Trump’s First Year,” CNN, June 1, 2018.

¹³ Larson and Savych, 2007, p. xxvii.

the Iraq War, as did the frequency with which civilian casualties were “mentioned in official briefings, news conferences, and other official U.S. government activities as well as the Congressional Record” and the frequency with which “NGOs have been mentioned in connection with war or military issues” over the same period.¹⁴

However, Larson and Savych’s research also finds that the U.S. public generally possesses fairly pragmatic expectations about the limits of collateral damage avoidance and that domestic support for recent U.S. military operations did not decline noticeably after high-profile incidents involving civilian casualties.¹⁵ Rather, their statistical analysis suggests that public support hinges on the perception that “the United States and its allies are making enough effort to avoid casualties.”¹⁶ This nuance has important policy implications, emphasizing that both the number of civilian casualties and clear efforts to show restraint and avoid such casualties can have an effect on public support for military operations. Further, how this expectation would apply in the case of a high-intensity conflict with a peer adversary is less clear, but domestic public concerns about foreign civilians would likely be lessened if the domestic public itself were under threat.

Similar empirical research has not been conducted regarding the attitudes of publics in other countries in response to civilian casualties caused by their countries’ militaries. However, given the expressed concerns of governments of key U.S. allies in Western Europe, it seems likely that, at a minimum, the attitudes of their publics parallel those of the United States. In states with closed media environments, such as Russia or China, it is unlikely that there would be substantial coverage of even substantial civilian casualties caused by those states’ armed forces, limiting the salience of this factor for those actors.

¹⁴ Larson and Savych, 2007, pp. 1–3, 205–207.

¹⁵ Larson and Savych, 2007, pp. xix–xx, 2–4.

¹⁶ Larson and Savych, 2007, pp. xx–xxi.

Future Projection: Public Aversion to Civilian Casualties Likely to Increase Further

Several factors appear to underlie the apparent growth in civilian casualty aversion, particularly in the United States and Europe, all of which are likely to continue over the next ten to 15 years. First, as discussed, trends in the decentralization of media suggest that Larson and Savych's key finding—that “the issue of civilian casualties has become increasingly prominent in media reporting, as have humanitarian organizations' commentary on wars and military operations”¹⁷—is likely to continue apace, raising the availability of information about these incidents and conflicts, and increasing concerns in at least some circles.

Second, notwithstanding perpetual burden-sharing debates within NATO, it is likely that Washington and the resource-constrained capitals of Europe will increasingly express a preference to fight in coalitions in the near to medium term;¹⁸ to the extent that partner preferences, civilian casualty tolerances, and domestic political pressures might differ, greater unification of action will likely result in overall increased concern for civilian casualties.

Third, the technological advances in ISR and PGMs that raised public and elite expectations and demands for immaculate warfare (at least in operations seen as less central to national security) are likely to continue in the future. Next-generation technologies likely will further increase precision targeting and intelligence-gathering capabilities, and these tools of war will proliferate to new actors, expanding the ability for states to exercise restraint while achieving operational objectives, in turn affecting public expectations of restraint.

Fourth, however, in a future security environment in which “inter-state strategic competition, not terrorism, is now the primary concern in U.S. national security,” the potential for full warfare with such near-peers

¹⁷ Larson and Savych, 2007, p. xxii.

¹⁸ Myron Hura, Gary W. McLeod, Eric V. Larson, James Schneider, Dan Gonzales, Daniel M. Norton, Jody Jacobs, Kevin M. O'Connell, William Little, Richard Mesic, and Lewis Jamison, *Interoperability: A Continuing Challenge in Coalition Air Operations*, Santa Monica, Calif.: RAND Corporation, MR-1235-AF, 2000, pp. 24–25; McInnis, 2013, pp. 79–80.

as Russia and China could increase, although it would still be unlikely.¹⁹ Under such scenarios, it should be anticipated that the U.S. public would become less averse to civilian (and military) casualties than it has been in the post-Vietnam era because of the likely stakes involved.

Implications for the U.S. Air Force and the Future of Warfare

These trends could have important implications for the future of warfare, particularly regarding how, where, and with whom the USAF operates. First, if coalition partners become increasingly averse to the risk of civilian casualties in the future, their utility to the United States in joint operations could decline, especially if they lack precision strike and sophisticated ISR technologies. Relatedly, the United States and its partners should anticipate that adversaries will seek to exploit any differences in domestic collateral damage tolerances and “drive wedges” in future coalitions and otherwise “affect campaign strategy, targeting, and rules of engagement.”²⁰

Second, an increasing civilian casualty sensitivity within the United States could imply that Washington might be increasingly deterred from undertaking actions in certain contexts and environments. This might be particularly true in cases of limited war, and especially in urban battlefields, though there could be substantial variation across operations regarding mobilization of public opinion.²¹

Third, lower civilian casualty tolerances suggest that the United States—particularly the USAF—will have incentives to invest more heavily in research and development and procurement of advanced

¹⁹ DoD, *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge*, Washington, D.C., 2018, p. 1.

²⁰ Larson and Savych, 2007, p. xx.

²¹ Watts, 2008, pp. 54–55.

ISR, micromunitions, greater stocks of PGMs, and nonlethal weapon systems and platforms in the future of warfare.²²

Finally, as the influences of the Internet, social media, and other outlets increasingly permeate the daily lives of domestic and international audiences, the role of sophisticated public affairs operations will grow in importance. The USAF should take preemptive measures to invest in human capital, including PAOs, and information distribution networks capable of quickly, accurately, and widely disclosing incidents of unintended civilian casualties in order to mitigate political blowback.

²² Chukwuma Osakwe and Ubong Essien Umoh, "Non-Lethal Weapons and Force-Casualty Aversion in 21st Century Warfare," *Journal of Military and Strategic Studies*, Vol. 15, No. 1, 2013, pp. 1–2.

Conclusion

Taken together, these trends paint a relatively consistent picture of how the incentives to exercise restraint are likely to evolve in the future, in four main ways. First, incentives for states to exercise greater restraint in interstate conflict or competition are likely to vary along at least two main dimensions: the intensity of the conflict and the domestic institutions of the state. In a potential high-intensity conflict between states, operational imperatives are highly likely to outweigh concerns regarding media coverage or collateral damage. Although states will retain their legal obligations under the LOAC, our view is that additional restraints beyond these obligations are unlikely to substantially affect policymaker decisions regarding how to fight high-intensity conflicts, although operational or strategic concerns (such as a desire to avoid escalation) could still prompt restraint in certain circumstances. In interstate competition short of war, however, the incentives for greater restraint are likely to vary according to the domestic political system of the state in question. In liberal democratic states with open media systems, public opinion is likely to continue to play an important role in decisions that could result in civilian casualties, whereas more-autocratic states that control their domestic media would be able to repress most coverage of such casualties. This difference provides an asymmetric advantage to more-autocratic states in certain gray-zone conflicts, though not necessarily one sufficient to outweigh other advantages that democratic states generally enjoy.¹

¹ Dan Reiter, and Allan C. Stam III, “Democracy and Battlefield Military Effectiveness,” *Journal of Conflict Resolution*, Vol. 42, No. 3, 1998, pp. 259–277; Ajin Choi, “The Power

Second, regarding conflicts with nonstate groups, states are more likely to be deterred from undertaking military operations because of concerns regarding collateral damage and civilian casualties, particularly in urban areas. Liberal democratic states are most likely to be deterred in this manner; states such as Russia or China might be less affected.

Third, states will have strong incentives to invest in capabilities that can limit the risks to civilians, thereby re-enabling a greater range of attacks that were previously deterred. These capabilities could consist of micromunitions, non-lethal weapons, greater stocks of PGMs, and continued advances in ISR. Again, these investment incentives are likely to be strongest in liberal democracies, although autocratic states might invest in similar technologies for their battlefield utility or, in the case of ISR, their utility for domestic population control.

Fourth, liberal democracies are likely to find increased value in robust, trusted military public affairs capabilities, which would enhance official abilities to provide explanations of rationales behind attacks that caused civilian casualties or to push back against false accusations or narratives whose salience is likely to increase. This could mean greater professionalization and training of public affairs as a career field within Western militaries, and tighter integration of PAOs with military operations from their inception. The precise training that would be of greatest use and the ideal method of integrating PAOs more tightly with operations would be important areas for future study, but the emphasis should be on ensuring transparency, reliability, and accuracy in public engagement regarding operations that put civilians at risk. Autocratic states might find less value in these capabilities because of their existing domestic control of media, particularly in states that have adopted communications strategies that do not prioritize accuracy or consistency.² Table 6.1 summarizes our assessment

of Democratic Cooperation,” *International Security*, Vol. 28, No. 1, 2003, pp. 142–153; Kenneth A. Schultz and Barry R. Weingast, “The Democratic Advantage: Institutional Foundations of Financial Power in International Competition,” *International Organization*, Vol. 57, No. 1, 2003; Stephen Biddle and Stephen Long, “Democracy and Military Effectiveness: A Deeper Look,” *Journal of Conflict Resolution*, Vol. 48, No. 4, 2004, pp. 525–546.

² Paul and Matthews, 2016.

Table 6.1
Summary of Findings

Trend	Who Fights	How the United States Will Fight	Where the United States Will Fight	When the United States Will Fight	Why the United States Will Fight	Other Implications
The spread of lawfare	Emboldened nonstate groups or autocracies; liberal or democratic states more deterred	Greater importance of PGMs, micromunitions, ISR, public communication	More likely in urban areas, despite U.S. desire to avoid			
Widespread distribution of imagery of U.S. military operations	Some greater deterrence of liberal or democratic states; others less affected	Greater importance of PGMs, micromunitions, ISR, public communication	More likely in urban areas, despite U.S. desire to avoid	Potentially quicker adversary counterattacks		
Increasing effectiveness of false accusations		Transparent, reliable public affairs vital				Increased risk of mission failure because of lack of public support
Increasing public concern for civilian casualties	Greater deterrence of liberal or democratic states; others less affected. Potentially lower participation by U.S. partners.	Greater importance of PGMs, micromunitions, ISR, public communication	More likely in urban areas, despite U.S. desire to avoid			

of the implications from each identified trend across the framework developed in Chapter One.

In addition to these general conclusions—notably, the observation that the United States and states similar to it likely will have continued incentives to improve precision strike capabilities—we have highlighted numerous other implications and recommendations for the U.S. military in general and the USAF in particular, including the following:

- **Plan to deal with proxy forces.** U.S. planning for operations increasingly should incorporate appropriate rules of engagement for encounters with groups that are operating as proxies of adversary states, both to limit the effectiveness of such groups and to limit the escalation risk they might pose.
- **Enhance focus on PAOs.** Public affairs capabilities are likely to become increasingly important to highlight adversary LOAC violations, rebut false accusations against U.S. forces, and maintain both domestic and international support for military operations. Greater professionalization and integration of PAOs with military operations should be explored.
- **Consider video recordings of U.S. operations.** Although this would raise difficult legal, technical, and security concerns, policymakers should consider consistently making video recordings of U.S. operations, and doing so in such a manner that would allow video to be released to the public if deemed necessary to rebut accusations of U.S. misconduct.³
- **Prepare for more-limited utility of coalition partners.** U.S. planning assumptions should incorporate the possibility that growing differences among coalition partners regarding acceptable risks of collateral damage could limit the ability of the United States to rely on partner support for future operations, particularly against nonstate groups and in urban environments.

³ The experiences of both U.S. domestic police agencies and the Israeli government with body cameras should be considered. See Jessica Saunders, Steven W. Popper, Andrew R. Morral, Robert C. Davis, Claude Berrebi, Kristin J. Leuschner, Shira Efron, Boaz Segalovitz, and K. Jack Riley, *Effective Policing for 21st-Century Israel*, dual English and Hebrew edition, Santa Monica, Calif.: RAND Corporation, RR-287/1-MPS, 2014; Stanley, 2015; and Alan Neuhauser, “Police Have Body Cameras, but Few Rules on Using Them,” *US News and World Report*, November 23, 2017.

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ilitary objectives often can be pursued using a number of different approaches: airpower versus ground forces, larger munitions versus smaller ones, more- or less-restrictive rules of engagement. Military effectiveness often favors the immediate application of overwhelming force, but militaries and their civilian overseers often opt for more-restrained approaches.

Understanding how and why policymakers have chosen to impose these restraints in the past and how and why they are likely to do so in the future is critical to understanding how states will conduct future wars. This report identifies four key trends likely to shape the future exercise of restraint in warfare: the spread of lawfare (or use of law as a weapon of war), the widespread distribution of imagery of U.S. military operations, the increasing effectiveness of false accusations, and the increasing public concern for civilian casualties. These trends are assessed for how likely they are to affect both conflict between states and between states and nonstate actors, in addition to how the effects of these trends might differ for different types of states. Overall, these trends appear likely to further increase the incentives of decisionmakers in liberal democratic states to avoid civilian casualties in conflicts against weaker adversaries and to support investments in capabilities to make this possible. Other states that are more autocratic are not likely to be similarly constrained, and policymakers in democratic states will need to adapt to this asymmetry. Between highly capable state actors, conflict is less likely to occur but could involve very different incentives if operational considerations prompt a sharp reduction in the degree of restraint exercised beyond each state's legal obligations and the public shows a greater tolerance of heightened levels of military casualties and collateral damage to civilians. This report also provides specific recommendations for U.S. policymakers to begin to adapt to these anticipated trends.



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